SCH No.95063004
City Project No. 2000.048E

VOLUME I

TRANSBAY TERMINAL / CALTRAIN DOWNTOWN EXTENSION / REDEVELOPMENT PROJECT

in the City and County of San Francisco

FINAL ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL IMPACT REPORT AND SECTION 4(f) EVALUATION

Pursuant to

National Environmental Policy Act of 1969, §102 (42 U.S.C. §4332); Federal Transit Laws (49 U.S.C. §5301(e), §5323(b) and §5324(b)); Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. §303); National Historic Preservation Act of 1966, §106 (16 U.S.C. §470f); 40 CFR Parts 1500-1508; 23 CFR Part 771; Executive Order 12898 (Environmental Justice); and California Environmental Quality Act, PRC 21000 *et seq.*; and the State of California CEQA Guidelines, California Administrative Code, 15000 *et seq.*

by the

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION

and the

CITY AND COUNTY OF SAN FRANCISCO,
PENINSULA CORRIDOR JOINT POWERS BOARD, AND
SAN FRANCISCO REDEVELOPMENT AGENCY

March 2004

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CITY AND COUNTY OF SAN FRANCISCO,
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ABSTRACT

The *Transbay Joint Powers Authority*, the City and County of San Francisco, the Peninsula Corridor Joint Powers Board, and the San Francisco Redevelopment Agency propose to construct a new multi-modal Terminal on the site of the present Transbay Terminal, extend the Peninsula Corridor Service (Caltrain) from its current San Francisco terminus at Fourth and Townsend Streets to a new underground terminus beneath the new Terminal, and establish a Redevelopment Area Plan with related development projects, including transit-oriented development on publicly-owned land in the vicinity of the new multi-modal Terminal. The project is needed because the present Transbay Terminal, which was built in 1939, does not meet current *building codes, including ADA requirements,* or space utilization standards. The need to modernize the Transbay Terminal provides an opportunity to revitalize the surrounding area with a mix of land uses that includes both market-rate and affordable housing, and to extend Caltrain service from its current terminus outside the downtown area into the San Francisco employment core. Increases in Caltrain and other transit ridership, reductions in non-transit vehicle use and improvements in regional air quality, and revitalization of the Terminal area are expected to result. Impacts include the loss of the Transbay Terminal, *listed on the* National Register of Historic Places, and loss of the terminal loop ramp, a contributing element to the historic Bay Bridge, and up to 13 other historic buildings that are contributors to downtown historic districts; residential and business displacements; localized noise and vibration effects; adverse traffic impacts at seven intersections; loss of parking, and disruption during construction. Proposed mitigation measures include historic recordation, sound walls, high-resilience rail facilities, public information and management practices during construction, temporary bus terminal and bus storage and parking replacement, and pedestrian measures. Relocation assistance will be provided in accordance with the federal and state relocation acts.

Preface

In 1997, a Draft Environmental Impact Statement / Draft Environmental Impact Report (Draft EIS/EIR) was circulated for the Caltrain San Francisco Downtown Extension Project, a public hearing was held, and public comments were received. The present *Final* EIS/EIR describes a different –albeit somewhat similar – project to that evaluated in the 1997 document. Various changes have occurred in project development and project-related conditions since the earlier environmental document was circulated. This Preface summarizes how this document responds to these changes.

The project described and evaluated in this new document is consistent with the Transbay Terminal Study that has been undertaken by the Metropolitan Transportation Commission / Bay Area Toll Authority in concert with the State of California, the City and County of San Francisco, AC Transit and other local transit service providers and other interested parties.

The description of the project alternatives responds to current design criteria to accommodate high-speed steel-wheel-on-rail technologies currently in use in Europe and under consideration by the California High-Speed Rail Authority for implementation in California, including a station in downtown San Francisco.

Many specific subjects have been updated, not only to address changes in area conditions that have occurred since the 1997 Draft EIS/EIR was issued, but also to reflect the three components of the present project. Background information and analysis for many subjects are entirely new, including: ridership, land use, engineering, capital costs, noise and vibration effects, cultural resources, traffic, transit, parking, and the project financial plan.

Given the extent of differences between the previous project and the present project, the Peninsula Corridor Joint Powers Board, the City and County of San Francisco, and the Federal Transit Administration *have* not *responded* to the public comments received on the 1997 Draft EIS/EIR. Only those comments received on the present document *are* addressed.

The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) was released for public review on October 4, 2002. Notice of availability of the Draft EIS/EIR was published in the San Francisco Independent newspaper and posted at the Planning Department. Five hundred fifty newsletters were sent to the mailing list announcing the availability of the Draft EIS/EIR, and a letter was sent directly to property owners whose properties could be directly affected by the Project. Fifty 11"X17" posters were posted throughout the Project area, including along Second Street. Notices were sent to all property owners within 300 feet of the project boundary.

The Draft EIS/EIR was available for on-line review on the Transbay Joint Powers Authority (TJPA) web site. Three hundred eight two copies, both printed and compact disc versions, of the Draft EIS/EIR were mailed to agencies and individuals. The document was also available for review at the following locations:

- *Caltrain Headquarters, Second Floor Reception, 1250 San Carlos Ave., San Carlos*
- *San Francisco Central Library, 100 Larkin Street (at Grove)*
- *City of Berkeley Central Library, 2090 Kittredge Street (at Shattuck)*
- *San Francisco Planning Department, 1660 Mission Street, First Floor Public Information Center*
- *AC Transit Headquarters, 1660 Franklin Street, Oakland (Board Secretary)*
- *Main libraries of cities along the Caltrain Corridor*

Three public hearings were held:

- *November 12, 2002 at 5:00 pm – San Francisco Redevelopment Agency Commission in the San Francisco City Hall,*
- *November 13, 2002 at 7:00 pm (with an open house at 6:30 pm) – Caltrain Headquarters, San Carlos, California, and*
- *November 26, 2002 at 12:30 pm – San Francisco Planning Commission in San Francisco City Hall.*

At the request of the public, the comment period was extended by the Planning Commission on November 26 to December 20, 2002.

The final environmental documentation consists of three volumes. Volume I is the Final EIS/EIR (which is the Draft EIS/EIR as amended). Volume II contains responses to public comments on the Draft EIS/EIR, and Volume III contains the written comments and transcripts from the public hearings.

A Locally Preferred Alternative (LPA) was adopted in March 2003 by the Transbay Joint Powers Authority (TJPA) after consideration of the information presented in the Draft EIS/EIR, public and agency input from the circulation of the Draft EIS/EIR, meetings among affected stakeholders, community meetings and workshops, and the public hearings. The LPA consists of the following project components: the Transbay Terminal West Ramp Alternative with its associated bus ramps, circulation, and off-site storage; the Caltrain Downtown Extension with the "stacked drift" tunneling option for the segment between Townsend Street and Folsom Street, and the Second–to-Main Alternative; and the Transbay Redevelopment Plan Area "full build" development alternative.

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SUMMARY

S.1 PURPOSE AND NEED FOR TRANSPORTATION IMPROVEMENTS

The primary purposes of the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project are to:

- Improve public access to bus and rail services;
- Modernize the Transbay Terminal and improve service;
- Reduce non-transit vehicle usage; and
- Alleviate blight and revitalize the Transbay Terminal area.

The project is needed because the present Transbay Terminal, which was built in 1939, does not meet current seismic safety or space utilization standards. The need to modernize the Transbay Terminal provides an opportunity to revitalize the surrounding area and to extend Caltrain service from its current terminus outside the downtown area into the San Francisco employment core. Figure S-1 shows the project's location.

Undertaking the project components would address the following associated needs:

- Provide a multi-modal transit facility that meets future transit needs;
- *Improve the Terminal as a place for passengers and the public to use and enjoy.*
- Alleviate the conditions of blight in the Transbay Terminal area;
- Revitalize the Transbay Terminal area with a more vibrant mix of land uses that includes both market-rate and affordable housing;
- Facilitate transit use by developing housing next to a major transit hub;
- Improve Caltrain service by providing direct access to downtown San Francisco;
- Enhance connectivity between Caltrain and other major transit systems;
- Enable direct access to downtown San Francisco for future intercity and/or high-speed rail service;
- Accommodate projected growth in travel demand in the San Jose – San Francisco corridor;
- Reduce traffic congestion on US Highway 101 and I-280 between San Jose and San Francisco and other routes;
- Reduce vehicle hours of delay on major freeways in the Peninsula corridor;
- Improve regional air quality by reducing auto emissions;
- Support local economic development goals; and
- Enhance accessibility to employment, retail, and entertainment opportunities.

Figure S-1: Project Location

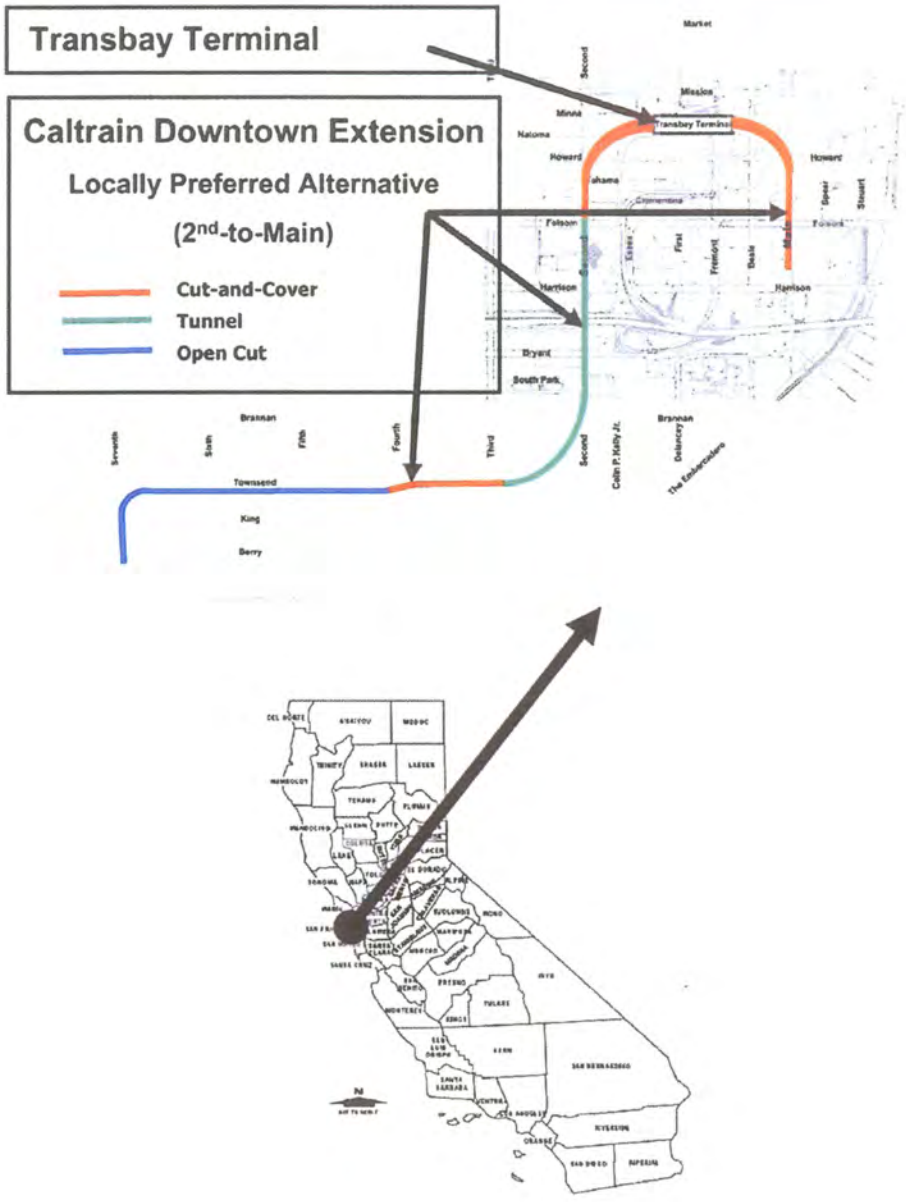


Figure S-1: Project Location and Vicinity Map

The Metropolitan Transportation Commission, State of California, City and County of San Francisco, and area transit providers (AC Transit, Muni, Golden Gate, SamTrans, and JPB) have evaluated options for replacement of the 60-year-old Transbay Terminal facility, due to its age, need for seismic upgrade, and inadequate facility layout. A properly designed, new terminal would improve space utilization, passenger circulation, signage, security, safety, and the overall transit-rider experience.

A multi-modal transportation facility would provide a centralized location for public and private bus and rail services in San Francisco's growing Financial District/South of Market Area and would enhance transit access for passengers arriving in and departing San Francisco. With its location near housing and major retail and commercial opportunities, it would increase transit ridership, thus reducing the number of non-transit vehicles traveling on area streets, highways, and bridges. Reduction in automobile vehicle miles of travel would result in reduced vehicular air emissions and an improvement in air quality.

Extension of the Caltrain Commuter Rail system 1.3 miles to Downtown San Francisco would close the gap than now exists between the train's current terminus station at Fourth and Townsend the employment center of the region, providing a seamless transportation link between the Peninsula and the heart of San Francisco. It would be consistent with Proposition H passed by the voter of San Francisco resolving that Caltrain should be extended to the Transbay Terminal site, and it would enable provision of high-speed rail service for a proposed statewide system.

The Redevelopment Plan would include a new Transbay Terminal, portions of the Caltrain Downtown extension within the Project Area, and redevelopment of other underutilized property in the Transbay Terminal area. Redevelopment activities, including redevelopment of the Terminal, would benefit from utilization of tax increment financing and the ability to assemble properties, install public improvements, and provide office, retail/hotel, and residential development, including affordable housing.

S.2 ALTERNATIVES

A description of the three alternatives evaluated in this Draft EIS/EIR is provided below.

S.2.1 No-Project Alternative

The No-Project Alternative consists of existing Caltrain service with funded improvements, other committed bus, rail, and roadway improvements, a BART extension to the San Francisco International Airport, and proposed development in downtown San Francisco in the 2020 horizon year. This is the No-Project Alternative under CEQA and the baseline alternative for purposes of NEPA.

Among the funded Caltrain service improvements are: service increases in daily trains between San Francisco and San Jose, and between San Jose and Gilroy; rehabilitation improvements, enhancements and additions to the existing Caltrain system; signal system modernization improvements; track improvements at the new Millbrae Intermodal facility that improve intermodal connections with BART; Electrification of the entire Caltrain line from Gilroy to its present San Francisco terminus at Fourth and Townsend Streets.

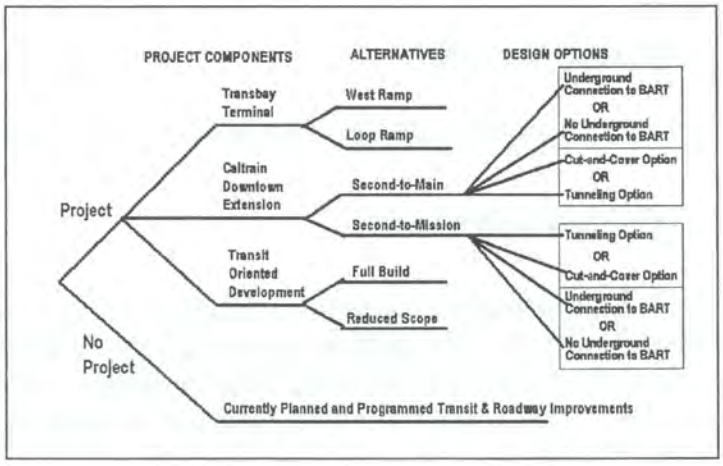
The No-Project Alternative includes all existing Muni service, plus major planned, ongoing, or constructed Muni projects, such as the S-Castro-Embarcadero Shuttle, the Third Street Light Rail project, and the Central Subway. Also included in the No-Project Alternative is existing BART service, *including* the extension to the San Francisco International Airport, *that* also interfaces with Caltrain and Samtrans bus services at the new Millbrae Intermodal Station. The No-Project Alternative further includes the changes to Samtrans bus service that were implemented in August 1999, the completion of Caltrans San Francisco Seismic Retrofit projects, and the completion of roadway and street improvements planned and programmed by the City and County of San Francisco's Department of Parking and Traffic or the Department of Public Works.

S.2.2 Project Components

The proposed project would be located in Downtown San Francisco (See Figure S-1) and has three major components:

- A new, multi-modal Transbay Terminal on the site of the present Transbay Terminal;
- Extension of Caltrain commuter rail service from its current San Francisco terminus at Fourth and Townsend Streets to a new underground terminus underneath the proposed new Transbay Terminal; and
- Establishment of a Redevelopment Area Plan with related development projects, including transit-oriented development on publicly owned land in the vicinity of the new multi-modal Transbay Terminal.

Two alternatives are under consideration for each of the major project components. Other components of the project include a temporary bus terminal facility to be used during construction, a new, permanent off-site bus storage/ layover facility, reconstructed bus ramps leading to the west end of the new Transbay Terminal, and a redesigned Caltrain storage yard.



S.2.2.1 Refinements to the Project and EIS/EIR

Refinements have been made to the Project and EIS/EIR since the Draft EIS/EIR was published. These refinement include

- ***Adoption of a Locally Preferred Alternative.*** *Following the U.S. Department of Transportation, Federal Transit Administration guidance and regulations, the Transbay Joint Powers Authority (TJPA) adopted in March 2003 the West Ramp Transbay Terminal, Second-to-Main, Tunneling, Full Build Options as the components to be included in the Locally Preferred Alternative (LPA) for inclusion in this Final EIS/EIR.*

- ***Movement of the Transbay Terminal Footprint to the West.*** *In response to public comment on the Draft EIS/EIR, the footprint of the new Transbay Terminal is proposed to be moved to the west (approximately 150 feet) of the location shown in the Draft EIS/EIR.*

- ***Elimination of the Temporary Bus Ramps to the Temporary Terminal.*** *In response to public comments on the Draft EIS/EIR, AC Transit bus access to the temporary terminal will no longer make use of a temporary bus ramp between the Bay Bridge and the temporary terminal during operation of the temporary facility.*

- ***Supplemental Air Emissions Assessment and Supplemental Noise Assessment of the Permanent Off-Site Bus Storage Facility*** *In response to public comments on the Draft EIS/EIR, a supplemental air emissions assessment and supplemental noise assessment was made of the proposed permanent off-site bus storage facility under the West Approach to the Bay Bridge between Second and Fourth Streets..*

- ***Refinements to the 2nd-to-Main and 2nd-to-Mission Caltrain Extension Alternatives.*** *Alignments and Station Layout. In response to public comments on both alternatives for the Caltrain Extension contained in the Draft EIS/EIR, engineering refinements were made to the Second-to-Mission and Second-to-Main options for the Caltrain Downtown Extension. Refinements included changes to the track, platform, and tail track layouts.*

- ***Revised Caltrain Operating Plan Assumptions*** *The number of daily Caltrain trains assumed to be operated in the Year 2020 has been revised downward from 170 to 132 reflecting more recent planning of the Peninsula Corridor Joint Powers Board.*

- ***Revised Project Construction/Implementation Schedule.*** *In response to public comments on the Draft EIS/EIR, the proposed project construction and implementation schedule has been refined.*

- ***Revised Project Capital Costs.*** *In response to public comments on the Draft EIS/EIR, capital cost estimates for both the Transbay Terminal and the Caltrain Downtown Extension have been refined for the LPA, resulting in an overall cost reduction of $143.7 million in 2003 dollars. The refined costs have been assigned to an anticipated year of expenditure under the refined implementation schedule, and inflation rates have been applied, providing a year-of-expenditure cost estimate for the LPA.*

- ***Revised Project Financial Plan.*** *The Project's financial plan has been refined to reflect the revised capital costs, the anticipated year of expenditure for various costs, and recent events regarding various funding sources.*

- ***Release of Draft Transbay Redevelopment Project Area Design for Development Vision and Redevelopment Boundary Revision.*** *In response to public comments on the Draft EIS/EIR and to advance the planning work for the proposed Transbay Redevelopment Area, the San Francisco Redevelopment Agency has released for public review the Draft Transbay Redevelopment Project Area Design for Development Vision (August 2003). The Draft Vision provides additional detail regarding the possible elements of the final Redevelopment Area Plan. A revision was also made to the proposed redevelopment area boundary in response to public comments.*

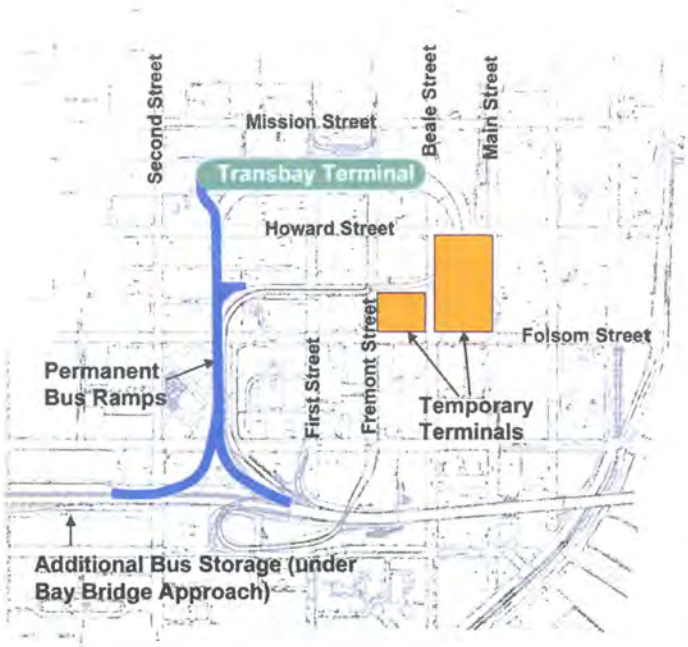
- ***Revisions to the Final EIS/EIR in Response to Public Comments on the Draft EIS/EIR.*** *Other revisions/refinements have been made in this Final EIS/EIR in response to public comments received on the Draft EIS/EIR. Volume II of this Final EIS/EIR contains the comments given on the Draft EIS/EIR and the responses to these comments. As indicated in Volume II, responses at times led to revision to the Final EIS/EIR. All refinements and revisions to the Draft EIS/EIR are outlined in this Final EIS/EIR in italics.*

S.2.2.*2* Transbay Terminal Alternatives

Two alternatives are being studied for a new Transbay Terminal. Under either alternative, a new multi-modal terminal would be located at the same site as the existing terminal at Mission and First Streets.

Bus ramps would connect directly from the terminal to the Bay Bridge, while an underground rail facility would allow the extension of Caltrain to downtown and provide space for potential future East Bay commuter rail and California's high-speed intercity rail.

West Loop Alternative. The existing western and eastern bus ramps between the Transbay Terminal and the Bay Bridge would be demolished, and new ramps would be constructed on the west side of the new Transbay Terminal, opening up additional space for development on the east side. The new bus ramps would be in approximately the same position as the existing ramps on the west side of the terminal and paralleling Essex Street. Bus turnaround loops would be provided on each bus level at the east end of the terminal. As the ramps approach the Bay Bridge, they would be stacked in a double-deck configuration. This alternative includes a terminal one block (165 feet) wide by *two* blocks (1,300 feet) long. It would include six levels, with four levels above ground and two below. Beginning at the lowest level, these include 1) a Train Level for Caltrain platforms, 2) Train Mezzanine Level for train passenger ticketing services, 3) Street Level for Muni vehicles and Golden Gate Transit buses, 4) Concourse Level for pedestrian circulation and substantial areas for joint development, 5) AC Transit Level, and 6) Upper Bus Level for other bus service (Muni service to Treasure Island, paratransit, Greyhound, and private operators). *This West Ramp Alternative was selected by the Transbay Joint Powers Authority as the Transbay Terminal component of the Locally Preferred Alternative. The footprint of the terminal has been moved approximately 150 feet to the west from its proposed location in the Draft EIS/EIR and would no longer span Beale Street. This shift reduces Project capital costs but does not affect the Project's environmental impacts or the operating efficiency of the terminal.*



Transbay Terminal West Ramp Alternative
Location of Terminal Components

Loop Ramp Alternative. This alternative would involve the demolition and reconstruction of both the existing western and eastern bus ramps between the Transbay Terminal and the Bay Bridge. The new Transbay Terminal would be one block wide and three and three-fourths blocks in length. It would include five levels, with two levels above ground and two below. The lower four levels (Train, Train Mezzanine, Street, and Concourse) would be very similar to the West Loop Alternative, although there would be less area available for joint development. The fifth level would be the Bus Level, which would accommodate AC Transit and all other bus operators.



Transbay Terminal Loop Ramp Alternative
Location of Terminal Components

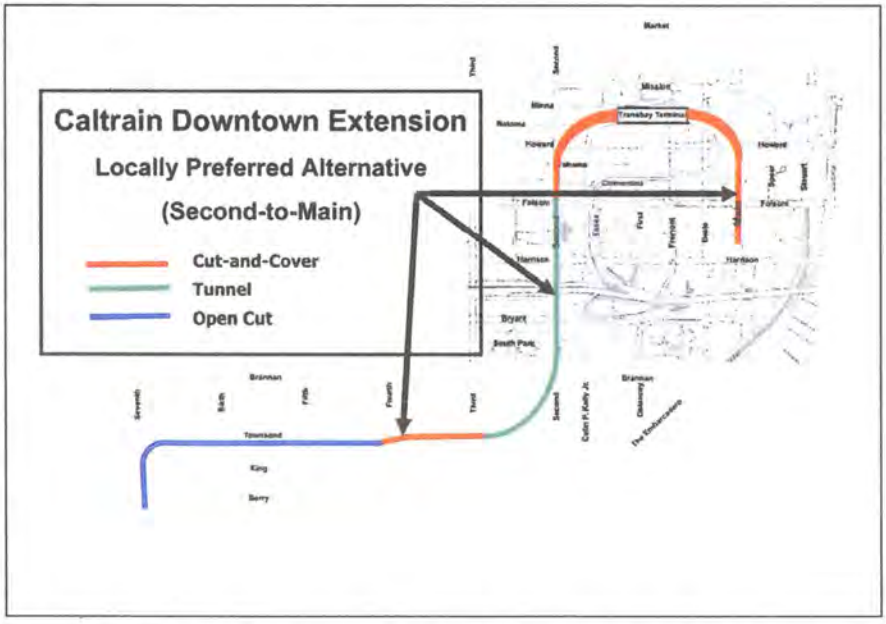
S.2.2.3 Caltrain Downtown Extension Alternatives

The Caltrain Downtown Extension Component consists of an extension of Caltrain from the present San Francisco terminus at Fourth and Townsend Streets to an underground terminal on the site of the present San Francisco Transbay Terminal at First and Mission Streets, a distance of some 1.3 miles. The extension would include reconstruction of the current storage yard at Fourth and Townsend, with provision of three surface platforms and six tracks on the southern portion of the existing facility near Fourth and King Streets and the addition of a new underground Caltrain station on the northern portion near Townsend and Fourth Streets.

Caltrain Downtown Extension tracks would begin its descent at about Berry Street and would curve east to a new underground station with a center platform near Fourth and Townsend Streets. From there, the tracks would continue under Townsend Street near Fourth Street, and continue east under Townsend Street in a cut-and-cover tunnel configuration. It would then curve north at about Clarence Place just east of Third Street in a cut-and-cover configuration. Nine buildings would need to be acquired and demolished to accommodate cut-and-cover construction of the curve from Townsend to Second and Brannan Streets. *A tunneling option has been defined for the Caltrain Downtown Extension. Under this option, the extension would be constructed from near Townsend Street, under Second Street, north to Folsom Street using a stacked drift tunneling technique. The tunneling option was selected by the Transbay Joint Powers Authority as the Caltrain Downtown Extension component of the Locally Preferred Alternative.* The alignment would continue under Second Street to Howard Street.

Two alternatives are under consideration from Howard Street north: (1) Second-to-Main, and (2) Second-to-Mission. *Engineering for these alternatives has been refined since distribution of the Draft EIS/EIR. Platform lengths and the length of straight (tangent) platforms were increased for both options, and additional through tracks were added to both. The lengths and number of tail tracks were also increased under both options.*

Second-to-Main Caltrain Extension Alternative. As the alignment approaches Howard Street along Second Street, it would curve northeasterly, into the basement of the new Transbay Terminal. Eleven buildings would need to be acquired and demolished for this curve into the Terminal. The terminal station would have six tracks and three platforms and would include approximately 2,000 feet of additional tracks (called tail tracks) in a cut-and-cover section leading from the east end of the new Terminal. These tracks would curve south to Main Street and continue underneath Main Street to south of Folsom Street. The tail tacks could also be extended as a separate, independent project at some time in the future, to a San Francisco-to-Oakland cross-bay alignment for commuter rail and/or high-speed trains. *This Second-to-Main*



Alternative was selected by the Transbay Joint Powers Authority as the Caltrain Downtown Extension component of the Locally Preferred Alternative.

This alternative would include a design option for a pedestrian connection underneath Fremont Street to the BART Embarcadero Station.

Second-to-Mission Caltrain Extension Alternative. Up to Second and Howard Streets, this Alternative would follow the same alignment as the Second-to-Main Alternative, although it would have a deeper profile. At that point, it would provide a different configuration for the underground station in the Transbay Terminal and for the tail tracks leading out of the terminal.

As this alignment approaches Howard Street, rather than running parallel to the Terminal's long axis, this alignment would curve northeasterly at about Tehama Street, cutting diagonally under the new terminal and exiting out under Mission Street headed towards The Embarcadero. The southernmost track would branch into four tracks leading to and serving two center platforms directly under the Transbay Terminal.

The two northernmost tracks would continue on an angle to Mission Boulevard and would serve two 600-foot side platforms to the north of the Transbay Terminal. These two tracks would continue to two 1,400-foot tail tracks under Mission Street ending just east of The Embarcadero. Two additional buildings on Mission Street would need to be acquired north of the Terminal for this alternative. The tail tracks for this alignment would be used in a manner similar to the uses described above for the Second-to-Main Alternative.

This alternative also includes a design option for a pedestrian connection underneath Fremont Street to the BART Embarcadero Station.

S.2.2.4 Proposed Transbay Redevelopment Plan Area

The Redevelopment Component includes two alternatives: the Full Build Alternative and the Reduced Scope Alternative. Either of these alternatives would include redevelopment on the parcels shown in Figure S-2. *In response to comments on the Draft EIS/EIR, the redevelopment area boundary shown on Figure S-2 has been revised from that shown in the Draft EIS/EIR.*

Full Build Alternative. This alternative assumes about 7.6 million square feet (sq. ft.) of residential/office/retail/hotel development, including approximately 5.6 million sq. ft. of residential development (4,700 residential units including affordable housing), 1.2 million sq. ft. of office development, 475,000 sq. ft. of hotel development, and 355,000 sq. ft. of retail development. *The Full Build Alternative was selected by the Transbay Joint Powers Authority as the redevelopment components of the Locally Preferred Alternative.*

A review of the proposals contained in the recently released Draft Transbay Redevelopment Project Area Design for Development Vision (San Francisco Redevelopment Agency, August 2003) shows that this vision would not introduce new adverse impacts beyond those identified in the Draft EIS/EIR for the Full Build Alternative for the redevelopment component of the Project.

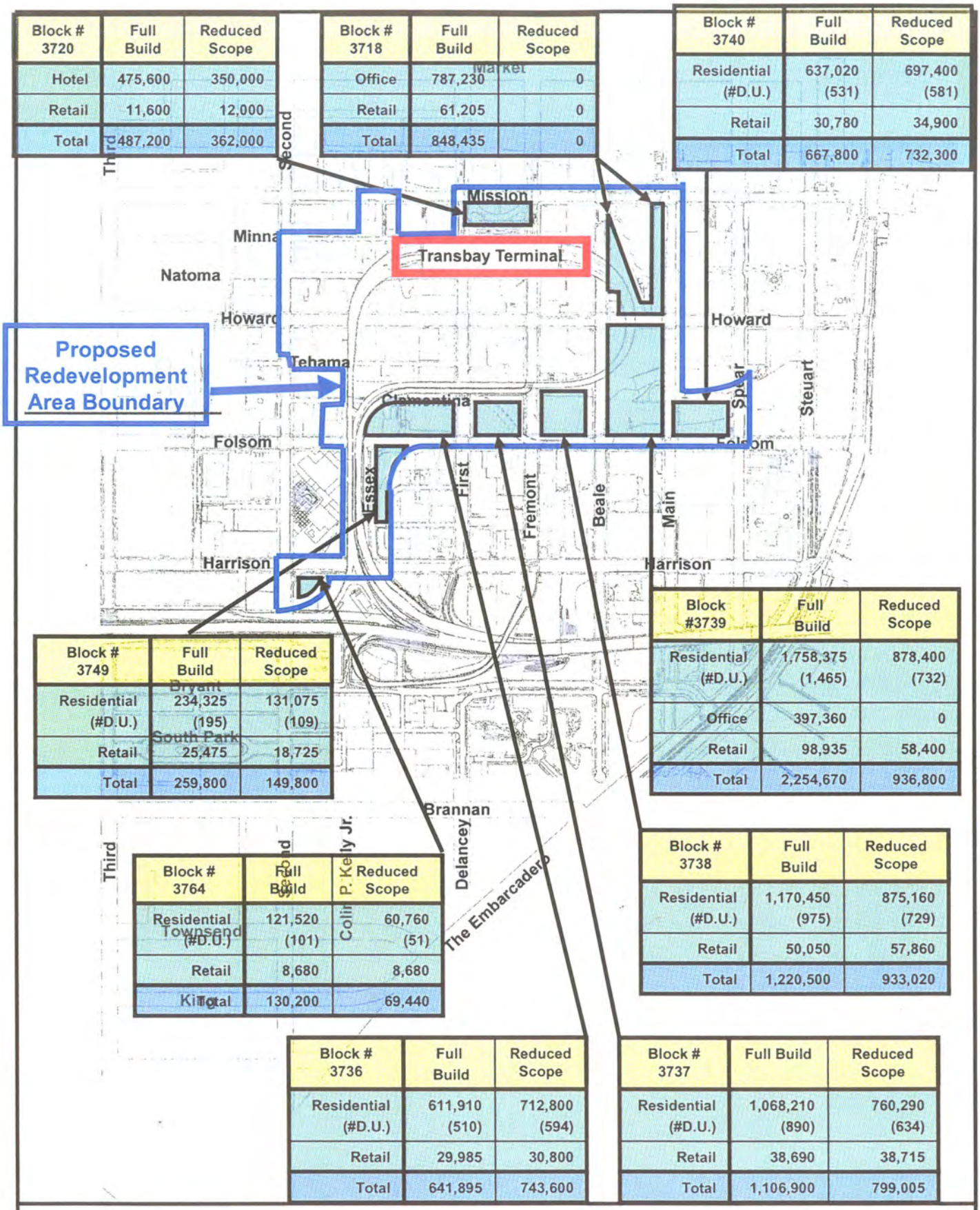


Figure S-2: Development Levels Assumed for Full Build & Reduced Scope Redevelopment Alternatives & Proposed Redevelopment Area Boundary

Reduced Scope Alternative. This alternative assumes a lesser amount of commercial and retail development and is weighted more toward housing. It assumes approximately 4.7 million sq. ft. of residential/office/retail/hotel development, including 4.1 million sq. ft. of residential (about 3,400 dwelling units), 350,000 sq. ft. of hotel development, and 260,000 sq. ft. of retail development. No office development is assumed for this Alternative.

S.3 SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Long-term environmental impacts and proposed mitigation measures are summarized in Table S-1. Short-term construction-related impacts and proposed mitigation are summarized in Table S-2. Because the Redevelopment Component of the project would involve separate future projects, each of which requiring separate environmental review, construction impacts for the Redevelopment Component are not included in Table S-2. For a full description of impacts and mitigation, see Chapter 5.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Land Use	Opportunities for revitalization in Transbay area would be lesser than under either of Redevelopment Alternatives.	For both alternatives: Parking lot on Harrison Street between 2nd and 4th streets displaced by bus storage. Mitigation: construct a parking deck under the freeway between 3rd and 4th Streets.	For both alternatives (2nd Street Cut-and Cover Option): loss of historic buildings would result in some change in character. *More* buildings would remain under tunneling option	Full Build includes 7.6 million sq. ft. of development (5.6 million residential, 1.2 million office, 475,600 hotel, 355,400 retail). Reduced Scope includes 5.4 million sq. ft. of development (4.7 million residential, 350,000 hotel, 200,000 each office and retail).
Wind	No impact	No impact	No impact	Full Build: 9 exceedences of San Francisco Planning Code pedestrian comfort criterion and 1 hazard criterion exceedence. Reduced Scope: 8 pedestrian comfort criterion exceedences; 1 hazard criterion exceedence. Case-by-case mitigation for future redevelopment projects.
Shadow	No impact	No impact	No impact	For both alternatives: some publicly accessible, open spaces would be expected to see a diminution in sunlight during certain periods of the day and the year. No mitigation is indicated.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Displacements and Relocation	No impact	Both alternatives would take 4 buildings/displace 2 non-residential units, other currently vacant. Mitigation would be relocation in accordance with the federal and state relocation acts.	2nd-to-Main Alternative Cut-and-cover Option would displace 60 residential units (120 residents) & 48 businesses (1,084 employees). 2nd-to-Mission Alternative Cut-and-cover Option would displace 60 residential units (120 residents) & 58 businesses (1,422 employees). Second-to-Main Tunneling Option would displace would displace 23 residential units (46 residents) & 40 businesses (425 employees). Second-to-Mission Tunneling Option would displace would displace 23 residential units (46 residents) & 50 businesses (763 employees). Mitigation: see Transbay Terminal discussion.	No impact.
Socio-economics	No impact	No adverse impact. Both alternatives would increase pedestrian activity and may contribute to the intensification of land uses and the redevelopment of underutilized parcels; thereby improving the economic vitality of the area.	No adverse impact. Both alternatives would provide improved access and therefore would enhance economic activity in this area.	No adverse impact. Both alternatives are expected to provide socioeconomic benefits by intensifying the urban character of the area and resulting in a more cohesive neighborhood with a balanced mix of residential and commercial uses.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Community Facilities & Services	No impact	Estimated 2 San Francisco Police Dept. officers would patrol new Terminal. *Additional officers and compensation would be required.* Life safety plan would address fire safety issues. Short- and long-term solid waste management measures are included.	For both alternatives, a life safety plan would be developed to address fire safety issues.	Estimated up to 115 San Francisco Police Dept. officers required/ no new police facilities. Develop security plan for future projects. Additional fire suppression personnel may be required/no new facilities likely. New emergency medical staff may be required. Likely supported by user fees.
Parklands, Schools and Churches	No impact.	No adverse impacts. Current concept for the new Transbay Terminal includes an open plaza for public use.	No adverse impacts. Private schools would likely benefit from the improved transit operations.	No adverse impacts. *New parks proposed as part of redevelopment plan.* Private schools would likely benefit from new transit-oriented development.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Fiscal and Economic Impacts	No impact.	Both Alternatives: Net real estate acquisition, demolition, and relocation costs between *$34.6 and $47.0* million *(LPA – West Ramp).*	Second-to-Main Alternative Tunneling Option net real estate acquisition, demolition, and relocation costs between *$44.1 and $50.6* million *(LPA).* Second-to-Mission Alternative Cut-and-Cover Option net real estate acquisition, demolition, and relocation costs between $130.4 and $137.6 million. Second-to-Mission Alternative Tunneling Option net real estate acquisition, demolition, and relocation costs between $65.7 and $69.0 million. Short-term loss of property tax revenue may be recouped or exceeded by new development. Short-term loss of payroll tax revenue avoided if businesses relocate in San Francisco.	Transfer of publicly-owned property from State to San Francisco Redevelopment Agency and Transbay Joint Power Authority to defray portion new Transbay Terminal costs.
Air Quality	No impact.	*No violation of CAAQS for permanent bus storage facility. Current terminal design includes glass partition between bus passenger waiting and loading areas*	Both Alternatives expected to produce decrease in vehicle miles traveled (VMT) with reduction of emissions from automobiles (reactive organic gases, carbon monoxide (CO), oxides of nitrogen, particulate matter, and oxides of sulphur).	No adverse impact. Incremental increases in CO concentrations at study intersections would not exceed state or federal standards. Locating development at a transit hub expected to divert to public transit many trips that would otherwise be made by private automobile.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Noise and Vibration	No impact.	Noise impacts from proposed bus storage lot *west* of Second St. would occur *at residential uses near facility.* Mitigation: construct sound walls along south side of the bus storage lot*s and along bus ramps leading from AC Transit lot. Install absorptive materials on inside of noise walls. Sound insulate residential unit on Perry Street.*	Vibration impacts would occur at 4 buildings. Mitigation: use high-resilience track fasteners or a resiliently supported tie system.	No impact.
Geology and Seismicity	No impact	Included in discussion of Caltrain Downtown Extension impacts.	**Both Alternatives – Cut-and-cover & Tunneling Options** Address potential for settlement by applying engineering principles and conventional construction techniques. Address potential liquefaction and ground deformation through: Regular track maintenance. Design & construction of foundations & shoring systems. Reinforce/stabilize soils, or rapid repair contingency plans. Design for maximum credible earthquake; use seismically resistant building structures. Pile supports for cut-and-cover portions, 4th & Townsend station.	Apply standard design and construction techniques for area. See Caltrain Extension discussion.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Geology Seismicity			**Both Alternatives – Tunneling Option** Due to fractured rock formations, use "Stacked Drift" and "Spiling" to prevent tunnel collapse.	
Water Resources	No Impact	No Impact	No Impact	No Impact
Floodplain	No Impact	No Impact	No Impact	No Impact
Utilities	No impact	Included in discussion of Caltrain Downtown Extension alternatives.	Relocation of existing underground utilities due to cut-and-cover excavation. Mitigation: coordinate with utility providers; avoid, relocate, and/or support in place utilities as necessary. Substantially reduced impacts from tunneling Option.	New development to connect to existing utility systems.
Electric and Magnetic Fields (EMF)	No impact	Included in discussion of Caltrain Downtown Extension alternatives.	EMF intensities and exposures are low. No health risks indicated.	No impact

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Historic and Cultural Resources	No Impact	Archaeological resource impacts included in Caltrain Downtown Extension discussion. Demolition and removal of the Transbay Terminal (*on the* National Register of Historic Places), as well as the existing loop ramp (contributing element to the Bay Bridge). Mitigation described under Caltrain Downtown Extension.	Previously unidentified archaeological sites may exist, and could be affected by any Alternative. Mitigation: Archaeological Research Design and Treatment Plan. Cut-and-cover Option (Both Alternatives) would require demolition of 13 buildings that contribute to historic districts. Mitigation measures to be set forth in a Memorandum of Agreement per Section 106 of National Historic Preservation Act. Tunneling option (Both Alternatives) would require demolition of 3 buildings that are *either individually eligible for NRHP and* contribute to historic districts. *Demolition would isolate 3 buildings in historic district.* Mitigation measures set forth in a Memorandum of Agreement (MOA) per Section 106 of National Historic Preservation Act.	No Impact
Hazardous Materials	No Impact	No Impact	Construct and operate fueling facility to comply with local, state and Federal regulations; handle and store fuels and solvents per California OSHA and local standards for fire protection and prevention.	No Impact

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Visual/ Aesthetics	Continued presence of existing features with low visual value, including surface parking lots, and in some cases, deteriorated buildings.	No adverse impact. Bus ramps to the Bay Bridge would occupy less area than existing ramps, and would be split, breaking up the mass of the ramps, enhancing views. New ramp decks would be less visually intrusive than existing. For West Ramp Alternative, the south and east portions of the existing ramp network would be demolished, opening up views outside of the Transbay Area.	Trench with concrete retaining walls approximately 30 feet deep south of Townsend St. and west of 5th St. Cut-and-cover construction between 5th Street and the Transbay Terminal includes demolition of all existing buildings above the alternative alignments. It is anticipated that new buildings would be constructed, with height and bulk similar to those demolished.	*Under either alternative,* Folsom St. building heights would be taller than existing. Provisions for development would help protect views, preserve open space, *and* enhance the pedestrian environment. *Under the Full Build Alternative, b*uildings may be broader and shorter, with setbacks preserved. *Under the Reduced Scope Alternative, buildings would be* taller and more slender preserving more of the existing views.
Safety and Security	No Impact	Security at Terminal responsibility of Transbay Terminal Joint Powers Authority.	Security at the Caltrain stations provided by the JPB via its contract with Amtrak. Security would increase over present levels commensurate with the increases in station activity.	Safety and security provided by San Francisco Police and Fire Departments.
Energy	No Impact	Included in Caltrain Downtown Extension discussion.	No adverse impact. Overall, Terminal and Train Extension would reduce the consumption of energy by diverting auto travel to rail and bus.	Redevelopment would require provision of energy from then current providers.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Transit Operations	10,000 passenger Transbay terminal capacity 32 bus bays. On-site bus storage	**For West Ramp Alternative**: Increase terminal capacity to 35,000 passengers. *48* bus bays provided. Off-site bus storage. **For Full Loop Ramp Alternative:** Increase terminal capacity to *35,000* passengers. Provide 51 bus bays. Maintain *some* on-site bus storage *and use Off-site-bus storage.*	**Either Alternative would** Increase linked transit trips in the corridor in 2020 by 10,000/day. Result in daily travel time savings of 7,200 person hours. Reduce VMT in Caltrain corridor by 260,000. Reduce BART San Mateo County entries/exits, but increase BART-Caltrain transfers in San Francisco. Reduce Muni and Samtrans service ($4 million annual savings) Increase transfers between Caltrain and other transit service.	Either Alternative would provide high-density development (business and residential) near major multi-modal transit facility to encourage increased transit usage and defray portion of Transbay Terminal costs. Less transit-oriented development under Reduced Scope Alternative.
Traffic Impacts	No Impact	All project components included in the Redevelopment impact discussion.	All project components included in the Redevelopment impact discussion.	7 intersections with adverse traffic impacts (significant under City and County of San Francisco guidelines) Mitigation: The City may request developers to contribute to the new Integrated Transportation Management System (ITMS) program.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Parking	No Impact	All project components included in the Redevelopment discussion.	All project components included in the Redevelopment discussion.	Approximately 1,950 (14 percent of study area parking) off-street parking spaces would be eliminated, including 260 spaces within the current Transbay Terminal building. Development (business and residential) near major multi-modal transit facility expected to encourage increased transit usage with reduced parking demand.
Non-motorized Traffic	11 corners and 2 crosswalks would operate at pedestrian Level of Service F.	All project components included in the Caltrain Downtown Extension impact discussion.	11 corners and 2 crosswalks would operate at pedestrian Level of Service F. Although not required, pedestrian mitigation measures are suggested. A total of *232* bicycle storage spaces would be needed at the new Transbay Terminal.	All project components included in the Caltrain Downtown Extension impact discussion.

Table S-2: Summary of Construction Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT
Transit Operations	No Impact	**For the Downtown Extension 2nd Street Cut-and-Cover Option**: - Muni's Line 10 would be re-routed. - Potential re-striping of 3rd Street could affect the performance of Muni Lines 15, 30, 45 and 81X.
Vehicular Traffic	No Impact	**Transbay Terminal** construction would affect access to 4 loading docks on Minna Street. **Both Caltrain Alternatives - Cut-and-Cover Option** would require: A total of *31* trucks per hour. Block-by-block closures of 2nd St. 3rd Street would be restriped as detour with 3 northbound and 2 southbound lanes. On-street parking will be prohibited, and the bus lane will be a mixed flow lane. A left-turn lane will be added on Howard at the 3rd/Howard intersection. Temporary closure or alternative access for 21 driveways (2nd to Main Alternative), or 11 driveways (2nd to Mission Alternative). The 2nd Street Tunneling Option would reduce the number of driveways affected. **Tunneling Option for Caltrain Extension Alternatives** would require detour plans and parking removal only for the block of Second Street between Howard and Folsom Streets (Both Caltrain Extension Alternatives) and for Main Street between Howard and Harrison (Second-to-Main Alternative) or for Mission Street between Beale and The Embarcadero (for Second-to-Mission Alternative). **Contra-flow lanes to the temporary terminal** would: Eliminate 2 southbound traffic lanes & 12 curbside parking spaces on Beale Street between Howard and Folsom Streets. Reduce Folsom Street from 4 to 2 lanes between *Essex* and Main streets. 9 parking spaces would be removed. Main St. would be reduced from 3 to 2 lanes between Howard and Folsom. 48 motorcycle parking spaces & 9 automobile spaces would be removed. On-street parking spaces on Howard St. would be removed between Beale and Main. *Convert Essex northbound lanes to southbound lanes. Add a contraflow lane.*

Table S-2: Summary of Construction Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT
Parking Impacts	No Impact	**For both Downtown Extension alternatives (Cut-and-Cover Option)**, on-street parking would be temporarily removed along Townsend, 2nd, and 3rd streets. 2nd Street parking would be closed and re-opened on a block-by-block basis. Parking on 3rd Street would be removed to accommodate detour for 2nd Street traffic. Contractor would post dates and times of parking closures and openings. **Tunneling Option for both Downtown Extension Alternatives.** Parking removal and detours would be required only for 2nd and 3rd Streets only between Folsom and Howard. Contractor would post dates and times of parking closures and openings. Tunneling Option would not require temporary removal of parking on 3rd Street. One block of parking on Second Street would be required between Folsom and Howard Streets.
Pedestrians and Bicycle Traffic	No Impact	**Temporary bus terminals would have the following impacts:** Casual carpool queues on the east side of Beale Street would be temporarily relocated to the west side of Beale Street. Walk and bicycle distances to the temporary terminal would be increased by 4 blocks for most pedestrians and bicyclists.
Neighborhoods & Businesses	No Impact	Most substantial impacts would occur on **streets affected by cut-and-cover construction**. Residential uses would be subject to reduced vehicle access, increased traffic congestion, increased noise, and construction-related dust. Businesses would experience the same type of disruptions, with the greatest impact to retail establishments, which rely on visibility and walk-in traffic. **For Cut-and-Cover Options – Both Alternatives,** this includes Townsend, 2nd Street between Brannan and Streets. **For Second-to-Main Alternative**, this includes Main Street. **For Second-to-Mission Alternative**, this includes Mission Streets. For Both Alternatives Tunneling Option, this includes Second Street between Folsom and Howard. **Mitigation:** conduct outreach to affected residents and businesses; develop traffic management plan; maintain a field office and information telephone line; post informational signs; maintain sidewalks during construction where feasible; install construction decking flush with adjacent surfaces; install construction fencing.
Community Facilities & Services	No Impact	Safety & security services would be provided by San Francisco Police and other security personnel. Any impacts to emergency access due to change in traffic conditions would likely be minor and not affect emergency response times. The San Francisco Fire Department would review project plans to ensure provision of adequate life safety measures and emergency access during construction. The amount of construction debris could be adequately accommodated by existing landfills. Mitigation: construction specifications will require the use of recycled construction materials where feasible, and include specification regarding the recycling of construction and demolition debris.

Table S-2: Summary of Construction Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT
Parks, Schools, Religions Institutions	No Impact	For all alternatives/construction options: construction-related traffic delays may inconvenience persons gaining access to these facilities.
Air Quality	No Impact	**For all Alternatives and Options**: Temporary emissions of nitrogen oxides, carbon monoxide, and sulfur oxides, and dust (PM_{10}). **Mitigation** would include: Water active construction areas at least twice daily. Cover trucks hauling loose materials or require trucks to maintain 2 feet of freeboard. Pave, apply water 3 times/day, or apply soil stabilizers on unpaved roads, parking and staging areas. Sweep daily paved access roads, parking and staging areas. Sweep streets daily if visible soil material is carried onto adjacent public streets. Install sandbags or other erosion control measures. Replant vegetation as quickly as possible.
Noise & Vibration	No Impact	**For all Alternatives and Options**, noise and vibration from construction activities could intrude on nearby residents and workers. **Mitigation** would include: Construct a sound wall as necessary for construction site. Comply with San Francisco Noise Ordinance. Conduct noise and vibration monitoring. Conduct inspection and noise testing of equipment. Implement community liaison program. Include noise control requirements in construction specifications. Limit use & hours of construction high vibration-generating techniques.
Water Resources	No Impact	**For all Alternatives and Options**: Grading, tunneling, and utility excavations would increase the sediment load to storm sewers, and wind-transported soils could affect nearby surface waters. Construction dewatering would locally result in temporary lowering of the water table and could promote downward migration of contaminants. **Mitigation** would include: Manage construction spoils to minimize wind dispersion. Dewater in stages and discharge dewatered effluent to sanitary sewer. Test groundwater samples to obtain a batch discharge permit from San Francisco Public Works Department; treat effluent prior to discharge if necessary.

Table S-2: Summary of Construction Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT
Utilities	No Impact	Impacts for overall project were addressed in prior table. If necessary, disruptions to service during construction would be short-term and carefully scheduled with advance notice given to affected customers.
Electromagnetic Fields	No Impact	No Impact
Historical and Cultural Resources	No Impact	Caltrain Extension Alternatives and Options require construction easement at the southeast corner of 166-178 Townsend Street, a contributor to the significance of the Rincon Point / South Beach Historic Warehouse – Industrial District. Proposed **mitigation:** underpin the building prior to construction. For archeology: If buried cultural materials are unearthed during construction, work in the vicinity would be halted until a qualified archaeologist can assess significance. If human remains are encountered during construction, no further disturbance shall occur until the County Coroner has made the necessary findings. Long-term impacts to archaeological and historical resources are addressed in Section 5.14.
Hazardous Materials	No Impact	Potential for direct impacts from pre-existing hazardous waste at 7 sites, indirect impacts from 27 sites. Exposure to asbestos or lead could result from demolition of the Transbay Terminal, which may have asbestos containing materials (ACM) and/or lead-based paint. **Mitigation** measures would include: Conduct further site investigation and develop mitigation plan for disposal of contaminated soil and discharge of contaminated effluent. Workers who may have contact with contaminated soil or groundwater would be required to have appropriate health and safety training. A worker health and safety plan would be developed, implemented and monitored. Any ACM and/or lead-based paint in the Terminal would be identified. If necessary asbestos will be abated and lead-based paint removed prior to demolition.
Aesthetics/ Visual Impacts	No Impact	Construction equipment and supplies would be visible, and evidence of construction activity would be noticeable to area residents, employees, and visitors. **Mitigation** is not required, but the project contractor will minimize "spill over" light or glare effects on adjacent areas at night. The TJPA and JPB, through on-site field office, will make all efforts possible to minimize specific aesthetic and visual effects of construction identified by neighborhood businesses and residents.
Geologic Impacts	No Impact	**For both Downtown Extension Alternatives - Cut-and-Cover Option**, poor quality bedrock under Second Street from Brannan Street to Folsom Street would be addressed by special shoring techniques. **For the both Downtown Extension Alternatives Tunneling Option**, specialized tunneling techniques are recommended including "spiling" and "stacked drift."

Table S-2: Summary of Construction Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT
Safety and Security	No Impact	To ensure safety during construction, best construction management practices would be required to be in place: Construction and staging areas would be fenced and lighted. Recognized safety practice requirements would be followed for the use of heavy equipment and the movement of construction materials. The Construction Manager would be responsible for job site safety and security. Emergency response personnel within San Francisco would be available for immediate response on an as-needed basis.

S.4 ESTIMATED CAPITAL COSTS

The Locally Preferred Alternative for the rebuilt Transbay Terminal and the underground Caltrain Extension *is* estimated to cost *$2.083 billion escalated to year of expenditure. Selection of another alternative other than the LPA would result in higher capital costs.* The Transbay Terminal component, *West Ramp Alternative,* of the Project is estimated to cost *$1,101.68 million escalated to year of expenditure. The Second-to-Main, tunneling Alternative for* the Caltrain Extension Alternative *is estimated to* cost *$971.84 million escalated to year of expenditure.*

Tables S-3 and S-4 summarize capital costs *for the Locally Preferred Alternative components of the* new Transbay Terminal and Caltrain Downtown Extension improvements, respectively. Cost estimates include net land acquisition costs and all agency costs for project oversight as well as general project contingency and reserve.

Table S-3: Transbay Terminal Capital Cost Estimate
West Ramp Alternative (LPA)
(Millions of Dollars – Year of Expenditure)

Activity	*Cost Estimate*
Operations Analysis, Preliminary Engineering, Geotechnical Engineering), Program Review/Value Engineering, Final Design & Permitting, Owner Costs	*$107.87*
Acquire Property, Design, Construct Temporary Terminals (Transit and Greyhound)	*$28.29*
Acquire Property & Demolish Buildings to Build Terminal	*$36.54*
Demolish Existing Terminal & Ramps, Construct New Terminal & Ramps	*$909.22*
Construct Permanent Off Site Bus Storage Facility	*$24.45*
TOTAL COST ESTIMATE	***$1,106.37***

Notes:

- *Costs escalated to year of anticipated expenditure between 2004 and 2011.*
- *Costs are for West Ramp Alternative*
- *Other qualifications and assumptions apply, including coordination with Caltrans during the retrofit of the Western Approach and bus ramp retrofit projects.*
- *Total assumes high end of 2001 real estate estimate escalated to year of expenditure.*
- *Construction costs include a 25% construction contingency, 8% for construction management, and 10% project reserve. Owner costs are factored into each category.*

Source: *MTC, SMWM, Oppenheim/Lewis, Sedway Group, Parsons, 2003*

Table S-4: Capital Cost Estimate for Caltrain Downtown Extension Second-to-Main Street Tunneling Option – Locally Preferred Alternative
(Millions of Dollars – Year of Expenditure)

Activity		*Cost Estimate*
Operations Analysis, Preliminary Engineering, Geotechnical Engineering, Program Review/ Value Engineering, Final Design & Permitting, Owner Costs		*$76.83*
Acquire Property & Demolish Buildings along Extension		
Acquisition/Relocation for Train Subway	*$82.85*	
Demolition	*$1.24*	
Resale Proceeds	*($31.12)*	
Subtotal		*$52.97*
Design and Relocate Utility Lines along Extension		*$52.90*
Construct Surface Rail & Improvements at Train Yard		*$13.37*
Construct Cut-and-Cover and Retained-Cut – Caltrain Extension		*$427.13*
Reconstruct Streets		*$7.09*
Construct Train Tunnel		*$287.70*
Construct Track & Systems Facilities		*$58.54*
TOTAL COST ESTIMATE – Caltrain Downtown Extension		***$976.53***

Notes:

- *Costs escalated to year of anticipated expenditure between 2004 and 2011.*
- *Costs are for Second-to-Main Tunneling Alternative, the Locally Preferred Alternative.*
- *Total assumes high end of 2001 real estate estimate escalated to year of expenditure.*
- *Construction costs include a 25% construction contingency, 8% for construction management, and 10% project reserve. Owner costs are factored into each category.*
- *The optional underground pedestrian connection from the train mezzanine to The Embarcadero Muni Metro/BART Station is estimated to cost $45.3 million.*
- *An additional $235 million could need to be added to the Project costs for purchase of dual mode locomotives if the Caltrain corridor is not electrified.*

Source: *Parsons, 2003*

S.5 PROJECT'S INCLUSION IN REGIONAL TRANSPORTATION PLAN

The Transbay Terminal / Caltrain Downtown Extension / Redevelopment Project is included as one of the top funding priorities in the financially constrained portion (called "Track 1") of the Regional Transit Expansion Policy (RTEP).1 The RTEP is the transit expansion element of the 2001 Regional Transportation Plan (RTP).

The 2001 RTP, including the RTEP, was adopted by the Metropolitan Transportation Commission in March 2002. The Transbay Terminal/Caltrain Downtown Extension/ Redevelopment Project is therefore included in the financially constrained 2001 RTP.

1 The Project is identified as the "Caltrain Downtown Extension/Rebuilt Transbay Terminal" in the RTEP and RTP.

The 2003 Transportation Improvement Plan (TIP) was federally approved in February 2003. The proposed Project is included in the 2003 TIP for Preliminary Engineering and design.

S.6 PROPOSED FUNDING BY SOURCE

Table S-1 presents *a funding plan for the LPA that was adopted by the TJPA Board and* described in Chapter 2 *of this Final EIS/EIR.* These funding options are based on the funding plan developed jointly by the City and County of San Francisco, the San Francisco County Transportation Authority, the JPB, and MTC as part of MTC Resolution 3434. The financial plan in this *Final EIS/EIR* is based on financial projections and governmental actions that are not finalized.

Table S-1 identifies revenue sources to fund the expected financing cost of the project. The other funding options have also been developed using Resolution 3434 funding plan as the point of departure, with adjustments as necessary within the framework of project eligibility and assumed overall availability of the different funding sources.

All improvements to the Transbay Terminal/Extension project could be classified as Transportation Improvements under Title 23 and are therefore eligible for a subordinated loan from the federal government as a part of USDOT's TIFIA program, which was authorized in TEA-21. This program may provide various forms of credit support for large transportation projects for up to one-third of a project's total cost. Revenues that could be pledged to such a loan include:

- Tolls from the San Francisco Bay Bridge,
- Lease income on retail space within the terminal,
- Sale or lease of properties transferred to the Transbay Joint Powers Authority, and
- Tax Increment Revenues on project areas created by the San Francisco Redevelopment Agency.
- *Passenger facility fees.*

While additional consideration could be given to the relative contribution of various funding sources to the project, to avoid speculation regarding the funding sources to be used and the viability of the financially constrained plan, the variations on the funding plan shown in Table S-1 are based on existing funding sources. There are, however, prospects for additional funding from new sources.

Table S-5: Project Estimated Capital Costs and Funding Sources (Millions of YOE Dollars)	
Transbay Terminal	**West Ramp**
Caltrain Extension Alternative	**Second-to-Main Tunnel Option**
Capital Costs and TIFIA Debt Service	
Total Capital	$2,082.9
Debt Service	$1,857.2
Total Cost	$3,940.1
Funding Source	
Local/State	
Regional Measure 1	$53.0
RTIP [1]	$23.0
San Mateo Sales Tax [2]	$27.0
San Francisco Sales Tax Reauthorization [3]	$295.0
AB1171 [*4*]	$150.0
Land Sales [*5*]	$287.9
Tax Increment [*6*]	$534.2
Net Operating Revenues [*7*]	$140.2
Bridge Toll Increase (SB 916) [*8*]	$150.0
High Speed Rail Bonds [*9*]	$475.0
Other [*10*]	$*182.5*
PFC [*11*]	$873.0
Leveraged Lease Transaction [*12*]	$50.2
Federal	
TIFIA Loan	$689.7
Section 1601 [*13*]	$9.4
Total Funds	**$3,940.1**

Notes:

[1] Per MTC's RTP, which assumes $23 million in RTIP (Regional Transportation Improvement Program), STP (Surface Transportation Program), and CMAQ (Congestion Mitigation and Air Quality Improvement Program) funds.

[2] San Mateo County contribution (per MTC's RTP).

[3] San Francisco County contribution per Expenditure Plan for the Reauthorization of the Local Sales Tax for Transportation, approved June 17, 2003, escalated to YOE $s. Approved by voters November 2003.

[*4*] Per MTC's RTP. New Source of discretionary funds to MTC, pursuant to State law passed in October 2001 to complete the seismic retrofit of Bay Area bridges and related projects, consistent with Regional Measure 1.

[*5*] Per *valuation by CB Richard Ellis for San Francisco Redevelopment Agency, August 2003, escalated to year of expenditure.*

[*6*] Tax Increment amounts from Seifel Consulting, *August 8, 2003 for San Francisco Redevelopment Agency.*

[*7*] Per Jones, Lang LaSalle and Nancy Whelan Consulting, *September 2003.* Includes $3 million in annual BATA bridge toll operating support per MTC Resolution 3434 *and SB 916 (proposed).*

[8] Regional Measure 2, which includes $150 million for the Project, was passed by the voters in Bay Area counties on March 2, 2004.

[9] Per SB 1856, funding for the Caltrain Downtown Extension may be provided as a part of the High Speed Rail bond initiative. The bond may be approved by the voters in November 2004.

[*10*] Other includes potential funding from the following sources: Proposition 42, *federal earmarks* and *additional local sales tax.*

[*11*] A Passenger Facility Charge (PFC) is assumed for Caltrain, AC Transit *and High Speed Rail* passengers. The PCF would be *$0.75 for Caltrain passengers, $0.25 for AC Transit passengers and $3 for High Speed Rail passengers.*

[*12*] The Terminal Facility's value is assumed to be $1.003 or $1.163 billion and the net benefit rate to be 5%. Leveraged lease transactions are encouraged by the FTA as innovative financing mechanism.

[*13*] Per MTC's RTP, which assumes $9.37 million in Section 1601 design grant.

Sources: San Francisco County Transportation Authority, Seifel Consulting, Jones, Lang LaSalle, Openheim/Lewis, Peninsula Corridor Joint Powers Board, Sedway Group, Nancy Whelan Consulting, Parsons Transportation Group, 2001, 2002, *2003, and 2004.*

S.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The West Ramp Transbay Terminal, Second-to-Main, Tunneling Option, Full Build is the environmentally superior alternative in that it:

- Fully meets the purpose and need for the project,
- Provides the most efficient transit service within the new terminal,
- Provides better views and opportunities for coordinated development in downtown San Francisco with fewer adverse land use impacts,
- Requires the least amount of property acquisition, including the fewest historic structures, therefore involving the fewest business and residential relocations,
- Provides dense transit oriented development near a multi-modal transit facility to help defray the costs (via tax-increment financing) for a multi-modal transit facility, thus encouraging increased transit use,
- Has the lowest level of construction impacts on properties along Second and Third Streets.

This alternative was selected by the Transbay Joint Powers Authority as the Locally Preferred Alternative.

S.8 ISSUES TO BE RESOLVED

Resolution is required regarding the ultimate disposition of California high-speed rail voter initiative that is pending on a future election ballot, as well as the future implementation of the Caltrain electrification program.

CHAPTER 1: PURPOSE AND NEED FOR THE PROJECT

1.1 PURPOSE

The primary purposes of the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project are to:

- Improve public access to bus and rail services;
- Modernize the Transbay Terminal and improve service;
- Reduce non-transit vehicle usage; and
- Alleviate blight and revitalize the Transbay Terminal area.

The project is needed because the present Transbay Terminal, which was built in 1939, does not meet current seismic safety or space utilization standards. The need to modernize the Transbay Terminal provides an opportunity to revitalize the surrounding area and to extend Caltrain service from its current terminus outside the downtown area into the San Francisco employment core.

Undertaking these project components would address the following associated needs:

- Provide a multi-modal transit facility that meets future transit needs;
- *Improve the Terminal as a place for passengers and the public to use and enjoy.*
- Alleviate conditions of blight in the Transbay Terminal Area;
- Revitalize the Transbay Terminal area with a more vibrant mix of land uses that includes both market-rate and affordable housing;
- Facilitate transit use by developing housing next to a major transit hub;
- Improve Caltrain service by providing direct access to downtown San Francisco;
- Enhance connectivity between Caltrain and other major transit systems;
- Enable direct access to downtown San Francisco for future intercity and/or high-speed rail service;
- Accommodate projected growth in travel demand in the San Jose – San Francisco corridor;
- Reduce traffic congestion on US Highway 101 and I-280 between San Jose and San Francisco and other routes;
- Reduce vehicle hours of delay on major freeways in the Peninsula corridor;
- Improve regional air quality by reducing auto emissions;
- Support local economic development goals; and
- Enhance accessibility to employment, retail, and entertainment opportunities.

The Metropolitan Transportation Commission (MTC), State of California, City and County of San Francisco, and area transit providers (AC Transit, Muni, Golden Gate, SamTrans, and JPB) have evaluated options for replacement of the 60-year-old Transbay Terminal facility, due to its

age, need for seismic upgrade, and inadequate facility layout. A properly designed, new terminal would improve space utilization, passenger circulation, signage, security, safety, and the overall transit-rider experience.

A multi-modal transportation facility would provide a centralized location for public and private bus (AC Transit, Muni, Golden Gate, Greyhound), paratransit, and rail (Caltrain) services in San Francisco's growing Financial District/South of Market Area and would enhance transit access for passengers arriving in and departing San Francisco. The extension of the Caltrain system from its current terminus at Fourth and Townsend Streets to a new Transbay Terminal at First and Mission Streets would improve access for residents and workers in San Francisco's high-density financial district and improve connections to other local and regional transit providers. Additionally, a multi-modal terminal facility and Caltrain extension would facilitate future expansion of regional express train service and implementation of statewide high-speed rail service.

A new, multi-modal transportation facility close to housing and major retail and commercial opportunities would increase transit ridership, thus reducing the number of non-transit vehicles traveling on area streets, highways, and bridges. Reduction in automobile vehicle miles of travel would result in reduced vehicular air emissions and an improvement in air quality.

1.2 NEED

The project location and vicinity are shown in Figure 1.2-1. This section discusses the existing deficiencies in the Transbay Terminal and its surrounding area and the other transportation problems that the proposed project will address. In identifying current and future needs in the Terminal vicinity and the Caltrain corridor that would be served by the Project, the following paragraphs also summarize past efforts that have been taken to address these needs.

1.2.1 PREVIOUS EFFORTS TO IDENTIFY AND ADDRESS DEFICIENCIES IN THE EXISTING TRANSBAY TERMINAL STRUCTURE AND OPPORTUNITIES FOR COORDINATING REDEVELOPMENT

A decade of planning preceded current efforts to identify replacement solutions for the Transbay Terminal, which does not meet modern seismic safety or space utilization standards. The present Transbay Terminal building, which extends across both Fremont and First Streets, the related loading areas in the "hump" and crescent areas above and fronting on Mission Street, and the loop ramps connecting to the Bay Bridge occupy a large site. Much of this area is underused, which has long generated interest in developing a more efficient transportation facility that would free land for other uses.

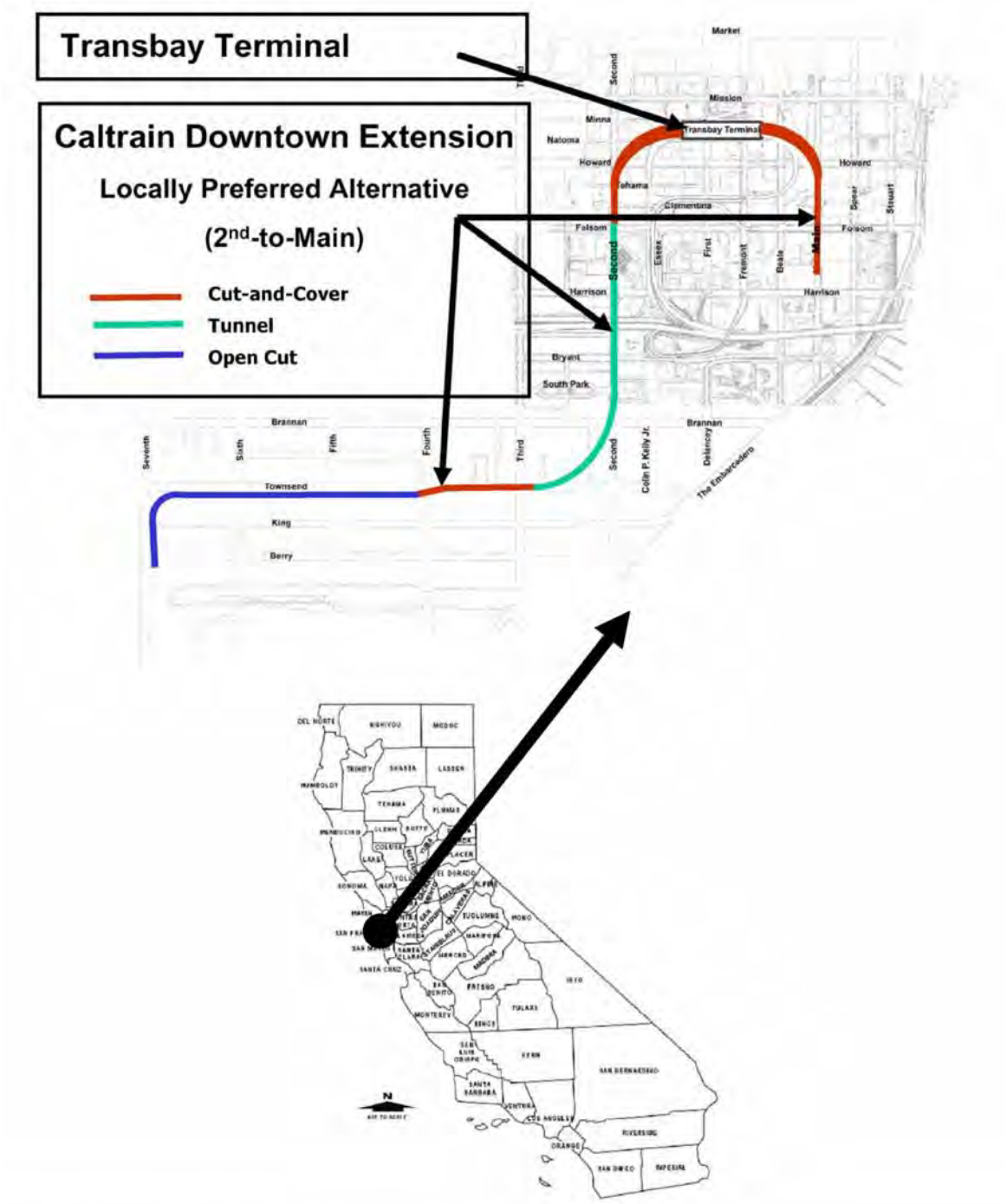


Figure 1.2-1: Project Location and Vicinity Map

The present terminal building does not meet current building or seismic safety codes, and the 1989 Loma Prieta earthquake raised seismic safety concerns about the terminal structure. Caltrans, as the Terminal owner and operator, reviewed the need for its seismic retrofit. As part of this effort, Caltrans determined that the access ramps to and from the Bay Bridge to the Terminal are seismically deficient and in need of repair or replacement.

In November 1992, Caltrans and the Office of the State Architect released alternative designs for improvements to the existing Terminal. In December 1992, the City of San Francisco and Caltrans agreed that, given the high estimated costs to bring the existing Terminal building to seismic and code compliance, it was reasonable also to consider its replacement.

In November 1993, Caltrans and the MTC – the transportation planning, financing, and coordinating agency for the nine-county Bay Area region – conducted a "Transit Needs Study" to identify operational needs for an upgraded or new facility (for example, numbers of bus bays, necessary space for bus operations and passenger facilities) while Caltrans proceeded with critical seismic and safety improvements. Based on the City and County of San Francisco Planning Department's October 1993 "Transit Terminal Study," preliminary alternatives were proposed in a City Planning Department Report to the Mayor.

In June 1994, the City and County of San Francisco and Caltrans agreed to undertake a study for alternatives to replace the Transbay Terminal. In December 1994, the San Francisco Board of Supervisors created the Transbay Redevelopment Survey Area to prepare a land use and transportation plan. During 1995 and 1996, terminal upgrade and replacement alternatives were studied by the San Francisco Redevelopment Agency and Planning Department, Caltrans, a Policy Advisory Committee representing the transit operators using the Transbay Terminal, a Citizens Advisory Committee, and a Technical Advisory Committee.

The Transit Terminal Decision Report (released in October 1995) yielded three primary options: (1) a new transit terminal on the site of the present Transbay Terminal, (2) a new terminal between Main and Beale Streets, south of the 201 Mission Street building and north of Folsom Street, and (3) a surface terminal at the Main/Beale site. On March 4, 1996, the San Francisco Board of Supervisors recommended the Main/Beale site (identified as Main/Beale North) as the City's preferred bus terminal alternative and recommended locating the proposed new Caltrain terminal underground at the site of the existing Transbay Terminal. The Board of Supervisors subsequently reversed this action, as discussed below at the end of this Section 1.2.1.

The September 1995 Transbay Terminal Reconfiguration Structural Analysis Report prepared for the Peninsula Corridor Joint Powers Board (JPB) in support of the 1997 Caltrain San Francisco Downtown Extension Project Conceptual Design Draft EIS/EIR considered whether the existing Transbay Terminal, retrofitted to withstand a maximum credible earthquake event, could accommodate a Caltrain Extension above-ground. This would avoid having to demolish the Terminal to construct the train box below ground level on the existing site. The structural analysis showed that the structure could be strengthened to take a new bus deck plus a train station and conform to the seismic provisions of the latest Uniform Building Code. Such a

strengthening would further limit space utilization within the Terminal, however, which would render the building impractical for multiple uses, including retail or commercial space. Following retrofit, commercial and passenger uses of the levels above the parking structure would be severely limited because the new shear walls would occupy substantial amounts of space, reducing the maximum size of the remaining rentable units and compromising pedestrian and customer flows. Given the costs and construction impacts of seismic retrofit, these limitations weighed against retrofit in comparison with the advantages of a new and more functional structure. Viewed from the perspective of the present study, seismic retrofit of the existing Terminal would not address the project purposes to modernize the Transbay Terminal, improve services, and revitalize the Terminal area.

In 1997, the City prepared a Draft Environmental Impact Report (EIR) for the Transbay Terminal Redevelopment Area Plan and construction of a new Transbay Terminal at the Main/Beale site. This project was terminated before the Draft EIR was circulated.

On January 1, 1998, MTC began operations as the Bay Area Toll Authority (BATA), created by the California Legislature to administer toll revenues on the Bay Area's seven state-owned toll bridges. In December of that year, BATA entered into a consultant contract to conduct the "Transbay Terminal Improvement Plan" study. A Transbay Panel working group was formed, consisting of public and private agencies and organizations that would be affected by the project. An Executive Committee was also formed, consisting of executive staff representatives and policy board members from AC Transit, the City and County of San Francisco, the JPB, Caltrans, and MTC. In February 1999, the San Francisco Board of Supervisors passed a resolution repealing its former endorsement of the Main/Beale site for a new terminal and urging the "City and County of San Francisco to work expeditiously with AC Transit, the MTC and Caltrans to retain AC Transit regional bus service at the current Transbay Terminal site."

The Transbay Terminal Improvement Plan study proceeded in two phases. Phase 1 identified terminal components and functional requirements to guide the development of design concepts for the new facility. This phase was completed in 1999. Phase 2 evaluated three terminal design concepts – named after Dickens novels – and BATA selected a concept (called "Great Expectations") to be carried forward for additional analysis. During 2000, refinements were made to the design concept to meet the needs of the transit operators that would use the new terminal, and project cost estimates and an implementation plan were developed. The "Great Expectations" concept is the basis for the Transbay Terminal West Ramp Alternative component of the proposed project (see Section 2.2.1.1). Another alternative evaluated by the Transbay Terminal Improvement Plan study, called "Our Mutual Friend," is the basis for the Transbay Terminal Loop Ramp Alternative component of the proposed project (see Section 2.2.1.2).

1.2.2 PROVIDING A MULTI-MODAL TRANSIT FACILITY THAT MEETS FUTURE TRANSIT NEEDS

A critical element in the Transbay Terminal Improvement Plan has been to ensure that design, construction, and operation of the new Transbay Terminal meet specific performance criteria to maximize the usefulness of the facility for transit operations. This need focuses on future (Year 2020) circulation, storage, loading, and passenger space requirements for AC Transit, Muni, Golden Gate, Greyhound, and paratransit services as well as a Caltrain and high-speed train station in downtown San Francisco. A new multi-modal transit facility on the site of the present Transbay Terminal would improve space utilization and improve operations for the various transit service providers.

1.2.2.1 AC Transit

Estimates of current and future AC Transit ridership summarized in Transbay Terminal Improvement Plan Working Paper 3.5: Summary of Phase 1 Findings by the Transbay Panel (June 11, 1999) are presented in Table 1.2-1.

Table 1.2-1: Estimates of Current and Future AC Transit Ridership

1998 All-Day (Actual)	1998 PM Peak Period (4:00-7:00)	1998 PM Peak One Hour	2020 All Day (Forecasts)	2020 AM Peak One Hour (Forecasts)
13,000	5,720	3,400	18,000 – 23,000	4,500 – 6,100

Assuming:
55% of daily total travel demand is eastbound, 45% westbound
44% transit growth 1990 – 2020
29.5% transit growth 1998 – 2020
80% of daily ridership occurs in the peak period
60% of peak period ridership occurs in the peak one hour

Source: Transbay Terminal Improvement Plan Working Paper 3.5: Summary of Phase 1 Findings by the Transbay Panel (June 11, 1999)

The lower end of the range for the projected 2020 ridership is based on the 1998 Regional Transportation Plan (RTP) EIR. Other estimates are higher. The San Francisco Bay Crossing Study (1991) projected AC Transit patronage levels would grow more rapidly and reach higher levels sooner than the RTP EIR forecasts. This study projected 2010 weekday ridership in the 18,000 to 21,000 range, which suggests peak one-hour ridership of 4,800 to 5,600. Even if growth between 2010 and 2020 were as low as one percent per year, weekday ridership could reach the 20,000 to 23,000 range, with peak hour/peak direction ridership in the range of 5,300 to 6,100 by 2020. This is almost twice current (1998) ridership levels. AC Transit's own study of potential Transbay service demand estimated 25 to 50 percent increases. Depending on the forecast method and assumptions, AC Transit's passenger-per-peak-hour ridership could be in the range of 4,500 to 6,100 by 2020.

It is the peak vehicle movements that define terminal space requirements. The Transbay Terminal Improvement Plan estimated that – even assuming higher bus loads (as a result of

improved schedules, marketing, and the use of higher capacity buses) – AC Transit could require 31 new stops within the terminal as opposed to the current 24 (or essentially the entire length of platforms two and three) to meet this level of future service. Increasing bus service also increases terminal or terminal area midday bus storage requirements. Accommodating AC Transit's space requirements in a new, multi-modal transit facility would ensure that AC Transit would be able to meet its future service needs to the horizon year.

1.2.2.2 Muni

Currently, Muni buses and trolleys with one exception do not use the interior of the Transbay Terminal, but 11 Muni routes serve the Terminal, and four terminate there, one inside the terminal and three in the "hump" area on the north side between Fremont and First Streets. Bus stacking and queuing and conflicts with pedestrians are already problems during peak commute hours because this area is somewhat undersized for Muni's current operation. Traffic congestion on Fremont Street, which is a major off-ramp for Bay Bridge commuters, delays Muni in the morning peak; evening buses are delayed by queuing along First Street, which is a major on-ramp to the Bay Bridge. About 80 percent of current Muni riders who use the Transbay Terminal are transferring to other bus operations there (primarily AC Transit), while five percent transfer to another Muni line and the remaining 15 percent walk to their destinations, primarily in the Financial District.[1]

Muni has no plan to increase service to the Transbay Terminal, but a new Terminal that improves the circulation patterns for its routes could greatly facilitate current and future Muni service and improve intermodal connectivity. Also, Muni's needs would change dramatically if a new regional or intercity rail service, such as Caltrain, Amtrak intercity, and/or California High-Speed Rail were added to the terminal. These needs have not been documented, but estimates for as much as 50 percent more space for Muni operations have been cited.[2]

1.2.2.3 Golden Gate Transit

Golden Gate Transit (operated by the Golden Gate Bridge, Highway, and Transportation District, GGBHTD) does not operate or seek to operate within the Transbay Terminal although it currently leases ramp bays as nighttime layover locations. The key issue with a new multi-modal transit facility for Golden Gate Transit is midday bus storage. Golden Gate currently stores 125 buses at Main / Folsom under a temporary lease with Caltrans; this lease terminates soon and Golden Gate needs to find alternative midday storage. Although Golden Gate does not plan to expand its services to the Transbay Terminal, its current and future operations are linked to the storage issue. Without a nearby location to store its buses in the midday, Golden Gate's San Francisco operations cannot increase and current operations are jeopardized. Providing storage

[1] Muni memorandum by John Katz, July 27, 1998, quoted in Transbay Terminal Improvement Plan Working Paper 3.5: *Summary of Phase 1 Findings by the Transbay Panel* (June 11, 1999).

[2] Ibid.

for Golden Gate buses in concert with the new terminal facility is a key component of the new terminal's functional requirements.

1.2.2.4 Greyhound

Greyhound, a private bus company and package delivery service, has invested extensively in the current Transbay Terminal, making major tenant improvements to its bus deck area. In exchange, Greyhound was given a long-term lease with buy-back provisions that require its compensation if its space were made temporarily or permanently unavailable. Greyhound is the only operator in the Terminal with a long-term lease, with nearly 20 years remaining. Greyhound relocated to the Transbay Terminal from its former terminal on Sixth Street because of the regional transit connections offered. While it does not keep statistics, the carrier believes that many of its passengers travel to and from the Terminal area on other public transit services. Greyhound currently operates from an island on the second level bus deck and makes extensive use of the ramp structures from the freeway into the Terminal. Greyhound operates about 86 buses per day, with additional service during peak and holiday periods; approximately 100,000 annual passengers are served at Greyhound's Transbay Terminal location. The current bus island accommodates 13 over-the-road coaches in a parallel configuration. Greyhound does not store buses in the Terminal nor does it plan to increase its level of service but it *has* needs *for* added space to provide passenger amenities, including ticketing, waiting and retail areas. A new multi-modal transit terminal that improves space utilization for all operators would meet these needs.

1.2.2.5 SamTrans

SamTrans provides connections to the Daly City and Colma BART stations, the San Francisco International Airport, and downtown San Francisco. Nine lines provide commute service between San Mateo County and the Transbay Terminal. Seven of these lines operate only during peak periods. SamTrans currently operates from the circular driveway at the front of the Transbay Terminal.

1.2.2.6 Regional Paratransit

The Transbay Terminal is a connection point for several regional paratransit services, including East Bay Paratransit Consortium, SamTrans' Redi-Wheels, Golden Gate Transit's Whistlestop Wheels, and Muni's paratransit. Current numbers of riders are small, but all operators anticipate substantial increases in ridership that would require them to increase services to the Transbay Terminal. Operators have stated that paratransit demand may be depressed because the current facility is not fully accessible. A modern multi-modal transit facility that meets Americans with Disability Act (ADA) accessibility requirements in providing accessible pathways for connections between paratransit and fixed-route services would address this need.

1.2.3 PROVIDING A MORE VITAL MIX OF DEVELOPMENT IN THE TRANSBAY TERMINAL AREA TO ADDRESS UNDERUSE OF LAND

Like the current project, many of the previous efforts to upgrade or replace the existing Transbay Terminal have recognized the opportunity to improve the surrounding area at the same time. Use of the terminal and its surrounding area has fluctuated over the facility's 60-year life span, with increasing private automobile ownership and usage and the replacement of the "Key System" trains with transbay bus routes. The large footprint of the terminal building crossing Fremont and First Streets above-ground blocks views and makes underlying sidewalks and streets dark. The large, deteriorating building reduces the attractiveness of the adjoining area for development. The 1994 Transbay Redevelopment Survey Area, which included the Transbay Terminal and its associated ramp structures as well as vacant land left from demolition of the Terminal Separator Structure and the Embarcadero Freeway in the wake of the 1989 Loma Prieta earthquake, characterized the area as blighted.

Construction of either a joint transit terminal or transit facilities in close proximity to one another would serve the interests of both Caltrain and other regional transit riders, creating an intermodal transit hub in the area. The transit hub would concentrate a large transit user population into a confined area, thereby focusing potential economic and joint development opportunities. A more efficient functional terminal design would also support City urban design goals and provide for development of some of the surrounding properties to higher and better uses. Such coordination offers an opportunity to achieve integrated development of transportation facilities and other land uses in the project area.

The redevelopment component of the project focuses on the right mix of uses to revitalize the area, support the transit program, while adding significant amounts of housing to the South of Market area. Placing new housing close to an intermodal transit hub supports transit usage and reduces the potential for increased private auto use of area streets. Another major objective of the redevelopment component of the project is to generate sufficient revenue to substantially offset the costs of the new terminal. (See Section 2.2.3).

1.2.4 CLOSING THE "GAP" – ADDRESSING THE LACK OF DIRECT CALTRAIN SERVICE INTO DOWNTOWN SAN FRANCISCO

1.2.4.1 Historical Support for the Extension of Caltrain into Downtown San Francisco

The underlying need for the Caltrain Downtown Extension component of the project relates to one central issue: getting the trains as close as possible to where most riders want to go. The concept of passenger train service directly into downtown San Francisco has been the subject of public scrutiny and debate for over a century. Currently, Caltrain's San Francisco service terminates at Fourth and Townsend Streets – over one mile from the downtown core. The distance between the Fourth and Townsend Streets station and most downtown San Francisco

job destinations is beyond walking distance for the majority of train riders and requires a transfer to the San Francisco Muni Metro light rail line or Muni bus service to complete the journey.

Figure 1.2-2 illustrates the one-mile "gap" that currently exists between major downtown San Francisco activity and employment centers and the present Caltrain terminus.

In 1987, the MTC identified an underground Caltrain extension to a station near the current Transbay Terminal site as "the single most important improvement that can be made to the Peninsula commuter line..."[3] Increases of over 125 percent in future Caltrain ridership to and from San Francisco have been forecast for such an extension (see Table 3.1-14). Work done for the Intercity High Speed Rail Commission, the predecessor to the current California High Speed Rail Authority, estimated a potential loss of 200,000 annual high-speed rail riders if the Caltrain terminal is not extended to the Transbay Terminal site (Charles River Associates, August 1996).

In March of 1997, the JPB and the Federal Transit Administration (FTA) released for public review a Draft Environmental Impact Statement / Draft Environmental Impact Report (Draft EIS/EIR) for the extension of Caltrain commuter rail from its Fourth and Townsend terminus in San Francisco to the site of the present Transbay Terminal. This Draft EIS/EIR reviewed a single “build” alternative with a train alignment along Seventh, Townsend, and Colin P. Kelly Streets and between Second and Essex Streets to the Transbay Terminal. It considered alignment options for the segment along Townsend Street and for the mined tunnel segment under Rincon Hill between Townsend and Folsom Streets. Although the Draft EIS/EIR was circulated and comments received, the environmental process did not proceed due to lack of sufficient funding for the project.

The voters of San Francisco have re-emphasized the critical importance of extending Caltrain service into the downtown core. Following certification of an initiative petition in December 1998, San Francisco voters in November 1999 approved Proposition H. This proposition provides that Caltrain should be extended from its present terminus at Fourth and Townsend Streets to the site of the present Transbay Terminal at First and Mission Streets. The proposition also states that the San Francisco Mayor, Board of Supervisors, and all city officers and agencies, including the Redevelopment Agency, “shall adopt such further ordinances and resolutions and take all other actions as necessary to effectuate the prompt extension of Caltrain downtown to said station.” Proposition H also calls for no conflicting use or development of the Transbay Terminal site or of the proposed Caltrain extension right-of-way.

[3] MTC/JPB Interim Upgrade Study, 1987.

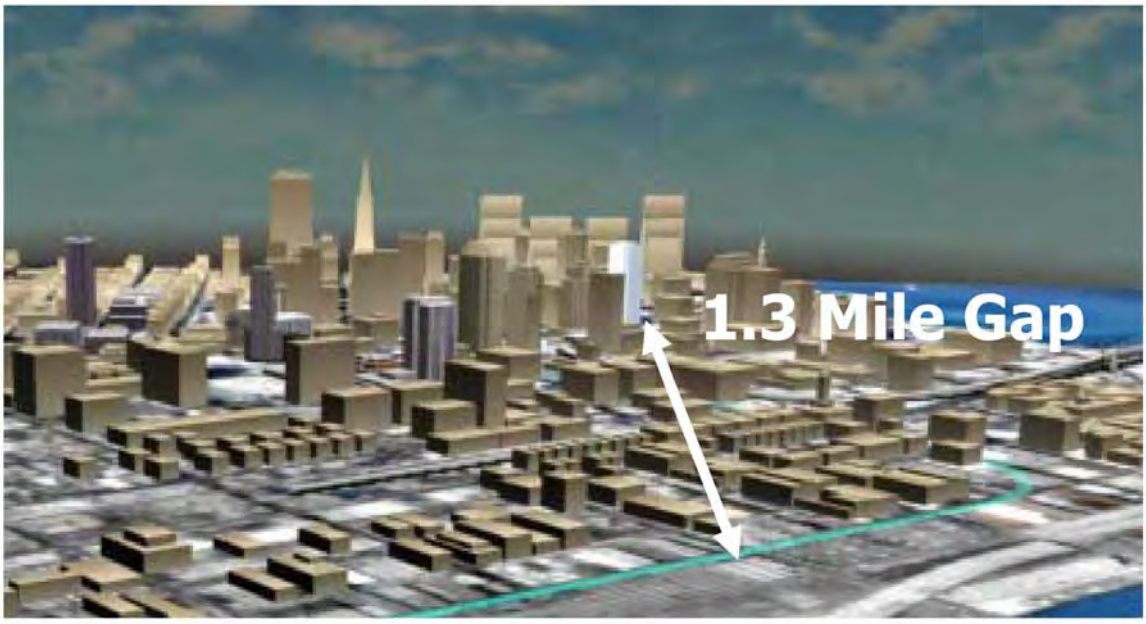


Figure 1.2-2: Gap Between Downtown Activity Center and Caltrain Station

1.2.4.2 Travel Delay Costs of Transfers from Caltrain Station to Downtown Employment Locations

The top twelve Caltrain origin-destination station pairs (by ridership volume) all include the Fourth and Townsend terminal as one major trip end. About 60 percent of the Caltrain riders disembarking at the Fourth and Townsend Streets station ride the Muni Metro or bus routes that connect the Caltrain terminus to downtown San Francisco employment centers. Most of these riders would be directly served, and their numbers increased, by eliminating the transit transfer link.

Based on the JPB's May 2000 Caltrain On-Board Survey, nearly half (49 percent) of the daily work trips emanating from any of the nine counties with destinations in the City of San Francisco were destined for the area typically identified as downtown San Francisco. As described above, the San Francisco Financial District and central downtown area (as well as the Civic Center area) are beyond walking distance from the Caltrain San Francisco terminus but accessible by Muni bus or Metro. The required transfer from one transit system to another adds to travel time and costs and discourages transit use.

Figure 1.2-3 illustrates existing typical morning peak period travel times by various transit modes between primary Peninsula origins and downtown San Francisco. For this study, the assumed point of origin is the downtown of each respective city and the California and Montgomery Streets intersection in downtown San Francisco.

The travel times include average delay or wait times required to transfer between modes (equal to one-half the time spacing -- or headway -- between scheduled bus or Caltrain and Muni train trips) in addition to the time spent in the transit vehicle and time required to reach the final destination.

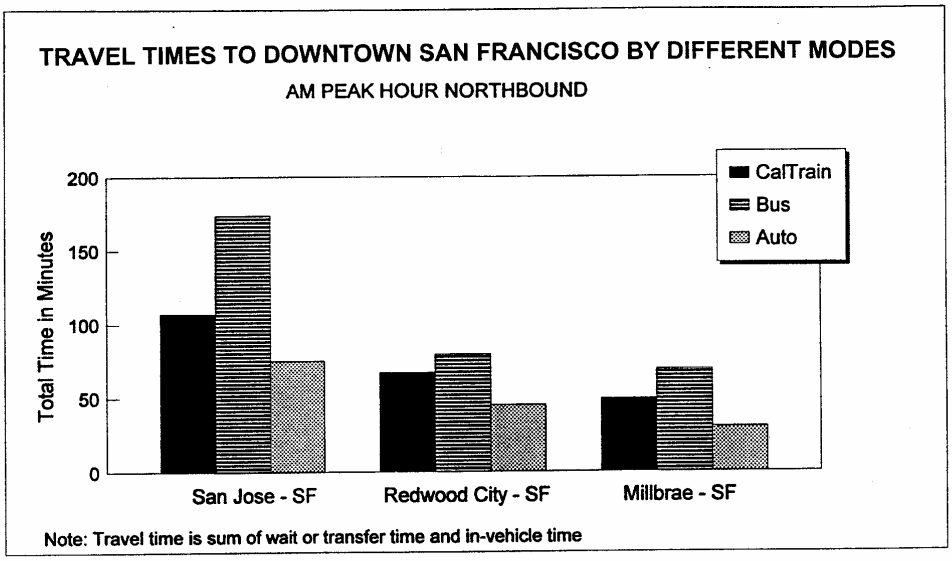
As Figure 1.2-3 shows, a trip from San Jose, Redwood City or Millbrae to downtown San Francisco remains highly competitive on Caltrain compared with SamTrans buses. Even with the additional several minutes transfer time between Caltrain and Muni at Fourth and Townsend, Caltrain is the faster mode. Compared to the auto, however, Caltrain is usually a longer trip. The auto provides almost door-to-door service, but the travel time is unpredictable due to possible congestion and/or traffic accidents. Reducing Caltrain travel time and inconvenience by eliminating the transfer at Fourth and Townsend would make the service more competitive with the auto and more reliable overall. Caltrain's increased reliability could offset much of its travel time disadvantage under typical conditions when compared to the auto.

Relocating Caltrain's San Francisco terminus to the Transbay Terminal area has been projected to result in a seven percent reduction in the number of person hours of auto travel.[4] Morning peak hour delay would be expected to be reduced by 20 percent. Implementation of the Caltrain Extension would result in daily travel time savings of 7,200 person hours, which includes 5,700 person hours saved for Caltrain riders and 1,500 person hours for roadway travelers in the corridor. Using FTA procedures, this represents an approximate $20 million per year savings (7,200 hours/day x $11.26/hour x 250 work days/year).

1.2.4.3 Negative Impact of Transfer on Potential Caltrain Ridership

Possibly the most significant "cost" of the intermodal transfer currently required at the Fourth and Townsend Station to reach downtown San Francisco is not the cost of added travel time but the adverse impact on Caltrain ridership. Over and above the travel time delay is the inconvenience of even well-coordinated transfers.

[4] August 27, 1996 memo from Korve Engineering to ICF Kaiser Engineers.



SOURCE: U.S. Census 1990

TRAVEL TIMES TO DOWNTOWN SAN FRANCISCO BY DIFFERENT MODES

Figure 1.2-3

According to research studies, passengers find transfers one of the most discomforting aspects of transit travel and regard them as "equivalent to three to four minutes of extra waiting time" in addition to the actual transfer time.[5] Passengers may be willing to pay double the base fare to avoid a transfer. Transfer elasticity studies of bus services have estimated that each additional transfer can lead to over a 50 percent decline in ridership.[6]

Transit users consider rail service more reliable and comfortable than bus services and therefore, the transfer impact could be somewhat greater for a commuter rail service. In any case, the rail-to-rail or rail-to-bus Caltrain-to-Muni transfer at the Fourth and Townsend Station can be assumed to depress San Francisco-bound Caltrain ridership by at least 50 percent below its potential with direct rail access to downtown San Francisco.

With the completion of the BART San Francisco Airport (SFO) Extension (see Section 1.4.1, BART Extension to San Francisco International Airport), riders *are* able to transfer between BART and Caltrain by crossing the platform at the new Millbrae intermodal station. This supplements Muni service for Peninsula commuters destined to/from San Francisco employment centroids along the BART corridor. Ridership projections conducted for this EIS/EIR show that not only would a substantial number of riders who would transfer to BART at Millbrae in the absence of a Caltrain Downtown Extension stay on Caltrain for their entire trip once the Extension is in place, but they also indicate a real increase in new Caltrain riders with the Caltrain Downtown Extension (see Section 3.1.6, Projected Caltrain Patronage and Accessibility Improvements). This demonstrates that there is a real benefit in removing the transfer "penalty" altogether as compared with adding new transfer options.

1.2.4.4 Intermodal Connections

Transit operators in the nine-county Bay Area have developed routes and schedules to facilitate inter-operator connectivity. Numerous fare prepayment and pass arrangements are available among operators. Nonetheless, connections between Caltrain and other Bay Area transit operators are constrained by the distance between the Caltrain terminus at Fourth and Townsend Streets and most other downtown transit destinations. Figure 1.2-4 highlights the downtown station locations and pick-up/drop-off points of the major transit operators.

[5] Econometrics, Incorporated, Patronage Impacts of Changes in Transit Fares and Services, U.S. Department of Transportation, September 1980.

[6] Elasticity is an empirically derived or research-estimated measure comparing a change in behavior resulting from a change in a factor that influences behavior. In this case, it is the change in riders due to the change in number of transfers required (Econometrics, Incorporated).



Figure1.2-4: Intermodal Connections

Bus corridors are shown for Muni, AC Transit, Golden Gate Transit, and SamTrans routes that serve the downtown. At present, only Muni bus routes and the Muni Metro provide transit connections at the Caltrain terminal in San Francisco, with 20 Metro trains meeting all Caltrain trains arriving between 6:16 and 8:59 AM. Nine Muni bus routes also serve the Fourth and Townsend Caltrain station, including three commuter shuttles linking rail passengers with downtown destinations.

Muni also provides the only public transit connection between the Fourth and Townsend Caltrain Terminal and the Transbay Terminal, which is the primary drop-off/pick-up location for bus passengers using nearly all of the other area transit services: AC Transit, SamTrans, and Golden Gate Transit. Muni is also the only connecting transit link between Caltrain and the Ferry Building, which is the main access point for Marin, Solano, and Alameda County ferry services.

Currently, Muni Metro provides the only direct transit connection between Caltrain and BART, the major regional rail transit operator in the Bay Area, which links San Francisco to the East Bay and northern San Mateo County. Following completion of the BART San Francisco Airport (SFO) Extension, Peninsula riders will be able to transfer between BART and Caltrain by crossing the platform at the new Millbrae intermodal station. Amtrak buses serve San Francisco Caltrain passengers connecting with intercity Amtrak trains in Emeryville or Oakland in the East Bay. At San Jose, Caltrain meets most of the daily Capitol Corridor trains or buses to and from Sacramento, and three Caltrain trains connect with the Coast Starlight to Los Angeles.

Compared with the existing Caltrain Station at 4th Street and Townsend, the proposed Caltrain Station at the Transbay Terminal will provide more convenient connections between Caltrain services and Muni, BART, AC Transit, Sam Trans, Golden Gate, and private carriers. The station will also allow Caltrain passengers from the Peninsula to reach downtown without transferring to other modes of travel.

See Section 3.1 for a detailed discussion of current transit services in the project vicinity and to and from the Caltrain Terminal.

1.2.4.5 Accommodating Future High Speed Rail

The preamble to Proposition H notes that the California High Speed Rail Commission identified San Francisco as the preferred destination for a bullet train from Los Angeles to the Bay Area. The preamble goes on to state that:

> ". . . .as part of the extension of Caltrain downtown, a new or rebuilt terminal shall be constructed on the present site of the Transbay Transit Terminal serving Caltrain, regional and intercity bus lines, MUNI, and high speed rail, and having a convenient connection to BART and MUNI Metro." (emphasis added)

In June 2000, the California High Speed Rail Authority issued its Final Business Plan for Building a High-Speed Train System for California. This document recommends that the

Governor and state legislature initiate a state-level program EIR and federal-level EIS for a statewide high-speed train network. Alignments for Bay Area access presented in this document include the Caltrain corridor. The Business Plan states that terminating the high-speed trains at the Transbay Terminal in San Francisco should be included in environmental studies.

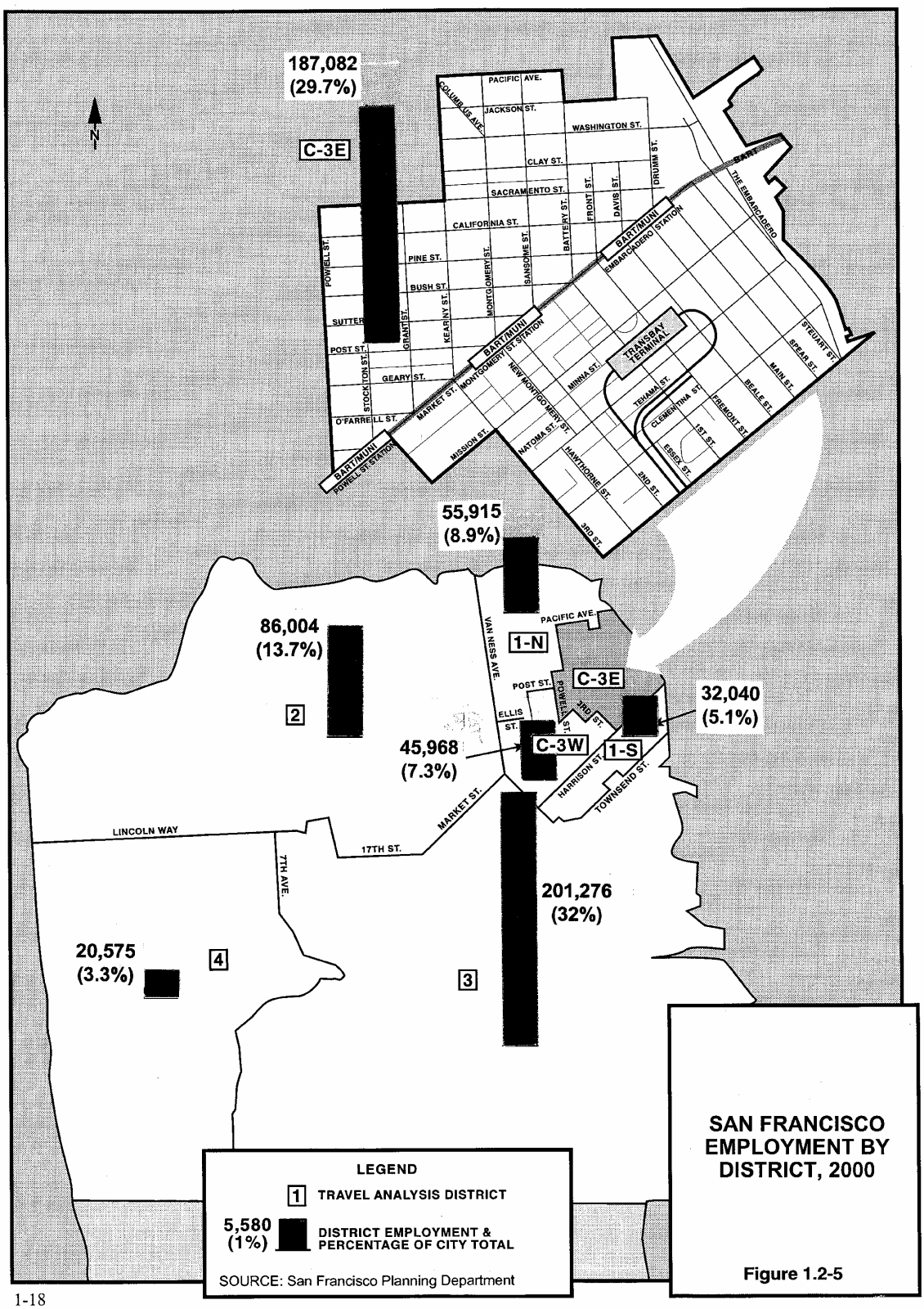
The JPB and the City and County of San Francisco have subsequently evaluated the compatibility of Caltrain track geometry and platforms with future high-speed trains. As a result of this analysis, new Caltrain downtown extension alignments have been identified for this EIS/EIR, as described in Chapter 2. These alignments have a track geometry (e.g., curve radii) that would enable high-speed train equipment that is currently in use in Europe and Japan to use the Caltrain downtown extension tracks, with high-speed train platforms in the basement of the new Transbay Terminal (see Section 2.2.2.4).

1.2.5 CURRENT AND FUTURE TRANSPORTATION DEMAND IN THE CALTRAIN SERVICE AREA

1.2.5.1 Current Downtown Area Employment

Figure 1.2-5 provides a comparison of Year 2000 employment in San Francisco by district. The seven districts shown are based upon major travel analysis zones that the Association of Bay Area Governments (ABAG) and the MTC have adopted for projecting demographic and travel data. Data for the Year 1990, as reported in the 1997 Caltrain San Francisco Downtown Extension Draft EIS/EIR, show the San Francisco CBD containing nearly 60 percent of downtown area employment, and the downtown area accounted for 60 percent of total San Francisco employment. More recent data indicate a shift in San Francisco employment from the CBD to the South of Market area. San Francisco downtown areas included in districts 1-N, 1-S, C-3E and C-3W (See Figure 1.2-5) encompass nearly all “downtown” work locations for the purposes of this study. The area extends from the San Francisco Bay west to South Van Ness Avenue and south to Townsend Street. The downtown area also contains the Union Square, Market Street Downtown Retail, and Embarcadero Center shopping districts. According to San Francisco Planning Department, the downtown area provided approximately 321,000 jobs, or 51 percent of San Francisco's total employment in the Year 2000. Nearly one-third of these jobs were located in the district C-3E portion of the area, as shown in Figure 1.2-5. The C-3E District largely encompasses what is commonly referred to as the City's CBD.

During the decade from 1980 to 1990, San Francisco experienced a 5.4 percent increase in employment while San Mateo and Santa Clara counties each experienced increases of almost 23 percent. In 1990, Santa Clara County, with its fast-growing, high-technology companies, had the greatest number of jobs in the Bay Area, compared with other counties. This regional growth emphasizes the fast-growing, two-directional nature of corridor travel demand and the potential for Caltrain to serve both of these travel markets. These trends have become more pronounced during the decade from 1990 to 2000. For example, in February 2000, morning peak period Caltrain ridership (that is, before 9:00 AM) was 60 percent northbound and 40 percent southbound.


187,082
(29.7%)
C-3E
55,915
(8.9%)
86,004
(13.7%)
2
1-N
C-3E
32,040
(5.1%)
45,968
(7.3%)
C-3W
1-S
201,276
(32%)
20,575
(3.3%)
4
3
N
PACIFIC AVE.
JACKSON ST.
WASHINGTON ST.
CLAY ST.
SACRAMENTO ST.
CALIFORNIA ST.
PINE ST.
BUSH ST.
SUTTER
POST ST.
GEARY ST.
O'FARRELL ST.
MISSION ST.
MARKET ST.
BART/MUNI FORMELL ST. STATION
BART/MUNI MONTGOMERY ST. STATION
BART/MUNI EMBARCADERO STATION
TRANSBAY TERMINAL
MINNA ST.
NEW MONTGOMERY ST.
NATOMA ST.
HAWTHORNE ST.
2ND ST.
3RD ST.
TEHAMA ST.
CLEMENTINA ST.
1ST ST.
ESSEX ST.
FREMONT ST.
BEALE ST.
MAIN ST.
SPEAR ST.
STEUART ST.
THE EMBARCADERO
DRUMM ST.
DAVIS ST.
FRONT ST.
BATTERY ST.
SANSOME ST.
MONTGOMERY ST.
KEARNY ST.
GRANT ST.
STOCKTON ST.
POWELL ST.
COLUMBUS AVE.
VAN NESS AVE.
POWELL ST.
ELLIS ST.
HARRISON ST.
TOWNSEND ST.
LINCOLN WAY
17TH ST.
7TH AVE.
LEGEND
1 TRAVEL ANALYSIS DISTRICT
5,580 (1%) DISTRICT EMPLOYMENT & PERCENTAGE OF CITY TOTAL
SOURCE: San Francisco Planning Department
SAN FRANCISCO EMPLOYMENT BY DISTRICT, 2000
Figure 1.2-5

1-18

1.2.5.2 Characteristics of Journeys to Downtown San Francisco Employment

The 1990 U.S. Census journey-to-work data indicate that the largest proportion (54 percent) of San Francisco employees live in San Francisco, and that this group has the highest transit mode share for travel to work (54 percent). Of the 482,700 reported daily work trips to the downtown (there are more work trips to or from the downtown than the number of employees due to multiple trips by employees, deliveries, visiting workers, etc.), just over 50 percent emanate from elsewhere in San Francisco, about 26 percent come from the East Bay, and 14 percent come from the South Bay (San Mateo and Santa Clara counties). Figure 1.2-6 presents the worker place of residence breakdown for each downtown employment district and for the four downtown districts combined.

According to "Commute Patterns to Downtown San Francisco," a memorandum to the Transbay Study Technical Advisory Committee from the San Francisco Planning Department (Badiner, 6/30/95), the overall mode split for journeys to work in downtown San Francisco was 54 percent transit, 30 percent drive alone, and 16 percent ride share. San Francisco-originating work trips had the highest transit mode share (61 percent transit) of all Bay Area residence regions. Commuters from the East Bay were next with a 55 percent transit mode share. San Francisco-destined commuters from the South Bay had the highest drive alone mode share (44 percent), and the lowest transit mode share (37 percent) compared with commuters from the other primary regions. This modal split was assumed as the baseline for current conditions. Caltrain ridership projections were developed from current ridership defined by on-board surveys in February 2001, with future (2020) mode splits estimated from adjustments to the previous Caltrain ridership study (Korve, 1996).

This modal split information reflects the superiority of high-quality, high-capacity, direct transit access to downtown San Francisco for San Francisco and East Bay residents relative to that afforded South Bay residents. Relocating the Caltrain Terminal closer to downtown would improve transit accessibility and result in substantially increased transit ridership for San Francisco-bound commuters from the Peninsula and South Bay. Figure 1.2-7 shows the major destinations by zip code area of northbound Caltrain commuters. The CBD centered along Market Street (zip code zones 94104, 94105, and 94111) dominates with 58 percent of all destinations. The highest proportion of Caltrain rider destinations (22 percent) is within the 94105 area containing the Transbay Terminal site.

Relocating the Caltrain terminus to the current Transbay Terminal site would not only better serve the San Francisco CBD, it would also improve accessibility to Santa Clara County's "Silicon Valley" jobs for San Francisco residents by offering better transit connections within the downtown core and better access for the area's expanding residential population. The high transit mode share among San Francisco residents highlights the potential for the extended Caltrain to capture San Francisco riders "reverse commuting" to South Bay jobs.

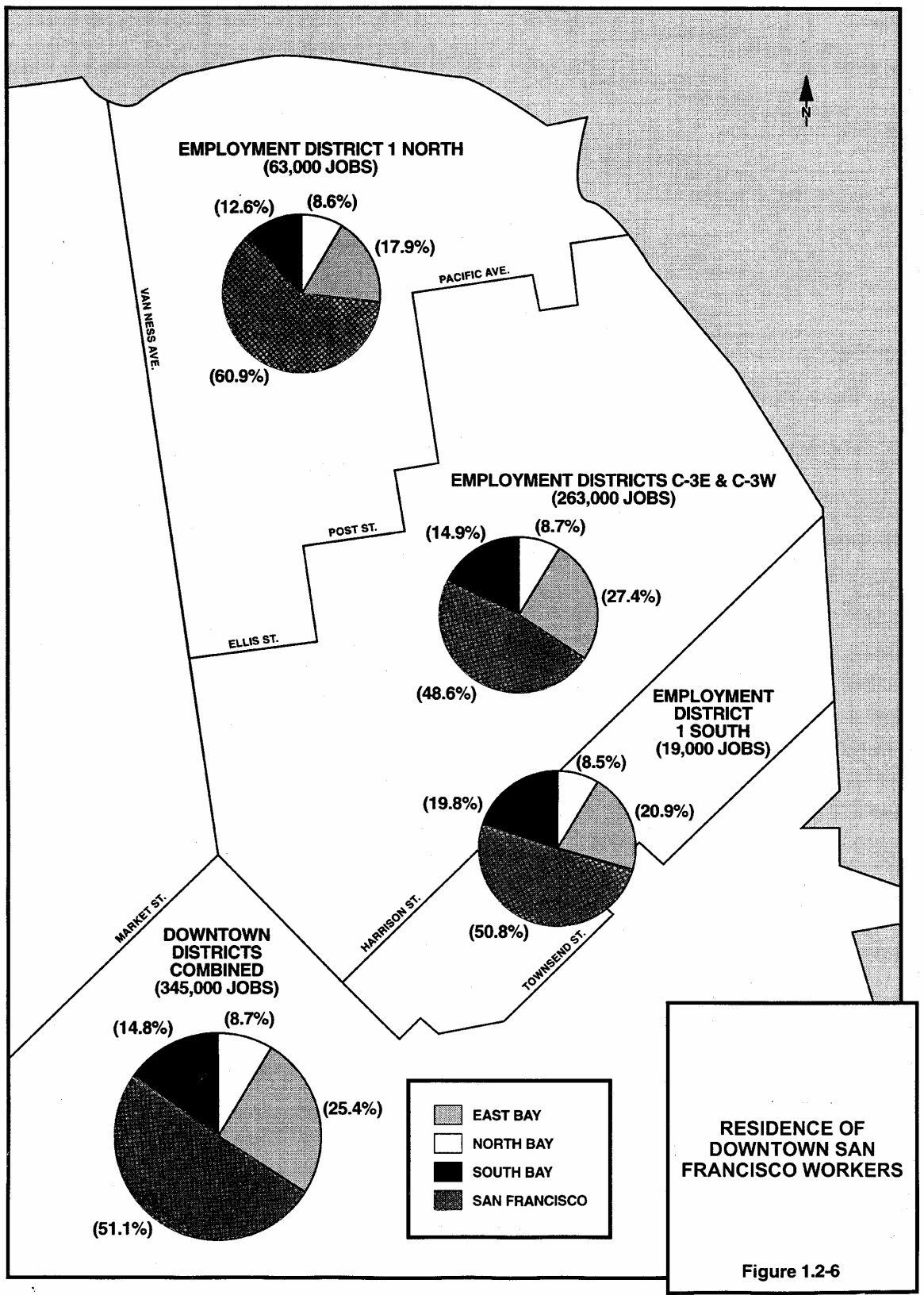

N
EMPLOYMENT DISTRICT 1 NORTH
(63,000 JOBS)
(12.6%)
(8.6%)
(17.9%)
(60.9%)
PACIFIC AVE.
VAN NESS AVE.
EMPLOYMENT DISTRICTS C-3E & C-3W
(263,000 JOBS)
POST ST.
(14.9%)
(8.7%)
(27.4%)
(48.6%)
ELLIS ST.
EMPLOYMENT
DISTRICT
1 SOUTH
(19,000 JOBS)
(8.5%)
(19.8%)
(20.9%)
(50.8%)
MARKET ST.
HARRISON ST.
TOWNSEND ST.
DOWNTOWN
DISTRICTS
COMBINED
(345,000 JOBS)
(14.8%)
(8.7%)
(25.4%)
(51.1%)
EAST BAY
NORTH BAY
SOUTH BAY
SAN FRANCISCO
RESIDENCE OF
DOWNTOWN SAN
FRANCISCO WORKERS

Figure 1.2-6

1.2.5.3 Future Downtown Area Employment and Travel Demand

Based on San Francisco Planning Department data, employment is expected to continue to grow by nearly 16 percent during the next 20 years, but anticipated growth is concentrated in a few areas. District 3, which covers the area east of Twin Peaks and south of Townsend Street to the County line (See Figure 1.2-5) – and which is beyond the "downtown" area identified for this study – was projected to experience an increase in employment of about 30 percent. These changes will shift the balance of downtown San Francisco employment concentration somewhat southward, although the CBD will retain its lead in all City employment. As of 2000, the CBD (District C-3E) contained about 30 percent of all employment citywide. The San Francisco Planning Department anticipates that by 2020, this area will contain about 27 percent of citywide employment. In contrast, areas to the south (Districts 1-S and 3) will increase their share of citywide employment by almost four percent, from 37 percent to over 40.4 percent, as a result of adding over 62,000 jobs in this 20-year period.

Table 1.2-2 summarizes anticipated changes in San Francisco employment by workplace location.

Table 1.2-2: Anticipated Changes in San Francisco Employment by District

District Workplace[1]	2000 Employment	Percentage of Total	2020 Employment	Percentage of Total	% Change 2000-2020
C-3 East	187,082	29.7	198,170	27.1	5.9
C-3 West	45,968	7.3	52,194	7.1	13.5
1-North	55,915	8.9	61939	8.5	10.8
1-South	32,040	5.1	34,380	4.7	7.3
2	86,004	13.7	99,729	13.6	16.0
3	201,276	32.0	261,524	35.7	29.9
San Francisco Total	628,860	100.0%	731,659	100.0%	16.3%

[1] Districts numbers and boundaries shown on Figure 1.2-5

Source: San Francisco Planning Department, 2001.

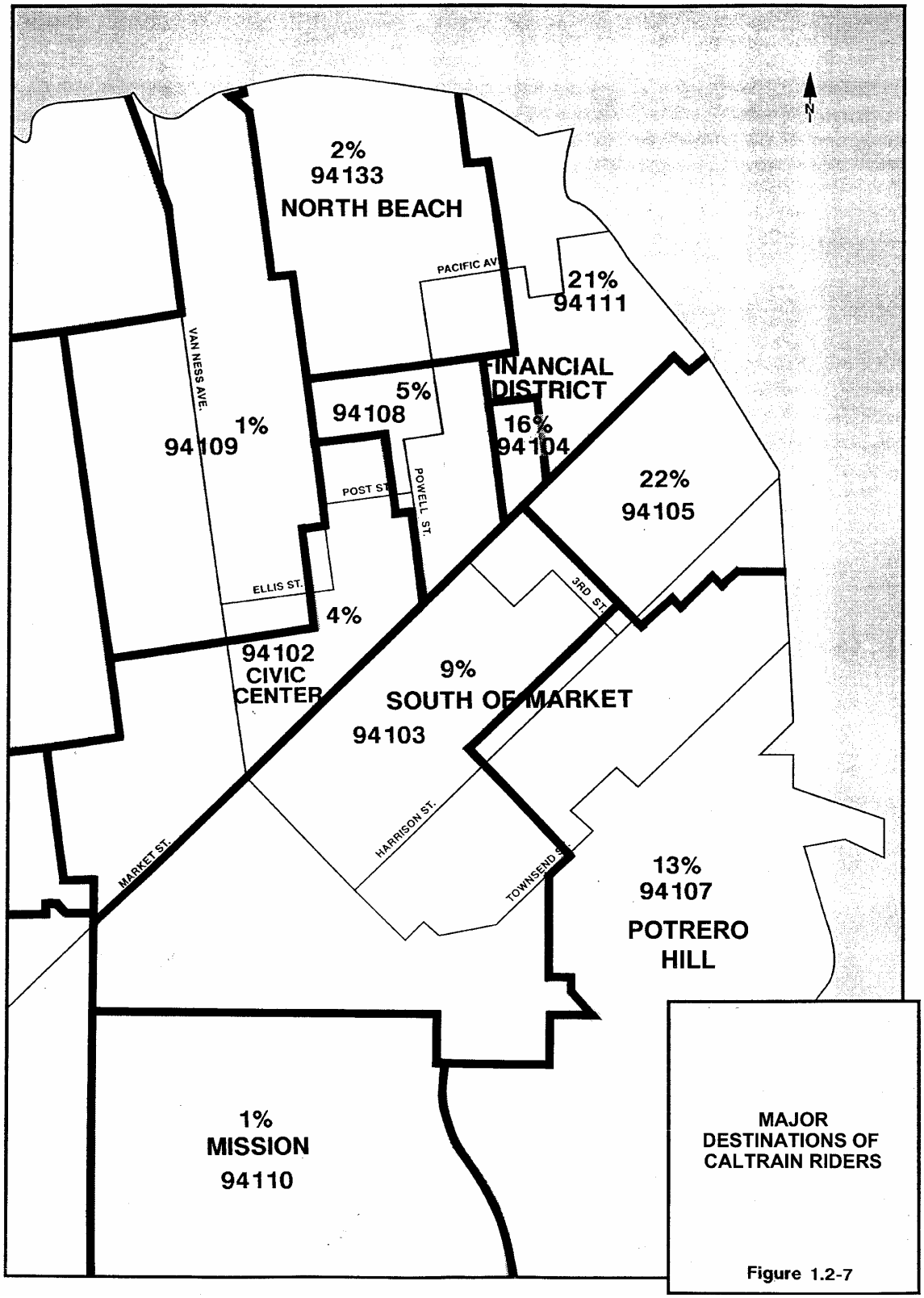

N
2%
94133
NORTH BEACH
PACIFIC AV
21%
94111
FINANCIAL
DISTRICT
VAN NESS AVE.
5%
94108
1%
94109
16%
94104
POST ST
POWELL ST.
22%
94105
ELLIS ST.
3RD ST.
4%
94102
CIVIC
CENTER
9%
SOUTH OF MARKET
94103
HARRISON ST.
MARKET ST.
TOWNSEND S
13%
94107
POTRERO
HILL
1%
MISSION
94110
MAJOR
DESTINATIONS OF
CALTRAIN RIDERS

Figure 1.2-7

1.2.6 CURRENT AND FUTURE ROADWAY CONGESTION

Economic growth and the corresponding demand for transportation services in the San Francisco Bay Area have exceeded the region's ability to increase roadway capacity. Existing demand for north-south travel along the Peninsula via U.S. 101 and I-280 regularly exceeds existing highway capacities and results in congestion that is increasing in both frequency and duration. Currently, U.S. 101 is the most severely congested freeway through the corridor (Transactions, MTC, August 2001). Between San Francisco and San Jose a number of roadway segments are at or over capacity during the peak commute hour.

Segments considerably over capacity during the evening peak include the area between I-80 and the I-280 / U.S. 101 interchange in San Francisco; south of Broadway Avenue in Burlingame to just north of the San Mateo Bridge in San Mateo; the areas north of the State Route 84 and State Route 237 interchanges in Woodside and Santa Clara, respectively; and the area from the San Tomas Expressway to the Capitol Expressway interchange in San Jose. Other segments of the roadway are approaching capacity. No roadway segment in the peak direction (generally southbound in the evening peak and northbound in the morning peak) operates better than level of service (LOS) D during the peak hour, with the majority of segments at LOS E or F. In the non-peak direction, only two short segments near the I-880 interchange and the San Mateo Bridge have been observed to operate on average at LOS C or better. (See Table 1.2-3 for definitions of freeway levels of service.)

Table 1.2-3: Level of Service Criteria for Freeways[1]

Level of Service	Description	Volume/Capacity Ratio & Speed
A	Free-flow conditions with a high level of maneuverability.	0.00 to 0.30 65 mph
B	Free-flow conditions but presence of other vehicles is noticeable. Minor disruptions easily absorbed.	0.30 to 0.47 65 mph
C	Minor disruptions cause significant local deterioration.	0.47 to 0.70 64 mph
D	Borders on unstable flow with ability to maneuver severely restricted due to congestion.	0.70 to 0.89 61 mph
E	Conditions at or near capacity. Disruptions cannot be dissipated and cause queues to form.	0.89 to 1.00 53 mph
F	Forced or breakdown flow with queues forming at locations where demand exceeds capacity.	Greater than 1.00 Variable

Note: [1] Based on a design speed of 65 miles per hour.

Source: Transportation Research Board, Highway Capacity Manual, Special Report 209 (Washington, D.C., 1994), p. 3-9

Without future roadway improvements, congestion on corridor freeways is bound to worsen to the point where travel is diverted and the peak periods spread into the midday and to later in the evening. Bottlenecks will constrain movement through the corridor. MTC's travel projections

for the Peninsula corridor, based on the planned future transit (no Caltrain extension) and highway capacities for the year 2005, indicate that northbound morning peak-hour vehicle demand at the U.S. 101 / I-280 interchange in San Francisco would be approximately 22,000 vehicles, exceeding the existing interchange capacity by 57 percent. These high levels of congestion will take a toll on economic development by constraining goods and people movements.

Opportunities to improve highway capacity are constrained by a number of factors, including the need for extensive and costly right-of-way acquisitions and potentially significant environmental impacts, such as displacements of residences, businesses, and natural resources. For these reasons, substantial capacity improvements to U.S. 101 and I-280 cannot be assumed to address long-term travel demands in the corridor, and Caltrain provides a vital transportation alternative to costly highway capacity expansion. By increasing transit ridership, the Caltrain Downtown Extension would ease congestion on Peninsula freeways.

1.2.7 FUTURE PARKING DEMAND IN DOWNTOWN SAN FRANCISCO

A shift in corridor travel from auto to transit with an extension of Caltrain service would reduce parking demand in downtown San Francisco. An estimated 2,000 fewer parking spaces would be required in the area based on the projected increase in Caltrain ridership directly attributable to the Caltrain Extension. This reduction in demand would offset most of the existing parking loss attributable to the project (see Chapters 5). Less parking-related traffic would reduce congestion on local streets. The reduction in parking demand and supply attributable to the Caltrain Extension supports City of San Francisco General Plan objectives to reduce the need for parking in downtown San Francisco and elsewhere.

1.2.8 CORRIDOR TRAVEL AND AIR QUALITY

High rates of auto ownership and vehicle miles of travel have contributed to air quality problems throughout California. Several of the pollutants of concern include ozone, nitrogen oxides and sulfur dioxides (precursors of smog); carbon monoxide; and particulate matter.

The San Francisco Bay Area's air quality has improved in recent years, largely in response to technological improvements in motor vehicles and less polluting fuels. The project study area is within the Bay Area Air Basin (BAAB), for which air quality conditions are monitored by the Bay Area Air Quality Management District (BAAQMD). According to the BAAQMD, the BAAB is in attainment with national standards for carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO_x), and annual particulate matter (PM_{10}). It is designated non-attainment for ozone (O_3) and unclassified for $PM_{2.5}$ and 24-hour $PM_{10.}$ With respect to California standards, the BAAB has attainment status for CO, NO_x, and SO_x. It is designated non-attainment for O_3 and $PM_{10.}$

Because transportation is the major contributor to O_3, increasing auto travel threatens the area's improvement in air quality. Growing congestion will add to the potential problems because of increased emissions of vehicles operating in stop-and-go traffic. Shifting commuters and other travelers to higher occupancy modes is highly desirable to restrain the growth in auto travel. A new multi-modal transit facility in the heart of San Francisco's employment center will serve this goal. Developing a transit-oriented mix of land uses in the vicinity of that multi-modal facility also supports this objective. Improved Caltrain service offers the greatest potential for increased high occupancy travel along the San Francisco Peninsula, particularly in southern San Mateo and Santa Clara counties, the areas with the most severe air quality problems in the corridor. Based upon projections of potential Caltrain use in 2020, over 8,000 daily auto trips would be removed from corridor roadways as a result of extending Caltrain service to a downtown San Francisco terminal.

1.3 PROJECT SPONSORS

Three agencies are cooperating in planning and developing this Transbay Terminal / Caltrain Downtown Extension / Redevelopment project: the City and County of San Francisco, the San Francisco Redevelopment Agency, and the Peninsula Corridor (Caltrain) Joint Powers Board (JPB).

A joint exercise of powers agreement, signed on April 2, 2001, created the Transbay Joint Power Authority (TJPA), consisting of the City and County of San Francisco, AC Transit, and the JPB. *Pursuant to the agreement, the TJPA was* formed to "develop, design, construct and operate a new transit terminal and related facilities on and adjacent to the existing Transbay Terminal site." The new TJPA is governed by a five-member board of directors, appointed respectively by the JPB, AC Transit, the San Francisco Mayor, the Muni Board of Directors, and the San Francisco Board of Supervisors (this member is to be a San Francisco Supervisor).

The TJPA is the entity that is obligated to implement and operate the new transit terminal. *Because the project is in the City and County of San Francisco, however, the City's cooperation is necessary. The joint powers agreement creating the TJPA designated the City as the Administrator for the project. When the City approved agreement in Board of Supervisors Resolution 104-01 it supported the project by urging the California legislature to enact legislation to provide land, funding and other measure needed to support the proposed Terminal Plan and Caltrain Extension. The Resolution also* urges BATA to allocate funds from existing seismic surcharge revenues to fund JPA operations and contracts for the Terminal Plan and Caltrain Extension until other funds become available. Finally, it urges the Transbay JPA Directors to approve agreements and leases with AC Transit to ensure that design, construction, and operation of the new Transbay Terminal meet specific performance criteria to maximize the usefulness of the facility for transit operations.

1.4 OTHER RELATED PROJECTS

The following paragraphs highlight a few related projects for their coordination or cumulative impact issues and their potential to support or be served by the Caltrain Extension. Section 3.1.5, Future Rail Transit and Bus Services, describes projects planned by individual transit operators. Further detail and an evaluation of land use impacts and development opportunities with the proposed project are presented in Chapters 4 and 5 of this document.

1.4.1 BART EXTENSION TO SAN FRANCISCO INTERNATIONAL AIRPORT

The BART – San Francisco International Airport (SFO) Extension provides 8.7 miles of new revenue service track extending southward from the present Colma Station roughly paralleling El Camino Real and the Caltrain right-of-way, entering and exiting the new San Francisco International Airport Station within SFO on aerial track, and then continuing roughly parallel with El Camino Real and the Caltrain right-of-way to the new Millbrae intermodal station. The BART – SFO Extension includes four new stations: South San Francisco, San Bruno, San Francisco International Airport, and Millbrae. The project provides direct transit access to SFO and constructs the first cross-platform connection between a commuter rail (Caltrain) and rapid rail transit (BART) system west of the Mississippi River.

The BART – SFO Extension is projected to serve 70,000 daily transit trips and to eliminate 10,000 daily auto trips to SFO by 2010. *The extension opened on June 22, 2003.*

1.4.2 MILLBRAE INTERMODAL STATION

The Millbrae intermodal station *serves* both Caltrain and the new BART – SFO Extension. The existing Caltrain Millbrae Station platform *has been* relocated approximately 800 feet north to the new Millbrae Avenue intermodal station, which *incorporates* three BART tracks with one center and one side platform to facilitate train movements. One Caltrain / BART platform *provides* for cross-platform transfers; other transfers *are* accommodated via an aerial walkway. About 3,000 parking spaces *are* provided with a pedestrian bridge to connect between the new parking structure and surface lots and the BART and Caltrain mezzanines.

1.4.3 THIRD STREET LIGHT RAIL

Muni, the City of San Francisco, and the San Francisco County Transportation Authority have initiated the Third Street Light Rail Project to reestablish rail service along Third Street in the Bayshore Corridor. Construction of the new light rail line is expected to occur in two phases:

- **Phase 1** is currently under design and will extend Muni Metro light rail service south from its current terminal at Fourth and King Streets. The line will cross the Fourth Street Bridge and run along Third Street and Bayshore Boulevard, ending at the Bayshore Caltrain Station in

Visitacion Valley. Tracks will be constructed primarily in the center of the street to improve safety and reliability, and 19 stops will be provided. *This phase of the Third Street LRT Project, the Initial Operating Segment (IOS), is expected to be open for full service in 2005; an early partial opening may occur in late 2004.*

- **Phase 2** would extend light rail service north from King Street along Third Street, entering a new Central Subway near Bryant Street, crossing beneath Market Street and running under Geary and Stockton Streets to Stockton and Clay Streets. Underground subway stations would be located at Moscone Center, Market Street, Union Square and Clay Street in Chinatown. Muni and the City are actively pursuing funding for the Central Subway.

A new Metro East Operating and Maintenance Facility is expected to be built on approximately 13 to17 acres at 25th and Illinois Streets to store, maintain and dispatch light rail vehicles.

1.4.4 MISSION BAY

Mission Bay is a 300-acre site located south and west of Pacific Bell Park (San Francisco Giants' baseball stadium) and bounded by Townsend, Mariposa, and Seventh Streets, and China Basin that is being developed by Catellus Development Corporation. Over the next decade, it is slated to contain a new 43-acre University of California at San Francisco (UCSF) satellite campus as well as 6,000 apartments, 850,000 square feet of retail shops, up to 6.8 million square feet of commercial space, 49 acres of parks and open space, and a 500-room conference hotel. The UCSF complex and a large residential block are currently under construction.[7]

The JPB has a permanent surface easement on property within the Mission Bay project area that is currently used for railroad purposes.

1.4.5 BAY BRIDGE WEST APPROACH, SEISMIC RETROFIT PROJECT

The Bay Bridge West Approach, Seismic Retrofit Project is a Caltrans project that will demolish and reconstruct the West Approach to the Bay Bridge. This section of Interstate 80 runs between the Fifth Street on/off ramps and the First Street on ramp near the western anchorage of the Bay Bridge. The project includes modifications to the on and off ramps in the Transbay Transit Terminal area. New sections of freeway will be built, as well as temporary freeway sections, before demolishing old portions of the freeway. Work is targeted for completion in Winter 2009.

[7] *San Francisco Chronicle*, Monday, October 23, 2000, pages A1 and A15; and Monday, March 19, 2001, p. E1 and E4.

1.5 USES OF THIS DOCUMENT

This document is a Final Environmental Impact Statement / Final Environmental Impact Report (Final EIS/EIR), prepared pursuant to the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations implementing NEPA, and the California Environmental Quality Act (CEQA).

This document will be used by federal, state, regional, and local agencies to assess the environmental impacts of the project on resources under their jurisdiction or to make discretionary decisions regarding the project. The Federal Transit Administration, the State of California, and the San Francisco Redevelopment Agency will use this document and the Final EIS/EIR in deciding whether and how to fund the project and in refining the project to minimize its adverse impacts.

1.6 PERMITS AND APPROVALS REQUIRED

Anticipated permits and approvals that would be required for this project are shown in Table 1.2-4.

Table 1.2-4: Permits and Approvals Anticipated to be Required

Agency	Approval or Permit
State Water Resources Control Board	General Construction Activity Stormwater Permit.
California Public Utilities Commission	Permits required for public safety considerations of underground Caltrain Extension and Terminal.
California State Legislature	*California Public Resources Code Section 5027 requiring approval from the State Legislature prior to demolition of "any building or structure that is listed on the National Register of Historic Places and is transferred from state ownership to another public agency."*
San Francisco Bureau of Environmental Health	Permit required for drilling or other subsurface exploration.
San Francisco Department of Public Works	Approval required for construction in public rights-of-way. Batch Industrial Wastewater Discharge Permit required for de-watering effluent discharge to the combined sewer system providing the quality of the effluent meets the NPDES General Permit discharge standards. Article 20 of San Francisco Municipal Code requires preparation of a Site Mitigation Plan if soil sampling and analysis indicate presence of hazardous waste in soil subject to construction disturbance.
San Francisco Municipal Transportation Agency	*Approval required for municipal public transit realignments, surface street changes, traffic operation changes, traffic control measures, and on-street parking changes.*.

Table 1.2-4: Permits and Approvals Anticipated to be Required

Agency	Approval or Permit
San Francisco Planning Department/Commission	Certification of CEQA environmental document. Review and approval of Project, including Redevelopment Plan, for consistency with provisions of the Planning Code and with the General Plan. Review and approval of property acquisition, including eminent domain, for consistency with General Plan. Certificate of Appropriateness for modification/demolition of historic resources
Peninsula Corridor Joint Powers Board	Certification of CEQA environmental document.
San Francisco Board of Supervisors	Approval of General Plan amendments. Adoption of Redevelopment Plan. Approval of property acquisitions, including eminent domain. Approvals required for use of City rights-of-way.
San Francisco Redevelopment Commission	Adoption of Redevelopment Plan.
San Francisco County Transportation Authority	Review and inclusion of the project in the Countywide Transportation Plan and Capital Improvement Program of the Congestion Management Program for San Francisco.

CHAPTER 2: DESCRIPTION OF THE PROJECT ALTERNATIVES

The proposed project has three major components:

- A new, multi-modal Transbay Terminal on the site of the present Transbay Terminal;
- Extension of Caltrain commuter rail service from its current San Francisco terminus at Fourth and Townsend Streets to a new underground terminus underneath the proposed new Transbay Terminal; and
- Establishment of a Redevelopment Area Plan with related development projects, including transit-oriented development in the vicinity of the new multi-modal Transbay Terminal.

Other subordinate components of the project include a temporary bus terminal facility to be used during construction of the new Transbay Terminal; a new, permanent off-site bus storage/layover facility; reconstructed bus ramps leading to the new Transbay Terminal; and a redesigned Caltrain storage yard. Figure 1.2-1 (in Chapter 1) shows the project location.

As described in this chapter, alternatives and options are under consideration for major project components. Section 2.1 describes the No-Project Alternative. Section 2.2 describes proposed project components, alternatives, and build options under consideration. Section 2.3 describes project component alternatives previously considered but subsequently withdrawn from consideration along with the reasons for their withdrawal.

2.1 NO-PROJECT ALTERNATIVE

The No-Project Alternative consists of existing Caltrain service with funded improvements, other committed bus, rail, and roadway improvements, a BART extension to the San Francisco International Airport, and proposed development in downtown San Francisco in the 2020 horizon year[1]. This is the No-Project Alternative under CEQA and the baseline alternative for purposes of NEPA.

Under the No-Project Alternative, the San Francisco Redevelopment Agency would not develop or implement a Redevelopment Plan for the Transbay Redevelopment Area. The publicly-owned properties would not be transferred to the Transbay Joint Powers Authority *(TJPA)*, but likely would be developed or sold for development by the state. This development would occur in the absence of a Redevelopment Plan most likely under existing zoning designations and local land use controls.

[1] The horizon year of 2020 was chosen because it is the horizon year for the current (not-updated) MTC regional model as well as for the San Francisco land use projections, on which ridership forecasts are based.

2.1.1 CALTRAIN OPERATIONS AND CAPITAL IMPROVEMENTS UNDER THE NO-PROJECT ALTERNATIVE

Caltrain trains consist of diesel-hauled, bi-level "gallery" cars that provide peak period service in both northbound and southbound directions between Gilroy and San Francisco. A total of 80 daily trains operate over the Peninsula Commute Joint Powers Board (JPB)-owned, northern portion of the route between San Jose and San Francisco. Caltrain operates four trains northbound in the morning and four trains southbound in the evening over the southern portion of the Corridor from San Jose to Gilroy, which is owned by the Union Pacific Railroad (UPRR).

JPB has programmed service increases to over *114* daily trains in the San Francisco to San Jose segment and over *20* daily trains in the San Jose to Gilroy segment within the next 10 years, including additional track, signal, station, and terminal capacity improvements to provide for the increased levels of service. JPB anticipates operating *132* daily trains in the 2020 horizon year.

JPB has programmed a series of rehabilitation improvements, enhancements and additions to the existing system that would provide an improved level of service. The following Caltrain facilities will exist at the completion of these projects, consistent with the Caltrain Rapid Rail Study adopted by the JPB in 1998:

- Rehabilitation of the Existing System – long-term repairs, reconstruction and modernization of the existing tracks, signals, bridges, stations, rolling stock and other systems.
- Enhancements and Capacity Improvements – additions and betterments to the rail system, including additional tracks; enhanced signal and communications systems, cab signals, Automatic Train Stop (ATS), and fiber optics; new stations; new shops; buildings and support facilities; vehicular and pedestrian grade separations; and new rolling stock. Also included in this category are grade crossing and station closures and consolidations.
- Increased Caltrain Express service consisting of 20 additional trains per day with an approximate 45-minute travel time between San Francisco and San Jose.
- A variety of passenger station improvements to permit simpler ticketing arrangements and create improved station amenities.

Signal system modernization improvements include a new Centralized Train Control (CTC) system, reverse signaling capabilities, additional train crossovers, and state-of-the-art active warning devices. The CTC would be operated from a new Central Equipment Maintenance and Operations Facility at the Lenzen Maintenance Facility in San Jose, and the existing Operations Center near Diridon Station in San Jose would be phased out.

Track and associated passenger platform improvements at the new Millbrae Intermodal facility are being constructed to improve the interface of the BART extension to San Francisco Airport with Caltrain at the Millbrae Intermodal Station (see Section 1.4.2).

The No-Project Alternative also includes electrification of the entire Caltrain line from Gilroy to its present San Francisco terminus at Fourth and Townsend Streets. The Caltrain Electrification Program would provide for the conversion from diesel-hauled to electric-hauled trains and would require the installation of some 150 to 170 single track miles of overhead contact system (OCS) for the distribution of electrical power to the electric rolling stock. Electric rolling stock would consist of locomotives or electrical multiple unit (EMU) cars. The OCS would be powered from a 25 kV, 60 Hz, single-phase, alternating current (ac) supply system that would require the installation of two or three traction power substations, one or two switching stations, and nine or ten paralleling stations. This power supply and distribution system and voltage are compatible with the requirements of high-speed rail, and therefore will accommodate future development of high-speed rail in the Caltrain corridor without major overhaul of the new electrification facilities. The Caltrain Electrification Program is being evaluated by the JPB in a separate environmental document.

Electrification of the Caltrain line is scheduled to be implemented by 2006. It is currently programmed under Track 1 of the 2001 Regional Transportation Plan (RTP), and will be funded entirely from local sources. The environmental review process for this program is expected to be completed *during 2004*, and it is assumed that the Electrification Program would be in place prior to implementation of the Caltrain Downtown Extension component of the present project.

Should electrification not be implemented in advance of the Downtown Extension, however, the extension could still be implemented using dual-mode (diesel-electric) locomotives. Dual-mode locomotives would enable Caltrain service to switch from diesel powered to electric powered propulsion before entering downtown San Francisco. A more detailed discussion of this propulsion option is provided in the 1997 Draft EIS/EIR for the Caltrain Downtown Extension. Should this option be necessary, the purchase of dual-mode locomotives would need to be added to the project costs for the Downtown Extension component. These potential costs are estimated to be $235 million in 2002 dollars for 34 locomotives.

2.1.2 MUNI FACILITIES AND RELATED BUS SERVICE UNDER THE NO-PROJECT ALTERNATIVE

The No-Project Alternative includes all current San Francisco Municipal Railway (Muni) service at existing levels plus the following major planned, ongoing, or constructed projects:

- S-Castro-Embarcadero Shuttle – new eastbound and westbound service between the Castro and Embarcadero stations;
- Third Street Light Rail project – extension of Muni Metro light rail service south from its current terminus at Fourth and Townsend Streets. The Third Street Light Rail line will cross the Fourth Street Bridge and run along Third Street and Bayshore Boulevard, ending at the Bayshore Caltrain Station in Visitacion Valley; and
- Central Subway – extension of Third Street light rail service northward from King Street along Third Street, entering a new central subway near Bryant Street, crossing beneath Market Street and running under Geary and Stockton Street to Stockton and Clay Streets.

The Third Street LRT Project Initial Operating Segment (IOS) is expected to be open for full service in 2005; an early partial opening may occur in late 2004. The Central Subway project is scheduled to be constructed by *2012* but is not presently funded. Muni and the San Francisco County Transportation Authority are actively pursuing funding, and the project is included in the No-Project Alternative in anticipation of funding being included in the 2001 Regional Transportation Plan in time for the Central Subway to be completed within the horizon year for the present project. Other planned, ongoing, or completed service changes and improvements included in the No-Project Alternative are summarized in Table 2.1-1.

2.1.3 BAY AREA RAPID TRANSIT SYSTEM (BART)

On June 22, 2003, the San Francisco Bay Area Rapid Transit District (BART) *opened* an extension to San Francisco International Airport that also *interfaces* with Caltrain and SamTrans bus services at the new Millbrae Intermodal Station. *Extensions from Hayward to Warm Springs and from Warm Springs to Santa Clara are also planned.*

2.1.4 SAN MATEO COUNTY TRANSIT SYSTEM (SAMTRANS)

In August 1999, SamTrans introduced a variety of changes to improve the efficiency of its core system. The changes reallocated service from areas of little demand to areas of greater demand. In many instances, routes were consolidated to increase service efficiency and permit increased frequency.

2.1.5 ROADWAY AND STREET IMPROVEMENTS

The No-Project Alternative assumes the completion of Caltrans San Francisco Seismic Retrofit projects, as follows:

- Yerba Buena Island Viaduct and tunnel
- West Span of the Bay Bridge (from Yerba Buena Island to the San Francisco Anchorage)
- Elevated West Approach to the Bay Bridge (from the Anchorage to the Fifth Street ramp)
- Elevated Bayshore Viaduct (I-80 from Fourth Street to Sixteenth Street)

Table 2.1-1: Other Muni Service Changes and Improvements Included in the No-Project Alternative

Service Change	Description	Status	Source
Caltrain Express Bus Service Consolidation (80x / 81x / 82x)	Consolidation of 80x and 82x lines concurrent with the extension of N-Judah to Caltrain Terminal at Fourth and Townsend; consideration to elimination of 81x	Implemented June 1999	Muni SRTP 2000
Ferry Bus Terminal *Relocation*	Relocation of the Ferry Terminal off-street bus turn-around to new curb-side terminals on the surrounding streets, to allow development of the current bus turn-around area as a hotel, to produce revenue for Muni projects	*Implemented Fall 2001*	Muni SRTP 2000
F-Line	*Muni's F-Line Historic streetcar service opened for service from Castro/Market Streets along the Embarcadero to Fisherman's Wharf in 2000, and currently carries approximately 20,000 riders per day.*	*March 2000*	*Muni comments on DEIS 2002*
E-Line	*Muni's E-Line station improvements on The Embarcadero and King Streets for historic streetcar service between Fisherman's Wharf and 4th/King Streets will be under construction in 2003.*	*Under construction in 2003*	*Muni comments on DEIS 2002*
15 – Third Street line	15-Third line to be completely discontinued with implementation of the Third Street Light Rail project in *full operation in 2005*	*2005*	Muni SRTP 2000
6-Parnassus Downtown Terminal	Downtown terminal for the 6 Parnassus line changed from Ferry Terminal to Transbay Terminal	Implemented March 2000	Muni SRTP 2000
12-Folsom	Extended service hours, days, and frequencies; outbound route moved from Howard Street to Harrison Street (between Embarcadero and 11th Streets); service extended to Embarcadero, connecting with F-Market line at the Ferry Building; 83-Pacific route abandoned, replaced by increased service on 12-Folsom	Implemented February 2001	Revised SOMA Action Plan, 12/5/00
N-Owl Service	Extend N-Owl buses from current inner terminal at Ferry Terminal to the Caltrain Fourth and Townsend terminal, via Embarcadero and King Streets	Implemented February 2001	Revised SOMA Action Plan, 12/5/00
47-Van Ness Motor Coach	47-Van Ness motor coach (originally called line "42W") – New Van Ness corridor line with terminals in eastern Fisherman's Wharf and at the Caltrain Fourth and Townsend terminal.	Implemented Spring 2001	Revised SOMA Action Plan, 12/5/00
10-Townsend	10-Townsend (originally called line 42E) – new line connecting Fisherman's Wharf, the Financial District, Caltrain, SOMA, and Potrero Hill with terminals at Van Ness and North Point. Initial service will be between the northern terminal in Fisherman's Wharf and a temporary southern terminal at Seventh and De Haro.	Implemented Spring 2001	Revised SOMA Action Plan, 12/5/00

Table 2.1-1: Other Muni Service Changes and Improvements Included in the No-Project Alternative

9-San Bruno	Additional 9-San Bruno trolley coach service (two additional coaches) between the vicinity of San Francisco General Hospital and the Ferry Terminal on weekdays	Implemented Spring 2001	Revised SOMA Action Plan, 12/5/00
Central Subway	Extension of Third Street light rail service from King Street along Third Street, entering a new central subway near Bryant Street, crossing beneath Market Street and running under Geary and Stockton Streets to Stockton and Clay Street.	To open in *2012*	Muni SRTP 2000

Notes: SRTP = Short Range Transit Plan; SOMA = South of Market Area

- Elevated Central Freeway (US 101 – connects I-80 with *Market Street, with the proposed Octavia Boulevard providing the connection to Oak and Fell streets*)

These projects have all entered or completed construction. Retrofit construction on the Yerba Buena viaduct and tunnel was completed in 2000. Retrofit of the west Bay Bridge span piers is complete. Retrofit of the west span towers and bridge structure is scheduled to be completed by Spring 2003, and the west approach by Spring 2007. The Central Freeway retrofit is scheduled for completion by September 2005.

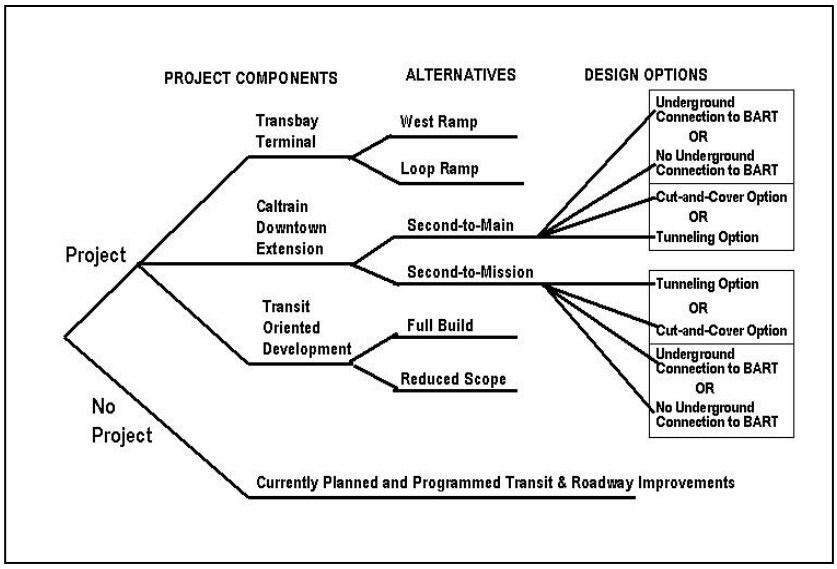
Other roadway and street improvements planned and programmed by the City and County of San Francisco's Department of Parking and Traffic or the Department of Public Works include two projects in the vicinity of the Transbay Terminal/Downtown Caltrain Extension project: striping a transit-only lane along Third Street, and providing a new King Street access roadway at Fifth Street into Mission Bay *(from south of King Street across Mission Creek).*

2.2 PROJECT COMPONENTS

The proposed project includes three major components, each with two alternatives, as follow:

(1) A new Transbay Terminal to serve as a multi-modal transit/transportation facility that incorporates the principles of sustainability and environmental responsibility at the site of the current Transbay Terminal at First and Mission Streets in downtown San Francisco.
(2) An underground extension of Caltrain commuter rail service from its current San Francisco terminus at Fourth and Townsend Streets to a new underground terminus in the basement of the proposed new Transbay Terminal.
(3) Adoption of a Redevelopment Plan for the Transbay Project Area and related development projects, including transit-oriented development. The plan and related development would permit tax increment financing to assist in financing of the transportation improvements and other redevelopment projects.

Two alternatives are under consideration for each major project components. Other components of the project include a temporary bus terminal facility to be used during construction, a new, permanent off-site bus storage/ layover facility, reconstructed bus ramps leading to the west end of the new Transbay Terminal, and a redesigned Caltrain storage yard. A schematic diagram of the project components, alternatives, and design options is shown on the right.



2.2.1 REFINEMENTS TO THE PROJECT AND EIS/EIR

Refinements have been made to the Project and EIS/EIR since the Draft EIS/EIR was published. Under both the federal and state environmental processes, refinements are often made to the EIS/EIR in response to both public comments and any additional project planning that have occurred. The Federal Department of Transportation, Federal Transit Administration (DOT/FTA) procedures and regulations also call for selection of a Locally Preferred Alternative (LPA) from among the various project alternatives evaluated in the Draft EIS/EIR. Detailed analysis and mitigation measures are provided for the LPA and the other alternatives in this Final EIS/EIR. Per CEQA Section 15088.5, none of the refinements identified below and evaluated in this Final EIS/EIR introduce significant new information or new adverse impacts that cannot be mitigated.

2.2.1.1 Adoption of a Locally Preferred Alternative

Following the DOT/FTA guidance and regulations, the TJPA adopted in March 2003 the West Ramp Transbay Terminal, Second-to-Main, Tunneling, Full Build Options as the components to be included in the Locally Preferred Alternative (LPA) for inclusion in the Final EIS/EIR. A Locally Preferred Alternative Report for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project (March 2003[2]) was prepared in advance of the LPA selection and is incorporated herein by reference.

[2] This LPA report is available for public review by appointment in case file 2000.048E at the Planning Department at 1660 Mission Street, San Francisco.

2.2.1.2 Movement of the Transbay Terminal Footprint to the West

In response to public comment on the Draft EIS/EIR, the co-lead agencies – the City and County of San Francisco, the JPB, the San Francisco Redevelopment Agency and FTA – propose to relocate the footprint of the new Transbay Terminal to the west (approximately 150 feet) of the location shown in the Draft EIS/EIR. This would result in the terminal structure no longer spanning Beale Street, thus reducing capital costs without substantially changing environmental effects or the operations and efficiency of the terminal. This change is described in Section 2.2.2.

2.2.1.3 Elimination of the Temporary Bus Ramps to the Temporary Terminal

In response to public comment regarding the need to reduce overall project costs, AC Transit bus access to the temporary terminal will no longer make use of a temporary bus ramp between the Bay Bridge and the temporary terminal during operation of the temporary facility. The proposed access to/from the temporary terminal for AC Transit buses is described in Section 2.2.2, and the impacts and mitigation measures associated with this access are detailed in Section 5.21.1.1 of the Final EIS/EIR.

2.2.1.4 Supplemental Air Emissions Assessment of the Permanent Off-Site Bus Storage Facility

In response to public comments on the Draft EIS/EIR, the co-lead agencies completed a supplemental air emissions assessment of the proposed permanent off-site bus storage facility under the West Approach to the Bay Bridge between Second and Fourth Streets. Findings of this supplemental analysis are provided in Section 5.7.3 and were used to respond to questions and comments raised during the public review period (please see Volume II of this Final EIS/EIR).

2.2.1.5 Supplemental Noise Assessment for the Permanent Off-Site Bus Storage Facility

In response to public comments on the Draft EIS/EIR, the co-lead agencies completed a supplemental noise assessment of the proposed permanent off-site bus storage facility under the West Approach of the Bay Bridge between Second and Fourth Streets. Findings of this supplemental analysis are provided in Section 5.8.6 and were used to respond to questions and comments raised during the public review period (please see Volume II of this Final EIS/EIR).

2.2.1.6 Refinements to the 2nd-to-Main and 2nd-to-Mission Caltrain Extension Alternative Alignments and Station Layout

In response to public comments on both alternatives for the Caltrain Extension, the JPB, working with the TJPA, the City and County of San Francisco and the Redevelopment Agency, developed engineering refinements to the Second-to-Mission and Second-to-Main options for the

Caltrain Downtown Extension that appeared in the Draft EIS/EIR. Refinements include changes to the track, platform, and tail track layouts. Section 2.2.3 describes these revisions. Meetings were held to discuss these refinements with the public.

2.2.1.7 Revised Caltrain Operating Plan Assumptions

The number of daily Caltrain trains assumed to be operated in the Year 2020 has been revised downward from 170 to 132, as shown in Section 3.1.6.2 in this Final EIS/EIR, reflecting more recent planning of the JPB. Train ridership projections have been revised to reflect this new assumed Caltrain service level, as described in Section 3.1.6.2 and 5.19.2.

2.2.1.8 Revised Project Construction/Implementation Schedule

In response to public comments, the co-lead agencies have refined and updated the proposed project construction and implementation schedule, which is shown in Figure 5.20-8, Section 5.20.

2.2.1.9 Revised Project Capital Costs

In response to public comments on the Draft EIS/EIR, the co-lead agencies have refined the capital cost estimates for both the new Transbay Terminal and the Caltrain Downtown Extension. The refined costs are provided for the Locally Preferred Alternative and the refinement results in an overall cost reduction of $143.7 million in 2003 dollars for the Project. The refined costs have been assigned to an anticipated year of expenditure assuming the refined construction/implementation schedule (shown in Figure 5.20-8), and inflation rates have been applied to provide a year-of-expenditure cost estimate for the LPA, thus providing a more accurate estimate of the Project's overall costs. These revised costs are provided in Chapter 6 and in Section 2.2.2.4 for the Transbay Terminal and Section 2.2.3.5 for the Caltrain Downtown Extension. If an alternative other than the LPA were to be chosen, capital costs for the Project would increase.

2.2.1.10 Revised Project Financial Plan

The Project's financial plan has been refined to reflect the revised capital costs, the anticipated year of expenditure for various costs, and recent events regarding various funding sources. The refined financial plan is provided in Chapter 6 of this Final EIS/EIR.

2.2.1.11 Release of Draft Transbay Redevelopment Project Area Design for Development Vision/Redevelopment Boundary Revision

In response to public comments on the Draft EIS/EIR and to advance the planning work for the proposed Transbay Redevelopment Area, the San Francisco Redevelopment Agency has released for public review the Draft Transbay Redevelopment Project Area Design for Development

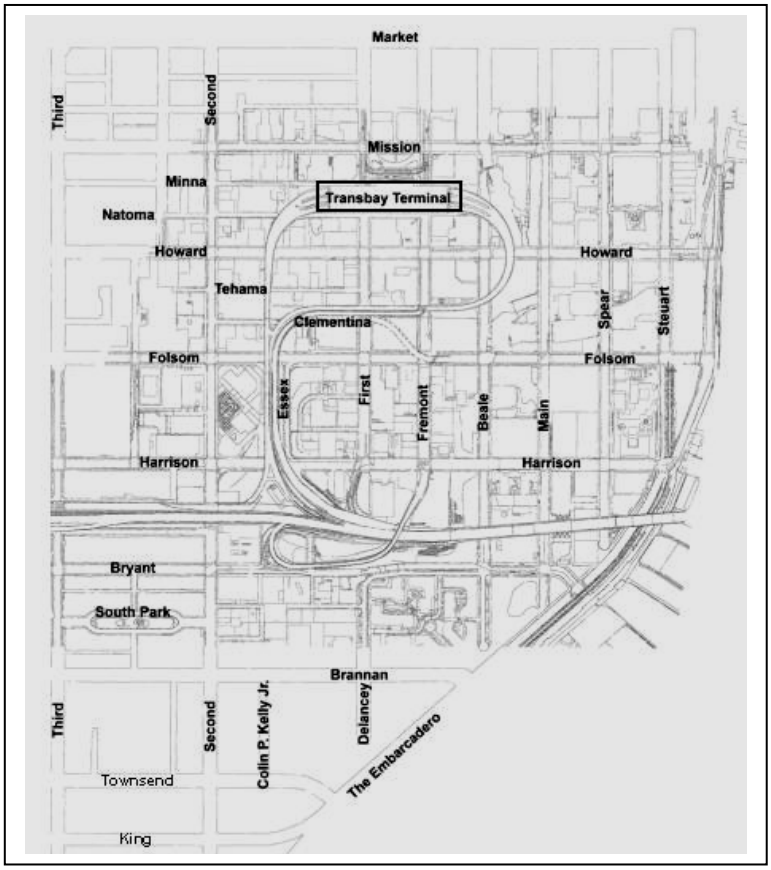
Vision (August 2003). Development of the Draft Transbay Redevelopment Project Area Design for Development Vision involved extensive public input and involvement. The Draft Vision provides additional detail regarding the possible elements of the final Redevelopment Area Plan, as described in Section 2.2.4. This section also describes revisions to the proposed redevelopment area boundary made in response to public comments.

2.2.1.12 Revisions in Response to Public Comments on the Draft EIS/EIR

Other revisions/refinements have been made in this Final EIS/EIR in response to public comments received on the Draft EIS/EIR. Volume II of this Final EIS/EIR contains the comments given on the Draft EIS/EIR and the responses to these comments. As indicated in Volume II, responses at times led to revisions to the Final EIS/EIR. All refinements and revisions to the Draft EIS/EIR are outlined in this Final EIS/EIR in italics.

2.2.2 TRANSBAY TERMINAL ALTERNATIVES

Two alternatives *were* studied for a new Transbay Terminal. Under either alternative, a new multi-modal terminal would be located at the same site as the existing terminal at Mission and First Streets (see figure to the right).



Bus ramps would connect directly from the terminal to the Bay Bridge, while an underground rail facility would allow the extension of Caltrain to downtown and provide space for potential future East Bay commuter rail and California's high-speed intercity rail.

With either Transbay Terminal Alternative, facilities would be included for AC Transit, Greyhound, Greyhound Package Express, Muni buses and trolley coaches, Golden Gate Transit *(GGT)* basic service buses, taxi service, and easily accessible bicycle storage. SamTrans buses would operate on local streets adjacent to the new terminal. Each alternative would include space for retail and cultural uses. Under current plans, full or partial acquisition of five parcels of land and demolition of five buildings would be

required for either Transbay Terminal Alternative and for the Temporary Terminal described in Section 2.2.1.3.

One concept for the terminal would incorporate sustainable design features that would allow the building to use site-specific wind, daylight and shading to reduce the building's energy needs. The design of the roof and exterior walls would facilitate natural ventilation and natural lighting of the interior. Mechanical cooling would be used only for enclosed office areas and data equipment rooms. Photovoltaic panels are proposed on the roof structure to capture solar energy. Rainwater would be captured for maintenance and irrigation of landscaping.

2.2.2.1 Transbay Terminal West Ramp Alternative

Figure 2.2-1 shows the Transbay Terminal West Ramp Alternative, including the locations of bus ramps leading to the terminal and off-site bus storage. *This figure reflects the revised location of the terminal (moved to the West) and the relocated permanent bus access ramps. The Transbay Terminal West Ramp Alternative was selected in March 2003 by the TJPA as the Transbay Terminal Component of the LPA.*

As developed during the Metropolitan Transportation Commission (MTC) study,[3] conceptual plans for this alternative include a terminal one block (165 feet) wide by three blocks (1,300 feet) long. It would include six levels, with four levels above ground and two below. The currently proposed terminal floor plan is described below.

Train Level: Train platforms would be two levels below grade. The actual location of platforms would vary for the two Caltrain Downtown Extension alternatives. Under either of the Caltrain Downtown Extension alternatives, there would be a direct connection to the train platforms from the Transbay Terminal.

Train Mezzanine Level: A train mezzanine would be one level below the street level – one level above the train platforms. It would accommodate train passenger ticketing services and passenger queuing. Building mechanical systems would also be located on this level. *This level would have sufficient space and would be designed so as not to preclude Muni Metro tracks leading from the proposed Third Street and Geary Corridor alignments.*

Street Level: As shown in Figure 2.2-2, the portion of the terminal on street level between Beale and Fremont Streets would accommodate Muni buses and trolley coaches, as well as Golden Gate Transit basic service buses. *A traffic signal would be provided for Muni and GGT as they exit this facility onto Fremont Street.* The west side would include some retail. A lobby for Greyhound/Greyhound Package Express is assumed on the east side of Beale Street.

Concourse Level: The second floor would function as a pedestrian concourse, connecting the various blocks one full story (20 feet) above street level. This area is currently assumed to include 150,000 to 225,000 square feet of retail, entertainment, conference, and educational and cultural space.

[3] Transbay Terminal Improvement Plan Study, Metropolitan Transportation Commission, 2001.

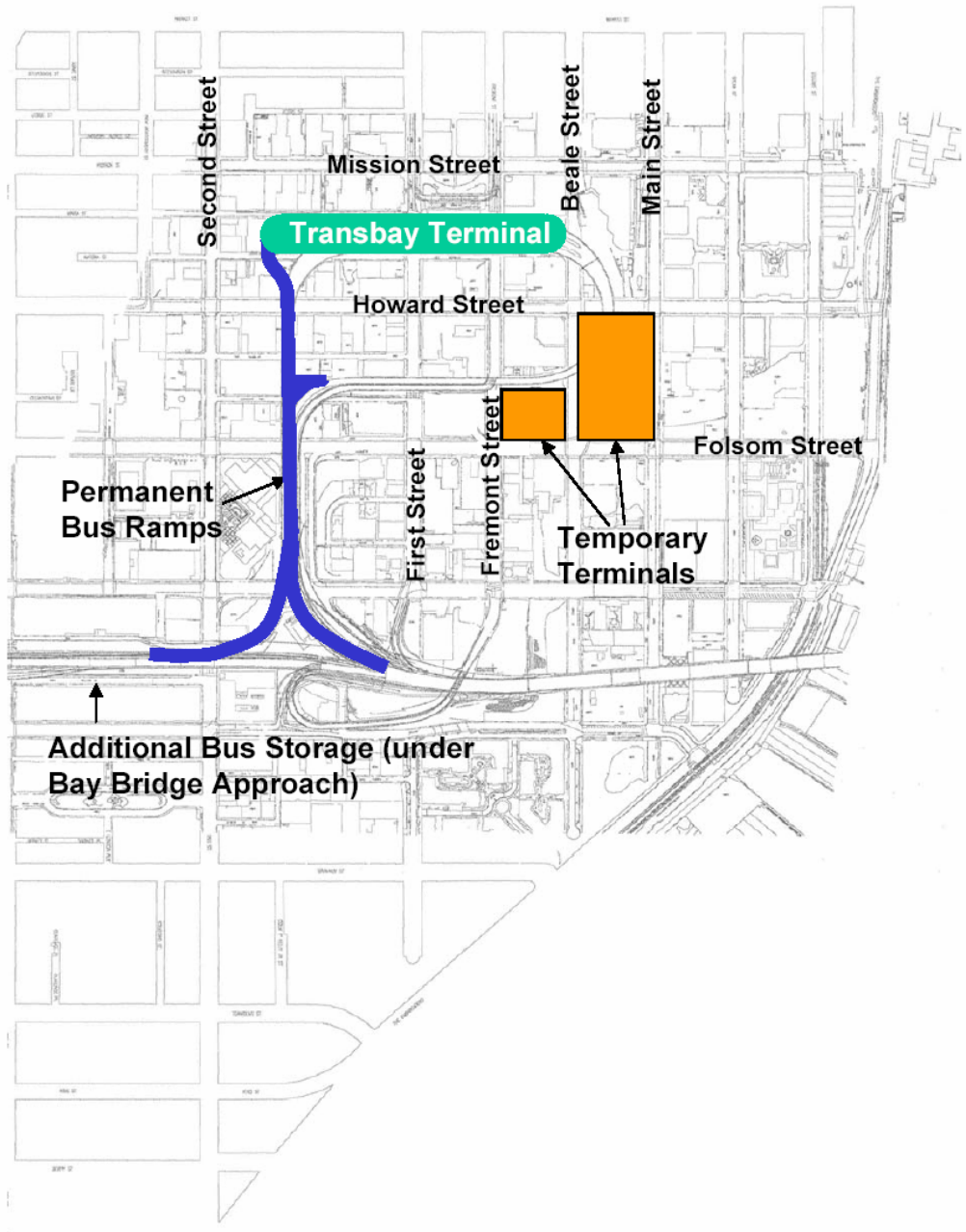
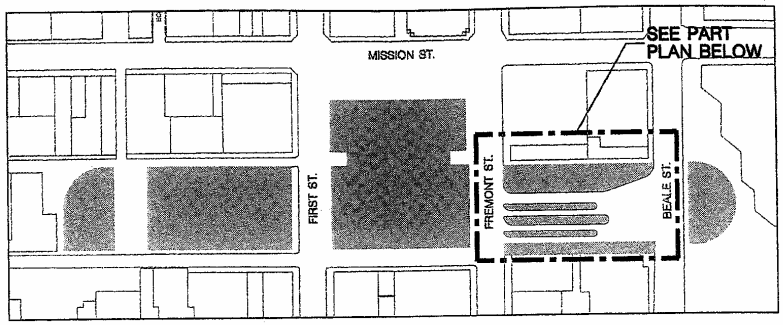


Figure 2.2-1:Transbay Terminal West Ramp Alternative Location of Terminal Components



PLAN AT ENTRY LEVEL

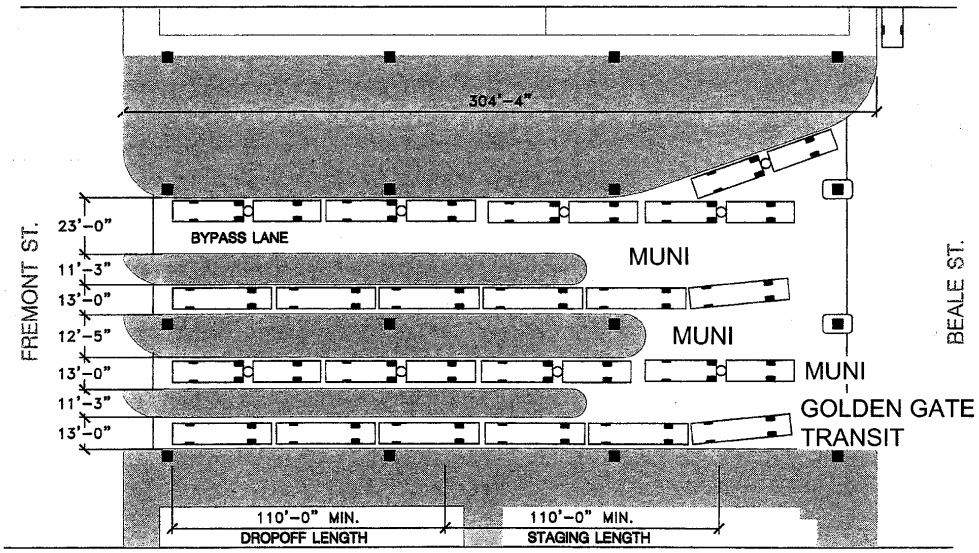


Figure 2.2-2: Transbay Terminal- - Muni and Golden Gate Transit Street-Level Facilities

AC Transit Level: The third floor (Lower Bus Level) would be 40 feet above street level, and would accommodate the transbay AC Transit commuter operation. It would permit 26 articulated and four standard buses simultaneously to serve arriving and departing passengers. As shown in Figure 2.2-3, Bus Deck 1 would be served by ramps that connect directly to the Bay Bridge. An interior full loop would be provided for bus circulation with two lanes – one through lane and one turnout lane.

Upper Bus Level: The fourth floor (Upper Bus Level) would be 60 feet above street level, and would consist of a partial level on the north side of the building, shown in Figure 2.2-3. It would provide half-loop service with two bus lanes – one through lane and one turnout/parking lane – to bus lines other than AC Transit. This would include Muni service to Treasure Island, paratransit, Greyhound, and private operators. Six bus bays would be included, plus 700 feet of straight curb.

Vertical circulation – escalators and elevators – would be provided between all of the levels for pedestrian/passenger flows. Conceptual plans for this terminal alternative include approximately 200,000 square feet of transit-oriented and retail development and 900,000 square feet of transit support and loading areas and mechanical support, yielding a total floor area just over one million square feet.[4]

Bus Ramps and Circulation. As shown in Figure 2.2-1, the direct bus ramps would be on the west side of the building, offering dedicated connections between the Bay Bridge and Transbay Terminal Bus levels 1 and 2. These ramps would be in *generally* the same position as the existing ramps on the west side of the terminal and paralleling Essex Street. *Figure 2.2-4 shows the location of the refined West Ramp leading to the terminal that has been moved to the west.*

Construction of these ramps would require the acquisition and demolition of one building east of the ramps and south of Howard Street and the removal of a portion of the back of the building east of the ramps and north of Howard Street. Existing bus ramps would need to be demolished and reconstructed to accommodate the new Terminal.

The ramp leading to and coming from the lower bus level would be a two-way ramp, with a single 12-foot lane in each direction. A minimum 20-foot width would be provided to allow vehicles to pass and continue bus service in the event of a vehicle breakdown. The ramp would divide into two at the entrance to the terminal, with an upper level ramp and a lower level ramp. Figure 2.2-5 shows a visual simulation of the stacked ramp configuration across Howard Street.

The upper level connection would have one lane functioning as an entrance to the upper bus level. The lower level bus ramp would have two lanes, functioning as both an entrance and an exit for lower bus level. Bus turnaround loops would be provided on each bus level at the east end of the terminal (see Figure 2.2-3).

[4] Possible use of a new Terminal for a transit operator emergency control center has been proposed by the San Francisco Redevelopment Agency and may be evaluated in the future by the *TJPA.*

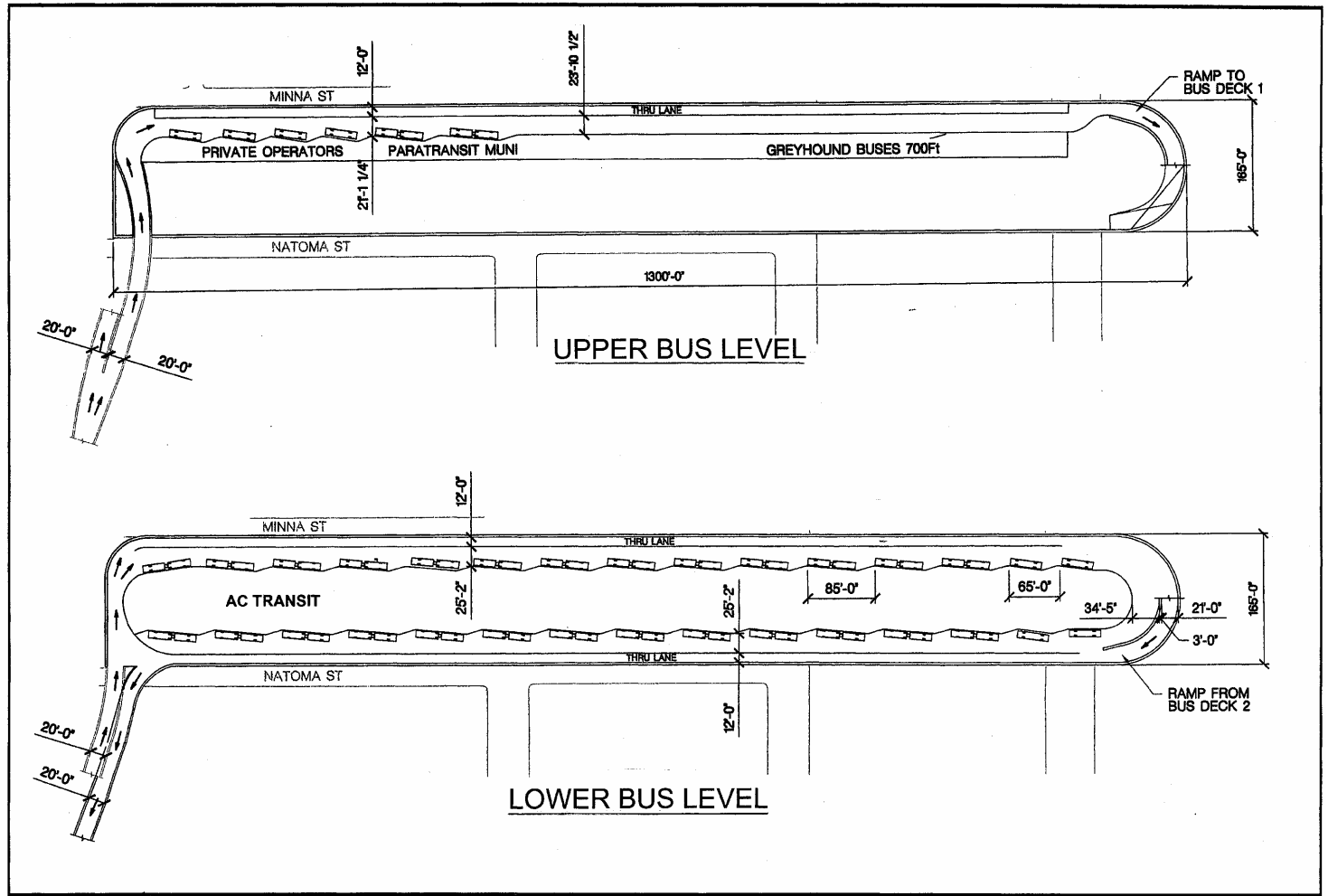
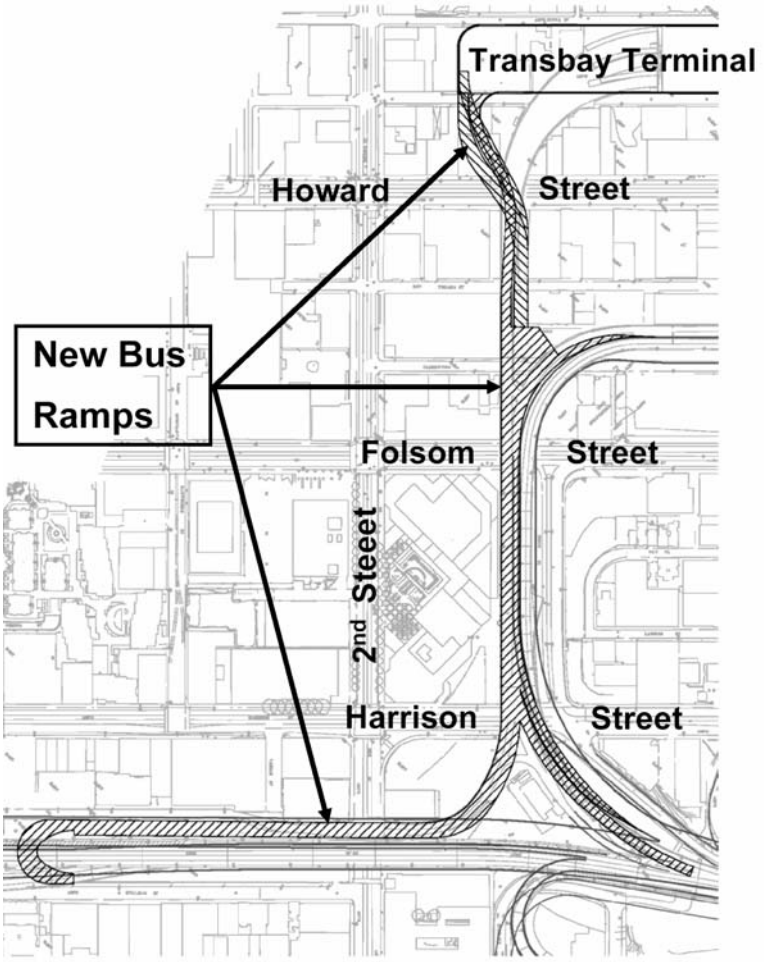


Figure 2.2-3: Transbay Terminal West Ramp Alternative

Buses would travel from the upper bus level down an exit ramp inside the terminal to the lower (AC Transit) bus level, and all buses would depart the terminal on the lower bus ramp to the Bay Bridge. At the Bay Bridge approach connection, the ramps would again be divided and stacked. The lower level would provide access to the bridge for eastbound buses leaving the terminal, while the upper level would serve westbound buses coming from the bridge and destined for the terminal. Current conceptual designs would allow for the staging of at least four buses on the ramp at the entrance to the terminal approaching the lower bus level. This configuration, together with the bus ramp storage link (described below) would include a total of 235,000 square feet of ramp area.

Figure 2.2-4: Transbay Terminal Off-Site Bus Storage Link Ramp



SamTrans bus service would operate on Mission Street using all bus stops for passenger alighting, and would terminate on either Mission Street between Fremont and Beale or on Howard Street between Beale and Fremont. After layover, SamTrans buses would load on Fremont, immediately south of the terminal (about 100 feet north of the Howard/Fremont intersection) and would then make stops on Mission Street for passenger boarding.



Fig 2A Existing Conditions



Fig 2B West Ramp Alternative

View from Howard Street
Near First Street
Looking Northwest

SOURCE: Parsons

Figure 2.2-5: Visual Simulation of Staked Ramps at Howard Street West Ramp Alternative

AC Transit Bus Storage. As shown on Figure 2.2-1 and detailed in Figure 2.2-*6*, bus storage would be off-site, under the west Bay Bridge approaches between Second and Fourth Streets. AC Transit storage would be at-grade between Second and Third Streets. Two optional conceptual designs have been developed for bus storage at this site. The storage area would accommodate either 42 or 53 buses, depending upon the selected layout for storing of the vehicles. Access to this bus storage area would be via *Fourth* Street and a two-way "storage link" ramp that would connect with the Transbay Terminal bus ramps. The plans include a building to house a lounge and restrooms for the drivers and office space for supervisory personnel. *A 10- to 12-foot noise wall would be provided along the southern boundary of the AC Transit off-site bus facility. Noise wall would also be provided along the bus ramps adjoining this facility.*

Golden Gate Transit Bus Storage. Golden Gate Transit weekday bus storage would be under the west approaches to the Bay Bridge, between *Third* and *Fourth* Streets. Based on current conceptual designs, approximately 140 buses could be accommodated on a paved at-grade lot.

The lot could be available for other uses in the evening and on weekends when Golden Gate Transit stores its buses elsewhere. *A 10- to 12-foot noise wall is proposed along the southern boundary of the Golden Gate Transit off-site bus facility and a portion of the eastern boundary of this facility.*

To minimize the impacts on neighborhood parking near the bus storage lot, a single level parking structure is proposed in the location shown on Figure 2.2-*6*. This structure, as currently conceived, would provide parking for up to 300 vehicles on two levels.

2.2.2.2 Transbay Terminal Loop Ramp Alternative

Figure 2.2-7 shows the Transbay Terminal Loop Ramp Alternative. This alternative would involve the demolition and reconstruction of both the existing western and eastern bus ramps between the Transbay Terminal and the Bay Bridge. The new Transbay Terminal would be one block wide and three and three-fourths blocks in length. It would include five levels, with two levels above ground and two below. The currently proposed terminal floor plan is described below.

Train Level: Train platforms would be two levels below grade. The actual location of platforms would vary for the two Caltrain Downtown Extension alternatives. Under any of the Caltrain Downtown Extension alternatives, there would be a direct connection to the train platforms from the Transbay Terminal.

Train Mezzanine Level: A train mezzanine would be one level below the street level – one level above the train platforms. It would accommodate train passenger ticketing services and passenger queuing. Building mechanical systems would also be located on this level. *This level would have sufficient space and would be designed so as not to preclude Muni Metro tracks leading from the proposed Third Street and Geary Corridor alignments.*

Street Level: As shown in Figure 2.2-2, the portion of the terminal on street level between Beale and Fremont Streets would accommodate Muni buses and trolley coaches, as well as Golden Gate Transit basic service buses. *A traffic signal would be provided for Muni and GGT as they exit this facility onto Fremont Street.* The west side would include some retail. A lobby for Greyhound/Greyhound Package Express is assumed on the east side of Beale Street.

Concourse Level: The second floor would function as a pedestrian concourse, connecting the various blocks one full story (20 feet) above street level. This area would include 150,000 to 225,000 square feet of retail, entertainment, conference, and educational and cultural space.

Bus Level The third floor would be 40 feet above street level, and would accommodate AC Transit and all other bus operators. There would be 51 bus bays, served by three one-way bus lanes. The elevated transit loop would be in the same general location as the existing Transbay Terminal bus ramps and would connect directly to the Bay Bridge. Buses would enter the terminal from the east and exit to the west.

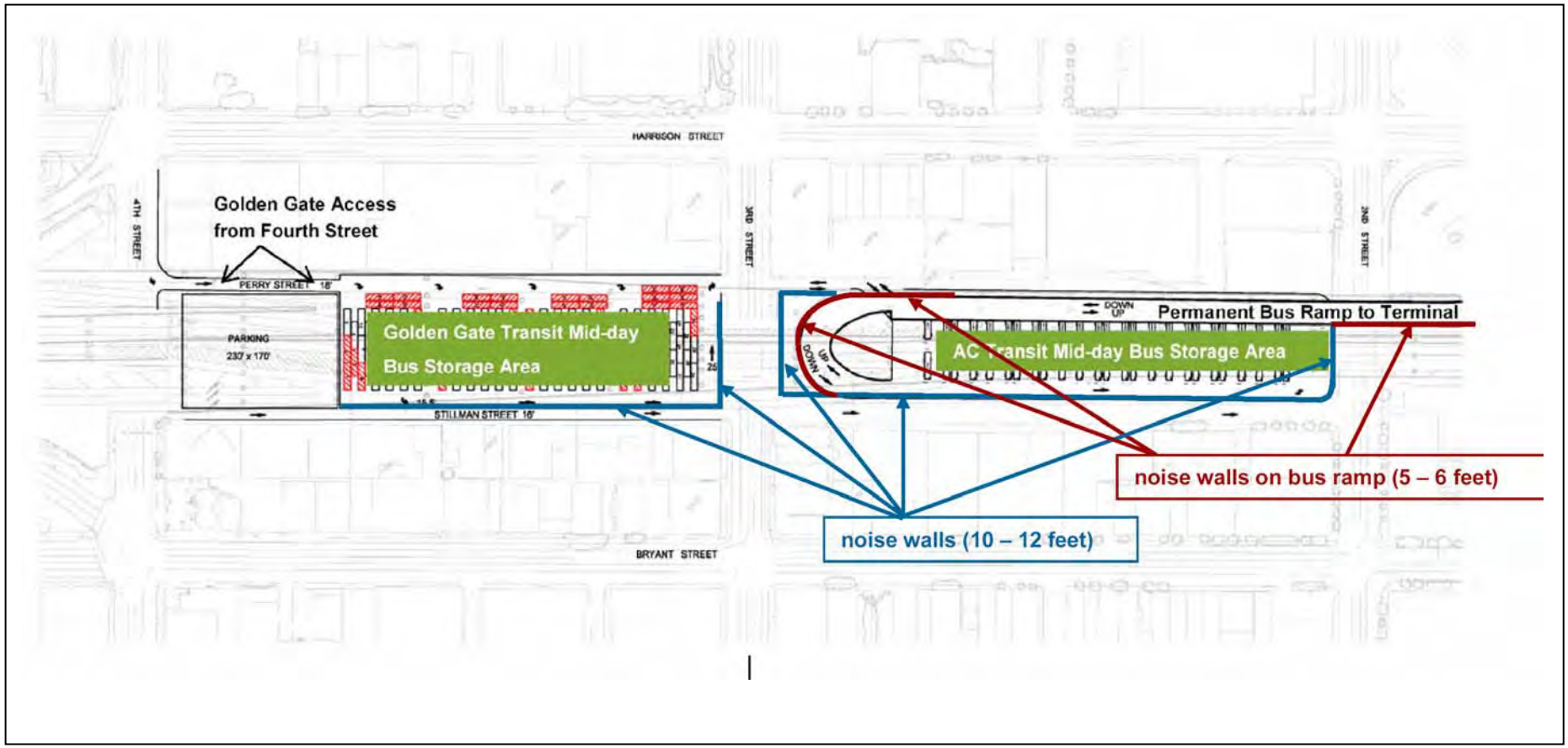


Figure 2.2-6: Transbay Terminal Off-Site Bus Storage

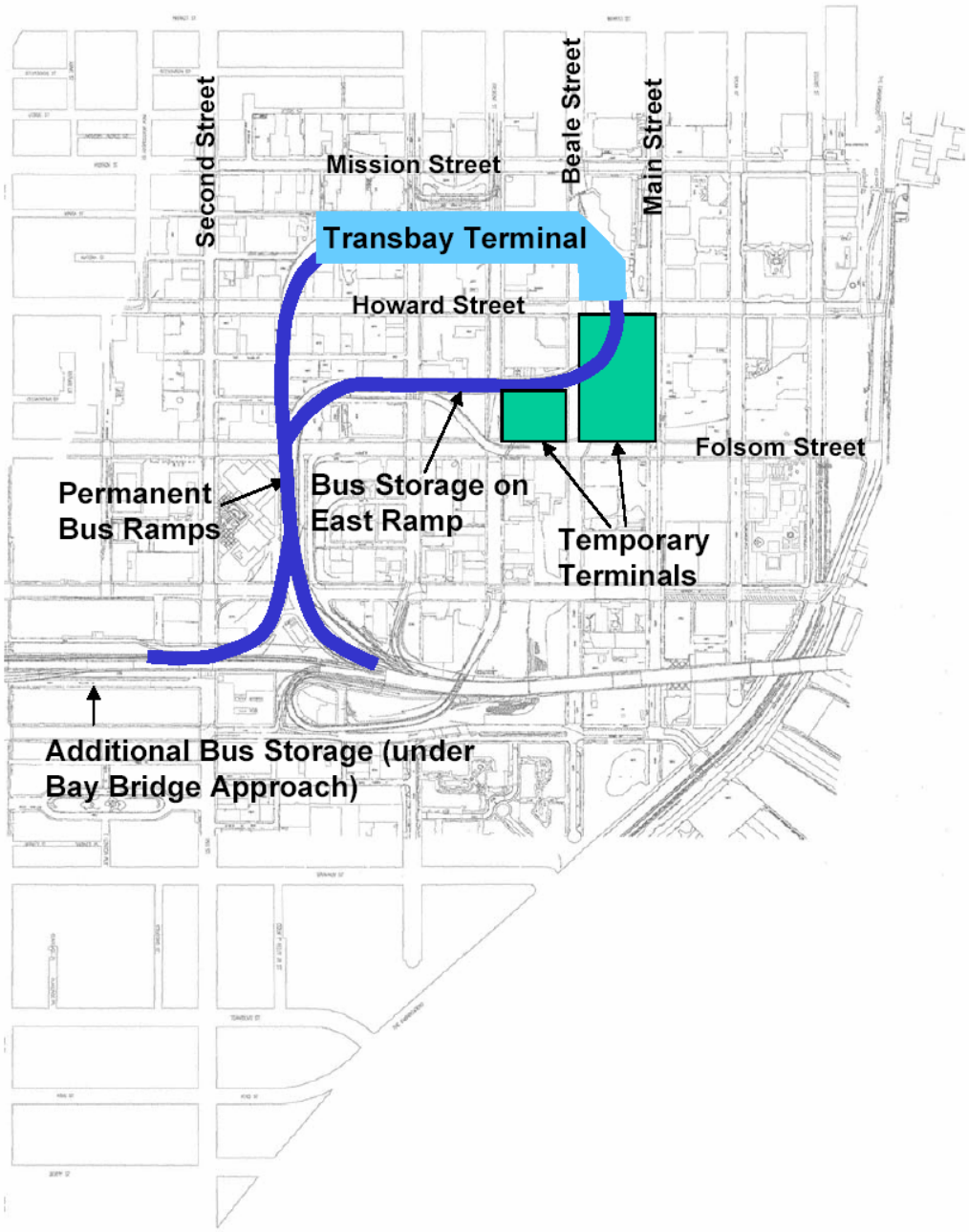


Figure 2.2-7:Transbay Terminal Loop Ramp Alternative Location of Terminal Components

Vertical circulation – escalators and elevators – would be provided between all of the levels for pedestrian/passenger flows. Bus operations for the Transbay Terminal Loop Ramp Alternative would be very similar to the current facility, with AC Transit and other bus operators operating on the second floor, and with buses entering from the east and exiting to the west. Muni and Golden Gate Transit operations would be moved to between Beale and Fremont Streets at street level, as described for the Transbay Terminal West Ramp Alternative.

Preliminary plans for this terminal alternative include approximately 175,000 square feet of transit-oriented and retail development and 750,000 square feet of transit support and loading areas and mechanical support, yielding a total floor area just under one million square feet.[5]

Bus Ramps and Circulation. The Transbay Terminal Loop Ramp Alternative would involve the demolition and construction of new bus ramp structures, providing for a full one-way loop of bus circulation through the Transbay Terminal with direct connections to the Bay Bridge on both the east and west sides of the terminal (See Figure 2.2-7). A total of 380,000 square feet of ramp area would be provided. Construction of these ramps would require the acquisition and demolition of one building east of the ramps and south of Howard Street and the removal of a portion of the back of the building east of the ramps and north of Howard Street. SamTrans bus operations would be as described for the West Ramp Alternative.

Bus Storage. The Loop Ramp Alternative would allow for approximately 120 standard 40-foot buses to be stored on the eastern bus ramps, with the remaining bus storage off-site at one or both bus storage sites described under the West Ramp Alternative.

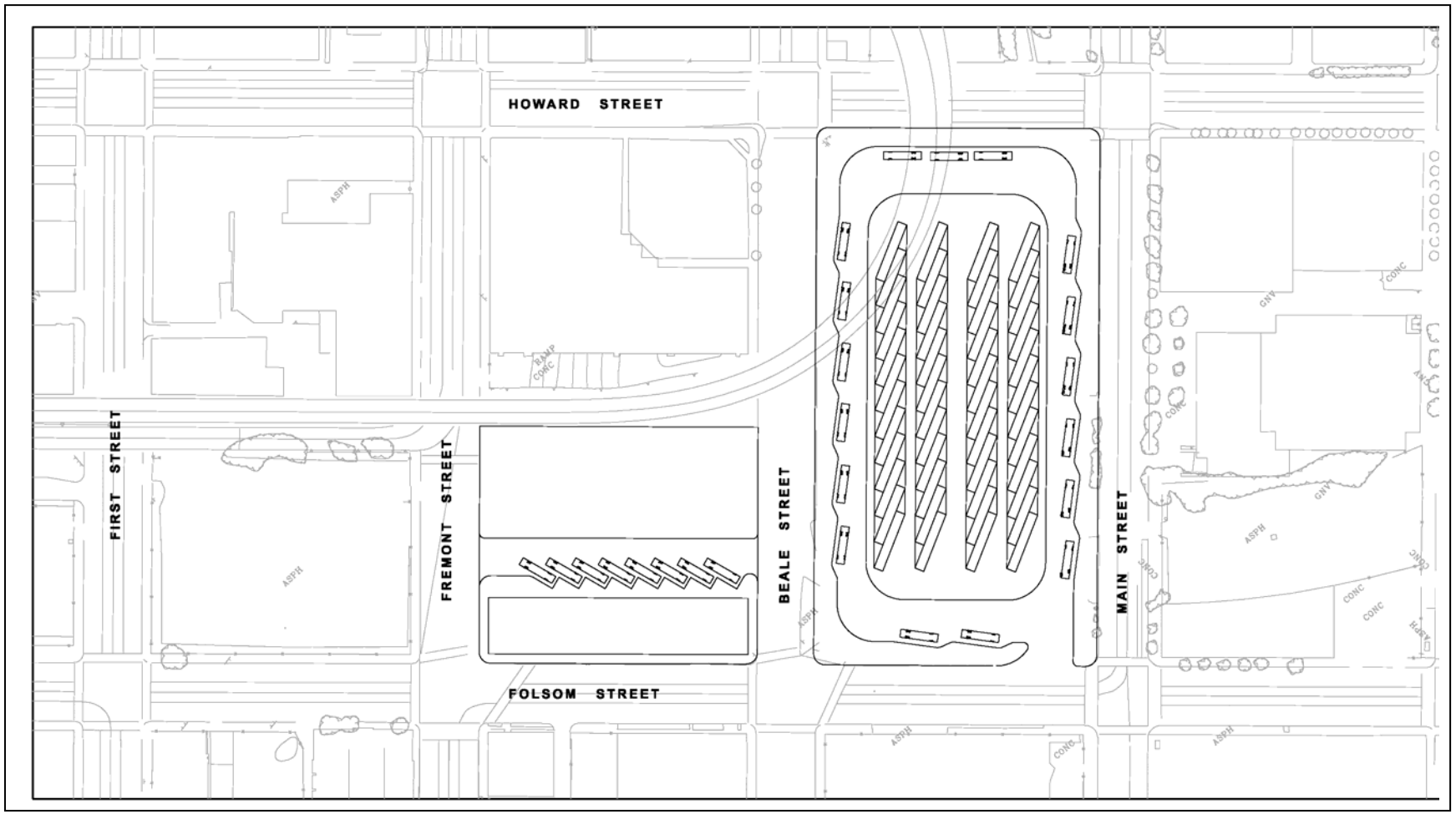
2.2.2.3 Transbay Terminal Construction

Temporary Bus Facilities. During construction of the new Transbay Terminal, two temporary surface terminals would be built. A temporary terminal for Greyhound buses would be located on Folsom Street between Fremont and Beale Streets. As shown in Figure 2.2-8, a temporary terminal for AC Transit buses would be located on the block bounded by Beale, Howard, Main, and Folsom Streets. A minimum of 16 saw-tooth bus spaces for AC Transit and eight bus spaces for Greyhound buses would be provided, based on preliminary plans. Amenities would be minimal and would include ticketing for AC Transit and Greyhound, restrooms, and sheltered waiting areas. Access to all operational areas would meet the requirements of the Americans with Disabilities Act.

Golden Gate Transit currently uses a site *at Eighth and Harrison Streets* for bus storage. Muni operations would be located on the curbs surrounding the temporary terminal block, with four drop-off bays (two of them trolley-ready) and four pick-up bays (all trolley-ready).

[5] Possible use of a new Terminal for a transit operator emergency control center has been proposed by the San Francisco Redevelopment Agency and may be evaluated in the future by the Transbay Joint Powers Authority.

Figure 2.2 8: Layout of Temporary Bus Terminal



Contra-flow lanes would be designed along Beale and Folsom Streets to accommodate right-hand drop-off and boarding for Muni. Golden Gate Transit would be allocated three bays on the curb with an additional four to five layover spaces on the north side of Folsom Street between Fremont and Beale Streets. During operation of the temporary terminal, SamTrans express bus service would operate via Mission, Beale, Folsom and Main Streets to an endpoint on Beale Street between Howard and Folsom, or as an alternative, on Main Street between Folsom and Howard. Buses would alight passengers at all bus stops prior to the endpoint. Leaving the endpoint, buses would be in service and stop at all bus stops for passenger boarding.

In response to public comment regarding the need to reduce overall project costs, AC Transit bus access to the temporary terminal will no longer make use of a temporary bus ramp between the Bay Bridge and the temporary terminal during operation of the temporary facility. Without a temporary bus ramp, the AC Transit buses exiting the freeway would use local streets to gain access to the temporary terminal. Buses exiting the I-80 freeway would go north up Fremont from the Harrison Street ramp, turn east on Folsom and proceed eastbound toward the temporary terminal. For the return trips, there would be a contra-flow lane along Folsom from Main Street to Essex Street for buses exiting the terminal. Buses would then have a protected left-turn movement from Folsom onto Essex Street. Once on Essex, the buses would travel on a dedicated bus lane toward the freeway on-ramp. Northbound traffic lanes on Essex Street would be temporarily eliminated during operation of the temporary terminal to allow for the dedicated bus lanes leading south to the freeway.

Construction of the new Transbay Terminal facilities would be staged to allow for development of the new terminal and ramps at approximately the same locations as the old terminal and ramps. Before commencement of construction of the new terminal and ramps, the following conditions are assumed:

- Caltrans would have completed construction of the proposed off-ramp from the Bay Bridge to Fremont and Folsom Streets.
- The existing Transbay Terminal access ramp over Fremont and Beale Streets would be removed

Construction would be phased to first construct the temporary terminals, with all associated infrastructure. This would enable bus operations to proceed unimpeded during construction. Upon completion of the temporary terminals, all bus operations would be removed from the existing Transbay Terminal. The existing terminal and access ramps would be demolished. Construction of the new terminal and access ramps would then commence in one large construction area.

2.2.2.4 Transbay Terminal Capital Costs

C*ost* estimates *shown in the Draft EIS/EIR* for the two Transbay Terminal Alternatives were: West Ramp Alternative *at* $1.02 billion and Loop Ramp Alternative *at* $1.19 billion *to start of construction assumed in the Draft EIS/EIR to be October 2002.* These estimates include the cost

of a train-ready basement, ramp development, the off-site bus storage facility, the temporary terminal, and the mid-point estimate for real estate. *Capital costs for the Transbay Terminal West Ramp Alternative (the Locally Preferred Alternative) have been refined and are shown in Table 2.2-1. These costs assume a refined construction schedule as shown in Figure 5.20-8, with all costs escalated to the actual year of expenditures.*

Table 2.2-1: Transbay Terminal Capital Cost Estimate
West Ramp Alternative (LPA)
(Millions of Dollars – Year of Expenditure)

Activity	***Cost Estimate***
Operations Analysis, Preliminary Engineering, Geotechnical Engineering), Program Review/Value Engineering, Final Design & Permitting, Owner Costs	*$107.87*
Acquire Property, Design, Construct Temporary Terminals (Transit and Greyhound)	*$28.29*
Acquire Property & Demolish Buildings to Build Terminal	*$36.54*
Demolish Existing Terminal & Ramps, Construct New Terminal & Ramps	*$909.22*
Construct Permanent Off Site Bus Storage Facility	*$24.45*
TOTAL COST ESTIMATE	***$1,106.37***

Notes:

- *Costs escalated to year of anticipated expenditure between 2004 and 2011.*
- *Costs are for West Ramp Alternative*
- *Other qualifications and assumptions apply, including coordination with Caltrans during the retrofit of the Western Approach and bus ramp retrofit projects.*
- *Total assumes high end of 2001 real estate estimate escalated to year of expenditure.*
- *Construction costs include a 25% construction contingency, 8% for construction management, and 10% project reserve. Owner costs are factored into each category.*

Source: *MTC, SMWM, Oppenheim/Lewis, Sedway Group, Parsons, 2003*

2.2.3 CALTRAIN DOWNTOWN EXTENSION ALTERNATIVES

The Caltrain Downtown Extension Component consists of an extension of Caltrain from the present San Francisco terminus (and storage yard) at Fourth and Townsend Streets to an underground terminal on the site of the present San Francisco Transbay Terminal at First and Mission Streets, a distance of some 1.3 miles. The extension would consist of two to four tracks branching to several additional tracks into the basement of the proposed new Transbay Terminal.

Two Caltrain Extension alternatives are under consideration (1) Second-to-Main, and (2) Second-to-Mission. *Both alternatives were refined in response to public comments on the Draft EIS/EIR. These revisions are shown in the Locally Preferred Alternative Report, (March 2003). Platform lengths and the length of straight (tangent) platforms were increased for both refined options, and additional through tracks were added to both. The lengths and number of tail tracks were also increased under both options. The refined alignments include three tracks*

from the Fourth and Townsend Station through to the terminal. The Draft EIS/EIR included only two tracks for the tunnel portion between Townsend and Second Streets. The refined option includes a third track in this segment to improve rail operations and capacity. Additional train storage capacity was also provided by the refined tail track layouts for both options. Figure 2.2-9 shows the overall Second-to-Main Caltrain alignment – the Locally Preferred Alternative for the Caltrain component

Figures 2.2-1*0* through 2.2-*18* show the plan and profiles for the Second-to-Main Street Alternative. Figures 2.2-1*0* through 2.2-1*4* and 2.2-*19* through 2.2-*22* show the plan and profiles for the Second-to-Mission Street Alternative.

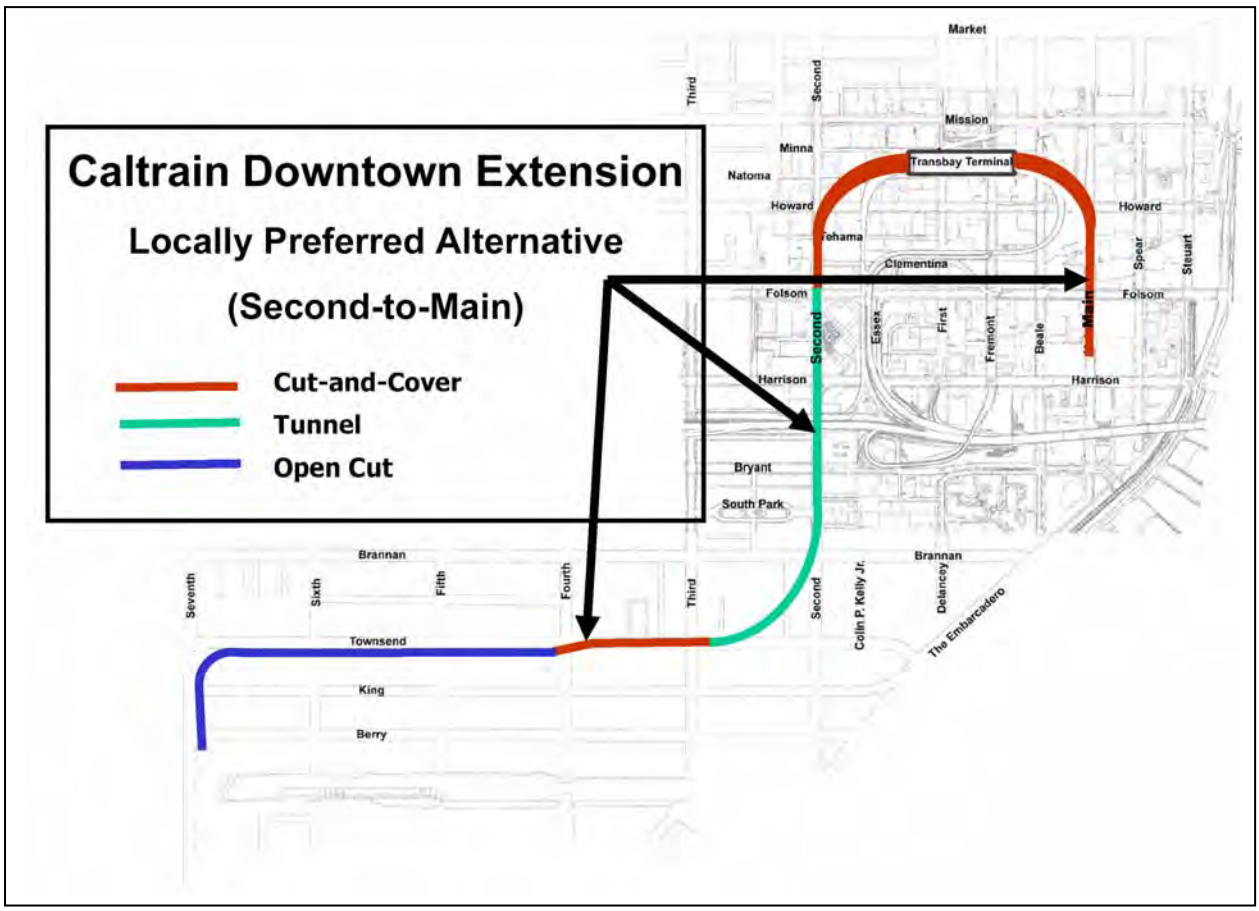
The extension would include reconstruction of the current storage yard at Fourth and Townsend, with provision of three surface platforms and six tracks on the southern portion of the existing facility near Fourth and King Streets and the addition of a new underground Caltrain station on the northern portion near Townsend and Fourth Streets.

The Caltrain Extension project would begin just north of Sixteenth Street, where additional tracks and sidings would be added as the alignment approaches the Fourth and Townsend location. Four Caltrain tracks are proposed to cross an extension of Common Street to the West.[6] From this location, the easternmost track would turn east into a reconstructed surface portion of the Fourth and Townsend storage facility and station. This track would then branch into six tracks leading to three surface platforms terminating at the current Fourth and Townsend Station (see Figure 2.2-13).

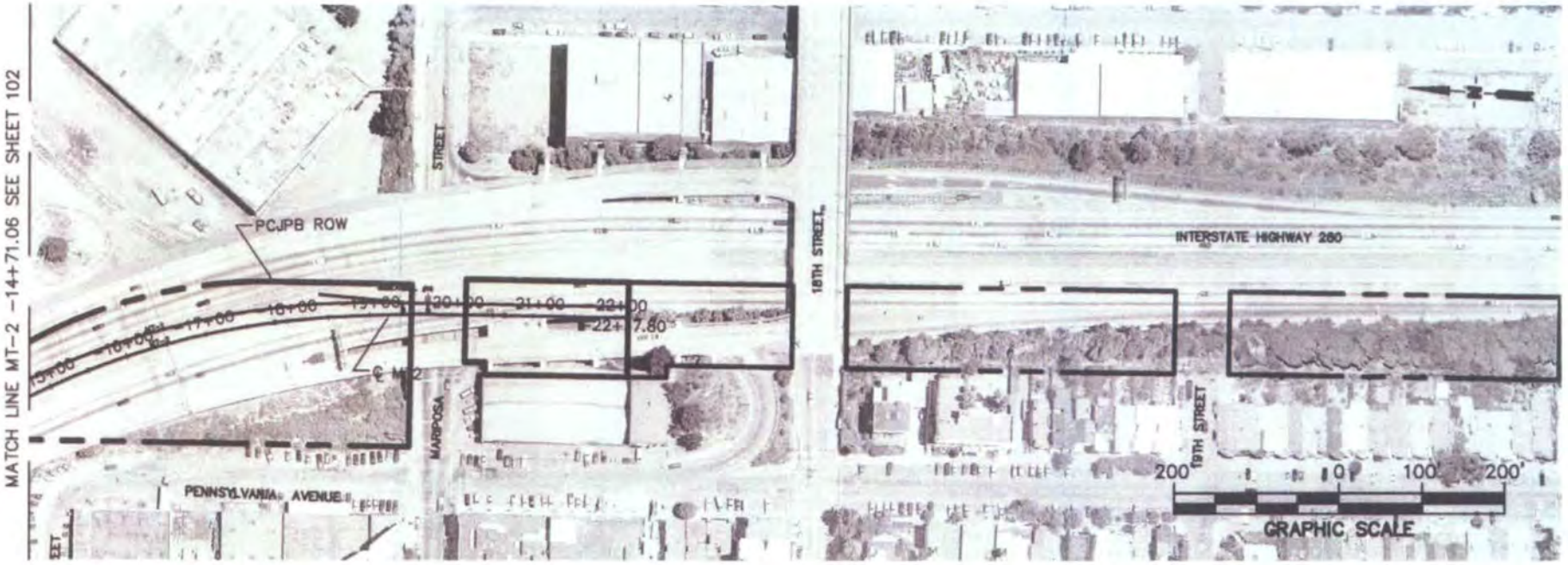
These tracks would not continue to the new Transbay Terminal but would terminate at the Fourth and Townsend Street Station. Platforms would be provided between these tracks for limited Caltrain service including, for example, special ballpark trains or non-electrified trains that could arrive from Dumbarton or from areas south of Gilroy, e.g., Monterey. The three westernmost tracks (closest to Seventh Street) at Common Street would begin to descend at approximately Berry Street and would curve east to a new underground station with a center platform near Fourth and Townsend Streets. These three tracks would lead to a new underground station at Fourth and Townsend, with two tracks serving a center-platform station (see Figures 2.2-13). An additional fourth track coming from the East would pass north of these three tracks and the new underground platform. This fourth track would head to the west (toward Seventh Street) and would branch into five depressed storage tracks to be located to the south of Townsend Street between the new station platform and Seventh Street.

[6] The extension of Common Street across the Caltrain right-of-way was included in the Mission Bay Subsequent Environmental Impact Report (SEIR). A Notice of Determination was posted for this SEIR on November 3, 1998. The California Public Utilities Commission approved the new at-grade crossing on May 18, 2000 as a replacement for two crossing that were closed at Berry and King Streets in the Mission Bay development. The new Common Street crossing is therefore assumed as part of the No-Project Alternative for this Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project EIS/EIR.

Figure 2.2-9: Caltrain Downtown Extension
Second-to-Main Alternative – Locally Preferred Alternative



The four tracks passing the Fourth and Townsend underground station would merge into two tracks under Townsend Street near Fourth Street. The alignment would then continue east under Townsend Street in a cut-and-cover tunnel configuration. It would then curve north at about Clarence Place just east of Third Street in a cut-and-cover configuration. For the current cut-and-cover option, eleven parcels with ten buildings would need to be acquired and demolished for this 1,100-foot long curve with 716- and 736-foot radii curves from Townsend to Second and Brannan Streets. (These buildings would remain for the tunneling option described below in Section 2.2.2.3.) The alignment would continue as a cut-and-cover section under Second Street for approximately 2,055 feet.



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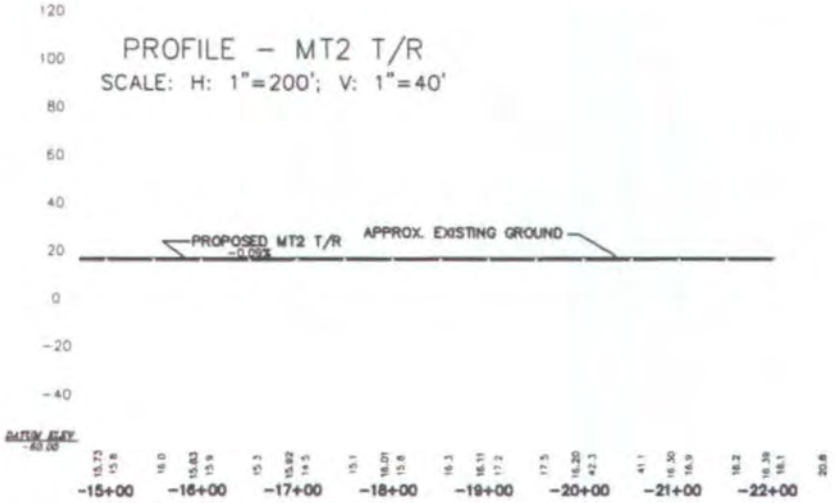

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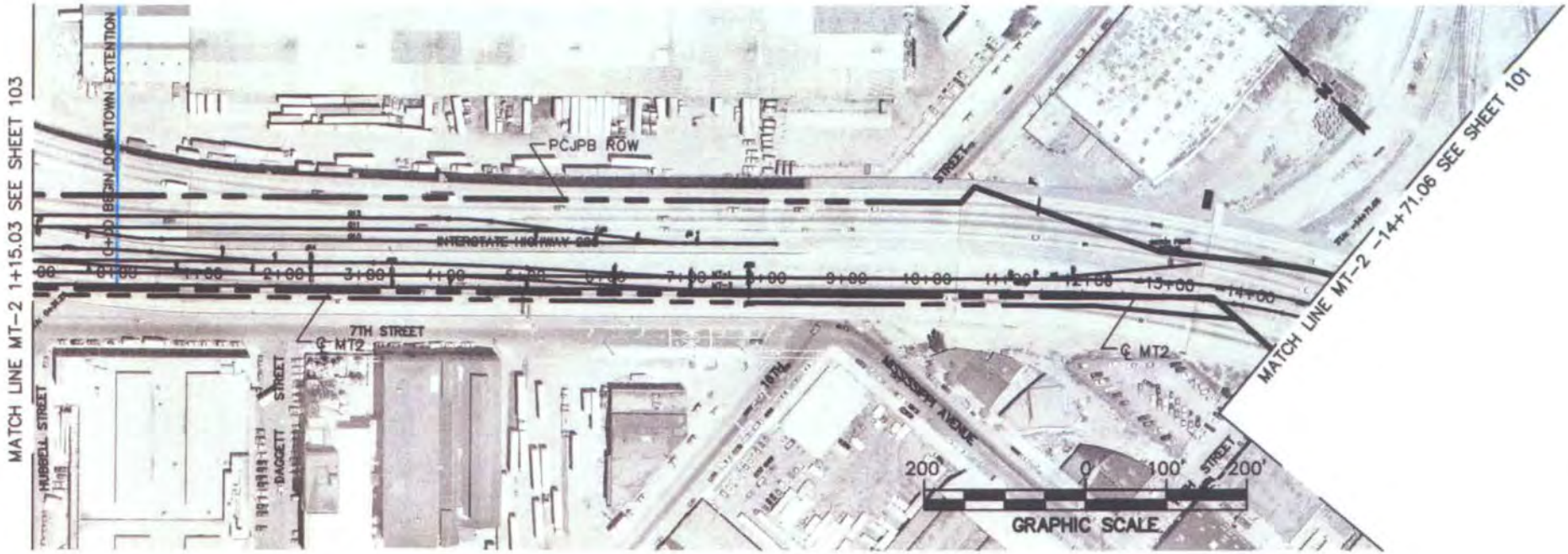

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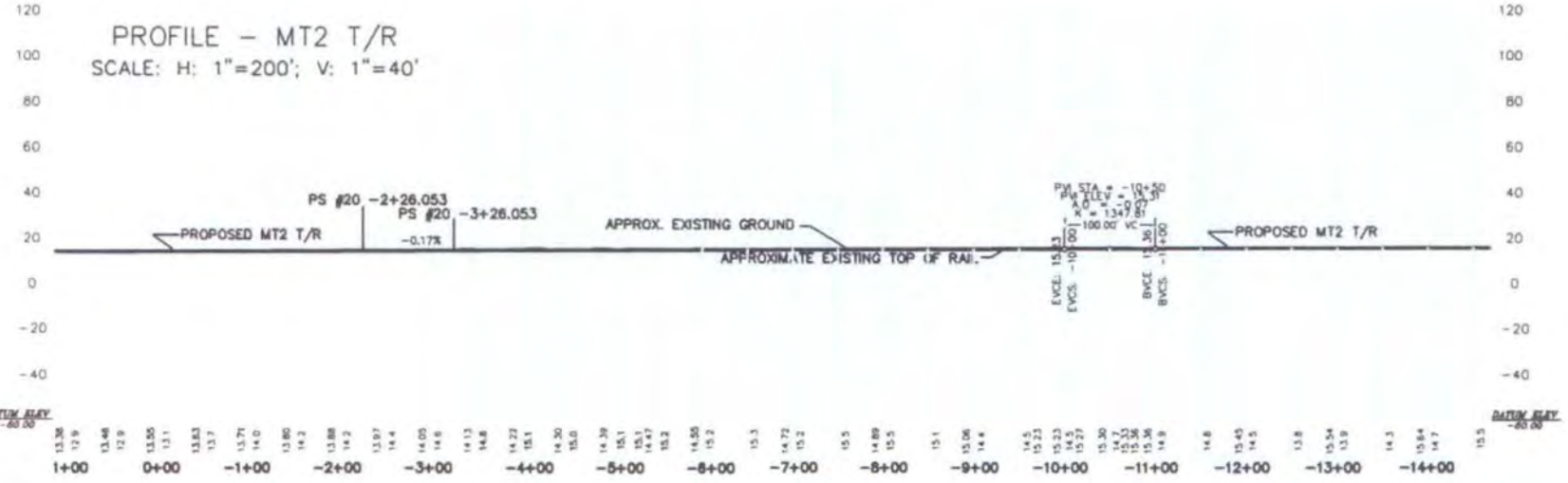

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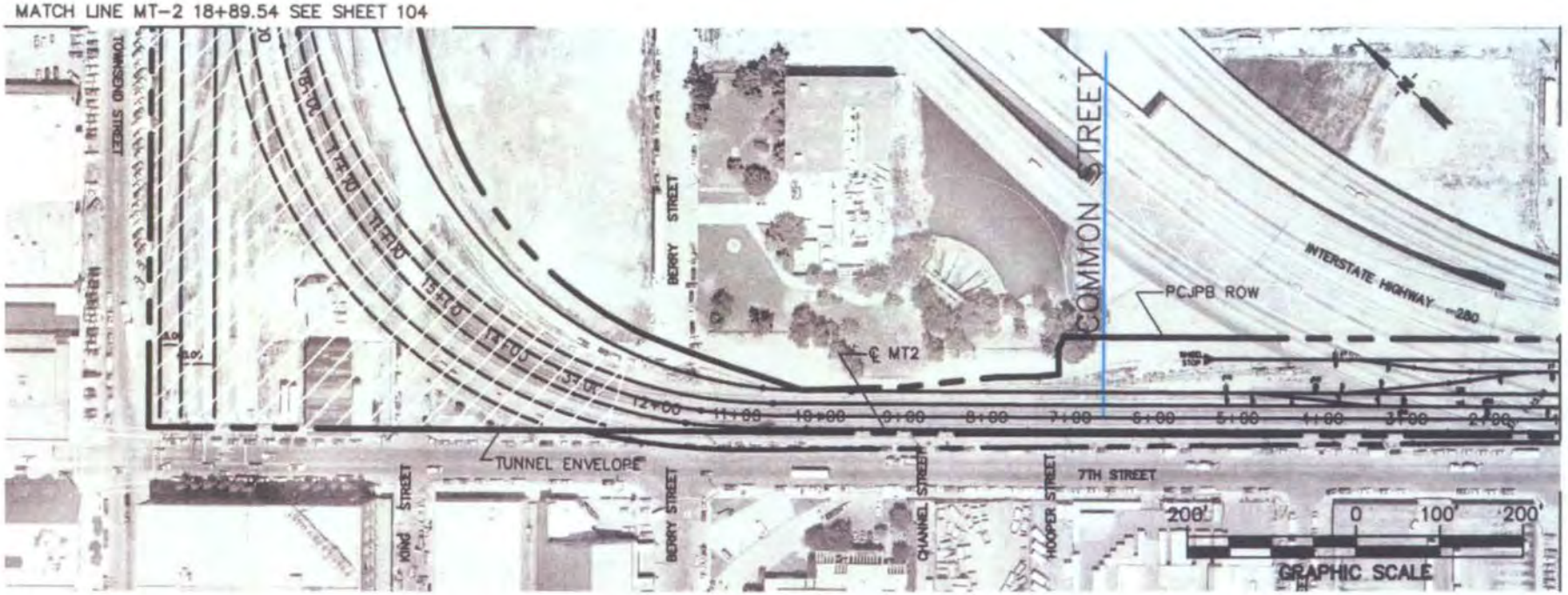

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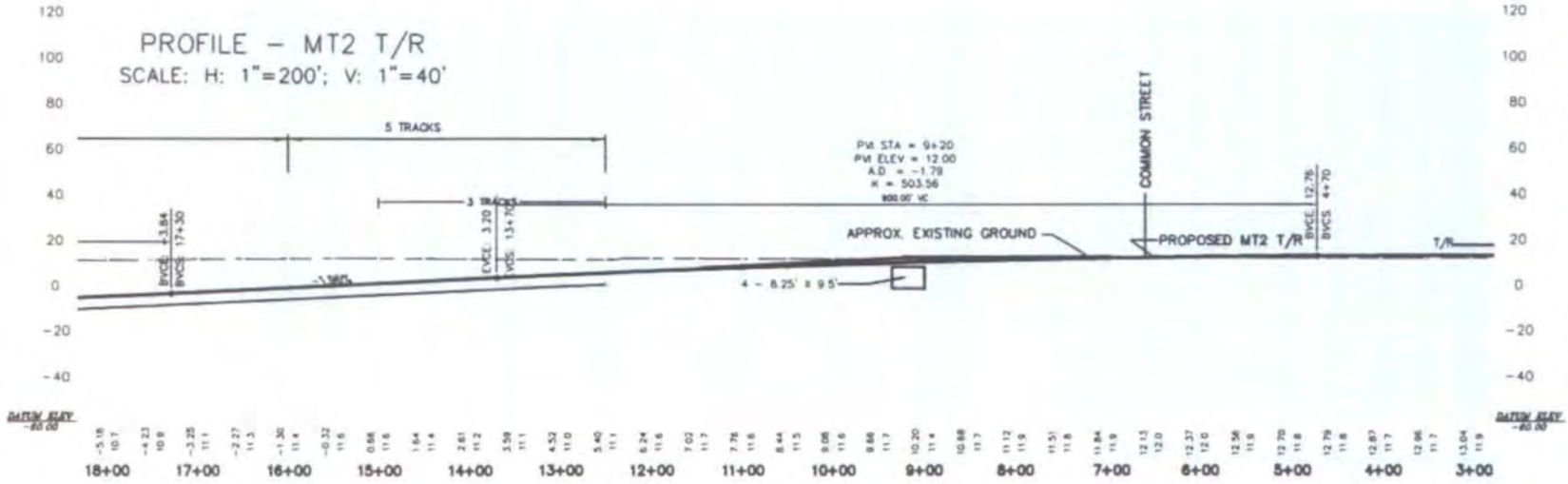

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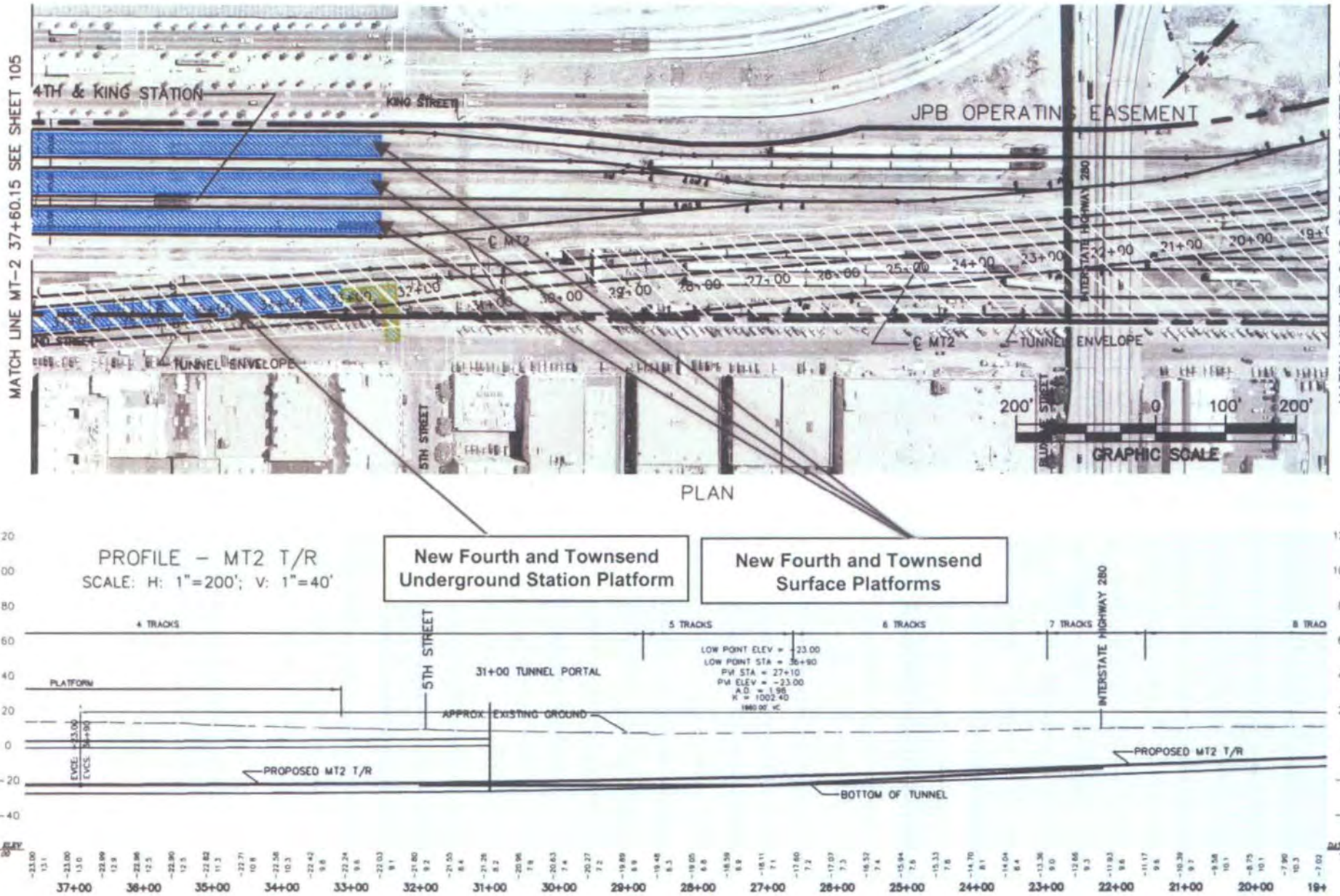

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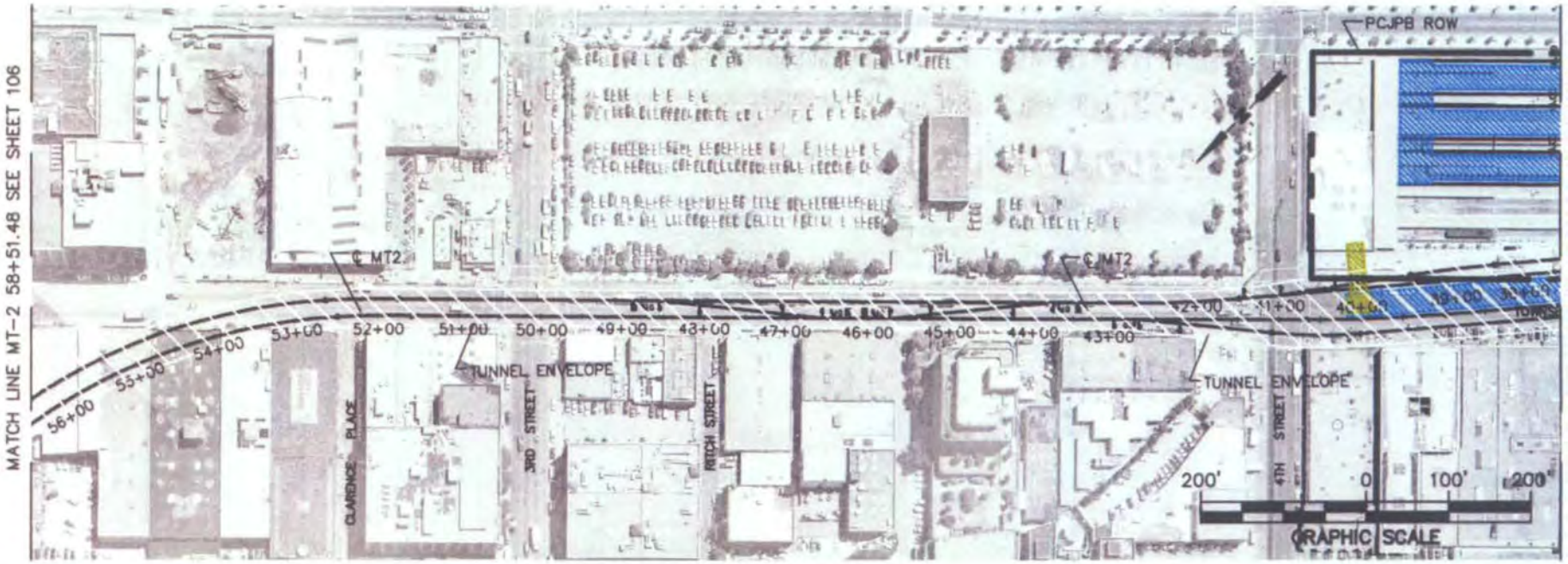

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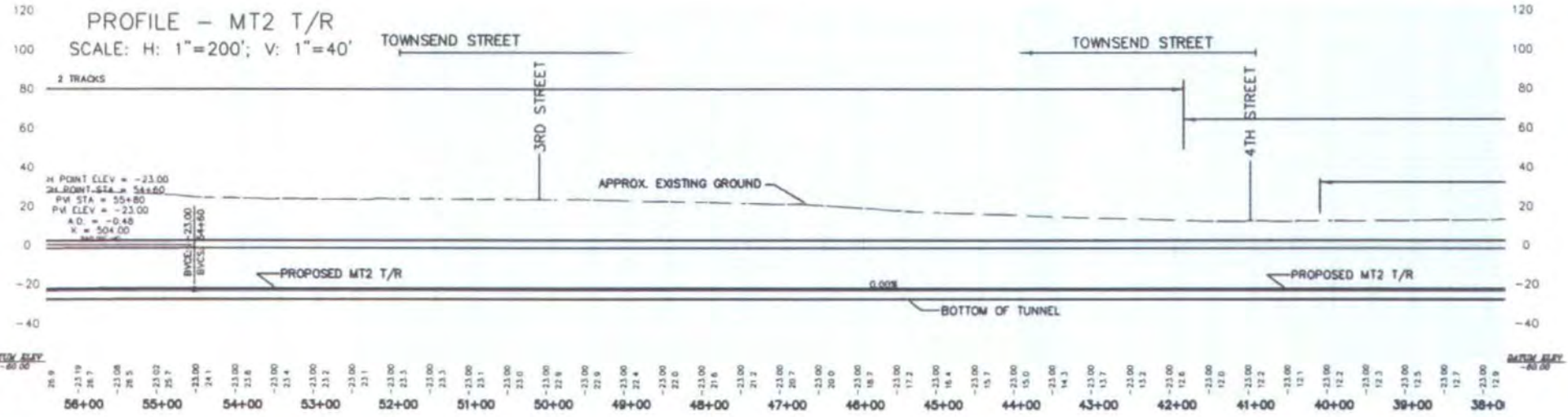

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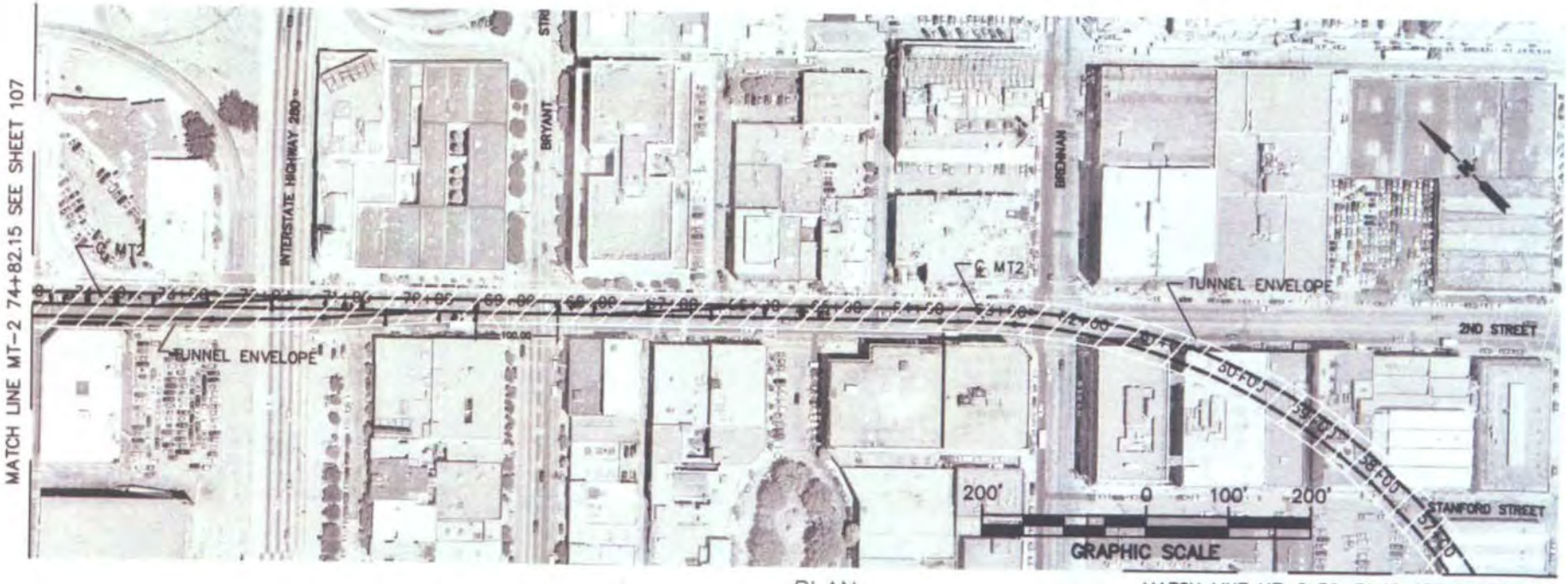

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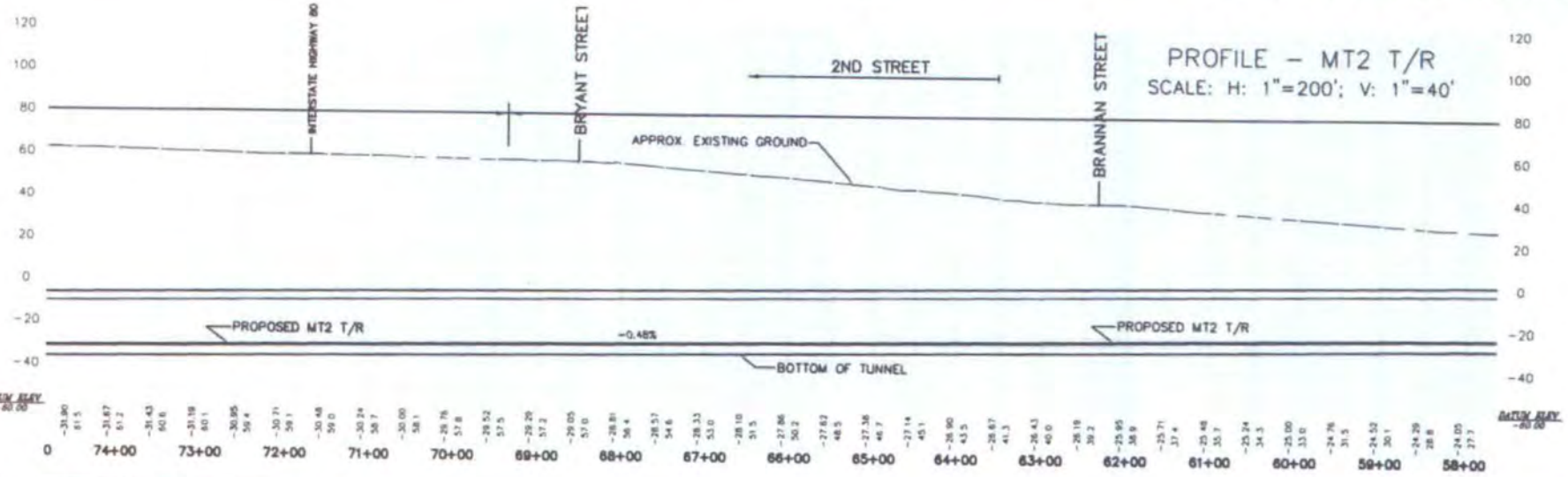

DATE FLOWN: SEPTEMBER, 2000	DESIGNED: J. TENNYSON	Figure 2.2-15	PARSONS 1250 San Carlos Avenue San Carlos, CA 94070	Caltrain 1250 San Carlos Avenue San Carlos, CA 94070	CHIEF ENGINEER: D. MAXEY	PENINSULA CORRIDOR JOINT POWERS BOARD	CADD FILE NO: C-DTX1-B; CADD DATE: 021902
SUBJECT TO CHANGE DURING FINAL DESIGN	DRAWN: J. SHIN		APPROVED		PROJECT MANAGEMENT:	SAN FRANCISCO CALTRAIN DOWNTOWN EXTENSION 2ND to MAIN SHEET 6 of 9	SCALE: 1"=200'
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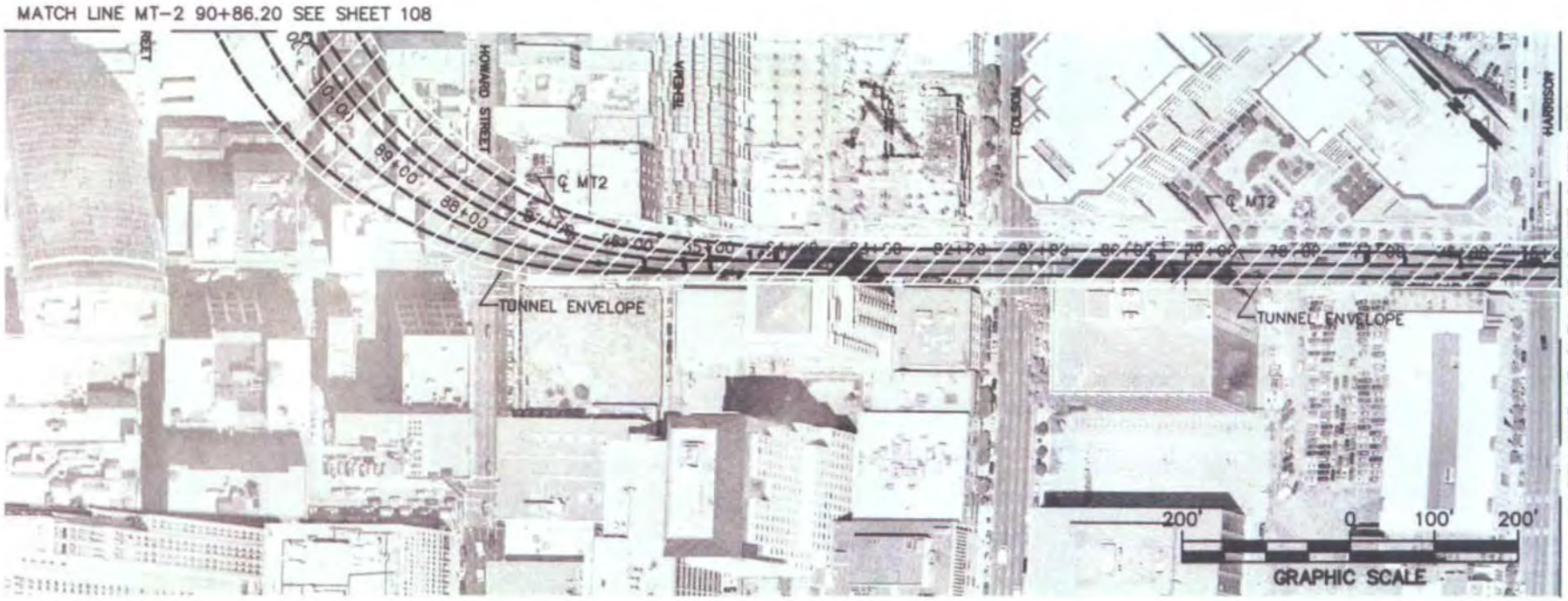

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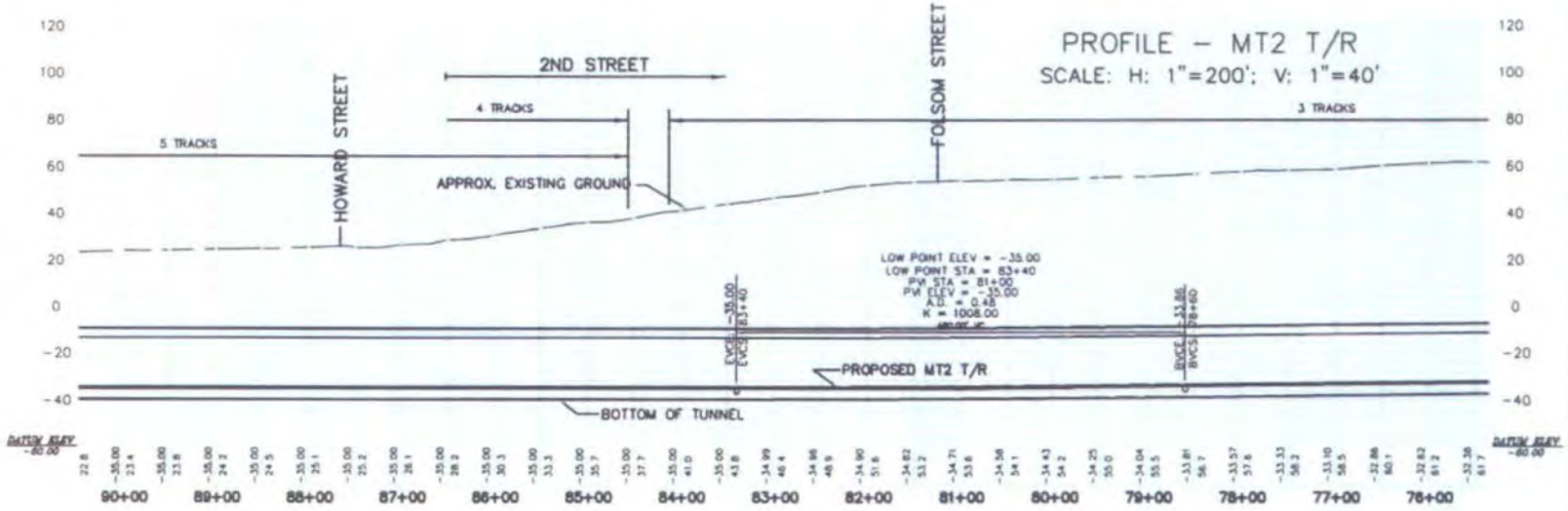

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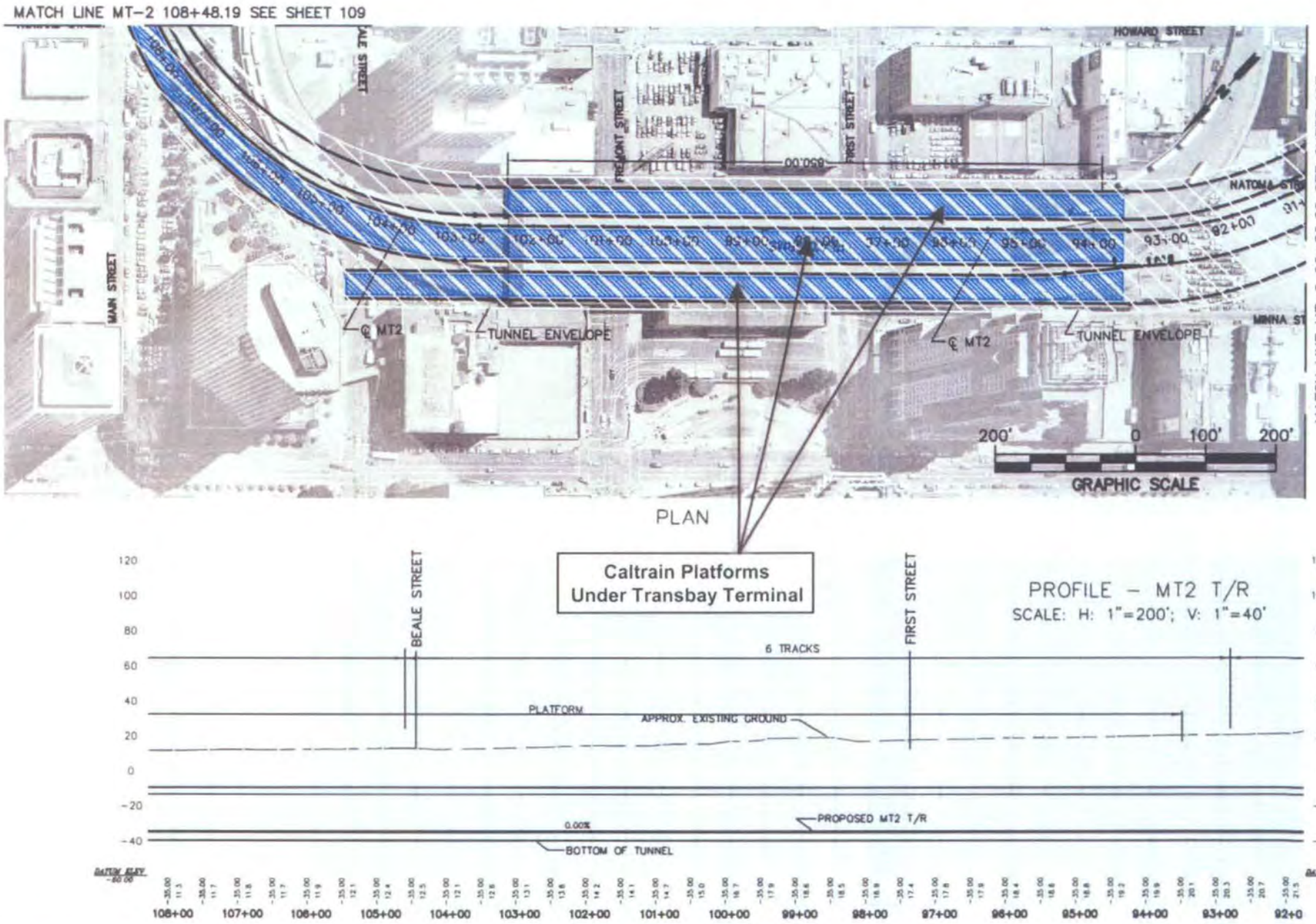

DATE FLOWN: SEPTEMBER, 2000	DESIGNED: J. TENNYSON DRAWN: J. SHIN CHECKED: D. MANSEN IN CHARGE: D. WEMMER DATE:	Figure 2.2-17	PARSONS 1250 San Carlos Avenue San Carlos, CA 94070 APPROVED	Caltrain 1250 San Carlos Avenue San Carlos, CA 94070	CHIEF ENGINEER: D. MAXEY PROJECT MANAGEMENT: STRUCTURES: Z. AMARE TRACK / CIVIL: B. SUSANTO	PENINSULA CORRIDOR JOINT POWERS BOARD SAN FRANCISCO CALTRAIN DOWNTOWN EXTENSION 2ND to MAIN SHEET 8 of 9	CADD FILE NO: C-DTX1-B CADD DATE: 021902 SCALE: 1"=200' CONTRACT NO: MILEPOST: DWG NO: 108 REV: PAGE NO:

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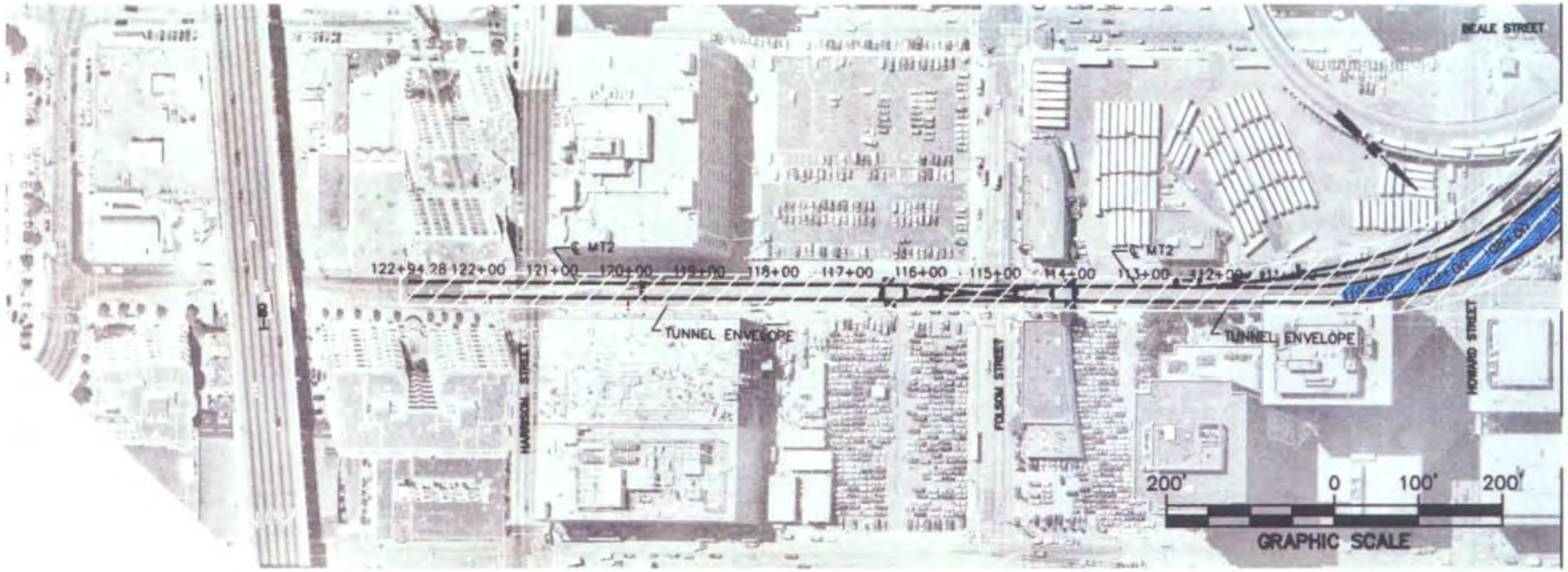

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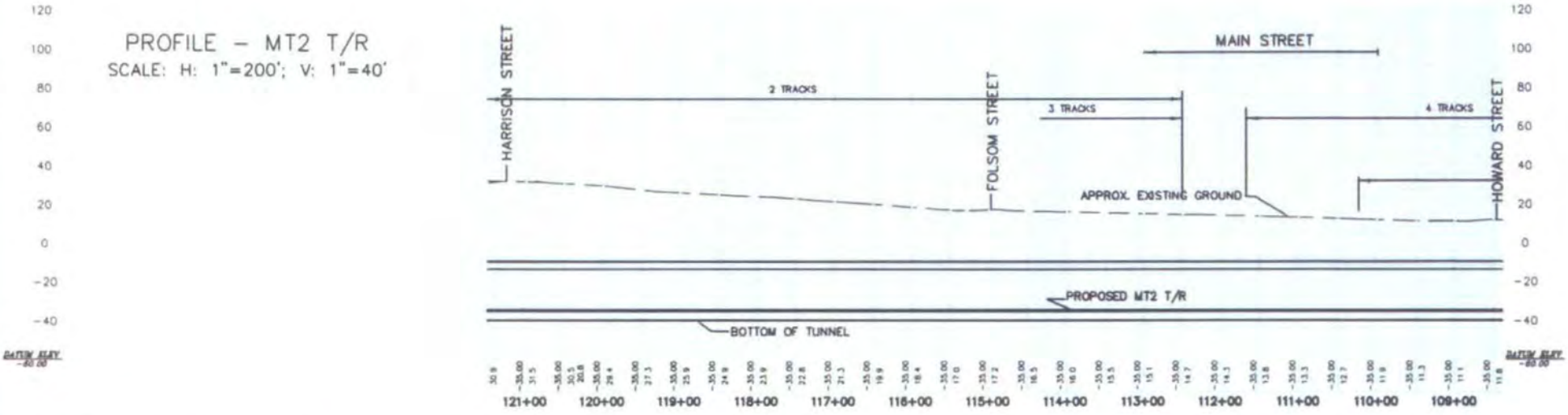

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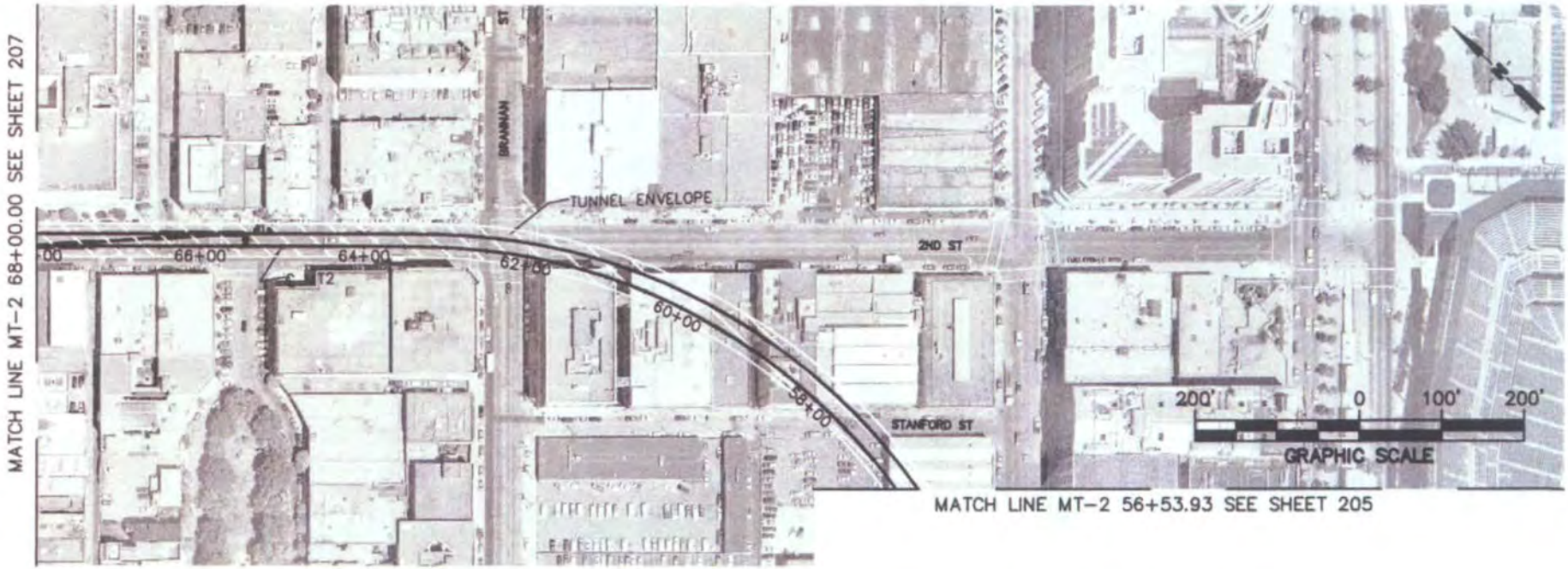

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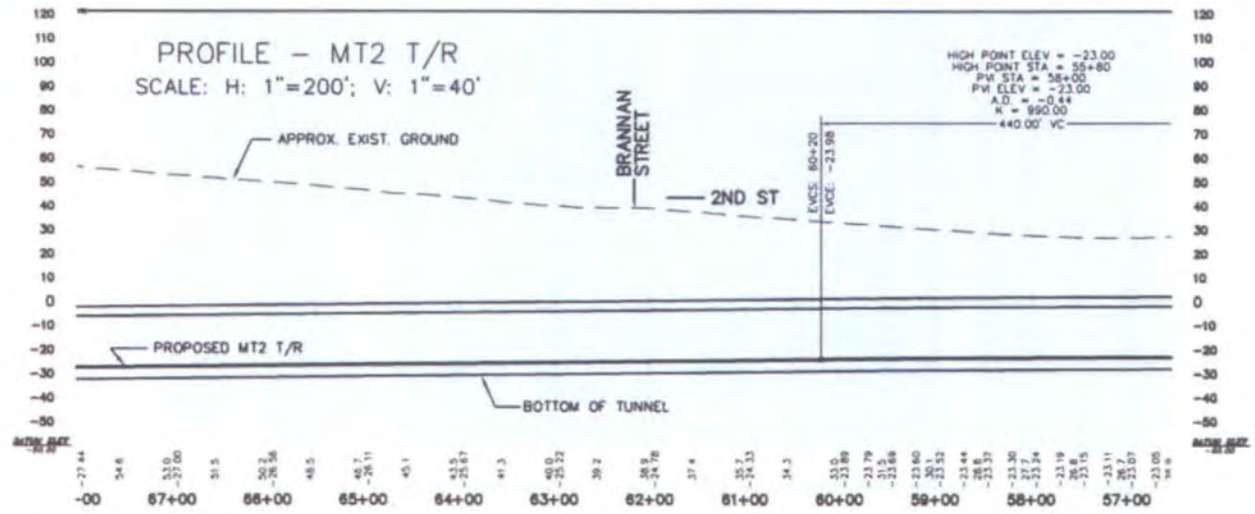

DATE FLOWN: SEPTEMBER, 2000	DESIGNED: J. TENNYSON	Figure 2.2-19	PARSONS	CHIEF ENGINEER: D. MAXEY	PENINSULA CORRIDOR JOINT POWERS BOARD	CADD FILE NO: C-0TX2-B	CADD DATE: 022002
SUBJECT TO CHANGE DURING FINAL DESIGN	DRAWN: K. LEI			PROJECT MANAGEMENT:	SAN FRANCISCO CALTRAIN DOWNTOWN EXTENSION 2ND to MISSION SHEET 6 OF 9	SCALE: 1"=200'	
	CHECKED: D. MANSEN			STRUCTURES: J. FICARRA		CONTRACT NO:	MILEPOST
	IN CHARGE: D. WEMMER			TRACK / CIVIL: C. PAYNE		DWG NO: 206	REV / PAGE NO
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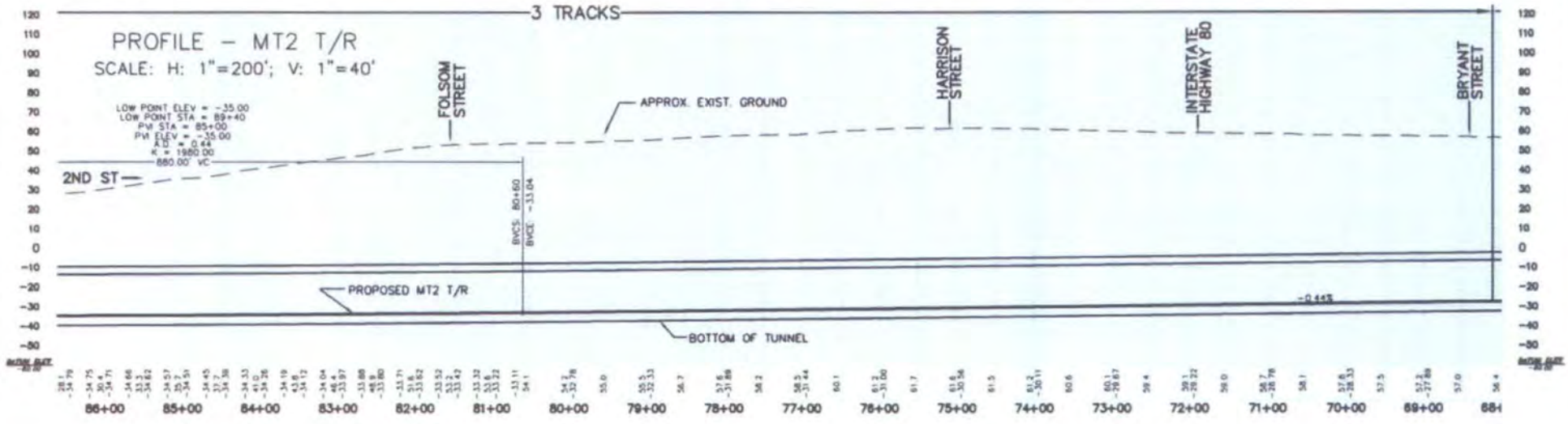

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SUBJECT TO CHANGE DURING FINAL DESIGN	DRAWN: K. LEI	Figure 2.2-20	PROJECT MANAGEMENT:	SAN FRANCISCO CALTRAIN DOWNTOWN EXTENSION 2ND to MISSION SHEET 7 OF 9	SCALE: 1"=200'	
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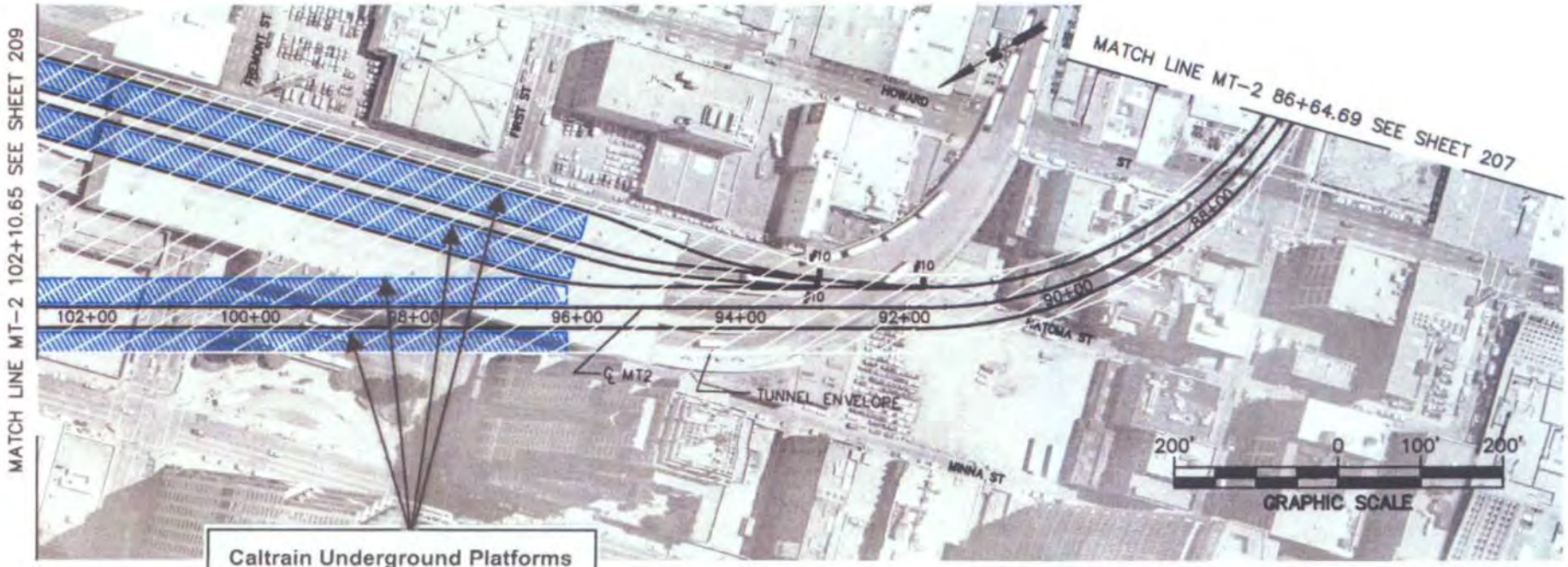
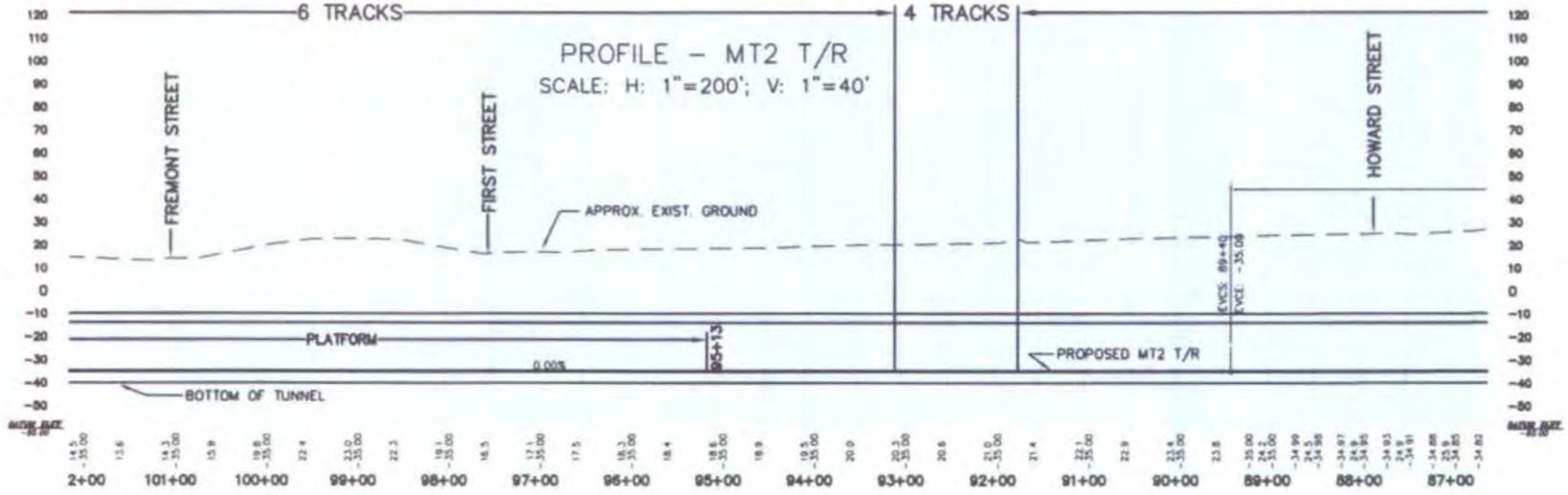
PARSONS 1250 San Carlos Avenue San Carlos, CA 94070

Caltrain 1250 San Carlos Avenue San Carlos, CA 94070





DATE FLOWN: SEPTEMBER, 2000	DESIGNED: J. TENNYSON DRAWN: K. LEI CHECKED: D. MANSEN IN CHARGE: D. WEMMER DATE:	Figure 2.2-21	PARSONS	Caltrain	CHIEF ENGINEER: D. MAKEY PROJECT MANAGEMENT: STRUCTURES: Z. AMARE TRACK / CIVIL: B. SUSANTO	PENINSULA CORRIDOR JOINT POWERS BOARD SAN FRANCISCO CALTRAIN DOWNTOWN EXTENSION 2ND to MISSION SHEET 8 OF 9	CADD FILE NO: C-0Tx2-8 CADD DATE: 022002 SCALE: 1"=200' CONTRACT NO: MILEPOST: DWG NO: 208 REV: PAGE NO:

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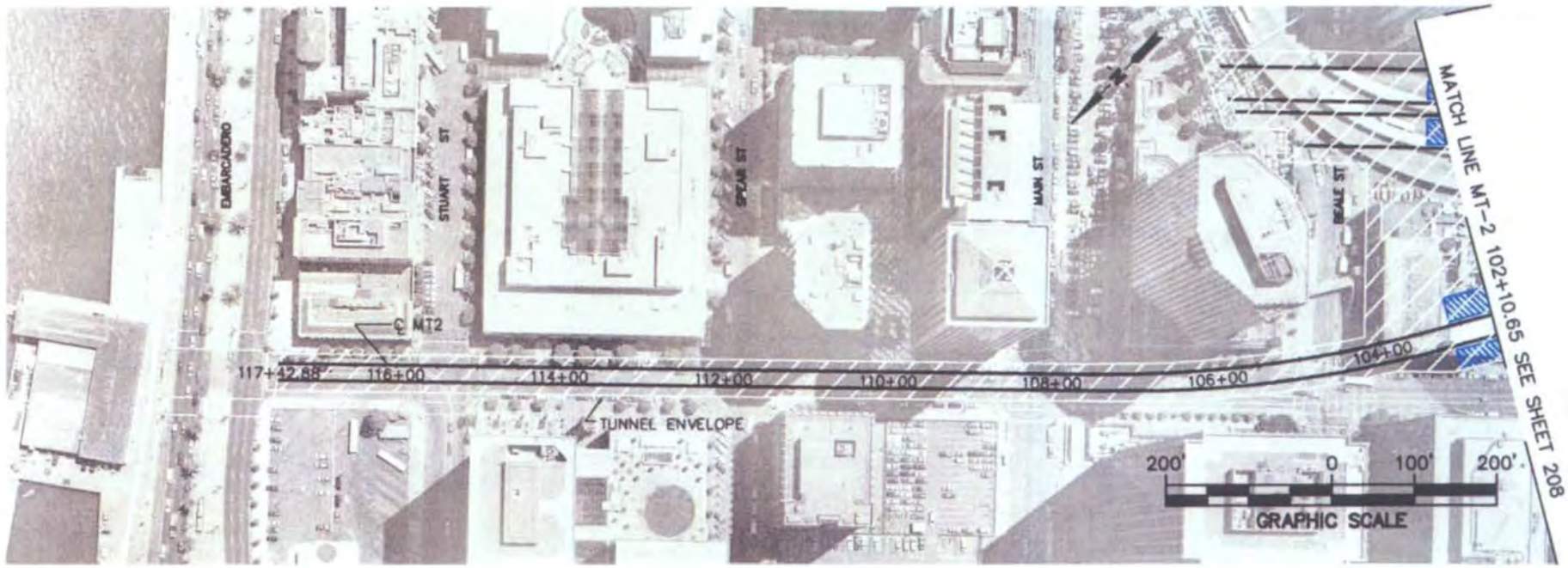

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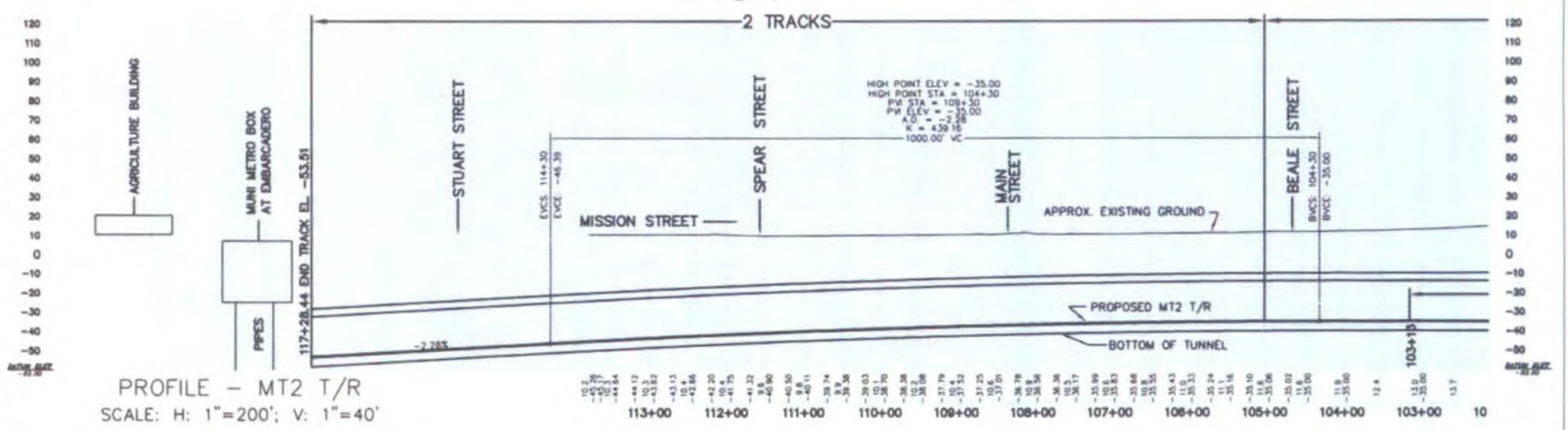


PROFILE – MT2 T/R

SCALE: H: 1"=200'; V: 1"=40'

DATE FLOWN: SEPTEMBER, 2000	DESIGNED: J. TENNYSON		CHIEF ENGINEER: D. MAXEY	PENINSULA CORRIDOR JOINT POWERS BOARD	CADD FILE NO: C-DTX2-8	CADD DATE: 022002
SUBJECT TO CHANGE DURING FINAL DESIGN	DRAWN: K. LEI	Figure 2.2-22	PROJECT MANAGEMENT:	SAN FRANCISCO CALTRAIN DOWNTOWN EXTENSION 2ND to MISSION SHEET 9 OF 9	SCALE: 1"=200'	
	CHECKED: D. MANSEN		STRUCTURES: Z. AMARE		CONTRACT NO:	MILEPOST:
	IN CHARGE: D. WEMMER		TRACK / CIVIL: B. SUSANTO		DWG NO: 209	REV: PAGE NO:
	DATE:					

PARSONS 1250 San Carlos Avenue San Carlos, CA 94070

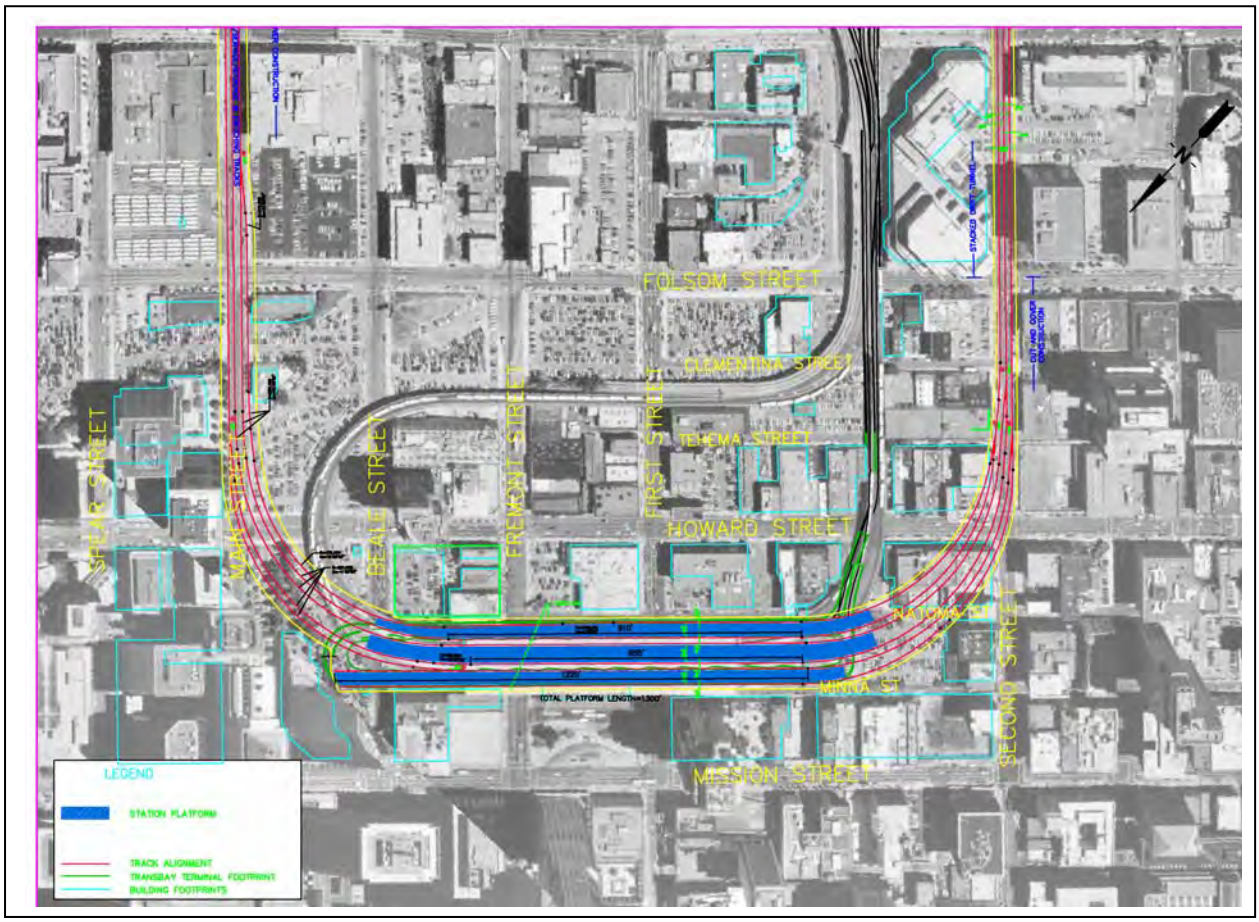
Caltrain 1250 San Carlos Avenue San Carlos, CA 94070

As described below, two alternatives are under consideration from Howard Street north: (1) Second-to-Main, and (2) Second-to-Mission.

2.2.3.1 Second-to-Main Caltrain Extension Alternative

Figure 2.2-23 shows the refined Second-to-Main Alternative alignment as selected for the Locally Preferred Alternative. As the Second-to-Main Caltrain Extension Alternative approaches Howard Street along Second Street, it would curve 90 degrees northeasterly, along an approximately 970-foot long curve with track curve radii of 498 to 545 feet into the basement of the new Transbay Terminal. Under current plans, *14* parcels of land with *11* buildings would need to be acquired and demolished for this curve into the Terminal.

Figure 2.2-23: Caltrain Refined Second-to-Main Alternative – Locally Preferred Alternative

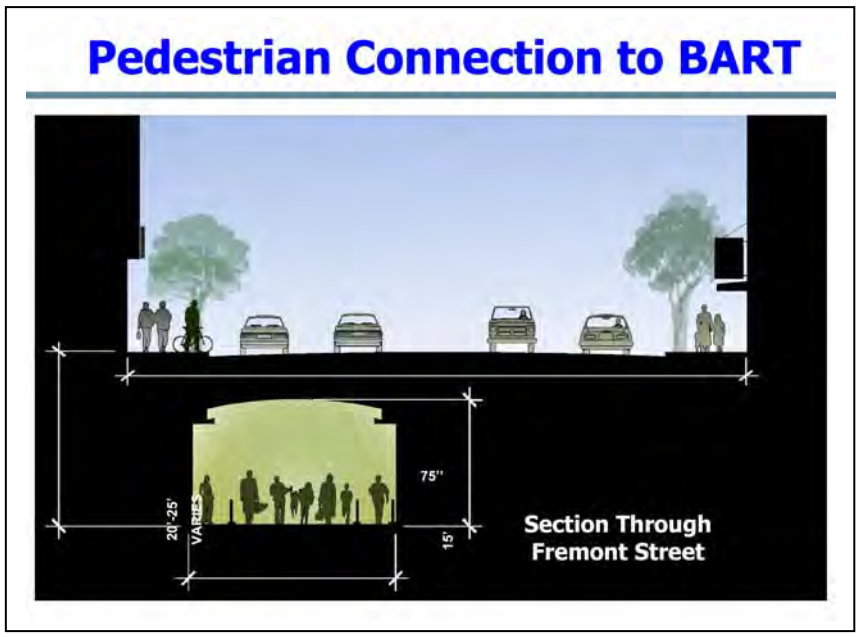


The terminal station would have six tracks and three platforms and would include approximately 2,000 feet of additional tracks (called tail tracks) in a cut-and-cover section leading from the east end of the new Terminal. These tracks would curve 90 degrees south along 498-foot to 521-foot

radius curves to Main Street and continue underneath Main Street to south of Folsom Street. The tracks would be used for temporary train storage, improving the operating efficiency of Caltrain service. Trains would not be required to be stored at Fourth and Townsend, but rather could be staged near the terminal to be brought quickly into service. This would minimize costly "deadheading" – the movement of trains that are not in revenue service. As shown on Figure *2.2-23, the proposed platform layout has been revised to maximize platform lengths to better accommodate long high-speed rail and commuter trains.* The *tail* tracks could also be extended as a separate, independent project at some time in the future, to a San Francisco-to-Oakland cross-bay alignment for commuter rail and/or high-speed trains.

This alternative would include a design option for a pedestrian connection underneath Fremont Street to the BART Embarcadero Station. The pedestrian connection would be below grade level and approximately 800 feet long. *Figure 2.2-24 shows a cross section for the proposed underground connection.*

Figure 2.2-24: Pedestrian Connection to BART (Conceptual Cross Section)



2.2.3.2 Second-to-Mission Caltrain Extension Alternative

The Second-to-Mission Alternative would follow the same alignment as the Second-to-Main Alternative up to Second and Howard Streets. At that point, it would provide a different configuration for the underground station in the Transbay Terminal and for the tail tracks leading out of the terminal.

As this alignment approaches Howard Street, rather than running parallel to the Terminal's long axis, this alignment would curve northeasterly at about Tehama Street, along a 1,432-foot radius

curve for approximately 700 feet, cutting diagonally under the new terminal and exiting out under Mission Street headed towards The Embarcadero. The southernmost track would branch into four tracks leading to and serving two center platforms directly under the Transbay Terminal. These four tracks would terminate at the eastern end of the Terminal. The two northernmost tracks would continue on an angle to Mission Boulevard and would serve two 600-foot side platforms to the north of the Transbay Terminal. These two tracks would continue to two 1,400-foot tail tracks under Mission Street ending just east of The Embarcadero. Under current plan, *20* parcels of land and 13 buildings would need to be acquired and demolished for this alternative. The tail tracks for this alignment would be used in a manner similar to the uses described above for the Second-to-Main Alternative, and could be extended as a separate, independent project at some time in the future to a San Francisco-to-Oakland cross-bay alignment for commuter rail and/or high-speed trains.

As with the Second-to-Main Alternative, this alternative would include a design option for a pedestrian connection underneath Fremont Street to the BART Embarcadero Station. The pedestrian connection would be below grade level and approximately 800 feet long.

2.2.3.3 Caltrain Extension Tunneling Option

Use of tunneling rather than cut-and-cover trenching was evaluated for constructing the Caltrain Downtown Extension Alternative, *and was selected as the Locally Preferred Alternative, as shown on Figure 2.2-9.* Given the geology along the Caltrain Extension alignments, tunneling appears to be feasible only for that portion of the alignments between Townsend Street and Folsom Street. This construction technique would involve the underpinning (additional support) of the buildings on the curve between Townsend and Second Streets.

Geology for this portion of the alignments is characterized as fractured rock. This geology is not suited for standard tunnel boring machines, so a highly specialized tunneling technique known as the "stacked drift" approach was evaluated. This approach, although more costly than most tunneling approaches, was selected to virtually eliminate the risk of tunnel collapse. Given that the proposed construction technique for tunneling has an extremely low likelihood of collapse or tunnel failure and given that buildings would be underpinned prior to construction, the buildings under which the tunnel would pass would not need to be vacated during the construction period.

2.2.3.4 Accommodation of High-Speed Rail

As shown on the plans and described in this section, the curves along the Caltrain Extension Alternatives all have radii greater than 493 feet, which is the minimum design curve radius for existing European (French and German) high-speed train equipment.[7] This minimum radius requirement was a critical factor for the placement of Caltrain alignment alternatives under Second Street. Specifically, the Second Street alignment allows for curves with radii greater

[7] Letter dated October 5, 2000 from Dan Leavitt, Deputy Director of the California High Speed Rail Authority to Maria Ayerdi, Transportation Policy Advisor, Office of the Mayor, City and County of San Francisco.

than 493 feet leading from Second Street into the Transbay Terminal for both Caltrain Alternatives.

2.2.3.5 Caltrain Capital Costs

The Caltrain Downtown Extension costs shown in the Draft EIS/EIR ranged from $844.3 million for the *Second*-to-Main Alternative/tunnel option to $912.9 million for the *Second*-to-Mission/cut-and-cover option *to start of construction assumed in the Draft EIS/EIR to be October 2002. Capital costs for the Second-to-Main Alternative Tunneling Option (the Locally Preferred Alternative) have been refined and are shown in Table 2.2-1. These refined costs assume a refined construction schedule as shown in Figure 5.20-8, with all costs escalated to the actual year of expenditures.*

Table 2.2-1: Capital Cost Estimate for Caltrain Downtown Extension Second-to-Main Street Tunneling Option – Locally Preferred Alternative (Millions of Dollars – Year of Expenditure)

Activity	***Cost Estimate***
Operations Analysis, Preliminary Engineering, Geotechnical Engineering, Program Review/ Value Engineering, Final Design & Permitting, Owner Costs	*$76.83*
Acquire Property & Demolish Buildings along Extension	
Acquisition/Relocation for Train Subway	*$82.85*
Demolition	*$1.24*
Resale Proceeds	*($31.12)*
Subtotal	*$52.97*
Design and Relocate Utility Lines along Extension	*$52.90*
Construct Surface Rail & Improvements at Train Yard	*$13.37*
Construct Cut-and-Cover and Retained-Cut – Caltrain Extension	*$427.13*
Reconstruct Streets	*$7.09*
Construct Train Tunnel	*$287.70*
Construct Track & Systems Facilities	*$58.54*
TOTAL COST ESTIMATE – Caltrain Downtown Extension	***$976.53***

Notes:

- *Costs escalated to year of anticipated expenditure between 2004 and 2011.*
- *Costs are for Second-to-Main Tunneling Alternative, the Locally Preferred Alternative.*
- *Total assumes high end of 2001 real estate estimate escalated to year of expenditure.*
- *Construction costs include a 25% construction contingency, 8% for construction management, and 10% project reserve. Owner costs are factored into each category.*
- *The optional underground pedestrian connection from the train mezzanine to The Embarcadero Muni Metro/BART Station is estimated to cost $45.3 million.*
- *An additional $235 million could need to be added to the Project costs for purchase of dual mode locomotives if the Caltrain corridor is not electrified.*

Source: *Parsons, 2003*

The optional underground pedestrian connection from the train mezzanine to The Embarcadero Muni Metro/BART Station is estimated to cost $45.3 million. An additional $235 million could need to be added to the Project costs for purchase of dual mode locomotives if the Caltrain corridor is not electrified. This number is dependent upon the size and timing of the procurement, and the salvage value of the current Caltrain locomotives. Please note that the proposed California High Speed Rail Program would also require electrification of the peninsula corridor.

2.2.3.6 Caltrain Operating Scenario Assumptions

For purposes of this EIS/EIR, it is assumed that Caltrain would operate *132* trains daily in the horizon year of 2020. Table 2.2-2 shows the operating assumptions used for analysis of ridership and operating costs.

Table 2.2-2: Caltrain Operating Assumptions (Year 2020)

Time of Day	Type of Service *(Per period two-way)*			Trains Per Day (Two-way)
	Local	Limited	Express	
Early am *5 – 6 am*	*7*	*0*	*2*	*9*
AM Peak *6-9 am*	*15*	*7*	*12*	*34*
Off Peak 9 am to 4 pm	*29*	*1*	*2*	*32*
PM Peak *4-7 pm*	*14*	*8*	*12*	*34*
Night 7 pm to midnight	*21*	*0*	*2*	*23*
Total *5 am to midnight*	*86*	*16*	*30*	*132*

Source: Peninsula Corridor Joint Powers Board *and HNTB, 2003*

2.2.4 PROPOSED TRANSBAY REDEVELOPMENT PLAN AREA

A plan for the redevelopment of the greater Transbay Terminal area has been a long-standing goal of the City and County of San Francisco, which entered into the redevelopment implementation process in December 1994 when the Board of Supervisors adopted a formal redevelopment survey area. A Citizen's Advisory Committee was formed which, along with local and regional agencies, has assisted the Redevelopment Agency in defining the redevelopment area. Additional planning and consensus building during the 1997 environmental process for the Caltrain Extension and the 2000 Terminal Study has resulted in the currently

proposed redevelopment area that is an integral part of the creation of a new Transbay Terminal and the extension of Caltrain.

Any of the project alternatives would require adoption of a redevelopment plan, new zoning and design guidelines, and a capital improvement plan. Several documents are to be prepared to develop these plans. This EIS/EIR document initiates but does not complete development of the plan. Documents to be prepared fall into three categories: (1) Redevelopment Plan to be adopted by the Redevelopment Commission and Board of Supervisors and signed by the Mayor, (2) a Design for Development to be approved by the Redevelopment Commission and Planning Commission, and (3) Planning Code and zoning map amendments. Redevelopment plan adoption documents include a Redevelopment Plan, a Preliminary Report, and a Final Report. Both the Preliminary Report and the Final Report will include all documents required per California Community Redevelopment Law for a redevelopment plan adoption.

Plan preparation will include the following activities: (1) analysis of the blight conditions in the area, (2) review of the financial feasibility of the entire project, (3) preparation of tax increment revenue projections for the area, and (4) evaluation of approaches for disposition and development of property within the Redevelopment Area. The Redevelopment Plan will be adopted by the San Francisco Redevelopment Commission and the San Francisco Board of Supervisors.

A Draft Transbay Redevelopment Project Area Design for Development Vision was released for public review in August 2003, and is discussed in Section 2.4.1.3 below. The *Final* Design for Development would be approved (not adopted) by the San Francisco Redevelopment Agency (SFRA) Commission and the San Francisco Planning Commission *at the time the Redevelopment Plan is proposed for adoption.*

2.2.4.1 Transit-Oriented and Other Redevelopment in the Transbay Terminal Area

Two development scenarios are being evaluated for the Redevelopment Plan Area, as described below. Assumed development levels for the "full build" and "reduced scope" development alternatives are shown in Table 2.2-3 and on Figure 2.2-25. The scenarios are not actual proposals but a representation of the range of reasonable development that could occur. Within the overall redevelopment plan, actual development proposals would be defined and evaluated in subsequent steps of the redevelopment process.

Transit-oriented development in the vicinity of the Transbay Terminal would provide a mix of residential and commercial development adjoining a major multi-modal transportation facility. Revenues from the sale or lease of the land plus proceeds based on tax-increment from development on the properties in the Redevelopment Area would be used to defray a portion of the costs for the new Transbay Terminal and Caltrain Downtown Extension. Publicly-owned properties proposed for possible development are shown in Figure 2.2-25.

Table 2.2-3: Levels of Redevelopment (Gross Square Feet, GSF) Full Build and Reduced Scope

Proposed Uses	Block Numbers									Total (GSF)
	3718	3720	3736	3737	3738	3739	3740	3749	3764	
Residential										
Full Build (No. of D.U.)	0	0	611,910 (510)	1,068,210 (890)	1,170,450 (975)	1,758,375 (1,465)	637,020 (531)	234,325 (195)	121,520 (101)	5,601,810 (4,667)
Reduced Scope (No. of D.U.)	0	0	712,800 (594)	760,290 (634)	875,160 (729)	878,400 (732)	697,400 (581)	131,075 (109)	60,760 (51)	4,115,885 (3,430)
Office										
Full Build	787,230	0	0	0	0	397,360	0	0	0	1,184,590
Reduced Scope	0	0	0	0	0	0	0	0	0	0
Hotel										
Full Build	0	475,600	0	0	0	0	0	0	0	475,600
Reduced Scope	0	350,000	0	0	0	0	0	0	0	350,000
Retail										
Full Build	61,205	11,600	29,985	38,690	50,050	98,935	30,780	25,475	8,680	355,400
Reduced Scope	0	12,000	30,800	38,715	57,860	58,400	34,900	18,725	8,680	260,080
Total										
Full Build	**848,435**	**487,200**	**641,895**	**1,106,900**	**1,220,500**	**2,254,670**	**667,800**	**259,800**	**130,200**	**7,617,400**
Reduced Scope	**0**	**362,000**	**743,600**	**799,005**	**933,020**	**936,800**	**732,300**	**149,800**	**69,440**	**4,725,965**

Source: San Francisco Redevelopment Agency, San Francisco Planning Department

Figure 2.2-25: Development Levels Assumed for Full Build and Reduced Scope Redevelopment Alternatives and Proposed Redevelopment Area Boundary

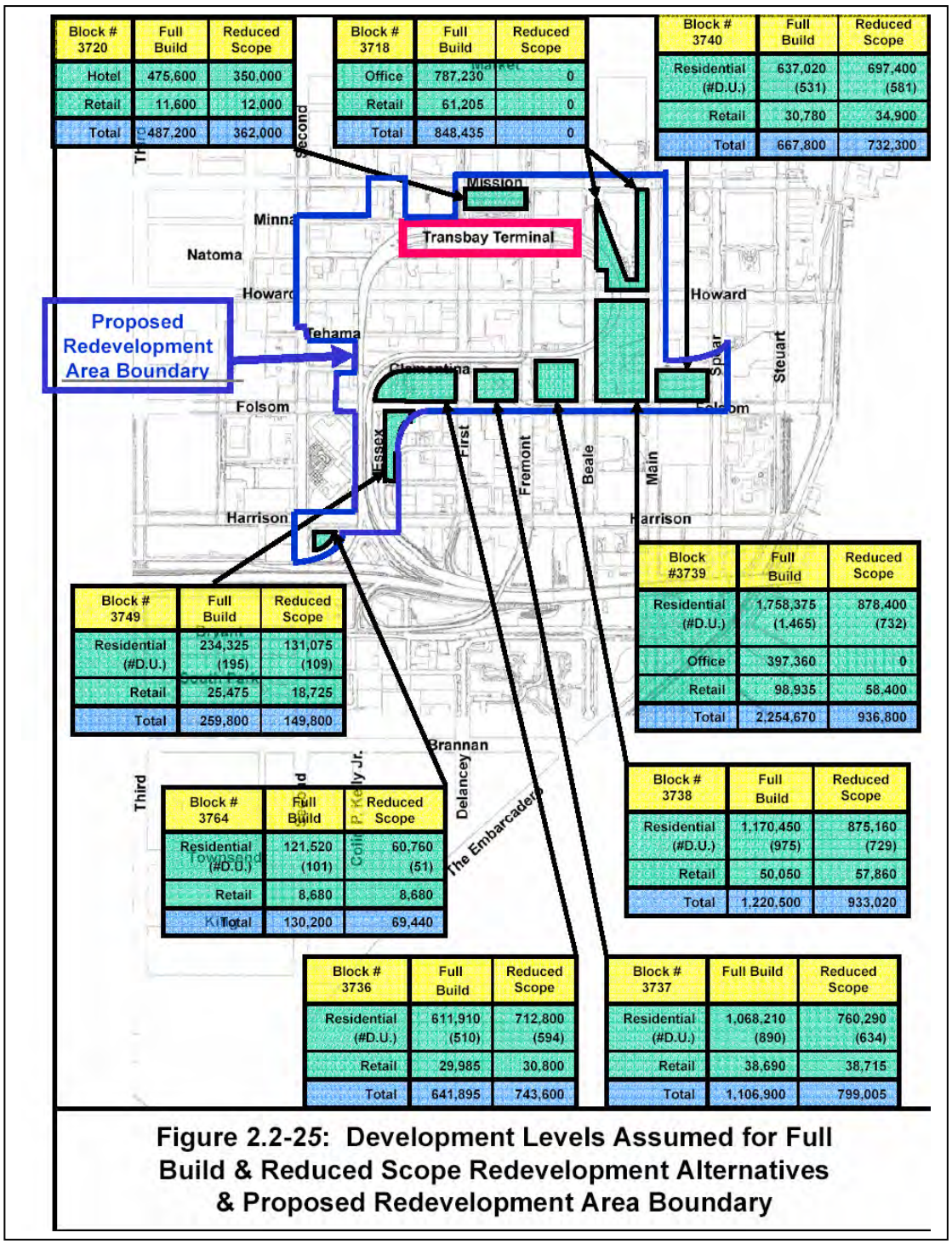


Figure 2.2-25: Development Levels Assumed for Full Build & Reduced Scope Redevelopment Alternatives & Proposed Redevelopment Area Boundary

The adoption of a Redevelopment Plan for the area in the general vicinity of the proposed new Transbay Terminal is proposed to aid in the revitalization and enhancement of the Terminal area and to facilitate related development and financing of the transportation improvements and other redevelopment projects, including office, retail, hotel, and residential development. Transbay Redevelopment Project Area boundaries *were revised to better recognize blighted areas and develop tax increment financing options. The proposed boundaries* are *also* shown on Figure 2.2-25.

Full Build Development Scenario. As shown on Table 2.2-4, the "full build" development scenario assumes about 7.6 million square feet (sq. ft.) of residential/office/retail/hotel development, including approximately 5.6 million sq. ft. of residential development (4,700 residential units including affordable housing), 1.2 million sq. ft. of office development, 475,000 sq. ft. of hotel development, and 355,000 sq. ft. of retail development.

Reduced Scope Development Scenario. As shown on Table 2.2-4, the **"**reduced scope" development scenario assumes a lesser amount of commercial and retail development and is weighted more toward housing. It assumes approximately 4.7 million sq. ft. of residential/office/retail/hotel development, including 4.1 million sq. ft. of residential (about 3,400 dwelling units), 350,000 sq. ft. of hotel development, and 260,000 sq. ft. of retail development. No office development is assumed for this Alternative.

2.2.4.2 Draft Transbay Redevelopment Project Area Design for Development Vision

The following program for the proposed Transbay Redevelopment Project Area was created through the Redevelopment Agency's design for development process. The program is described in more detail in the Draft Transbay Redevelopment Project Area Design for Development Vision (August 2003) document.

Working with members of the community during three public workshops, the Agency developed a refined program within the broad framework set forth in the "full build" and "reduced scope" alternatives of the Draft EIS/EIR. Based on community input from the public workshops and the comments to the Draft EIS/EIR, the refined program reduces the number of new residential towers in the proposed Project Area. Instead of a "wall of new development," as described by comments on the Draft EIS/EIR for the Full Build Alternative above, the refined program includes fewer, more slender towers far enough apart to protect sunlight, open space, and views within the new Transbay neighborhood.

The refined program also incorporates additional public improvements within the proposed Project Area, including new neighborhood parks, new public plazas, new pedestrian-oriented alleyways, and widened sidewalks.

The final Design for Development will be a public document that provides a set of architectural and urban design standards and guidelines for new development, open spaces and streetscapes

in the proposed Project Area. The program described below is still being refined through the Redevelopment Agency's continuing design for development process and ongoing community outreach.

Land Use

The Draft Design for Development document includes a land use program for the proposed Project Area, as shown in Figure 2.2-26. The area immediately surrounding the new Transbay Terminal is proposed as predominantly office uses, with some hotel and residential uses. The predominance of office uses north of Mission Street makes this part of the proposed Project Area appropriate for additional office development. The development parcels along Folsom Street and south of Howard Street between Main and Beale Streets are proposed to be predominantly residential uses. The proximity of Folsom Street to Rincon Hill and The Embarcadero makes this part of the proposed Project Area appropriate for additional residential development.

Folsom Street and portions of Beale Street would also be the focus of ground-floor retail development serving the new Transbay neighborhood as well as the existing Rincon Hill neighborhood. To respect the existing historic districts to the west of the Transbay Terminal, the area along Second Street would be a mixed-use district with commercial and residential development.

Urban Form – Residential

The draft vision includes an urban form program described in detail in Appendix F of this Final EIS/EIR. While the "full build" alternative includes approximately 4,700 residential units, this level of development would create a virtual wall of residential towers along Folsom Street and north of Folsom Street between Main and Beale Streets. Based on community input from the public workshops, the number of residential towers was reduced and would include fewer, taller towers surrounded by low-rise development between four and eight stories in height. The spacing between the towers is intended to protect sunlight, open space, and views within the proposed Project Area.

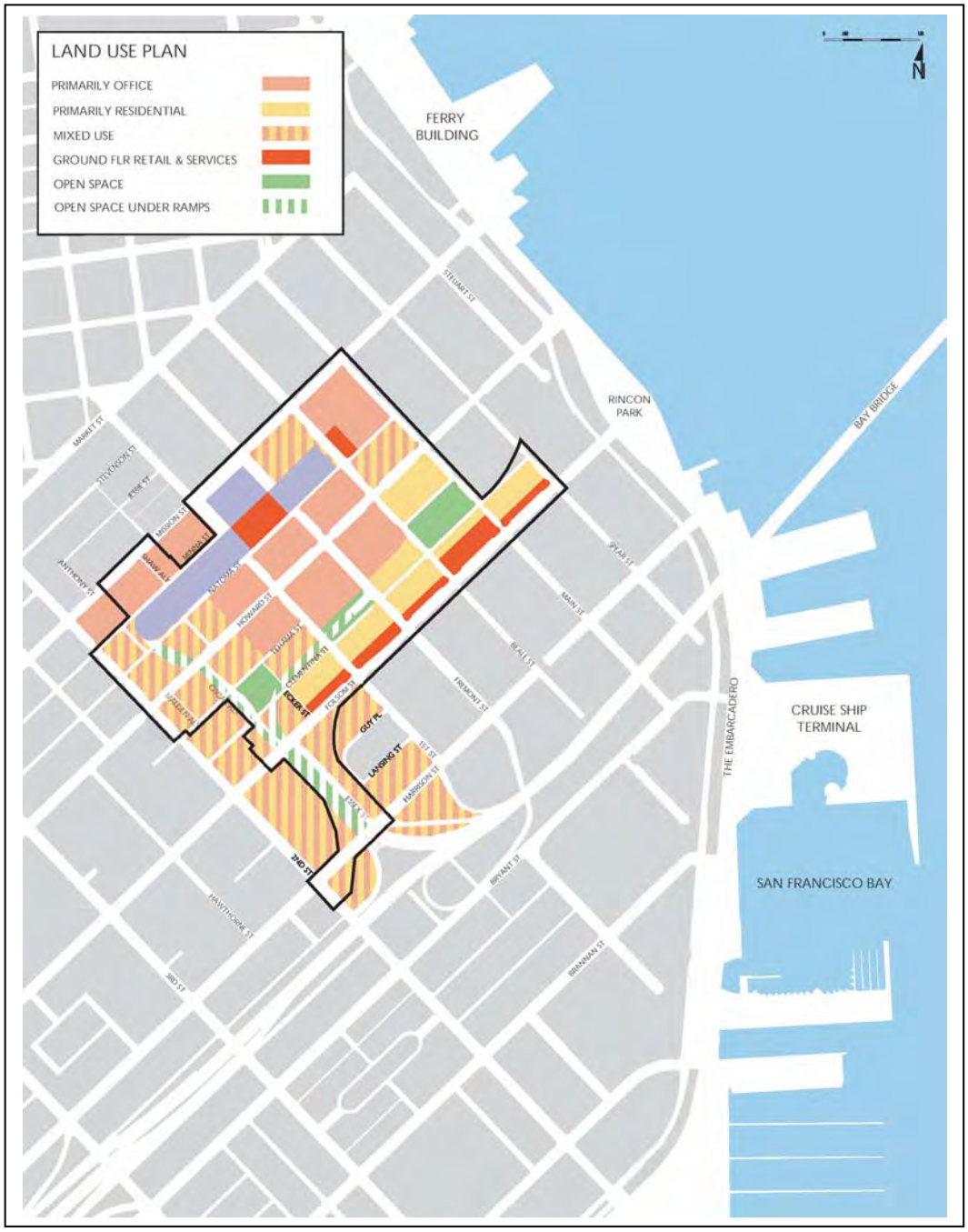
The draft program includes approximately 3,200 new residential units on the publicly owned development parcels, including several smaller, underutilized adjacent parcels. In addition to the development on publicly owned parcels, residential development would be encouraged and facilitated in the mixed-use zones of the proposed Project Area. It is intended that this new development retain the existing historic character of the neighborhood.

Urban Form – Office/Retail

The proposed program includes new office development on two publicly owned parcels and a new hotel development on the publicly owned parcel just north of the new Transbay Terminal. This hotel would be designed to serve high-speed rail passengers using the new Terminal as well as the larger downtown area. The program includes approximately 40,000 square feet of

ground-floor retail space concentrated in the residential area along Folsom Street. This new retail space will serve future residents of Transbay as well as existing residents in Rincon Hill.

Figure 2.2-26: Draft Design for Development Land Use Plan



During the development of the Redevelopment Agency's Draft Transbay Redevelopment Project Area Design for Development Vision released in August 2003 (and discussed in Section 2.4.1.3), differing height and bulk schemes were evaluated within the redevelopment plan area, including an 800-foot tall structure adjacent to the proposed new Transbay Terminal. However, these schemes are not being pursued at this time. In the event that the Transbay Redevelopment Project Area Design for Development Vision is revised by the Redevelopment Agency in the future, any new concepts would be subject to further evaluation and environmental review, as necessary.

Public Improvements

To transform the area into a livable residential neighborhood, the draft design for development document also includes improvements to the streetscape and open space for area residents and pedestrians. Four main types of public improvements are included: (1) neighborhood parks, (2) landmark plazas (3) pedestrian-oriented alleys, and (4) widened sidewalk zones.

The most prominent of the proposed public improvements is the addition of widened sidewalks to improve the pedestrian experience along all the streets in the area, providing connections to and from downtown, the waterfront, South Beach and Yerba Buena. The sidewalks along Beale, Main and Spear Streets are proposed to be widened to provide usable open space for the area's residents. In addition, it is proposed that the neighborhood be served with new parks programmed with various uses. Together these parks total 126,800 square feet. Two primary target zones for neighborhood parks are those zones where new residential development housing would be focused. Tower locations and heights have been carefully defined to minimize shading of parks and expanded streetscapes during the mid-day hours throughout the year. The primary opportunity and logical site for a landmark public plaza is on the north and south of the primary Transbay Terminal edifice, the east-west spine that will house the primary vehicular circulation for the terminal.

The proposed program includes new alleys as well as extensions to existing alleys throughout the Project Area, allowing for better pedestrian circulation throughout the neighborhood. Pedestrian alleys can have a high level of pedestrian activity, and can be improved with special paving, lighting, plantings, and furniture.

Critical improvements to the sidewalk environment appear necessary and are planned as a part of the redevelopment of the area. The widened sidewalks could serve two roles: (1) as improved linkages throughout the area but in particular to the terminal itself for the high volumes of pedestrian traffic that is expected as the area redevelops, and (2) as usable public open space on certain streets where adequate room exists to allow more active recreation uses.

***Folsom Street** has been identified in the past as a location for a special pedestrian right-of-way that might act as the center of the new neighborhood and provide an active link to the waterfront along the Embarcadero. Portions of **Main, Beale, and Spear** Streets carry the lowest vehicular traffic volumes in the area, and there is excess capacity within the vehicular right-of-way for*

projected traffic volumes. This makes it possible to use some of the street width for a pedestrian sidewalk zone.

Widening of sidewalks on these streets would be important given the significant number of housing units that would have access from or be adjacent to these streets, and could therefore enjoy the benefits of adjacent improved sidewalks. These streets are also the primary connectors from the eastern portion of the financial district to the South Beach waterfront area, where major open space amenities and public destinations are located, e.g., Pacific Bell Park.

Options are being explored for widening the sidewalk environment of other Transbay area streets. However, projected traffic volumes on many streets are such that only limited improvements would be possible – none of the scale and extent as those proposed for Folsom, Main, Beale and Spear Streets.

2.3 ALTERNATIVES CONSIDERED AND WITHDRAWN

Various alternatives and design options for the different components of the proposed project were considered and subsequently withdrawn from further consideration based on their inability to satisfy the project purpose and need, operational constraints, potential environmental impacts, lack of cost-effectiveness, engineering feasibility, and other factors. These alternatives and the reasons they were withdrawn from further consideration are described below for the Transbay Terminal and the Caltrain Downtown Extension. Previous planning efforts for a Transbay Redevelopment Area Plan are discussed in Section 2.2.3.

2.3.1 TRANSBAY TERMINAL ALTERNATIVES CONSIDERED AND WITHDRAWN

As part of the study by the Metropolitan Transportation Commission (MTC), the Transbay Terminal Improvement Plan evaluated three alternative replacement terminal site configurations and a terminal renovation alternative based on the following criteria:

- Engineering issues
- Transit operations criteria
- Terminal operations criteria
- Terminal and transit operations cost analysis
- Joint development potential
- Urban design issues
- Overall project costs and revenues

The terminal replacement alternatives were named after Dickens novels and consisted of Our Mutual Friend, Great Expectations, and A Tale of Two Cities. The conceptualization and evaluation of these three terminal alternatives continued for 24 months. Alternatives were screened with input from the Transbay Terminal Plan Panel. Based on this screening, the

Transbay Terminal Plan Executive Committee (consisting of staff and policy board representatives from AC Transit, the City and County of San Francisco, the JPB, Caltrans, and MTC) selected the Transbay Terminal West Ramp Alternative ("Great Expectations") described above in Section 2.2.1.1. To assure that a full range of alternatives is evaluated, this EIS also includes the Loop Ramp Alternative described in Section 2.2.1.2, which is based on the MTC Study's "Our Mutual Friend" option.

2.3.1.1 Renovation of the Existing Transbay Terminal Building and Associated Structures

Renovating the existing Transbay Terminal building and its associated structures would produce a facility that would be most similar to the existing Transbay Terminal. It would be the least expensive of the terminal improvement alternatives that were considered within the Transbay Terminal Improvement Plan study. It offers no other benefits in comparison with the replacement alternatives, however.

Retaining the existing terminal building would not meet the project objectives. It would preclude most opportunities for improved space utilization, passenger circulation, signage, security, and safety. It would not accommodate the underground rail options – either a Caltrain extension or high-speed rail – and would require construction of new elevated rail structures. Although the existing Terminal, retrofitted to withstand a maximum credible earthquake, could accommodate a Caltrain Extension above-ground, such a strengthening would render the building impractical for multiple uses, including retail or commercial space. It therefore offers very limited potential for revenue-generating joint development within the terminal and would keep in place the elevated ramp structures that cross 10 city streets, which has contributed to the continued deterioration and underutilization of land in the Transbay Terminal area. For these reasons, and following review and concurrence by the Transbay Terminal Improvement Plan Panel and Executive Committee, the Renovation Alternative was withdrawn from further consideration.

2.3.1.2 New Bus Terminal at Main/Beale Site

In February 1999, the San Francisco Board of Supervisors passed a resolution repealing its prior endorsement of the Main/Beale site for a new terminal and urging the "City and County of San Francisco to work expeditiously with AC Transit, the Metropolitan Transportation Commission (MTC) and Caltrans to retain AC Transit regional bus service at the current Transbay Terminal site." AC Transit supported this action noting that the Main/Beale site would not provide the level of transit service that could be provided at the current terminal site and it would be farther from the employment locations of AC Transit's current riders. This site would not address project objectives to modernize the Transbay Terminal and improve its service. Withdrawal of the Main/Beal site was also consistent with the provisions of Proposition H, which calls for a multi-modal facility at the current Transbay Terminal site.

2.3.1.3 A Tale of Two Cities Terminal at Transbay Terminal Site

The Tale of Two Cities terminal alternative was the most costly of the alternatives considered by the Transbay Terminal Improvement study. It offered substantial room for expansion of bus operations and would have accommodated the full 2020 bus program projected by terminal bus operators. It provided clear passenger circulation within the terminal structure and integrated retail and passenger circulation advantageously. Both AC Transit and rail services would have been vertically separated from Muni services by only one level, thus facilitating intermodal transfers.

The Tale of Two Cities terminal alternative did not meet the project objective to revitalize the Transbay Terminal area as well as the other terminal configurations. The extended footprint of this large facility did not contribute to improved utilization of land in the Transbay Terminal area and created long distances between modes for passengers circulating within the terminal. The facility also would have had elevated ramps crossing 10 city streets, which would have contributed to the continued "blight" in the area. The greatest negative with this alternative, however, was that the huge scale of the terminal facility and its integrated joint development led to costs almost twice these of the other two replacement alternatives. For these reasons, and following review and concurrence by the Transbay Terminal Improvement Plan Panel and Executive Committee, the Tale of Two Cities Alternative was withdrawn from further consideration.

2.3.2 CALTRAIN DOWNTOWN EXTENSION ALTERNATIVES CONSIDERED AND WITHDRAWN

Multiple Caltrain Downtown Extension alternatives and design options were considered and subsequently withdrawn from further consideration based on engineering feasibility, potential environmental impacts, operational constraints, or inability to meet the project purpose and need. These Caltrain Extension alternatives and the reasons they were withdrawn from further consideration are described in the following sections and are shown on Figure 2.3-1.

2.3.2.1 Caltrain Downtown Extension Draft EIS/EIR (1997) Alignment

The Caltrain Extension alignment shown in the 1997 San Francisco Downtown Extension Project Draft EIS/EIR would follow Townsend Street and would curve north just east of Third Street and follow a tunnel alignment under Rincon Hill to Essex Street. It would be in a subway configuration under the alignment of the existing west bus ramps and follow the curve under the existing bus ramps into the basement of the new Transbay Terminal (see Figure 2.3-1, Alignment 1). It would not meet the project purpose to enable direct access to downtown San Francisco for future high-speed rail service. Its curve into the Transbay Terminal would have a 395-foot radius, which would not accommodate the high-speed steel-wheel-on-rail equipment currently in use in Europe and under consideration by the California High-Speed Rail Authority for implementation in California, including a station in downtown San Francisco.

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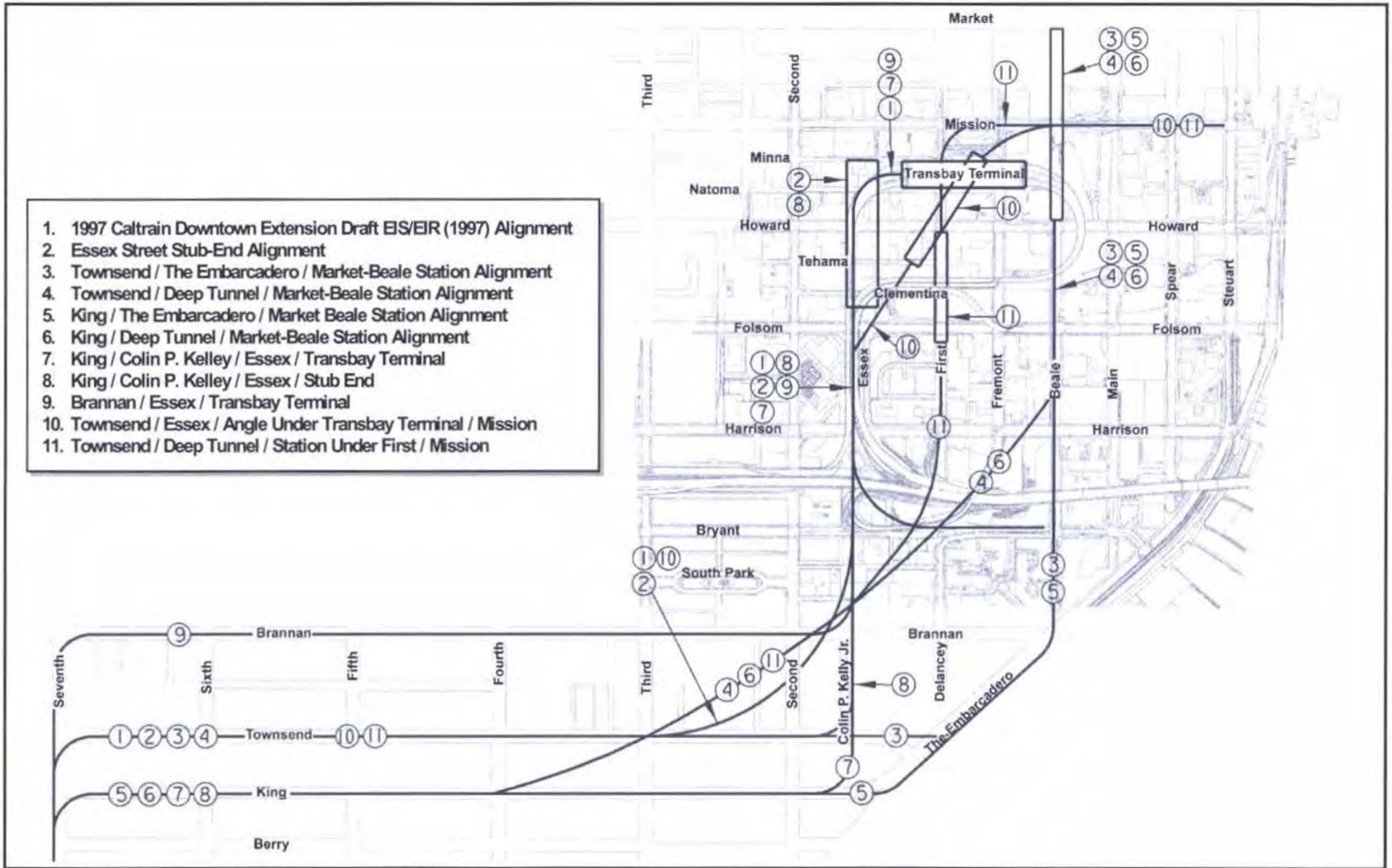


Figure 2.3-1: Alternatives Considered and Withdrawn

Given its inability to accommodate high-speed rail, this alignment was withdrawn from consideration. A critical project purpose is to provide a multi-modal transit facility that accommodates bus, paratransit, Greyhound, Caltrain, and high-speed rail service. As noted above, the curves for the Caltrain Extension Alternatives described in Section 2.2.2 would accommodate the existing European high-speed rail equipment

2.3.2.2 Essex Street Stub-End Alignment

In response to the curve radii problems associated with the 1997 Caltrain Alignment, a new alignment was reviewed that would also tunnel under Rincon Hill and under the existing Transbay Terminal western ramps. Rather than curve into the basement of the Transbay Terminal, however, this alignment would include a train station that would be oriented perpendicular to and the west of the Transbay Terminal, with the northern end of this train station at Minna Street (see Figure 2.3-1, Alignment 2). This alignment would eliminate the tight curve leading into the Transbay Terminal and would enable the use of high-speed train equipment.

This alternative was included in the Notice of Preparation and Notice of Intent to Prepare this EIS/EIR, but has since been withdrawn from consideration. During the public scoping process, the public noted several problems associated with this alignment. These public comments and issues contributed to the withdrawal of this alignment. First, the train platforms would not be directly under the multimodal transit facility, so internal passenger circulation and the ease of transfer from one mode to another would be substantially compromised. Second, the orientation would not allow for trains to pass through the station. That is, the trains would not be able to enter one end and exit at the other end of the station to a storage track. For the stub-end station, trains would pull into the station and would need to reverse direction to leave the station. This would substantially reduce train operating efficiency and would not meet the project purpose to substantially improve Caltrain service to downtown San Francisco.

As described above, the two Caltrain Extension Alternatives under consideration in this EIS/EIR include tail tracks coming out of the east end of the train station. These trail tracks would allow for train storage and servicing, resulting in improved train operating efficiency. For example, trains would not need to be moved back to the Fourth and Townsend storage yard for storage and staging, but rather would be ready to be moved to a train platform from the tail track once a train vacated the platform; this train move would not block the train that is leaving the station. Finally, the tail tracks would allow for potential extension of commuter and high-speed rail service across the bay to Oakland, as a separate project.

2.3.2.3 Other Caltrain Extension Alternatives Evaluated in 1997

As part of the 1997 Draft EIS/EIR analysis, five alignment options applying different construction techniques for different segments were considered for an alternative to extend Caltrain to an underground station at Market and Beale Streets or at the Transbay Terminal. A detailed description of these alternatives and their characteristics is provided in the Design

Options Screening Report, Caltrain San Francisco Downtown Extension Project, Peninsula Corridor Joint Powers Board, 1995.

Under the first option, the Caltrain Extension would have diverted from the existing Caltrain tracks at about Seventh and Berry Streets, travel subsurface along the south side of Townsend Street, curve beneath the southbound lanes of The Embarcadero roadway, and then travel northward along and under Beale Street to a proposed underground station at Market Street (see Figure 2.3-1, Alignment 3). Cut-and-cover and soft-ground tunneling techniques were investigated to evaluate engineering feasibility and minimize disruptions at the surface. Both a short-tunnel option with a portal between Fifth and Sixth Streets and a long-tunnel option with a portal at Seventh Street were considered. Differing alignment options for the final segment entering an underground train station at Market and Beale Streets were also considered.

The second alignment option would have followed the same route along Seventh and Townsend, using subway and/or cut-and-cover construction techniques. From this point, the alignment would have descended, curving northeasterly, in a mined tunnel under Rincon Hill. Under Beale Street, the tunnel would ascend and continue, using cut-and-cover techniques, to the proposed underground train station, with alignment variations according to the different train station configurations (see Figure 2.3-1, Alignment 4).

A third alignment would follow the King Street right-of-way rather than Townsend Street for the eastward segment. It would travel east on King to The Embarcadero, and continue northeastward in cut-and-cover tunnel subsurface along The Embarcadero right-of-way to Beale Street. It would then travel northward to an underground train station at Market and Beale (see Figure 2.3-1, Alignment 4).

A fourth alignment would follow the King Street right-of-way in cut-and-cover tunnel, curve northeasterly east of Fourth Street, transition to a mined tunnel at approximately Third and King Streets, and then continue to an underground train station at Market and Beale (see Figure 2.3-1, Alignment 5).

The fifth option would follow along King Street for the westernmost segment from about Seventh and Berry Streets to the Embarcadero (see Figure 2.3-1, Alignments 7 and 8). This alignment would be capable of being combined with the remaining portions of any of the Transbay Terminal or Market and Beale Streets terminal alignments described above.

The alignments along Beale Street leading from The Embarcadero would pass near the Bay Bridge anchorage, raising issues regarding the effects of cut-and-cover construction on this major structure. The alignments using cut-and-cover construction down King or Townsend Street and The Embarcadero would introduce potentially substantial noise, traffic, air quality and other environmental impacts during construction within the South Beach neighborhood and elsewhere along The Embarcadero. This is an area that has experienced prolonged disruption from prior construction of The Embarcadero roadway and Muni Metro Extension projects. The

King Street Alignment would also introduce traffic and other environmental impacts for the new baseball park at King and Second Streets.

Extending the line north of Mission Street all the way to Market Street would have been costly, given that at least two train levels would have been needed, resulting in a deep excavation between older, historic buildings, and given the existence of subsurface structures (e.g., subsurface parking) in this part of the Beale Street right-of-way. Similarly, expanding the proposed Caltrain terminal to six tracks to accommodate future high-speed rail would cost more at the Market/ Beale Street location than at the Transbay Terminal. Finally, these alternatives would again introduce a stub-end station, reducing train operating efficiency (as described above in Section 2.3.2.2) and would not meet the project purpose to substantially improve Caltrain service to downtown San Francisco.

Because of the additional capital and operating costs and the reduced operating efficiencies for this alternative compared to the alternatives defined herein and the major issues at the proposed train station site, the Caltrain Extension Alternative to the Market and Beale Street Terminal was withdrawn from further consideration.

The King Street alignment segment was withdrawn from consideration because it would have caused severe traffic disruptions during construction, e.g., baseball games at Pacific Bell Park. Moreover, construction of this alignment would have meant tearing up the newly constructed southbound lanes of King Street and would have been complicated by a large box sewer line located adjacent to this alignment.

The Caltrain terminal at Market and Beale Streets was ultimately withdrawn from further consideration because of the narrow right-of-way available on Beale Street, requiring construction of a multi-level train station between two historic structures.

2.3.2.4 Alignment along Brannan Street for the Westernmost Segment of the Caltrain Extension

This alignment would follow Brannan Street rather than Townsend Street or King Street for the first segment of the Caltrain Extension from about Seventh and Berry Streets to The Embarcadero (see Figure 2.3-1, Alignment 9). The Brannan Street alignment portion was capable of being combined with the remaining portions of any of the Transbay Terminal or Market and Beale Streets terminal alignments. It was withdrawn from further consideration because the alignment would have passed on the surface in front of the Sixth Street off-ramp for I-280 and would have traveled along the densely developed Brannan Street adversely affecting traffic operations.

2.3.2.5 Alignment From Essex Street Passing at an Angle Under the Transbay Terminal Site at First Street

This alignment would follow the Essex Street tunnel alignment with a cut-and-cover section north of Folsom Street passing at an angle under the center (near First Street) of the new Transbay Terminal (see Figure 2.3-1, Alignment 10). It was withdrawn from further consideration because of the impacts that this long tunnel would have on real estate above the alignment, including the need for substantial property acquisitions, including both existing development and development currently under construction between Folsom and Mission Streets on both sides of First Street.

2.3.2.6 Alignment Tunneling under Rincon Hill to a Tunnel and Terminal Station Directly Under the First Street Right-of-Way

This alignment would generally follow the Essex Street tunnel alignment under Rincon Hill, but the tunnel would angle more to the east to meet the First Street right-of-way (see Figure 2.3-1, Alignment 11). A two-or three-level train station would then be constructed under the First Street right-of-way south of a new Transbay Terminal. This multi-level train terminal would require a transition of the train tracks from a one-level to a "stacked" configuration, which would need to occur to the south of the train terminal station. There is insufficient length to make such a transition under the Townsend Street right-of-way, and it is not advisable, from a tunnel construction safety or tunneling cost perspective, to build such a transition in the tunnel portion under Rincon Hill. This alternative was therefore withdrawn from further consideration.

2.3.3 CALTRAIN STORAGE YARD LOCATED IN BRISBANE

An alternative to the Fourth and Townsend location proposed for a Caltrain midday storage and layover yard was a site at the former Bayshore Yard in Brisbane. This potential yard site was withdrawn from further consideration because of its distance from the proposed new Caltrain terminal. "Deadhead" time (the amount of time the train would be operated out of revenue service) would have been at least three and one-half times greater than the time to the current Caltrain facility, adding substantially to Caltrain operating costs and adversely affecting the ability to operate efficient and safe train service at anticipated levels of service.

CHAPTER 3: TRANSPORTATION ANALYSIS

This chapter describes existing and projected future transportation conditions in the project area. It includes the following four sections: 1) transit, 2) vehicular traffic, 3) non-motorized traffic, and 4) parking. The transit section describes current and future rail and bus services and patronage. The vehicular traffic section describes the existing and future street and highway system in the corridor. The non-motorized traffic section focuses on existing pedestrian/bicycle traffic patterns, and future pedestrian walkways, bike paths, and attractors. The parking section describes existing parking amounts, locations, accessibility, and future needs.

The information provides a baseline to assess the level of impact to existing transit services for each of the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project (Terminal/Extension Project) alternatives. Existing rail transit and bus service in and around the Terminal/Extension Project study area and planned future rail and bus service are described. See Figure 3-1 for a map illustrating the transit network in the study area.

3.1 TRANSIT

3.1.1 EXISTING RAIL TRANSIT SERVICES

Caltrain, BART, and Muni Metro provide rail service in the study area. Service consists of commuter rail, heavy rail, light rail transit, and historic streetcar trolleys. BART and Muni Metro serve the Market Street subway located along the north edge of the study area. Caltrain provides passenger rail service from the south bay to the San Francisco terminal at Fourth and Townsend Streets. Figure 3-1 shows the rail transit network in the study area.

3.1.1.1 Caltrain

Caltrain provides commuter rail service between Santa Clara County and San Francisco. The Peninsula Corridor Joint Powers Board (JPB), a joint powers agency consisting of San Francisco, San Mateo, and Santa Clara counties, operates the service. The 77-mile rail line serves 34 stations. The San Francisco terminal at Fourth and Townsend Streets is approximately 1.3 miles from the Transbay Terminal at Mission and First Streets. *During* off-peak hours, the main southern terminal is the Tamien Station in San Jose, which provides a connection with the Santa Clara County light rail system. Of the *76* one-way weekday train trips on Caltrain, five morning trips originate and five evening trips terminate at the Gilroy Station. *Weekend service has been suspended two years until March 2004 for construction of passing tracks and other upgrades of the signaling system, trackwork, and other improvements to allow for "Baby Bullet" express service.* Figure 3.1-1 shows the Caltrain corridor and stations.



Figure 3-1 | Transit Network in the Project Area

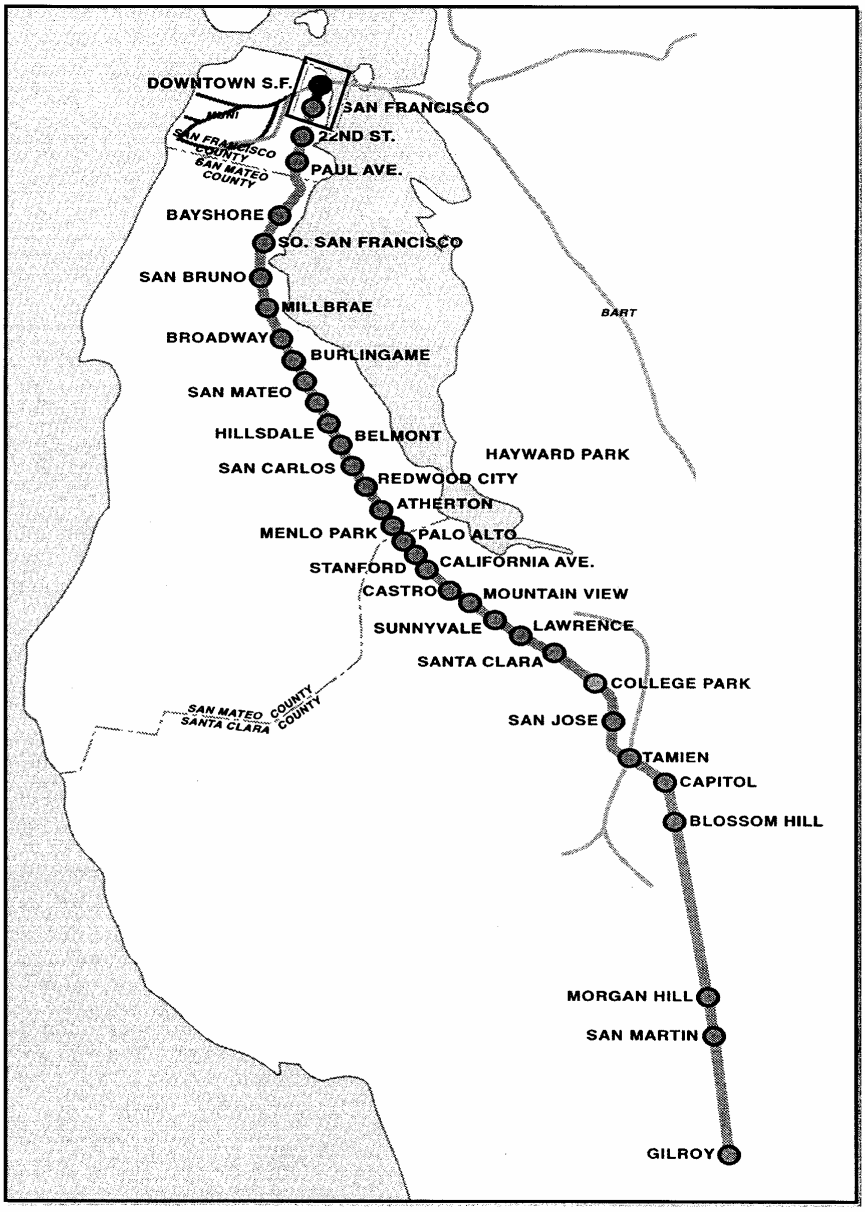


Figure 3.1-1: Caltrain Corridor with Stations

At the Fourth and Townsend Station, Caltrain connects with the Muni N-Judah light rail and nine Muni bus lines. The station is also served by an Amtrak bus connection to the Amtrak rail station in Emeryville. Connections with SamTrans are not provided at Fourth and Townsend but are available at 11 South Bay train stations (or within one block of these stations). Connections with Santa Clara Valley Transportation Authority (VTA) bus lines are available at 15 South Bay Caltrain stations. Currently there is no direct connection between Caltrain and BART. Table 3.1-1 summarizes Muni, SamTrans, and VTA connecting bus services at Caltrain Stations. Table 3.1-2 details Muni service at the Fourth and Townsend Station.

Table 3.1-1: Connecting Bus Service at Caltrain Stations

Caltrain	Feeder Bus Service
Fourth & Townsend	Muni 10, 15, 30, 38L, 45, 47, 80x, 81x, 82x, N-Judah Light Rail
22nd Street	Muni 48
Paul Avenue	Muni 29
Bayshore	Muni 9, 9X, 15, 56; SamTrans 292
South San Francisco	SamTrans 130, 131, 32, 34, 292
San Bruno	SamTrans 40, 41
Millbrae	SamTrans MX, 242, 390, 391
Broadway	SamTrans 292; Burlingame Free Bee
Burlingame	SamTrans 292; Burlingame Free Bee
San Mateo	SamTrans TX, 250, 292, 295
Hayward Park	Shelter only; no ticket sales
Bay Meadows	Race days only
Hillsdale	SamTrans KX, TX, 250, 262, 390, 391, 292, 294, 295
Belmont	SamTrans KX, PX, TX, 260, 262, 390
San Carlos	SamTrans KX, PX, TX, 261, 390
Redwood City	SamTrans KX, PX, RX, 270, 271, 390, 391
Atherton	Shelter only; no ticket sales
Menlo Park	SamTrans KX, RX, 390, 295, 296
Palo Alto	SamTrans KX, PX, RX, 280, 281, 282, 390, 391; SCVTA 22, 35, 86, 300
Stanford	Football days only
California Avenue	SCVTA 24, 88, Marguerite Shuttle
San Antonio	SCVTA 32, 35, 50, 86
Mountain View	SCVTA 20, 50, 51, 52, 145, 304, 304A
Sunnyvale	SCVTA 32, 53, 54, 55, 56, 140, 26 (Weekends)
Lawrence	SCVTA 41, 43, 145, 304A
Santa Clara	SCVTA 10, 22, 32, 34, 44, 60, 300, 304A
College Park	SCVTA 36, 62
San Jose	SCVTA 11, 22, 63, 64, 65, 68, 180, 300, 304A, Hwy. 17
Tamien	SCVTA 25, 67, 82, Light Rail
Capitol	SCVTA 66, 68, 304, 304-A
Blossom Hill	SCVTA 67
Morgan Hill	SCVTA 14, 15, 521
San Martin	SCVTA 18, 18A, 19, 68, 521
Gilroy	SCVTA 18, 18A, 19, 68, 521

Source: Muni, SamTrans, Santa Clara Valley Transportation Authority, Nelson/Nygaard, 2002.

Table 3.1-2: Muni Service at the Fourth and Townsend Caltrain Station

Bus Line	Typical Weekday Hours of Operation	Typical Headways in Minutes					Average Weekday Route Passengers	Estimated Weekday Boardings and Alightings at the Caltrain Station
		Weekday			Sat.	Sun.		
		Peak	Base	Eve.	Base	Base		
10-Townsend	5:30 AM - 1:20 AM	10	12	15	12	12	N/A	N/A
15-Third Street	4:45 AM - 1:30 AM	5-10	10	15	10	10	27,735	1,623
30-Stockton	5:00 AM - 2:00 AM	4-5	5-10	8-10	6	5-10	26,428	3,071
45-Union/Stockton	5:30 AM - 2:00 AM	6-9	6	15-17	12	15	19,344	2,252
47- Van Ness	6:00 AM - 1:15 AM	6-7	7-8	12-15	7-8	7-8	N/A	N/A
76 - Marin Headlands	Daytime Sundays Only	-	-	-	60	60	N/A	N/A
80x- Caltrain Express	7:00 AM - 9:30 AM; 3:30 PM - 6:15 PM	6-10	-	-	-	-	526	756
81x- Caltrain Express	6:15 AM - 9:30 AM; 3:35 PM - 6:00 PM	5-30	-	-	-	-	718	843
82x- Presidio & Wharves Express	6:15 AM -9:15 AM; 3:30 PM - 6:40 PM	20-30	-	-	-	-	711	477
N-Judah Light Rail	5:00 AM - 1:45 AM	8	10	12	10	12	39,051	3,455

Notes: Service on the 10-Townsend and 47-Van Ness Lines began on June 9, 2000. Estimated boardings and alightings on the N-Judah refer only to the peak period (6 AM -9 AM and 3:30 PM to 7:00 PM) rather than a full day of service.

Sources: Muni published schedules, February 2001; Muni Monitoring Data, FY 99 - 00

Weekday Caltrain service is a combination of express and local service. Weekday service hours are from 4:30 a.m. to midnight. Saturday service operates from 6:00 a.m. to midnight. Sunday service operates from 7:30 a.m. to 10:30 p.m. Frequencies during the weekday peak period vary between five and 30 minutes. During the midday, trains run every 30 minutes. During evenings, trains run every 60 minutes. On weekends, trains run every 60 to 120 minutes.

Caltrain's fares are based upon travel zones that were adjusted July 1, 1998. The system is divided into nine fare zones. One-way adult fares vary from $1.25 for travel within one zone to $6.25 for traveling the entire length of the 77-mile corridor. Disabled patrons and seniors ride for approximately half the regular one-way adult fare. Children under five ride free when accompanied by a fare-paying adult. Children between five and 11 years ride for approximately half the adult fare. A monthly ticket is available for unlimited rides between a specified number of zones. On weekends and holidays, the monthly ticket is valid for travel between all zones served by Caltrain. A Caltrain monthly ticket valid for two or more zones is good as local fare credit on all SamTrans and VTA buses. Discount monthly tickets are available to persons 17 years old and younger with a valid ID, seniors, disabled patrons or high school students older than 17. One-way weekday discount tickets are 25 percent off the regular fare and valid only on weekday trains that are scheduled to start their runs at San Jose or San Francisco stations between the morning and afternoon peaks. Ten-ride tickets and weekend passes are also available for purchase.

Weekday Caltrain ridership in February 2001 *was* estimated at 35,609 passengers; *current ridership is lower because of the recession. Of the February 2001 ridership,* almost 20 percent of the daily passengers *boarded* at the San Francisco Fourth and Townsend Station. During the morning peak, 27 percent of the passengers exit at the San Francisco terminus. During the afternoon peak, 39 percent of the passengers exit at Caltrain stops in San Mateo County and 44 percent exit at stops in Santa Clara County.[1] Table 3.1-3 shows the weekday boardings and alightings at Caltrain stations.

3.1.1.2 BART

BART provides heavy rail passenger service in the metropolitan Bay Area. The grade-separated service operates at high speeds of up to 80 miles per hour. BART currently has five operating lines: Pittsburg/Bay Point–Colma, Fremont–Daly City, Richmond–Daly City/Colma, Fremont-Richmond, and Dublin/Pleasanton–Daly City. All lines except the Fremont–Richmond line serve downtown San Francisco via a subway directly beneath Market Street.

BART shares four stations in downtown San Francisco with Muni Metro: Embarcadero, Montgomery, Powell and Civic Center. BART passengers can also make connections to the Muni bus lines serving Market Street. Although there is not a direct transfer connection between BART and Caltrain, Muni's N-Judah light rail connects the Embarcadero Station with Caltrain's Fourth and Townsend terminus.

BART's service hours are approximately 4:00 a.m. to midnight, Monday through Friday; 6:00 a.m. to midnight on Saturday; and 8:00 a.m. to midnight on Sunday. BART operates direct service between Pittsburg/Bay Point and Colma, Fremont and Richmond, as well as Dublin/Pleasanton and Daly City seven days a week during all service hours. At night and all day Sunday, only these three routes operate, requiring passengers to transfer if their destination is on a line that is not in service. Transfer stations are at the 12th Street / Oakland City Center Station, the MacArthur Station, and the Bay Fair Station. The West Oakland Station is also used as an "unofficial transfer station." Table 3.1-4 summarizes the frequency of BART trains.

BART's fare structure is built on a distance-based formula. The fare for most one-way trips wholly within San Francisco is $1.10. An additional $0.05 is charged for travel from the downtown Market Street subway stations to the Balboa Park Station. An additional $0.60 is charged for travel from the Daly City and Colma stations. One-way fares from downtown San Francisco to the East Bay range from $2.05 to $4.10. The maximum one-way fare is $4.70, from Colma to the Pittsburg/Bay Point Station.

BART has several discount passes. The blue high-value tickets with fare values of $35 and $48 are sold at a 6.25 percent discount. BART red tickets offer a 75 percent discount for disabled persons and children aged five to 12. BART green tickets offer a 75 percent discount for seniors. BART orange tickets provide a 50 percent discount for middle or secondary school students. The BART Plus ticket works in the BART fare gates like a regular BART ticket but also offers an unlimited number of local bus rides within the valid half-monthly time period.

[1] Caltrain Ridership Survey, February 2001

Table 3.1-3: Caltrain Rail Service in the Study Area

Station	Typical Headway in Minutes [1]					Weekday Boardings and Alightings
	Weekday			Sat.	Sun.	
	Peak 5-30	Base 30	Eve. 4-25	Base 60	Base 120	
San Francisco County						
Fourth & Townsend						13,609
22nd Street						1,334
Paul Avenue						49
Bayshore						1,021
San Mateo County						
South San Francisco						1,360
San Bruno						1,728
Millbrae						1,801
Broadway						1,117
Burlingame						1,811
San Mateo						2,754
Hayward Park						1,205
Bay Meadows						156
Hillsdale						2,664
Belmont						1,741
San Carlos						2,453
Redwood City						3,607
Atherton						574
Menlo Park						2,623
Santa Clara County						
Palo Alto						4,542
California Avenue						2,766
San Antonio						1,625
Mountain View						4,410
Sunnyvale						2,842
Lawrence						2,610
Santa Clara						2,248
College Park						437
San Jose						3,590
Tamien						1,612
Capitol						229
Blossom Hill						348
Morgan Hill						793
San Martin						435
Gilroy						1,102
Caltrain Total Daily Boardings & Alightings						**71,214**

Sources: Caltrain published schedule, April 29, 2001. Caltrain Ridership Statistics, February 2001.

Recent BART ridership counts from April 2001 show an average weekday ridership of 333,800 passengers. Most passenger activity occurs in downtown San Francisco at the Embarcadero, Montgomery, Powell, and Civic Center stations (see Table 3.1-4). Weekday boardings at these stations are about 115,055 passengers or about 34 percent of the total weekday boardings. Approximately 50 percent of the daily trips are transbay. Montgomery Station has the highest number of entries and exits with an average weekday activity of 71,466 passengers entering and exiting the station.[2] Table 3.1-4 also shows the percentage of entries at each BART station that are transbay trips.

Table 3.1-4: BART Transbay Service and Ridership

Line/Stations	Weekday Hours of Operation	Typical Headways in Minutes					Weekday Boardings & Alightings	Weekday Transbay Passengers (by Station Origin)	Percent of Station Entries that are Transbay Trips
		Weekday			Sat.	Sun.			
		Peak	Base	Eve.	Base	Base			
Pittsburg/ Bay Point - Colma	4:00 AM - 1:00 AM	5	15	20	20	20			
Pittsburg/Bay Point							9,644	2,615	56%
North Concord							4,175	1,395	65%
Concord							12,409	3,240	51%
Pleasant Hill							13,825	4,769	68%
Walnut Creek							11,972	3,512	61%
Lafayette							6,112	2,024	69%
Orinda							5,168	1,767	71%
Rockridge							9,402	3,221	71%
Fremont-Daly City	5:00 AM - 7:40 PM	15	15	-	20	-			
Fremont (2)							12,463	2,794	45%
Union City (2)							8,144	1,801	45%
South Hayward (2)							6,281	1,364	43%
Hayward (2)							9,858	1,724	36%
Bay Fair (2) (3)							10,362	2,478	47%
San Leandro (2) (3)							10,049	2,521	50%
Coliseum (2) (3)							13,721	2,733	39%
Fruitvale (2) (3)							16,704	3,747	44%
Lake Merritt (2) (3)							9,154	2,340	52%
Richmond – Daly City/Colma	5:00 AM - 7:40 PM	15	15	-	20	-			
Richmond (2)							8,626	1,769	40%
El Cerrito del Norte (2)							16,792	4,134	52%
El Cerrito Plaza (2)							7,820	2,057	52%
North Berkeley (2)							7,331	2,169	60%
Downtown Berkeley (2)							21,216	3,858	36%
Ashby (2)							8,618	2,334	54%

[2] BART Ridership Statistics, April 2001

Table 3.1-4: BART Transbay Service and Ridership

Line/Stations	Weekday Hours of Operation	Typical Headways in Minutes					Weekday Boardings & Alightings	Weekday Transbay Passengers (by Station Origin)	Percent of Station Entries that are Transbay Trips
		Weekday			Sat.	Sun.			
		Peak	Base	Eve.	Base	Base			
Fremont-Richmond	4:00 AM - 1:00 AM	15	15	20	20	20	See stations marked (2)		
Dublin/Pleasanton – Daly City	4:00 AM - 1:00 AM	15	15	20	20	20			
Pleasanton							12,815	4,245	67%
Castro Valley							4,230	1,385	65%
Stations Common to Most Lines									
MacArthur (1) (2)							13,274	3,425	49%
19th Street (1) (2)							16,641	3,558	43%
12th Street (1) (2)							24,816	5,045	41%
West Oakland							10,148	4,252	82%
Embarcadero							69,433	24,544	72%
Montgomery							71,466	22,783	66%
Powell							53,099	13,920	52%
Civic Center							37,541	11,020	58%
16th Street							19,697	2,637	26%
24th Street							24,748	2,570	20%
Glen Park							15,303	1,328	17%
Balboa Park							24,796	1,291	10%
Daly City							16,306	2,125	26%
Colma (1)							14,058	1,345	19%
Total							**668,217**	**165,839**	**50%**

Notes:
(1) Common to Richmond and Pittsburg/Bay Point Lines only
(2) Stations on the Fremont - Richmond Line
(3) Stations on the Pleasanton Line

Sources: BART published schedules, May 2001; Bart Statistics, April 2001.

3.1.1.3 Muni Metro

The San Francisco Municipal Railway (Muni) operates the Muni Metro light rail system. For the most part, the system operates in mixed traffic except for the subway sections through central San Francisco and small sections of exclusive at-grade right of way. Muni currently has seven operating lines: J-Church, K-Ingleside, L-Taraval, M-Ocean View, S-Castro, N-Judah, and the F-Market.

All of the lines except the F-Market serve the downtown San Francisco subway stations. The J, K, and M lines also connect with BART at the Balboa Park Station. The J Line also serves the Glen Park Station. Muni's Metro service connects with Caltrain via the N-Judah light rail line, which continues from the Embarcadero Station along a surface extension to the Fourth and Townsend Caltrain Station. The F-Market line consists of historic streetcars running partially in

a transit priority lane along the surface of Market Street. Service is provided between Fisherman's Wharf and the Castro Street neighborhood.

Muni Metro lines generally operate between 5:00 a.m. and 1:00 a.m. weekdays, 6:00 a.m. and 1:00 a.m. Saturdays; and 8:00 a.m. and 1:00 a.m. Sundays. Metro Owl service, late-night surface bus service, is offered for portions of various lines. Weekday headways vary between five and 12 minutes depending on the line and time of day. Table 3.1-5 shows the frequencies and ridership of Muni light rail. In 1999, the N-Judah had the highest ridership with 39,000 average weekday boardings.

Table 3.1-5: Muni Rail Services in the Study Area

Line	Typical Weekday Hours of Operation	Typical Headway in Minutes					Average Weekday Route Ridership
		Weekday			Sat.	Sun.	
		Peak	Base	Eve.	Base	Base	
F- Market	5:00 AM – 2:00 AM	5-8	7-8	15	8	8	9,353
S- Castro	Peak AM & PM only	7-12	-	-	-	-	N/A
J- Church	4:00 AM – 2:00 AM	7-10	10	12	12-18	12-20	13,680
K- Ingleside	5:00 AM – 1:00 AM	9	10	15-20	12	15	18,087
L- Taraval	5:00 AM – 1:30 AM	5-10	10	14-20	10	12	28,209
M- Ocean View	4:30 AM – 1:30 AM	9 -12	10	10-15	12	15	28,088
N- Judah	5:00 AM – 1:45 AM	8	10	12	10	12	39,051

Note: The S-Castro began service on April 2, 2001.

Sources: Published Muni Schedules, February 2001; Muni monitoring data, FY 99 - FY 00.

3.1.2 EXISTING BUS SERVICES

Muni, SamTrans, AC Transit and Golden Gate Transit provide bus service in the study area. All four operators offer service either within or in the vicinity of the area's major transit hub, the Transbay Terminal at Mission and First Streets. The terminal is also served by paratransit services, Greyhound interregional buses, Gray Line tour buses, and other private tour operations. Caltrain's Fourth and Townsend Station is served by Muni and limited Amtrak bus service only. The ferry terminal at Mission and Embarcadero is served by Golden Gate Transit's ferry feeder bus service. Muni is in the process of abandoning use of the Ferry Terminal's off-street bus turnaround at Mission and Stuart Streets and moving the terminals for 11 Muni lines to the Ferry Terminal's surrounding streets. Caltrain stations in the South Bay have connecting bus service provided by Muni, SamTrans, and the VTA. Table 3.1-1 summarizes the bus connections at the 34 Caltrain stations.

3.1.2.1 Muni Bus Service

Muni currently operates 83 transit lines in regular weekday service. Fifty-six of these are motor coach (diesel bus) and 17 are trolley coach (electric bus). The other 10 lines include seven light rail and three cable car lines. Most bus lines operate seven days a week, between 6:00 a.m. and midnight. Limited late night (owl) service is available between 1:00 a.m. and 5:00 a.m. on

sections of 13 Muni routes. On weekdays, service frequencies, or headways, generally range from four to 12 minutes during peak periods, five to 20 minutes during midday, and 10 to 30 minutes during evenings. On weekends, base frequencies generally range from five to 60 minutes, depending on demand and headway policy. In February 2001, Muni began implementing the South of Market Action Plan, a series of service changes that included the partition of the 42-Downtown Loop into the 47-Van Ness and the 10-Townsend, expanded service and frequencies on the 12-Folsom, and extension of the 19-Polk to Townsend Street.

The basic Muni fare for a one-way trip is $1.25. Cash fares include a free transfer given at the time of boarding. *Adult* monthly passes *at $45.00* are available for travel on all Muni lines as well as BART, SamTrans, and Caltrain service within San Francisco. Seniors, disabled persons, and children under 18 are charged $0.35 for one-way trips and *$10.00* for monthly passes. Also available are weekly passes for *$12.00* and weekly tourist passes for $33.75, which includes admission to several city visitor attractions.

Muni operates 10 bus lines that directly serve either the Transbay Terminal or its immediate vicinity: the 5-Fulton, 6-Parnassus, 10-Townsend, 14-Mission, 14L-Mission Limited, 14x-Mission Express, 38-Geary, 38L-Geary Limited, 76-Marin Headlands, and the 108-Treasure Island. Five of these routes, including the 5, 6, 38, 38L, and 108, terminate at the terminal. Table 3.1-6 summarizes the service characteristics of the Muni lines that serve the Transbay Terminal, including operating hours, frequencies, number of boardings, and the passenger activity at the Transbay Terminal. Figure 3.1-2 shows the Muni lines within the study area that serve the Transbay Terminal.

Table 3.1-6: Muni Service at the Transbay Terminal

Bus Line	Typical Weekday Hours of Operation	Typical Headways in Minutes					Average Weekday Route Passengers	Estimated Weekday Boardings and Alightings
		Weekday			Sat.	Sun.		
		Peak	Base	Eve.	Base	Base		
5-Fulton	24 Hours	4-9	5-12	15	6-10	9	15,458	1,221
6-Parnassus	5:20 AM - 2:10 AM	7-10	12	20	12	20	6,434	405
10-Townsend	5:30 AM - 1:20 AM	10	12	15	12	12	N/A	N/A
14-Mission	24 Hours	5-10	6	10	7-8	7-8	37,310	1,778
14L-Mission Limited	8:15 AM - 4:45 PM	20	20	-	15	15	6,052	496
14x-Mission Express	6:30 AM - 9:00 AM; 4:00 PM - 6:45 PM	8-9	-	-	-	-	2,572	658
38-Geary	24 Hours	7-8	7-8		14	15	28,779	1,598
38L-Geary limited	6:00 AM - 6:30 PM	7-8	7-8	-	7	-	18,127	1,469
76-Marin Headlands	Daytime Sundays Only	-	-	-	60	60	N/A	N/A
108-MUNI Treasure Island	4:20 AM -1:00 AM	20	20-60	20	45	45	517	529

Notes: Service on the 10-Townsend line began on June 9, 2000. Estimated boardings and alightings on the N-Judah refer only to the peak periods (6 AM - 9 AM and 3:30 PM to 7:00 PM) rather than a full day of service.

Sources: Muni published schedules, February 2001; Muni Monitoring Data, FY 99 – 00.



Figure 3.1-2 | Muni Service at the Transbay Terminal

Within the study area, Muni operates 29 routes that do not serve the Transbay Terminal. Their service characteristics are summarized in Table 3.1-7. The routes are mapped in Figure 3.1-3.

Table 3.1-7: Non-Transbay Terminal Muni Service in the Study Area

Bus Line	Typical Weekday Hours of Operation	Typical Headways in Minutes					Estimated Weekday Route Passengers
		Weekday			Sat.	Sun.	
		Peak	Base	Eve.	Base	Base	
1- California	4:40AM – 2:30AM	6-9	5-10	10-17	6-8	6-8	28,793
1-AX California Express	6:45AM – 9:00AM 4:15PM – 6:30PM	10,15	-	-	-	-	-
1-BX California Express	6:45AM – 9:15AM 4:15PM – 6:30PM	5-7, 10	-	-	-	-	-
2- Clement	5:00AM – 8:00PM	10	20	-	15	15	6,865
3- Jackson	6:30AM – 1:30AM	10	20	20	15	15	
4- Sutter	5:00AM – 7:30PM	10	20	-	-	-	
6- Parnassus	5:20AM – 2:10AM	7-10	12	20	12	20	6,434
7- Haight	5:30AM – 7:30PM	10	12	-	12	20	5,620
9- San Bruno	5:00AM – 1:40PM	6-9	10	15	10	10	18,461
9x- San Bruno Express	7:00AM – 7:30PM	7-12	12	-	-	-	8,416
12-Folsom	5:30 AM – 1:30AM	7-10	10	20	10	10	3,829
15- Third	4:45AM – 1:30AM	5-10	10	15	10	10	27,735
21- Hayes	5:15AM – 1:45AM	5-8	6-10	20	12	12	9,740
30- Stockton	5:00AM – 2:00AM	4-5	5-10	8-10	6	5-10	26,428
30x- Marina Express	6:00AM – 9:45AM 3:45PM – 7:00PM	5-7	-	-	-	-	2,467
31- Balboa	4:45AM – 2:00AM	10	10-12	15	15	15	10,149
31AX- Balboa Express	6:45AM – 8:45AM 4:15PM – 6:30PM	8-9,10	-	-	-	-	
31BX- Balboa Express	6:45AM – 9:00AM 4:15PM – 6:30PM	10	-	-	-	-	
38AX- Geary Express	7:00AM – 9:00AM 4:00PM – 7:30PM	10,15	-	-	-	-	
38BX- Geary Express	6:45AM – 9:00AM 4:15PM – 7:30PM	7-9, 10-12	-	-	-	-	
41- Union	5:00AM – 9:30AM 3:30PM – 7:45PM	10	-	-	-	-	3,560
45- Union/Stockton	5:30AM – 2:00AM	6-9	6	15-17	12	15	19,344
66- Quintara	5:45AM – 12:00AM	20	20	30	30	30	1,188
71- Haight - Noriega	5:45AM – 1:15AM	10	12	15-20	12	10	10,195
80x- Gateway Express	7:00AM – 9:30AM 3:30PM – 6:15PM	6-10	-	-	-	-	526
81x- Caltrain Express	6:15AM – 9:30AM 3:35PM – 6:00PM	5-30	-	-	-	-	718
82x- Levi Express	6:15AM – 9:15AM 3:30PM – 6:40PM	20-30	-	-	-	-	711
91- Owl	12:15AM – 6:15AM	30	-	-	-	-	365

Sources: Muni Published Schedules, February 2001; Muni Monitoring Data, FY 99-00.



Figure 3.1-3 Non-Transbay Terminal Muni Service in the Study Area

Muni operates nine bus lines that serve the Fourth and Townsend Caltrain Station: the 10-Townsend, 15-Third, 30-Stockton, 38L-Geary Limited, 47-Van Ness, 45-Union/Stockton, 80x-Caltrain Express, 81x-Caltrain Express, 82x-Presidio & Wharves Express. The N-Judah light rail line also serves the station. Figure 3.1-4 shows the routes of Muni lines within the study area that serve the Caltrain Station. Table 3.1-8 summarizes their service characteristics.

Table 3.1-8: Muni Service at the Fourth and Townsend Caltrain Station

Bus Line	Typical Weekday Hours of Operation	Typical Headways in Minutes					Average Weekday Route Passengers	Estimated Weekday Boardings and Alightings
		Weekday			Sat.	Sun.		
		Peak	Base	Eve.	Base	Base		
10-Townsend	5:30 AM – 1:20 AM	10	12	15	12	12	N/A	N/A
15-Third Street	4:45 AM – 1:30 AM	5-10	10	15	10	10	27,735	1,623
30-Stockton	5:00 AM – 2:00 AM	4-5	5-10	8-10	6	5-10	26,428	3,071
45-Union/Stockton	5:30 AM – 2:00 AM	6-9	6	15-17	12	15	19,344	2,252
47- Van Ness		6-7	7-8	12-15	7-8	7-8	N/A	N/A
76 - Marin Headlands	Daytime Sundays Only	-	-	-	60	60	N/A	N/A
80x- Caltrain Express	7:00 AM – 9:30 AM; 3:30 PM – 6:15 PM	6-10	-	-	-	-	526	756
81x- Caltrain Express	6:15 AM – 9:30 AM; 3:35 PM – 6:00 PM	5-30	-	-	-	-	718	843
82x- Presidio & Wharves Express	6:15 AM –9:15 AM; 3:30 PM – 6:40 PM	20-30	-	-	-	-	711	477
N-Judah Light Rail	5:00 AM – 1:45 AM	8	10	12	10	12	39,051	3,455

Notes: Service on the 10-Townsend and 47-Van Ness lines began on June 9, 2000; estimated boardings and alightings on the N-Judah refer only to the peak periods (6 AM -9 AM and 3:30 PM to 7:00 PM) rather than a full day of service.

Sources: Muni published schedules, February 2001; Muni Monitoring Data, FY 99-00.

3.1.2.2 AC Transit

AC Transit provides local, express, and commuter service in western Alameda County and western Contra Costa County. Of AC Transit's 138 routes, 35 offer transbay service between the East Bay and the Transbay Terminal, the operator's only San Francisco stop. Midday storage of AC Transit occurs on the Transbay Terminal bus ramps, which can provide storage for up to 120 standard 40-foot buses.

Of the 35 transbay routes, five are 'basic service' that operate seven days a week throughout the day and 31 are 'commuter service' that operate peak periods only. On weekdays, headways for peak period service vary between seven and 30 minutes. Most commute trips are offered in the peak direction only with westbound service provided in the morning and eastbound service in the evening. Figure 3-1 shows the route that AC Transit buses take to serve the Transbay Terminal. Table 3.1-9 summarizes the service characteristics of the basic and commuter services.

Approximately 15,205 daily weekday passengers use AC Transit's transbay service. The line with the highest ridership is the O-Alameda with 1,780 daily boardings.[3]

[3] AC Transit Passenger Counts, February 2001.

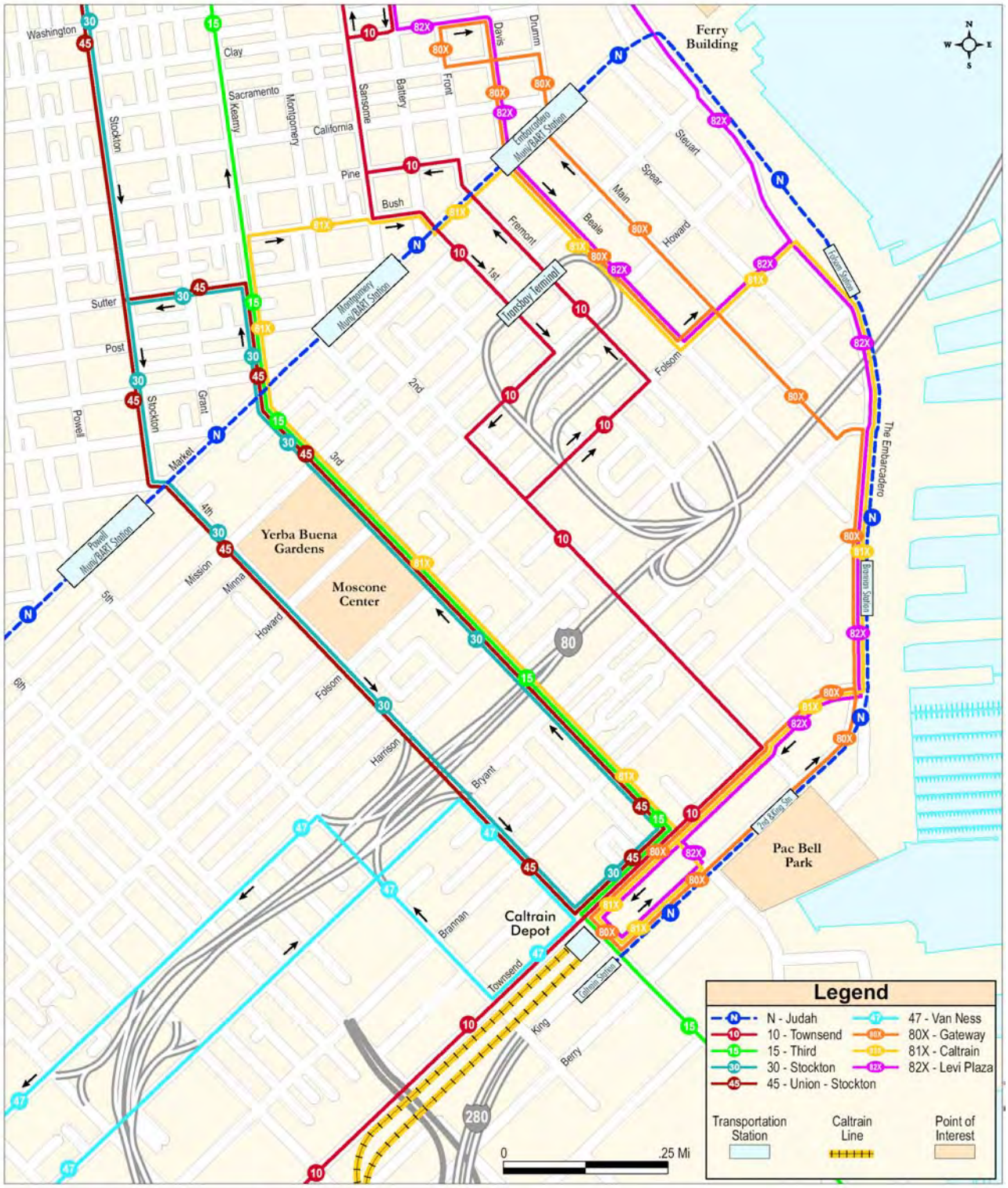


Figure 3.1-4 | Muni Service at the Caltrain Station

Table 3.1-9: AC Transit Service at the Transbay Terminal

Bus Line	Typical Weekday Hours of Operation	Typical Headway in Minutes					Weekday Transbay Ridership
		Weekday			Sat.	Sun.	
		Peak	Base	Eve.	Base	Base	
Basic Transbay Service							
F - Berkeley	4:45 AM - 12:45 AM	15 - 30	30	30	30	30	817
N - San Leandro	4:40 AM - 9:07 AM; 7:10 PM - 12:52 AM	30	-	10-30	30	30	711
NL - San Leandro	6:10 AM - 8:07 PM	20-30	30	30	30	30	991
O - Alameda	5:27 AM - 12:41 PM	7-20	45	60	60	60	1778
A - Oakland Airport	24 Hours	30	30	30	30	30	314
Commute Hour Only Transbay Service			**AM Peak Trips**		**PM Peak Trips**		
			Westbound	Eastbound	Westbound	Eastbound	
B - Trestle Glen			4	0	5	0	157
BX - Trestle Glen			4	0	2	3	55
C - Piedmont			10	4	10	14	461
CB - Montclair			4	0	0	4	191
E - Claremont			8	0	0	10	321
FS – Berkeley			5	0	0	5	236
G - El Cerrito			10	0	0	9	518
H/HX - El Cerrito			10	0	0	10	526
K - San Leandro			5	0	0	6	185
KH - San Leandro			5	0	0	5	131
L - El Sobrante			9	0	0	12	476
LA - El Sobrante			13	8	7	13	760
LB - El Sobrante			7	0	7	13	425
LC - El Sobrante			7	0	0	10	445
LD (LX) - Richmond			5	2	0	5	255
NF - San Leandro			6	0	0	11	445
NG - San Leandro			5	0	0	11	525
NH - San Leandro			6	1	1	11	359
NV - San Leandro			2	0	0	4	103
OX/OX1 -0 Alameda			11	0	0	14	813
P (CH) - Piedmont			7	0	0	16	712
RCV/RCVX - Castro Valley			7	0	0	7	231
S - Hayward			5	0	0	4	226
SA (SW) - Hayward			4	0	0	6	244
SB - Newark			5	0	0	6	285
V - Montclair			7	0	0	17	703
W (W1) - Alameda			9	0	0	10	504
WA (W2) - Alameda			3	0	0	3	104
Y - Emeryville			2	0	0	2	56
Z - Albany			0	8	7	0	142
Total							**15,205**

Sources: AC Transit published schedules, March 2001; AC Transit passenger counts, February 2001.

Most AC Transit Transbay trips cost $2.50 for a one-way ticket, $22.00 for a 10-ride ticket book and $80.00 for a monthly pass. Longer distance transbay trips are priced at $2.75 for a one-way ticket, $25.00 for a 10-ride ticket book and $90.00 monthly pass. Service between the Transbay Terminal and Oakland airport costs $5.00. Seniors, disabled persons, and children under 12 are eligible for 50 percent discounts on all types of tickets except the monthly passes.

3.1.2.3 SamTrans

SamTrans provides connections to the Daly City and Colma BART stations, the San Francisco International Airport, and downtown San Francisco. In August 1999, SamTrans reorganized its local and commuter service into a core system with reallocated service from areas of little demand to areas of greater demand. Table 3.1-10 summarizes the SamTrans service between the Transbay Terminal and communities along the Peninsula. Nine lines provide commute service between San Mateo County and the Transbay Terminal. Seven of these lines operate only during peak periods. Figure 3.1-5 shows SamTrans routes that serve the Transbay Terminal.

Table 3.1-10: SamTrans Bus Service in the Transbay Terminal Area

Bus Line	Typical Weekday Hours of Operation	Typical Headway in Minutes					Weekly Afternoon Peak Period Ridership out of San Francisco
		Weekday			Sat.	Sun.	
		Peak	Base	Eve.	Base	Base	
DX Pacifica-San Francisco	AM & PM Peak Only	10-15					172
KX Palo Alto-San Francisco	5:15 AM - 1:45 AM	25-40	25-40	60	30	30	296
MX San Mateo - San Francisco	AM & PM Peak Only	20-30					88
NX Redwood Shores-San Francisco	AM & PM Peak Only	30					48
PX Redwood City-San Francisco	AM & PM Peak Only	10-30					72
RX Palo Alto-San Francisco	AM & PM Peak Only	15-40					32
TX San Carlos-San Francisco	AM & PM Peak Only	20					64
391 San Mateo-Daly City-San Francisco	AM & PM Peak Only	20	-				432
292 San Francisco - Hillsdale S.C.	4:45 AM - 2:15 AM	20-40	25-35	60	30	30	464

Note: Ridership figures refer to the number of southbound SamTrans passengers leaving San Francisco during the afternoon peak period of 4 PM - 7PM. SamTrans does not currently have data available describing the daily patronage specifically at the Transbay Terminal.

One-way cash fares for travel between San Francisco and the South Bay are $2.20 for regular intercity service and $3.00 for express service. Seniors and disabled persons pay $0.50 for regular service and $1.25 for express service during non-peak periods. Youth, between six and 17, pay $1.50 for regular service and $1.25 for express service.

Tokens are sold in packages of 10 at a 10 percent savings over cash fares. Monthly passes cost $56.00 for regular service and $102.00 for express service. Seniors and disabled persons are charged $18.00 for regular service passes. Children under 17 pay $22.00 for regular service passes. SamTrans passengers may also purchase a Muni sticker, which upgrades their monthly passes to include unlimited rides on Muni. Stickers cost $17.00 when purchased with a regular service pass and $11.00 with an express pass.

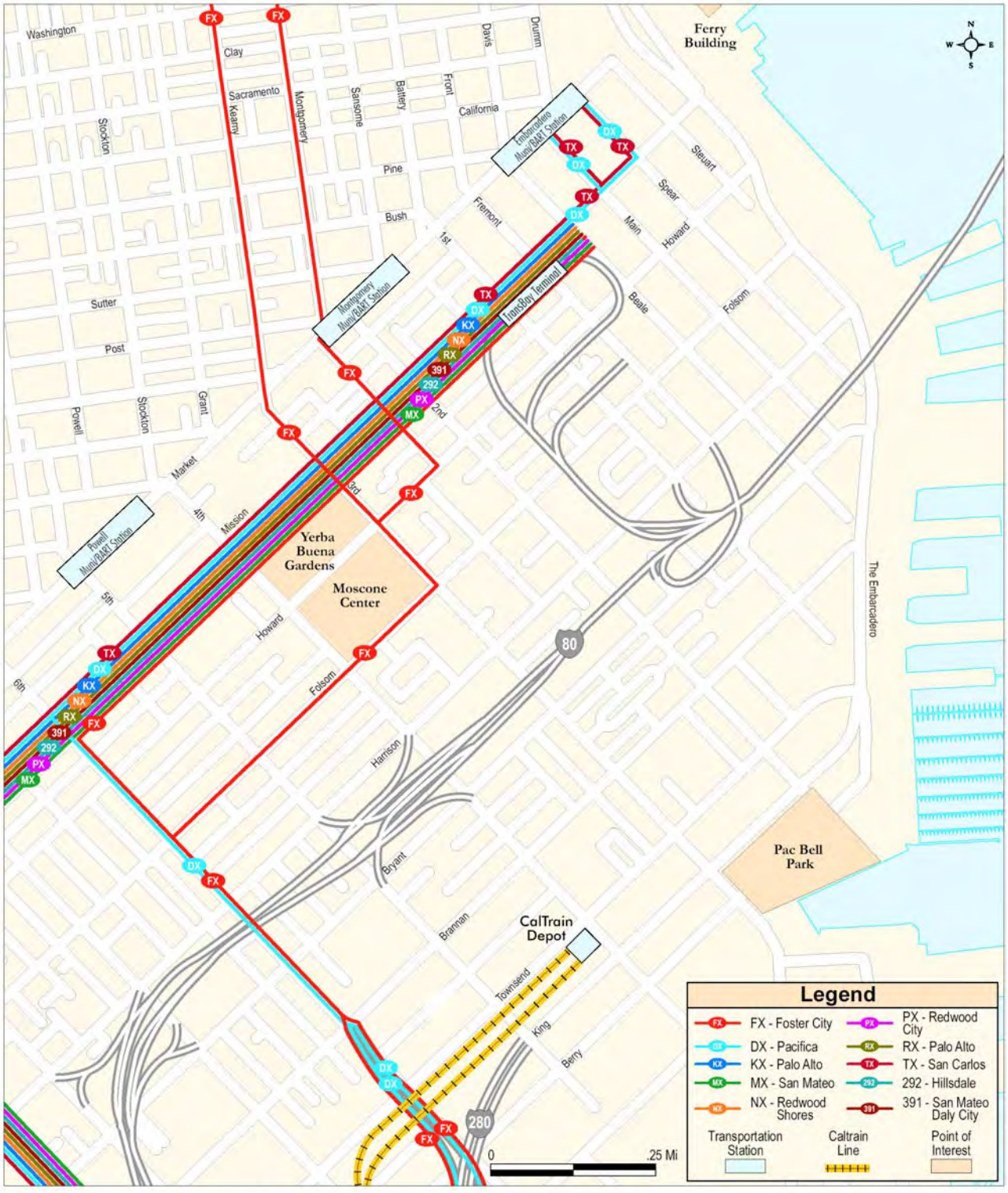


Figure 3.1-5 | Sam Trans Routes Serving the Project Area

3.1.2.4 Golden Gate Transit

Operated by the Golden Gate Bridge, Highway, and Transportation District, Golden Gate Transit provides daily bus service to Marin and Sonoma counties with connections to San Francisco and the El Cerrito Del Norte BART Station in Contra Costa County. Within San Francisco, the major transfer and boarding points are the San Francisco Transbay Terminal, Seventh and Market Streets near the Civic Center, and the Golden Gate Bridge Toll Plaza. Golden Gate Ferry provides daily ferry service between Larkspur or Sausalito in Marin County and San Francisco. Midday storage for Golden Gate Transit buses occurs at an off-site location at Main and Howard Streets. The storage area supports 125 buses.

Golden Gate Transit offers 29 transbay routes between Marin County and the Transbay Terminal. Seven of these routes form Golden Gate Transit's Basic Service which generally operates every day and nearly 24 hours per day. Route 10 operates only on weekends in San Francisco; Routes 30 and 90 operate only on weekdays. Most of Golden Gate Transit's basis service lines are routed along Mission and Van Ness Streets to serve the Civic Center.

The other 21 transbay routes provide commuter service only during weekday peak periods. Frequencies during peak periods for both basic and commuter routes vary between five and 60 minutes. Most of the commuter service routes travel along Battery and Sansome Streets to serve the Financial District. Frequencies during peak periods for both basic and commuter routes vary between five and 60 minutes. Figure 3.1-6 shows Golden Gate Transit routes that serve the Transbay Terminal area and Table 3.1-11 summarizes Golden Gate's service in the Terminal area.

The Golden Gate service area is divided into ten fare zones. Transbay adult cash fares for one-way bus travel range from $2.*65* to $5.*65*. Ferry service between San Francisco and Larkspur costs $3.*25* on weekdays and $*5.60* on weekends or holidays. Ferry service between San Francisco and Sausalito costs $5.60 regardless of the day of travel. Seniors and disabled persons are eligible for a 50 percent discount on bus and ferry tickets. Children receive a 25 percent discount. Inter-county passes containing 20 tickets are discounted 20 percent from face value. Two Golden Gate Transit routes, Line 67 and Line 69, offer free shuttle service between the Ferry Terminal and San Francisco's financial district, South of Market area, and the Civic Center. Most GGT buses and all Golden Gate ferries are equipped to transport bicycles.

Current ridership data are not available for Golden Gate Transit. In March 1997, Golden Gate estimated the number of southbound passengers as 3,684 during the morning peak (7:30 a.m. - 8:30 a.m.) and 18 during the evening peak (4:30 p.m. - 5:30 p.m.). Northbound passengers were estimated at 375 during the morning peak and 3,207 during the evening peak.

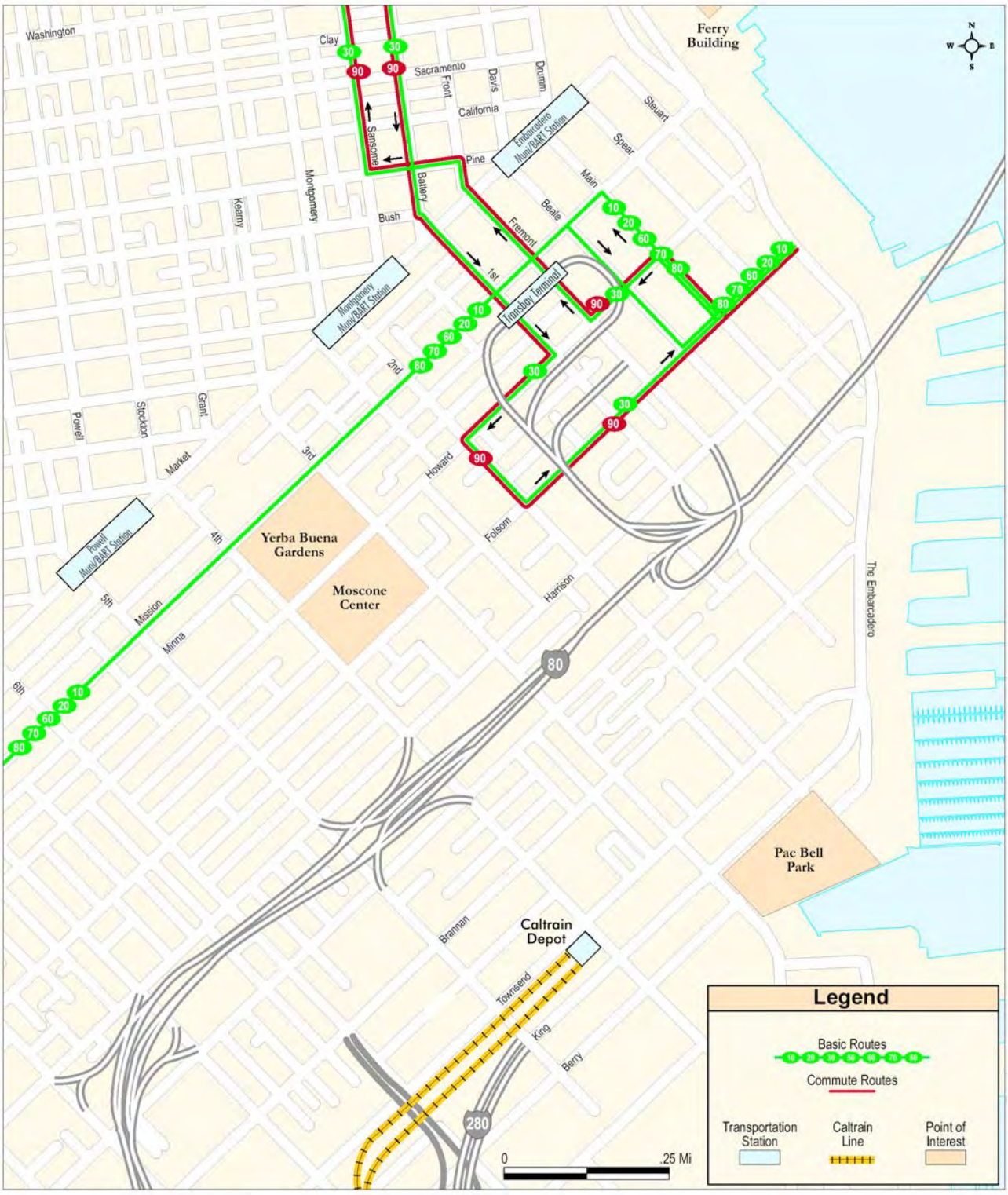


Figure 3.1-6 Golden Gate Transit Service at the Transbay Terminal

Table 3.1-11: Golden Gate Transit Service at the Transbay Terminal Area

Bus Routes	Typical Weekday Hours of Operation	Typical Headways in Minutes				
		Weekday			Sat.	Sun.
		Peak	Base	Eve.	Base	Base
Basic Routes						
10 Tiburon-Mill Valley-Sausalito (1)	Weekends Only	-	-	-	60	60
20 Canal-San Anselmo-Corte Madera	4:30 AM - 2:00 AM	30	30	60	-	-
30 San Rafael-Larkspur Ferry	8:15 AM - 5:00 AM	60	60	60	-	-
50 San Marin-Novato-San Rafael-Sausalito	4:00 AM - 1:00 AM	30	30	60	60	60
60 San Rafael	(2)	(2)	(2)	(2)	(2)	(2)
70 Novato-San Rafael	(2)	(2)	(2)	(2)	(2)	(2)
80 Santa Rosa-Novato-San Rafael	24 Hours	20 - 30	30	30 - 60	30	30
Commute Routes (Operate Peak Times Only)						
2 Marin Headlands-Marin City		10-20				
4 Mill Valley		7-10				
8 Tiburon		15 - 30				
18 San Anselmo-College Of Marin-Corte Madera		30 - 60				
24 Lagunitas-Manor-San Anselmo-Greenbrae		5-10				
26 Sleepy Hollow-San Rafael		15-20				
28 San Rafael-Canal-Larkspur Landing		30				
32 Peacock Gap-San Rafael		30 -60				
34 Santa Venetia-San Rafael		30 - 45				
38 Terra Linda		10-15				
44 Lucas Valley		15-30				
48 Novato-Ignacio		30				
54 San Marin-Novato Blvd.		5-15				
56 San Marin		10-15				
72 Santa Rosa-Rohnert Park Expressway		*14-55*				
74 Santa Rosa-Petaluma		15-30				
76 Rohnert Park-East Petaluma		30				
78 Santa Rosa-Sebastopol		25-50				
90 Sonoma Valley-San Rafael		(3)				
93 Golden Gate Bridge-S.F. Civic Center		10-15				

Notes:
(1) Transbay Service on weekends Only.
(2) Routes 60 and 70 are part of Route 80 Service. Hours of operational weekdays are combined for 60, 70, and 80 service from San Francisco.
(3) Only *two* southbound and one northbound run serve the Transbay Terminal area.
Source: Golden Gate Transit published schedules, June 2001.

3.1.3 OTHER SERVICES

3.1.3.1 Caltrans Bay Bridge Bicycle Shuttle

Caltrans operates the Bay Bridge Bike Shuttle, which runs during peak commute periods when bikes may not be carried across the Bay on BART. Service is provided between the Transbay Terminal in San Francisco, Treasure Island, and the MacArthur BART station. Four westbound and three eastbound shuttles are provided during both morning and evening peak periods. The service costs $1.00.

3.1.3.2 *Special Commuter Services*

There are *two special commuter services* serving the study area including the Napa Valley Commute Club and the Valley of the Moon Commute Club. The Napa Valley Commute Club is a non-profit organization that offers commuters peak direction morning and evening service between Napa Valley and San Francisco. The morning service boards passengers at three locations in the City of Napa and drops them off at 15 stops in San Francisco including Fremont Street between Mission and Howard Streets. Evening service boards passengers at the Transbay Terminal's street level crescent loading area on Mission Street. Approximately 50 passengers ride the service's single coach bus during both morning and evening service. Membership is $170 per calendar month. For infrequent riders, the cost is $8.00 one-way or $13.00 round-trip.[4] *As of March 2001, the Napa Valley Commute Club operates one southbound and one northbound trip during the peak period.*

Valley of the Moon Commute Club is a member run club, which carries North Bay commuters between Sonoma Valley and San Francisco. In San Francisco, stops are made along Mission Street at First, Jessie, Fourth, and Sixth Streets. Monthly subscriptions are $135. *As of October 2002, the Valley of the Moon Commute Club operates two southbound and two northbound trips during the peak periods.*

3.1.3.3 Greyhound

Greyhound Lines is an interregional, private bus operation carrying passengers and package freight. At the Transbay Terminal, there are 43 daily outbound schedules during the off-peak season and 49 daily schedules during the peak season (June through August). Greyhound does not serve the Caltrain Fourth and Townsend Station. The most popular destinations are Sacramento, Reno, Los Angeles, San Jose, and Santa Cruz. During weekends and holidays, Greyhound adds additional service. In May 2001, six roundtrip runs of commuter service were added between the Transbay Terminal and Sacramento. In 2000, Greyhound counted a total of 263,040 outbound passengers at the Transbay Terminal.

[4] Interview with Napa Valley Commute Club Representative, Bob Streich, June 4, 2001

3.1.3.4 Amtrak

Amtrak does not offer rail service in San Francisco but offers connecting bus service between downtown San Francisco and Amtrak's Emeryville Station. Within the study area, bus stops are located at the Caltrain Fourth and Townsend Station, the Moscone Center on Howard Street at Fourth, the Hyatt Regency on Market and Davis, and the Ferry Building.

The thruway bus service connects passengers with Amtrak's Capital Corridor, Coast Starlight, California Zephyr, and San Joaquin routes.

3.1.3.5 Private Tour Operators

Grayline Tours is the largest private tour operator at the Transbay Terminal. The company offers day trips around the city and to regional tourist destinations including Muir Woods, Napa and Sonoma Valleys, Monterey Bay, and Yosemite National Park. Tour buses for day trips board passengers at five bus bays on the bus deck level. During the peak summer season, a maximum of 40 buses board and alight at the Transbay Terminal. During the winter, a minimum of 25 daily buses uses the Terminal. In 2000, passenger counts varied from 2000 daily passengers in the summer to 200 to 300 during the winter.[5]

Other tour operators offer a smaller scale of service from the Transbay Terminal. During the peak summer season, Silverstar Tours operates about 13 daily trips to Reno, Lake Tahoe, Monterey, and Napa Valley. Approximately 150 daily passengers board on First Street, just west of the Transbay Terminal. Green Tortoise Adventure runs between three and four weekly tours throughout the West Coast. Passengers board during weekday evenings from Natoma Street between First and Fremont.

3.1.4 EXISTING TRANSIT SERVICE UTILIZATION VERSUS CAPACITY

Transit has become increasingly important as a travel mode for persons going to and from downtown San Francisco because of constrained roadway capacity. The current utilization and potential capacity of the various transit modes providing access to the city were analyzed to establish available transit capacity. The analysis period was the evening peak commute hours of 4:00 to 6:00 p.m., the busiest part of the typical workday. For persons beginning and ending their trips in San Francisco, four surface and subway corridors within the city were identified that included the major bus and rail lines providing local transit service. These corridors are in the vicinity of the downtown; services are operated primarily by either Muni or BART (San Francisco-Daly City Colma trains).

For persons traveling through the study area with a trip origin or destination outside of San Francisco, three regional corridors were identified. The major transit operators in the regional corridors are Caltrain, BART, AC Transit, SamTrans, Golden Gate Transit (bus and ferry), and the various ferry services to the East Bay and North Bay.

[5] Interview with Grayline representative, June 4, 2001.

For all transit routes in these local and regional corridors, the number of evening riders outbound from San Francisco was estimated at the maximum load point (i.e., the point of highest demand) from available data sources and aggregated to obtain a total demand for each transit line and travel corridor. This is referred to as a demand screenline analysis. As a counterpart to the demand in a corridor, the service capacity of each transit route was also estimated, by multiplying the passenger capacity standard for transit vehicles by the number of transit trips scheduled during the evening peak. The ridership demand was compared to the capacity provided and expressed as a percent utilization of available capacity. Demand/capacity utilizations were also calculated for each corridor and the local and regional screenlines combined.

Tables 3.1-12 and 3.1-13 provide a summary of this analysis. As shown, the estimated current utilization of local transit capacity is around 70 percent. The estimated current utilization of regional transit capacity provided from San Francisco in the evening peak is approximately 72 percent.

Table 3.1-12: Existing Outbound PM Peak Period Transit Demand and Transit Capacity San Francisco Screenline Corridor

Screenline	Transit Line (1)	Ridership (2)	Existing Capacity	Capacity Utilization
Northeast				
Kearny/Stockton	Muni 30, 30X, 45	3,695	5,222	71%
All other lines	Muni 32, 41, 422, 82X	1,576	3,413	46%
TOTAL NORTHEAST		**5,271**	**8,635**	**61%**
Northwest				
Geary Corridor	Muni 38, 38L, 38AX, 38BX	4,181	5,885	71%
All other lines	Muni 1, 1AX, 2, 3, 4, 5, 21, 31, 31AX, and 31BX	9,927	13,979	71%
TOTAL NORTHWEST		**14,108**	**19,863**	**71%**
Southwest				
Subway Lines	Muni Metro K, L, M, and N	8,764	11,781	74%
All other lines	Muni 6, 7, 66, 71L, F	2,348	3,661	64%
TOTAL SOUTHWEST		**11,112**	**15,442**	**72%**
Southeast				
Mission Street Corridor	Muni 14, 14L and 14X	1,946	2,650	73%
Third Street Corridor	Muni 15	707	1,191	59%
All other lines	Muni 14, 14L and 14X	3,304	4,339	76%
TOTAL SOUTHEAST		**5,958**	**8,180**	**73%**
TOTAL SAN FRANCISCO SCREENLINES		**36,449**	**52,120**	**70%**

Notes:
(1) Lines reaching maximum load point going outbound towards screenline.
(2) Ridership refers to outbound passenger loads at the maximum load point between 4PM and 6PM.

Sources: San Francisco County Transportation Authority, Wilbur Smith Associates, 2001

In contrast to other transit operators, Muni has established a capacity utilization service standard of 1.0 which includes not only seating capacity but also substantial numbers of standees, with standees representing somewhere between 30 to 80 percent of seated passengers, depending upon the specific transit vehicle configuration. Thus, Muni screenlines and sub-corridors at or near 100 percent of capacity operate under noticeably crowded conditions with many standees. Because each screenline and most sub-corridors include several Muni lines with multiple transit vehicles from each line, some individual transit vehicles operate at or above 100 percent of capacity and are extremely crowded during the PM peak hour at their most heavily used points (i.e., screenlines), while others operate under less crowded conditions. Moreover, the extent of crowding is accentuated whenever target headways are not met through either missed runs and/or bunching in service. Thus, in common with other types of transportation operations such as roadways and parking facilities, transit operators may experience substantial problems in service delivery well short of established service capacity standards.

Table 3.1-13: Existing Outbound PM Peak Period Transit Demand & Capacity – Regional Screenlines

Regional Transit Screenline	Ridership	Existing Capacity	Capacity Utilization
East Bay:			
AC Transit	3,143	4,896	64%
BART	17,537	14,560	120%
Ferry	646	1,629	40%
TOTAL EAST BAY	21,326	21,085	101%
North Bay:			
GGT Bus	3,132	5,339	59%
GGT Ferry	755	2,410	31%
TOTAL NORTH BAY	3,886	7,749	50%
South Bay:			
SamTrans	785	1,083	72%
BART	3,157	10,360	30%
Caltrain	1,900	2,900	66%
TOTAL SOUTH BAY	5,842	14,343	41%
GRAND TOTAL	**31,054**	**43,177**	**72%**

Notes: Ridership and capacity for outbound trips (away from downtown San Francisco) for the weekday PM Peak hour (typically 5:00 – 6:00 PM) based on information obtained from each of the regional transit carriers.

Sources: BART, AC Transit, Golden Gate Transit, SamTrans, Wilbur Smith Associates, July 2001

3.1.5 FUTURE RAIL TRANSIT AND BUS SERVICE

This section outlines the future year improvements to rail and bus transit services in the study area.

3.1.5.1 Caltrain Service Improvements

The JPB has programmed substantial service increases to over 114 daily trains in the San Francisco to San Jose segment and over 20 daily trains in the San Jose to Gilroy segment within the next 10 years. For a comprehensive description of Caltrain's planned operations and capital improvements, see Section 2.1, No-Project Alternative.

3.1.5.2 BART Extension to San Francisco International Airport

With its opening on June 22, 2003, the BART – San Francisco International Airport (SFO) Extension *extends* BART service from its *previous* southern terminus at the Colma Station to SFO. The extension *also serves* a new Millbrae intermodal station, which *enables* transfers between BART and Caltrain. For additional information about the SFO extension, see Section 1.4.1, BART Extension to San Francisco International Airport, and 1.4.2, Millbrae Intermodal Station.

3.1.5.3 *Third Street Light Rail Project*

The Third Street Light Rail Project will provide new light rail service from the Bayshore area to Chinatown. The first phase – the initial operating segment (IOS) – is currently under construction and will extend Muni service from Fourth and King Streets south across the Fourth Street Bridge, running along Third Street and Bayshore Boulevard and ending at the Bayshore Caltrain Station in Visitation Valley. The 5.4 miles of new rail *for the IOS* will be constructed primarily in the center of the street to improve safety and reliability. Nineteen stops will be provided. Bus service changes connected with the Third Street light rail line include elimination of the 15-Third, extensions of the 9,9X, 9AX, 9BX, 36 and 43 lines to cover portions of the 15-Third not covered by the new light rail and rerouting of the 54 Felton.

Muni and the City and County of San Francisco are actively pursuing funding for construction of the *Phase 2 of the Project – the New* Central Subway. The proposed light rail service will be extended north from the Third Street Light Rail Service at King Street along Third Street, entering a new Central Subway near Bryant Street, crossing beneath Market Street and running under Geary and Stockton Streets to Stockton and Clay Streets. A total of four underground subway stations will be built at Moscone Center, Market Street, Union Square, and Clay Street in Chinatown. A surface station will be built at Third and King.

The New Central Subway alignment in the South of Market area under Third Street will be built complete with junction connections for the Geary subway branch to Transbay Terminal. (See the following subsection for a discussion of the Geary Corridor options.) The proposed train mezzanine level of the new Transbay Terminal would have sufficient space and would be designed so as not to preclude Muni Metro tracks leading from the proposed 3rd Street and Geary Corridor alignments. Figure 3.1.7 shows possible alignments for this connection from 3rd Street into the new Transbay Terminal. Continued coordination with Muni during the design phase of the Terminal Project will result in an alignment that can be accommodated within the Terminal.

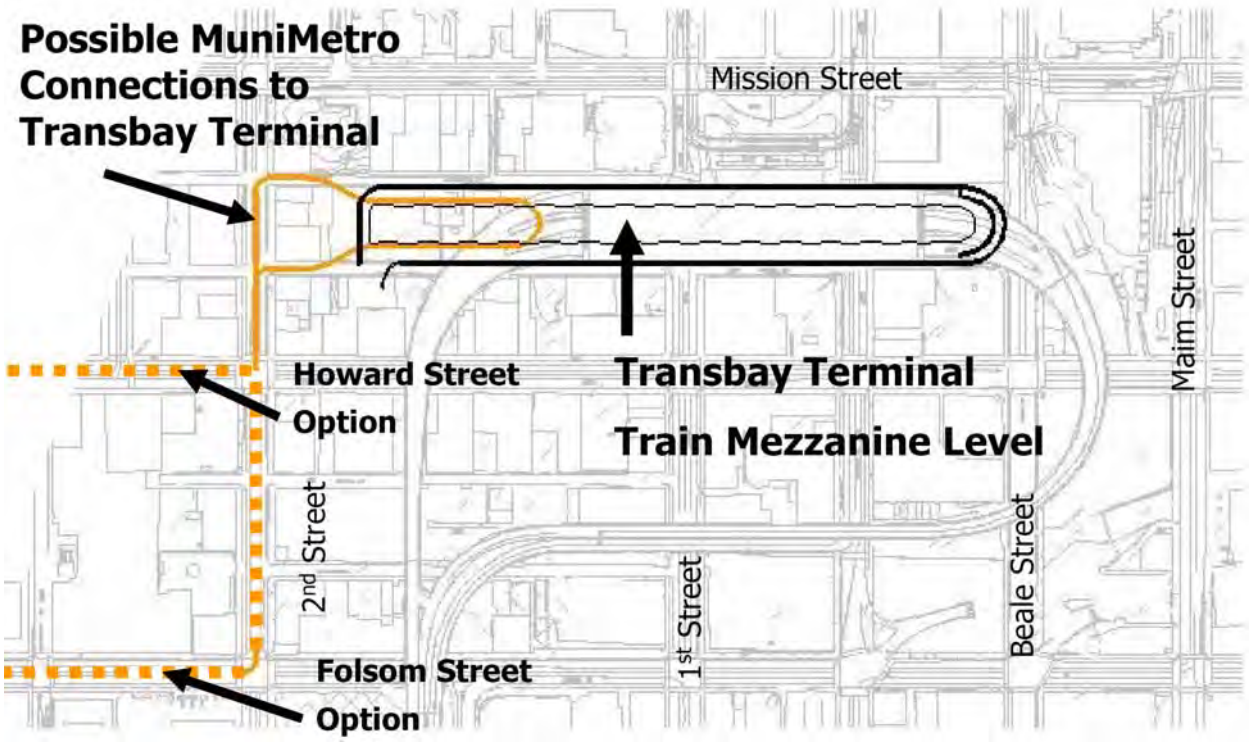


Figure 3.1-7: Possible Future Muni Metro Connections to Transbay Terminal

Source: *Project Development Phase, Final Report and Executive Summary, Transbay Terminal Improvement Plan,* Figure 2 (March 2001), and *Comment Letter from Jose Cisneros, Deputy General Manager for Capital Planning &*

3.1.5.4 Geary Rail or Bus Project

The Geary Rail or Bus Project is proposed in the project area. Muni performed a Geary Corridor Planning study in 1994 and 1995 recommending completion of a Major Investment Study (MIS) and EIS/EIR with three alternatives:

- *"Light Rail, all-surface configuration (to Transbay Terminal on a street alignment basically the same as discussed for the E and F-lines in these comments).*
- *"Light Rail, surface configuration west of Laguna, subway east of Laguna*
- *"Trolley Coach, surface configuration west of Laguna, subway east of Laguna*

"The Geary alternatives with subway configurations contain several proposed downtown routings for the subway. The most likely alternative is for the Geary line to use the Central Subway in the downtown area through the Union Square area and then into South-of-Market, with a branch off of the Central Subway at 3rd Street & Folsom (or Howard) for the Geary line,

proceeding easterly under Folsom (or Howard) Street to Beale, directly behind the Transbay Terminal. One of the alternatives also included the Central Subway branch coming to the surface on either Folsom or Howard.

At the time the study was performed, Muni's governing board, the Public Transportation Commission (PTC), accepted the report and elected not to move forward to an MIS and EIS/EIR until a viable financial plan could be developed. The PTC also elected not to select a preferred mode and alignment.

A Geary project is one of the four corridors listed in the San Francisco County Transportation Authority's 'Four Corridor Plan', and is also included in Muni's recent publication 'A Vision for Rapid Transit in San Francisco', and has been included in Muni's Short Range Transit Plan.

3.1.5.5 Other Muni Service Changes

In February 2001, Muni began implementing the South of Market Action Plan, a series of service changes including the partition of the 42-Downtown Loop into the 47-Van Ness and the 10-Townsend, expanded service and frequencies on the 12-Folsom, and extension of the 19-Polk to Townsend Street. In April 2001, a new light rail service, the S-Castro began peak period service on Market Street between the downtown and Castro stations. Also to be implemented is additional service on the 9-San Bruno line between the vicinity of San Francisco General Hospital and the Ferry Terminal on weekdays. For a summary of recent and planned changes, see Table 2.1-1.

3.1.5.6 AC Transit Service Changes

Under the express bus alternative for increasing capacity in the Bay Bridge corridor, the MTC Bay Crossings Study[6] proposed increasing AC Transit Transbay service to approximately 150 buses in the peak hour. Because the capacity of the current Transbay Terminal is about 130 buses per hour, the full potential of this proposed service increase could not be realized except in a new Transbay Terminal. Table 3.1-14 summarizes the route structure, which follows the current routes listed in Table 3.1-9. In addition, CCCTA would add two express bus routes from Moraga and Pleasant Hill, which would increase the Transbay bus service by eight more bus trips in the peak hour.

3.1.5.7 SamTrans

SamTrans is planning to modify, eliminate, or consolidate certain express bus routes. SamTrans' 1999 Strategic Plan states that termination of express bus service may occur in response to BART extensions, increased service on Caltrain and greater congestion on Highway 101.

[6] Metropolitan Transportation Commission, *San Francisco Bay Crossings Study, Final Report,* July 2002.

Table 3.1-14: Proposed Future AC Transit Transbay Bus Service

	Headways			No. of Trips	No. of Seats	Total			Veh Hrs	Last Trip-PM
Line	AM Peak	Base	PM Peak			Capacity/Hr	Nite	Owl		
A								60	5	
B	15		12	5	285	325			40	7:00
BX	15		12	5	285	325				7:00
C	15	30	12	5	285	325	30		55	11:59
CB	15		12	5	285	325			30	8:00
E	20		15	4	228	260			30	7:30
F	20	30	15	4	228	260	30		120	11:59
FS	20		15	4	228	260				6:45
G										7:00
GA	15	15	12	5	285	325	30		70	11:59
GB	15	15	12	5	285	325	30		70	11:59
H	15		15	4	228	260			52	7:00
HX	30		30	2	114	130				7:00
K	15		15	4	228	260			80	7:00
KH	15		15	4	228	260				7:00
L	15		15	4	228	260				7:45
LA	10	15	7.5	8	456	520	30		80	11:59
LB	15		15	4	228	260			140	7:00
LC	15		15	4	228	260				7:15
LD	20		15	4	228	260			32	6:15
N							30		350	11:59
NL	15	15	15	4	228	260				7:00
NG	20		15	4	228	260				7:00
NF	20		15	4	228	260				6:45
NH	20		15	4	228	260				7:00
NV	30		15	4	228	260				6:15
O	15	30	15	4	228	260	60		135	11:59
OX	15		15	4	228	260				8:00
OX1	30		30	2	114	130				5:00
P	15		7.5	8	456	520			70	7:30
RCV	20		20	3	171	195			24	7:00
S	20		15	4	228	260			120	7:00
SA	20		15	4	228	260				7:00
SB	15	15	15	4	228	260	30			11:59
V	15		15	4	228	260			55	7:30
W	15		15	4	228	260			46	7:00
WA	15		20	3	171	195				6:00
Y	15		20	3	171	195			5	6:00
Z	15		20	3	171	195				Reverse
Total				150	8,550	9,750			1,609	

Notes:
Assumes 50 seats per bus currently; 57 seats per bus proposed -- 55 passengers with standees in present; 65 passengers with standees in future.
No of Seats is in peak hour.
Current AC Transit service (August 2002) is 96 trips in the peak hour for a total 4,775 seats and 5,253 passengers with 990 vehicle hours.
CCCTA transit services would add 8 express buses in the peak hour across the bridge from routes serving Moraga and Pleasant Hill.
The Transbay Terminal is not replaced bus service would be limited to its current capacity of about 130 buses per hour.
Source: MTC Bay Crossing Study, Appendix A, Alternative 1: Express Bus Service, July 2002.

3.1.5.8 High-Speed Rail Service

Senate Bill 1856, the legislation regarding a proposed bond measure for a California High Speed Rail System, was passed by the state legislature and signed by the Governor in 2002. The legislation states that the first phase of the proposed statewide high speed rail system shall be "Between San Francisco Transbay Terminal and Los Angeles Union Station." Plans for high-speed rail are being coordinated with the proposed Caltrain extension, which would provide the tracks and platforms for the high-speed rail service north of the 4th and Townsend Station area. According to the California High Speed Rail Authority, the San Francisco station is projected to attract up to 43,000 high-speed rail boardings and alightings per day in 2020.

3.1.6 PROJECTED CALTRAIN PATRONAGE AND ACCESSIBILITY IMPROVEMENTS

This section outlines future Caltrain patronage forecasts and transit travel times with and without the Caltrain Extension project. Caltrain's current and projected daily boardings and alightings by station for 2001 and 2020 are shown in Table 3.1-15. The 2001 data are for February 2001.[7]

The ridership forecast was modified to account for a projected level of 132 trains per day in 2020 instead of the previously analyzed 170 trains per day. The result was a decrease in daily ridership of one tenth of one percent, less than 200 daily ons and offs out of approximately 128,000 daily ons and offs projected for 2020. Because the 132-train concept would be concentrated in the peak periods with a maximum level of service while reducing service in the off-peak and evening periods, the projected ridership gain in the peak periods is projected to nearly compensate for the losses in the off-peak and evening periods, resulting in a negligible decrease in ridership compared with that presented in Table 3.1-14 of the Draft EIS/EIR. Thus the ridership numbers in the Final EIS/EIR have not been changed from those presented in the Draft EIS/EIR.

3.1.6.1 Caltrain Ridership Under No-Project Alternative

As shown in Table 3.1-*15*, Year 2020 ridership at the Fourth and Townsend Station is projected to be less than in 2001 because of expected transfers to and from BART at the new Millbrae intermodal station. But Caltrain ridership is expected to grow by *40* percent system wide. For the No-Project Alternative under a *132*-train Caltrain weekday schedule, the system is projected to carry approximately 50,000 riders. This ridership level is substantially higher than the *2001* level of 35,600 riders.

[7] Caltrain On-Board Survey, February 2001.

Table 3.1-15: Caltrain Daily Boardings and Alightings Existing, 2020 No Project, and with Downtown Extension

Station	2001	2020 No-Project	2020 Extension to Transbay Terminal
Transbay Terminal	0	0	29,307
Fourth & Townsend	13,611	12,950	3,098
22nd Street	1,334	1,716	1,706
Paul Avenue	49	49	51
Bayshore	1,021	1,366	1,427
South San Francisco	1,360	1,879	2,173
San Bruno	1,728	2,334	2,657
Millbrae	1,801	8,370	5,948
Broadway	1,117	1,524	1,841
Burlingame	1,811	2,448	3,035
San Mateo	2,754	3,652	4,645
Hayward Park	1,205	1,627	1,938
Hillsdale	2,820	4,126	5,791
Belmont	1,741	2,348	2,933
San Carlos	2,453	3,408	4,011
Redwood City	3,607	4,835	5,730
Atherton	574	800	904
Menlo Park	2,623	3,861	4,439
Palo Alto	4,560	6,217	7,311
California Avenue	2,766	3,604	4,048
San Antonio	1,598	2,217	2,539
Mountain View	4,428	6,697	7,375
Sunnyvale	2,842	4,067	4,439
Lawrence	2,610	3,857	4,096
Santa Clara	2,248	3,258	3,368
College Park	437	532	547
San Jose	3,590	5,534	5,686
Tamien	1,612	2,206	2,237
Capital	228	308	311
Blossom Hill	348	547	551
Morgan Hill	793	1,258	1,259
San Martin	435	570	570
Gilroy	1,102	1,948	1,949
Total Entries + Exits	71,206	100,115	127,921
System Entries	35,603	50,057	63,960

Source: Caltrain February 2001 Ridership Survey; Parsons Ridership Forecast, August 2001

3.1.6.2 Caltrain Ridership Under Caltrain Downtown Extension Alternative

Table 3.1-*15* also shows Caltrain projected daily boardings and alightings by station for the year 2020 with the proposed Caltrain Downtown Extension which would extend Caltrain to the Transbay Terminal site. For a *132*-train weekday schedule, ridership is projected to increase to 64,000 trips per day, an increase of 13,900 trips over the projected 2020 No-Project ridership, and of 80 percent over the February 2001 ridership of 35,600 trips per day. Ridership at the San Francisco terminal is likewise projected to increase, from 13,000 to 29,300 daily boardings and alightings if the terminal station were moved from Fourth and Townsend Streets to the Transbay Terminal site. An additional 3,100 daily boardings and alightings are projected for a Fourth and Townsend/Mission Bay Station, which would be located in the vicinity of the existing Caltrain terminal. Incremental increases in ridership are projected for all other Caltrain stations except those south of the Tamien Station in San Jose.

The extension would decrease the number of transfers to BART at Millbrae, as former Caltrain riders that switched to BART with the opening of the Millbrae BART extension switch back to Caltrain upon extension of Caltrain to the Transbay Terminal. The projections did not assume completion of the proposed BART extension to Santa Clara by 2020. Based on VTA projections, implementation of the extension could possibly lower Caltrain ridership by 2,000 to 3,000 riders per day, mostly at the San Jose end of the corridor.

3.1.6.3 Projected Travel Times/Accessibility With and Without the Caltrain Downtown Extension

Table 3.1-*16* shows travel time comparisons on Caltrain for selected trips between central origins and destinations in the cited cities.[8] These travel time estimates are taken directly from the patronage model, where they are used to determine ridership levels. The travel times include access, wait, transfer, and ride times at both ends of the trip for four selected origins and destinations for the year 2001 and projected for the year 2020. The travel time savings under the No-Project scenario can be attributed to Caltrain Rapid Rail Program improvements currently underway along the Caltrain railroad, such as track rehabilitation and other infrastructure improvement, electrification, and the increase in the number of weekday trains from 78 to *132*.

With the Caltrain Downtown Extension, travel time savings for selected trips are projected to be 13 to 15 minutes compared to No-Project conditions, except for trips beginning in the San Francisco Airport, for which the time savings are projected to be 10 minutes.

[8] Including transfers to other service providers as appropriate for the respective trip ends.

Table 3.1-16: Estimated Transit Travel Times for Selected Trips on Caltrain*

Origin	Destination	Travel Time (hour: min)			Projected Travel Time Savings (minutes)
		2001	2020 No-Project	2020 Extension to Transbay Terminal	
Downtown San Jose	Downtown San Francisco	2:05	1:39	1:24	15
Sunnyvale	Downtown San Francisco	1:51	1:40	1:26	14
Palo Alto	Downtown San Francisco	1:36	1:17	1:02	15
Millbrae	Downtown San Francisco	1:08	0:52	0:37	15
San Bruno	Downtown San Francisco	1:04	0:54	0:40	14
Downtown San Francisco	San Francisco Airport	1:11	0:56	0:47	10
Redwood City	Concord	2:26	2:13	1:59	14
Downtown Oakland	San Carlos	1:41	1:28	1:15	13

Notes: *The travel times are for average peak-direction conditions and include access, wait, transfer, and ride times at both ends of the trips between central origins and destinations in the cited cities. *The trips assume use of Muni for connections to downtown San Francisco and use of BART from the Embarcadero Station for trips to Concord and from Oakland.*

Source: Parsons Ridership Model, September 2001.

3.2 VEHICULAR TRAFFIC

This section describes the regional roadways and local streets in the project area and traffic conditions on those facilities.

3.2.1 REGIONAL ROADWAYS IN CORRIDOR

The study area is served by three freeways -- Interstate 80, Interstate 280, and U.S. Highway 101. These are all limited-access, divided facilities and are described further below.

3.2.1.1 Interstate 80 (I-80)

I-80 is oriented east-west across the country from San Francisco to New York City. The San Francisco - Oakland Bay Bridge is part of the I-80 system, connecting San Francisco to the East Bay. The Bay Bridge has five lanes eastbound and five lanes westbound. The portion of I-80 between U.S. 101 and the Bay Bridge that crosses the project area exists as an eight-lane facility. Existing daily traffic volumes in this segment range from 218,000 vehicles to 232,000 vehicles. The Bay Bridge carries approximately 290,000 vehicles per day. During the peak hour, Caltrans estimates I-80 carries nearly 20,000 vehicles in the segment between U.S. 101 and the Bay Bridge.

3.2.1.2 Interstate 280 (I-280)

I-280 passes near the western end of the study area, serving South San Francisco and western Peninsula cities. The freeway runs north-south and extends from San Francisco southward to San Jose. I-280 and U.S. 101 cross south of downtown San Francisco. Just south of where U.S. 101 crosses, daily traffic volumes on I-280 are 164,000 vehicles per day, with daily volumes of 230,000 vehicles per day at the Pacifica exit. Ramp connections to I-280 from King Street provide direct connections to The Embarcadero adjacent to the existing Caltrain Terminal at Fourth and King Streets.

3.2.1.3 U.S. Highway 101 (U.S. 101)

U.S. 101 passes south and west of the study area, serving San Francisco, the Peninsula, and San Jose. It extends north to the Golden Gate Bridge, Marin County and beyond to the Seattle area, and south through the state to Los Angeles. It is primarily an eight-lane facility south of I-80 and along the Peninsula. From the southern San Francisco city limits to I-80, the average daily traffic ranges from 245,000 to 255,000 vehicles, with the highest volumes near the I-80 junction. In San Mateo County, the average daily traffic volumes range from 181,000 to 275,000 vehicles, with the highest volumes near the interchange with State Route 92 and in the vicinity of the San Francisco International Airport.

In Santa Clara County, U.S. 101 average daily traffic volumes are highest near San Jose (reaching about 248,000 vehicles) and around Mountain View near State Route 85 (about 246,000 vehicles). The traffic volumes are lowest in the southern part of Santa Clara County, with average daily volumes around 83,000 vehicles in Gilroy.

3.2.1.4 El Camino Real

In addition to the three freeways described above, State Route 82 (El Camino Real) runs north-south in the Caltrain corridor, serving the Peninsula cities. El Camino Real is the only continuous arterial street serving the entire length of the Peninsula, and carries up to 3,000 vehicles during the peak hour in some segments near the Caltrain stations in Millbrae and San Bruno. Many of the Caltrain stations have access to El Camino Real or a nearby parallel road.

3.2.2 THE STREET NETWORK IN THE PROJECT AREA

The boundaries of the traffic study area are Market Street to the north, Third Street to the west, Bryant Street to the south, and the San Francisco Bay to the east. This area is the primary focus of the traffic evaluation for the Terminal / Extension / Redevelopment project.

The study area has a well-developed street system between Market and Bryant Streets. Streets are primarily one-way, and block lengths are usually between 425 to 900 feet in the east-west direction and 300 to 600 feet in the north-south direction. According to the Transportation

Element of the San Francisco General Plan, the primary northbound and southbound arteries are Main, Beale, Third, Fourth, Fifth, and Sixth Streets. Main and Third Streets provide one-way northbound traffic, and Beale and Fourth Streets provide one-way southbound traffic. Fifth and Sixth Streets are used for two-way traffic.

Primary east-west arteries include Howard, Folsom, Harrison, and Bryant Streets, and a portion of King Street. Folsom Street is currently a four-lane eastbound street except from The Embarcadero to Main Street, where it becomes a two-way street, with three lanes eastbound and one lane westbound. Bryant Street is also one-way eastbound, except for the portion east of Sterling Street, which is two-way. Howard and Harrison Streets are one-way streets westbound; although Howard Street is two-way east of Fremont, and Harrison Street is two-way east of Third Street. King Street is used for two-way traffic.

East-west streets in the study area include Market and Mission Streets, which provide two lanes of traffic in each direction and are designated as "Transit Preferential Streets" in the San Francisco General Plan. Mission Street is a transit-preferential arterial, having one of its two lanes in the westbound direction, between Main Street and Third Street (7 a.m. to 6 p.m., weekdays) and between Fourth and Eleventh Streets (4:00 to 6:00 p.m., weekdays), dedicated as a bus-only lane. In the eastbound direction, Mission Street has a bus lane between Eleventh Street and Fifth Street (7:00 to 9:00 a.m. and 4:00 to 6:00 p.m., weekdays), and between Third Street and Beale Street (7:00 a.m. to 6:00 p.m., weekdays).

Market Street also serves as a transit-oriented arterial. It has two lanes in each direction with bus and historic trolley stops on center islands and bus stops at the curb. The left curb lanes on First Street (between Market Street and Howard Street) and on Fremont Street (between Mission Street and Market Street) are also exclusive bus lanes.

Under existing conditions, the study area contains two off-ramps from the Bay Bridge: at Fremont Street between Folsom Street and Howard Street and at Fremont and Harrison Streets. There are three I-80/Bay Bridge eastbound-on-ramps in the study area: Essex and First Streets (both at Harrison Street), and Bryant Street at Sterling Street. Access to and from the Peninsula using the I-80 freeway, that is, via on- and off-ramps at Fourth Street between Harrison and Bryant Streets, is not included in the study area. The Sixth Street I-280 on- and-off ramps at Brannan Street are also not part of the traffic study area.

3.2.3 EXISTING TRAFFIC CONDITIONS

This section outlines existing traffic conditions in the project area. The data were developed for the City of San Francisco to analyze the Rincon Hill, Mid-Market, SOMA, and Transbay areas.

Traffic operating conditions for surface streets in the study area are described using level of service indices. These statistics indicate the levels of congestion and delay that occur in the study area under existing conditions.

Level of Service (LOS) designations are used as qualitative descriptors of an intersection's performance based on traffic delays. An intersection's LOS could range from A, representing free-flow conditions, to F, representing jammed conditions, corresponding to average delay, as follows.

Level of Service for Intersections

Level of Service	Average Vehicle Delay (Seconds per Vehicle)
A	$\leq$ 5.0
B	5.1 to 15.0
C	15.1 to 25.0
D	25.1 to 40.0
E	40.1 to 60.0
F	$\geq$ 60.0

Table 3.2-1 presents the LOS for base year (existing) conditions at key intersections in the study area. The table indicates that, under base year conditions, the 27 signalized intersections analyzed operate at an acceptable LOS (D or better) during the weekday morning and evening peak commute hours, with the exception of five intersections: First/Folsom, Second/Harrison, Essex/Harrison, First/Harrison, and Second/Bryant.

Table 3.2-1: PM Peak-Hour Intersection Delay (seconds per vehicle) and Level of Service (LOS) Summary Existing (2001) and Projected 2020 No Project Traffic Conditions

Intersection	2001		2020 No Project	
	Delay	LOS	Delay	LOS
1. First/Market	25.9	D	34.8	D
2. Fremont/Market	15.2	C	27.1	D
3. Second/Mission	10.2	B	16.0	C
4. First/Mission	27.1	D	**59.5**	**E**
5. Fremont/Mission	21.8	C	22.8	C
6. Beale/Mission	14.9	B	20.0	C
7. Main/Mission	15.6	C	21.9	C
8. Second/Howard	12.3	B	25.7	D
9. First/Howard	31.9	D	**42.1**	**E**
10. Fremont/Howard	20.1	C	29.4	D
11. Beale/Howard	16.2	C	28.7	D
12. Main/Howard	15.4	C	25.2	D
13. Spear/Howard	13.9	B	15.5	C
14. Second/Folsom	32.5	D	**>60**	**F**
15. First/Folsom	**>60**	**F**	**>60**	**F**
16. Fremont/Folsom	7.7	B	22.6	C
17. Beale/Folsom	14.5	B	14.7	B
18. Main/Folsom	12.1	B	15.6	C
19. Spear/Folsom	11.1	B	13.3	B
20. The Embarcadero/Folsom	18.2	C	31.3	D
21. Second/Harrison	**44.9**	**E**	**>60**	**F**
22. Essex/Harrison	**>60**	**F**	**>60**	**F**
23. First/Harrison	**>60**	**F**	**>60**	**F**
24. Fremont/Harrison	37.0	D	**47.8**	**E**
25. Main/Harrison	32.0	D	**>60**	**F**
26. Spear/Harrison	15.4	C	22.9	C
27. Second/Bryant	**>60**	**F**	**>60**	**F**

Sources: San Francisco County Transportation Authority, Wilbur Smith Associates, September 2001

3.2.4 FUTURE STREET NETWORK IN PROJECT AREA

The following roadway improvements are not part of the proposed Terminal / Extension / Redevelopment project, but are expected to be in place by the year 2020. Most of these changes would be related to the roadway improvements called for under the San Francisco Department of Parking and Traffic (DPT) Variant Alternative, selected by the San Francisco Board of Supervisors as the Locally Preferred Alternative for the replacement of the Embarcadero Freeway and the Terminal Separator Structure.

- The existing I-80 Fremont Street off-ramp would be modified. Design for this off-ramp is currently under discussion between Caltrans and the City/County of San Francisco.

- First Street would be restriped between Howard and Harrison Streets to provide a new peak-hour only left-side transit lane against the east curb. Left turns from First Street onto Harrison Street would be allowed in this transit lane during peak hours.

- Harrison Street would be re-striped to one-way westbound, from First Street to Third Street.

- When warranted by congestion levels in the future (sometime before the year 2015), the existing evening peak-period carpool operation on the Bryant Street approaches to the Sterling Street on-ramp would be changed to mixed-flow operation, and the current mixed-flow operation on the Essex Street approach to the Bay Bridge would be restricted to HOV operation during the evening peak period.

3.2.5 FUTURE TRAFFIC CONDITIONS: NO-PROJECT ALTERNATIVE

Table 3.2-1 presents the current 2001 and projected 2020 No-Project LOS conditions for the 27 study intersections during the evening peak hour. The levels of service shown reflect normal traffic conditions.

Given the high volume-to-capacity ratios estimated at the freeway on-ramps in the vicinity of the existing Transbay Terminal, the intersections near these ramps would quickly deteriorate to less than acceptable conditions (LOS E or F) in the case of an accident, construction, or a stall on the Bay Bridge or on U.S. 101, or in the case of greater traffic volumes (on the freeway or on local streets) than those projected to occur under normal conditions. The DPT estimates that "incident" conditions occur in the evening peak period about 25 percent to 30 percent of weekday evenings, and less often in the morning commute period.

Table 3.2-1 shows that five additional intersections have projected increases in delay to unacceptable levels (LOS E or F) between 2001 and 2020 for the evening peak hour. These are First/Mission, First/Howard, Second/Folsom, Second/Harrison, and Main/Harrison. Two other intersections are projected to degrade from LOS C to D between 2001 and 2020: Beale/Howard and Embarcadero/Folsom.

3.3 PARKING

The focused parking study area is bounded by Market Street to the north, Fourth Street to the west, Townsend Street to the south, and The Embarcadero to the east (Figure 3.3-1). This study area represents an approximate 10-minute walking distance to and from the existing Transbay Terminal site. The parking analysis focuses on off-street parking facilities such as lots and garages in the South-of-Market area.

Within the study area, the City *and the* Port as well as private entities are responsible for

managing parking. The Port of San Francisco is responsible for on-street and off-street parking resources within its jurisdiction, including spaces along The Embarcadero. The San Francisco DPT is responsible for on-street parking outside Port jurisdiction. Off-street parking resources outside Port jurisdiction are generally privately owned and managed. Some off-street parking areas are located on land owned by Caltrans, which leases lots to private operators, *usually through short term leases.*

Parking garages and surface lots are scattered throughout the study area. Most are small-to-medium in size, containing 20 to 350 parking spaces. Some larger garages also exist, with capacities of 700 spaces or more. Weekday midday and evening period field surveys were conducted in August 1999 and January 2001 by Wilbur Smith Associates to determine the occupancy rate of the parking supply in the study area. The data presented in Table 3.3-1 show an overall parking occupancy rate of 85 percent during the midday on weekdays.

Table 3.3-1: Existing Parking within the Project Study Area

Type of Parking Facility	Number of Parking Facilities	Parking Spaces Available	Parking Spaces Used	Percent Occupancy [1]
Garage	30	7,631	6,288	82%
Lot	44	6,495	5,653	87%
Lot/Garage	2	215	200	93%
Total	74	14,341	12,141	85%

Notes: [1] Weekday - midday

Source: Wilbur Smith Associates, August 1999. Field checked January and November 2001.

In addition to parking in the lots and garages, there are approximately 2,750 on-street spaces in the study area. About 200 of these spaces are under the San Francisco Port Authority's jurisdiction. The on-street parking spaces are generally relatively full during normal weekday conditions.

3.4 NON-MOTORIZED TRAFFIC CONDITIONS

This section reviews the existing pedestrian and bicycle conditions in the area surrounding the Transbay Terminal and includes the following analyses:

- Pedestrian levels of service at five intersections – crosswalks and corners;
- Sidewalk widths throughout the study area;
- Qualitative analysis of on-sidewalk pedestrian conditions throughout the study area;
- Origin/destination analysis of study area pedestrian traffic; and
- Bicycle access and traffic counts at five intersections.

Pedestrian conditions are presented first, followed by bicycle conditions.

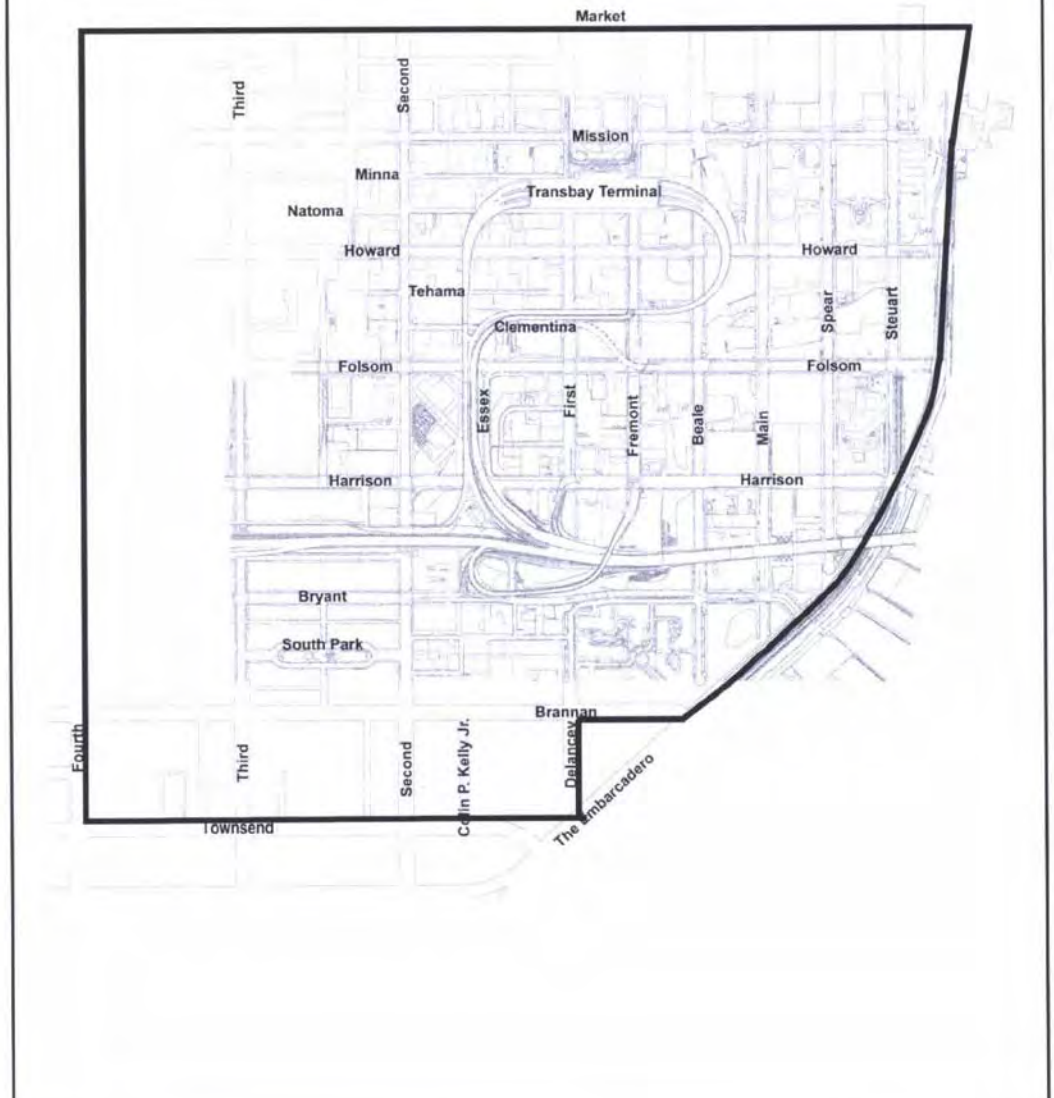


Figure 3.3-1: Parking Study Area

3.4.1 PEDESTRIAN CONDITIONS

The City and County of San Francisco adopted a Downtown Streetscape Plan in 1995 that assigns a street typology to downtown roadways. The type of streets include “Special Streets,” "Second Level Streets,” “Destination Streets,” “Walkthrough Alleys,” and “Base Case Streets.” The following street designations apply to the streets in the area surrounding the Transbay Terminal,

Special Streets:	Mission Street
Second Level Streets:	Beale Street, Second Street
Walkthrough Alleys:	Ecker, Natoma, Minna, Garden Walk
Base Case:	All other streets

The Downtown Streetscape Plan applies design guidelines and standards based on the street designations. Amenities, such as public art, banners, benches, sidewalk displays, and private street light installation are encouraged on Second Level Streets, and distinctive, decorated sidewalk elements are reserved for Special Streets.

3.4.1.1 Intersection Analysis

Evening peak hour pedestrian and bicycle counts were conducted at the following five intersections:

- Mission and First Streets;
- Mission and Fremont Streets;
- Howard and First Streets;
- Howard and Fremont Streets; and
- Folsom and Beale Streets.

The first four intersections are those that immediately surround the Transbay Terminal. The fifth intersection was selected for analysis given the projected levels of future development along Folsom Street. The counts were conducted between 4:00 p.m. and 7:00 p.m. The locations of the intersections are shown in Figure 3.4-1. The Levels of Service (LOS) for the five intersections were calculated using the methodology from the 1994 update to the 1985 Highway Capacity Manual. Additional qualitative analysis follows the calculations of LOS. Crosswalk and corner LOS are measurements of the amount of space (square feet) each pedestrian has in the crosswalk or on the corner. These measurements depend on pedestrian volumes, signal timing, corner dimensions, crosswalk dimensions and roadway widths. LOS A represents free-flowing pedestrian conditions, while LOS F indicates that there are substantial restrictions to pedestrian movement and speed. Two aspects of pedestrian traffic were measured: standard flow and maximum surge conditions. Maximum surge occurs when pedestrians clump together due to sidewalk obstructions, blocking by a group of slower-moving pedestrians, a simultaneous departure or arrival by many pedestrians, or when pedestrians from either side of the crosswalk meet mid-way.

Pedestrian conditions as measured by this LOS analysis show that all the crosswalks analyzed are functioning at LOS B or better during both standard flow and surge conditions. The majority of the corners are also functioning at LOS B or better, although two of 20 corners analyzed showed LOS C. The crosswalk and corner LOS analysis is summarized in Table 3.4-1, Existing Pedestrian LOS. Figure 3.4-1 maps the intersections and their levels of service.

Table 3.4-1: Existing Pedestrian LOS – PM Peak Conditions (Peak 15 Minutes)

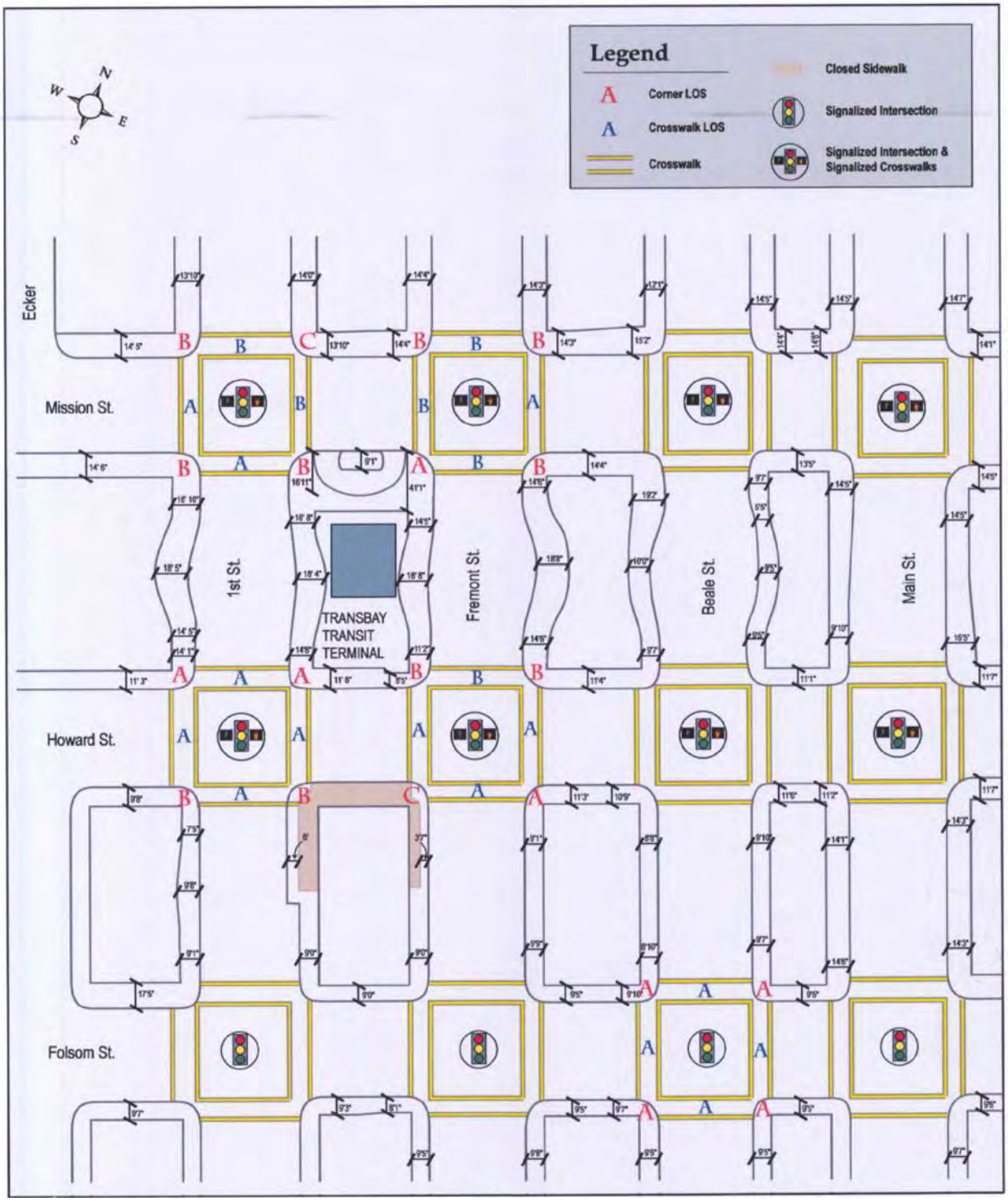
Intersection	Cross-walk	Ped Space (sq ft/ped)	LOS	Surge LOS	Corner	Ped Space (sq ft/ped)	LOS
Mission & First	North	64	B	B	NW	43	B
	East	125	B	B	NE	34	C
	South	193	A	B	SW	100	B
	West	149	A	B	SE	99	B
Mission & Fremont	North	109	B	B	NW	50	B
	East	171	A	B	NE	62	B
	South	75	B	B	SW	214	A
	West	126	B	B	SE	63	B
Howard & First	North	389	A	A	NW	118	A
	East	319	A	A	NE	192	A
	South	890	A	A	SW	103	B
	West	245	A	A	SE	69	B
Howard & Fremont	North	115	B	B	NW	80	B
	East	308	A	A	NE	98	B
	South	806	A	A	SW	35	C
	West	348	A	A	SE	136	A
Folsom & Beale	North	689	A	A	NW	211	A
	East	1083	A	A	NE	213	A
	South	467	A	A	SW	160	A
	West	508	A	A	SE	226	A

Source: Nelson\Nygaard pedestrian analysis, August 2001.

The southern sidewalk between Fremont and First Streets along Howard Street was closed due to construction at the time this pedestrian analysis was conducted. As a result, the sidewalk widths at the southwest corner of Howard and Fremont and the southeast corner of Howard and First have been narrowed from their traditional widths. While fewer pedestrians are using these corners due to the blocked sidewalk, the narrower holding area at each of these corners negatively impacts the LOS.

The evening peak 15-minute period varied between and within each intersection. Of the twenty corners analyzed, eight saw their peak pedestrian volumes between 5:00 p.m. and 5:15 p.m., while six peaked between 5:15 p.m. and 5:30 p.m.

Figure 3.4-1 Corner & Crosswalk Pedestrian Level of Service (LOS) Existing Condition



3.4.1.2 Sidewalk Conditions

Sidewalk widths were measured in the area surrounding the Transbay Terminal from Main Street on the east to Folsom Street on the south to First Street on the west, and to Mission Street on the north. Sidewalk widths vary throughout the area and even within the same block. In general, widths range from about eight feet to 16 feet. An exception is the temporary condition created by construction on Howard Street between First and Fremont. In this area, temporary sidewalks are as narrow as four feet. Figure 3.4-2, Sidewalk Dimensions, shows a schematic of sidewalk widths throughout the area.

Some general observations about pedestrian conditions in the area are:

- Sidewalks are widest and most attractive in the northeast corner of the defined area (e.g., Main and Mission; Beale and Mission). In this area, some sidewalks feature surface detail (e.g., bricks), sidewalk tables, and well-groomed street trees.

- The further a pedestrian moves south in the defined area, the less attractive become the sidewalks. Several areas of sidewalk along Folsom Street are cracked and rutted; several sidewalk sections in the southern part of the study area feel "barren" given the parking lots, large faceless buildings and construction sites that front the street.

- The pedestrian experience along Fremont and First Streets is hampered by the Transbay Terminal structure itself. Where the terminal crosses the street, the sidewalks are wide, but they are dark and more likely to be inhabited by members of the homeless community.

- Morning traffic turning left off Folsom onto Fremont Street creates conflicts with pedestrians crossing Fremont on the north side of the intersection.

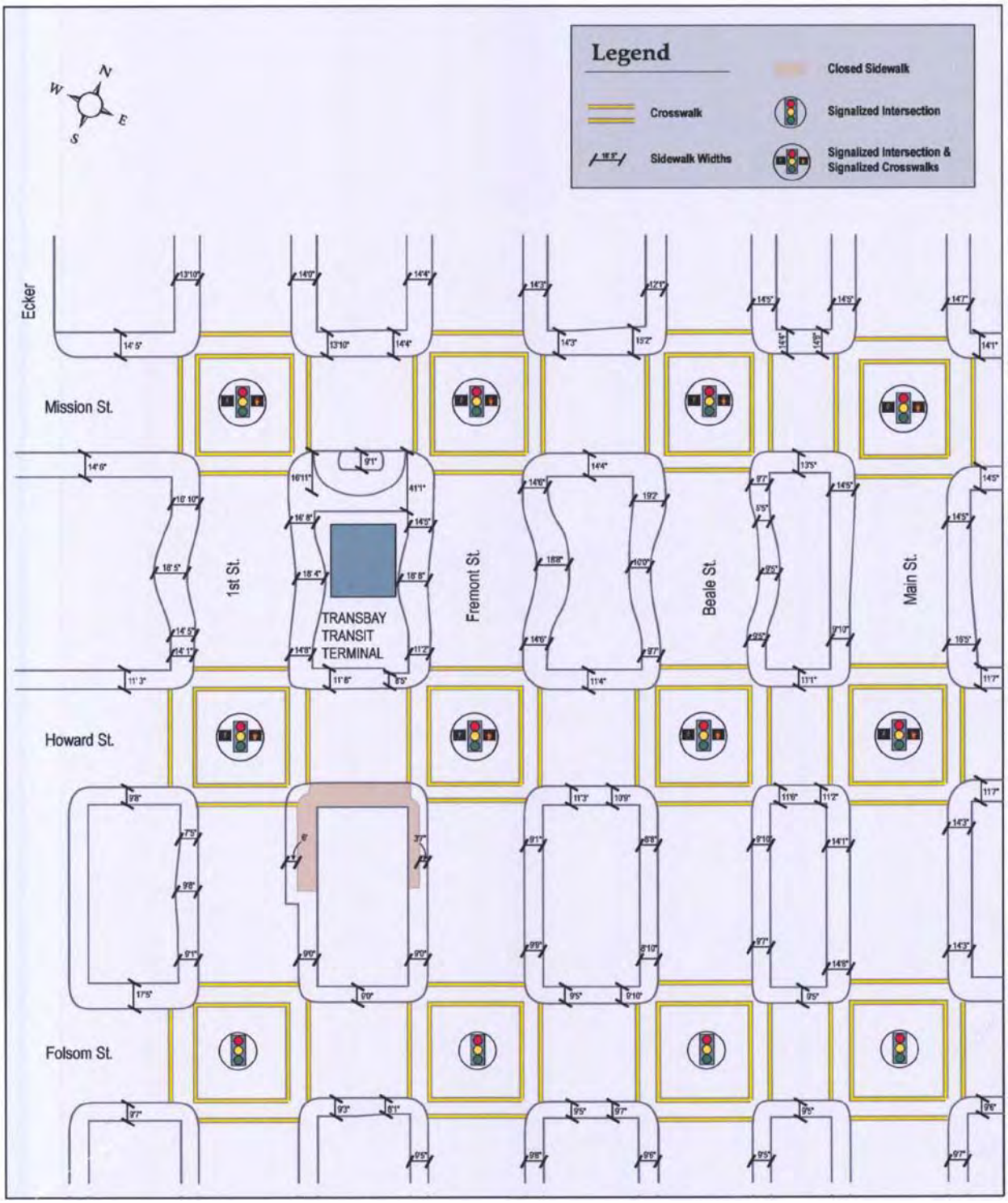
- Evening traffic turning left off Howard onto First Street creates conflicts with pedestrians crossing First Street on the south side of the intersection.

- Intersections along Folsom Street do not have pedestrian crossing signals.

- The north-south streets of First, Fremont and Beale have fewer street trees than do the east-west streets of Mission and Howard. Street trees and street furniture vary from block to block and within blocks.

- Street furniture in the area is limited to newspaper racks, trash receptacles, parking meters, and tall light stands designed for traffic lighting. While newspaper racks do not necessarily impede pedestrian flow, they often clutter the corners and many are not well maintained.

Figure 3.4-2 Sidewalk Dimensions



3.4.1.3 Special Pedestrian Conditions

The following three unique pedestrian conditions occur in the Transbay Terminal area:

1. Morning unloading of casual carpoolers at Howard and Fremont Streets;
2. Evening queuing for casual carpoolers along Beale Street; and
3. Evening queuing for Golden Gate Transit buses along Mission and Fremont Streets.

Morning Casual Carpool Unloading. During the morning commute, many carpools unload their passengers at the intersection of Howard and Fremont Streets. Observed pedestrian flows during this morning period revealed that there is not adequate curb space for cars unloading these passengers. The situation has been temporarily exacerbated by the construction occurring on Howard Street between Fremont and First Streets. Passengers often disembark vehicles into Howard Street as cars make the turn off Fremont. The unloading of passengers creates temporary back-ups of vehicles turning left onto Howard from Fremont.

Evening Casual Carpool Queues. In the evenings, commuters who work in downtown San Francisco and live in the East Bay queue up along the west side of Beale Street between Folsom and Howard Streets to wait for casual carpool rides home. The pedestrian queues begin to form around 3:00 p.m. and reach their peak between 5:00 p.m. and 5:15 p.m. The line for carpools to Vallejo, Fairfield, and Suisun forms at the north end of the block closest to Howard Street and is the longest of the carpool lines. At its longest, the Vallejo/Fairfield/Suisun queue snakes up the block toward Folsom Street until it gets too close to the neighboring Hercules/Richmond queue. It then doubles back on itself, travels down the block toward Howard Street and wraps around the corner onto Howard. The carpool lines block the sidewalk, but those waiting in the queues are orderly and allow passage by through-pedestrians. There is no shelter available for waiting passengers, and some casual carpoolers wait up to an hour for a carpool ride.

By 5:15 p.m., the carpool lines have shrunk to just a few waiting commuters and by 6:00 p.m., there is no one standing in line. Instead, the waiting carpools begin to queue at the curb. At most, four cars were observed lined up at the curb, and there is adequate curb space to accommodate these vehicles. At the south end of the block, there is the potential that queued-up vehicles could block access to the Golden Gate Transit bus storage site at Howard and Main Streets. The volume of vehicles observed, however, did not approach levels that would create this condition.

Evening Golden Gate Transit Queues. There are three main Golden Gate Transit (GGT) queue areas, as follows:

1. The north side of Mission Street between First and Fremont Streets, near First;
2. The west side of Fremont Street just south of Mission Street; and
3. The west side of Fremont Street just north of Mission Street.

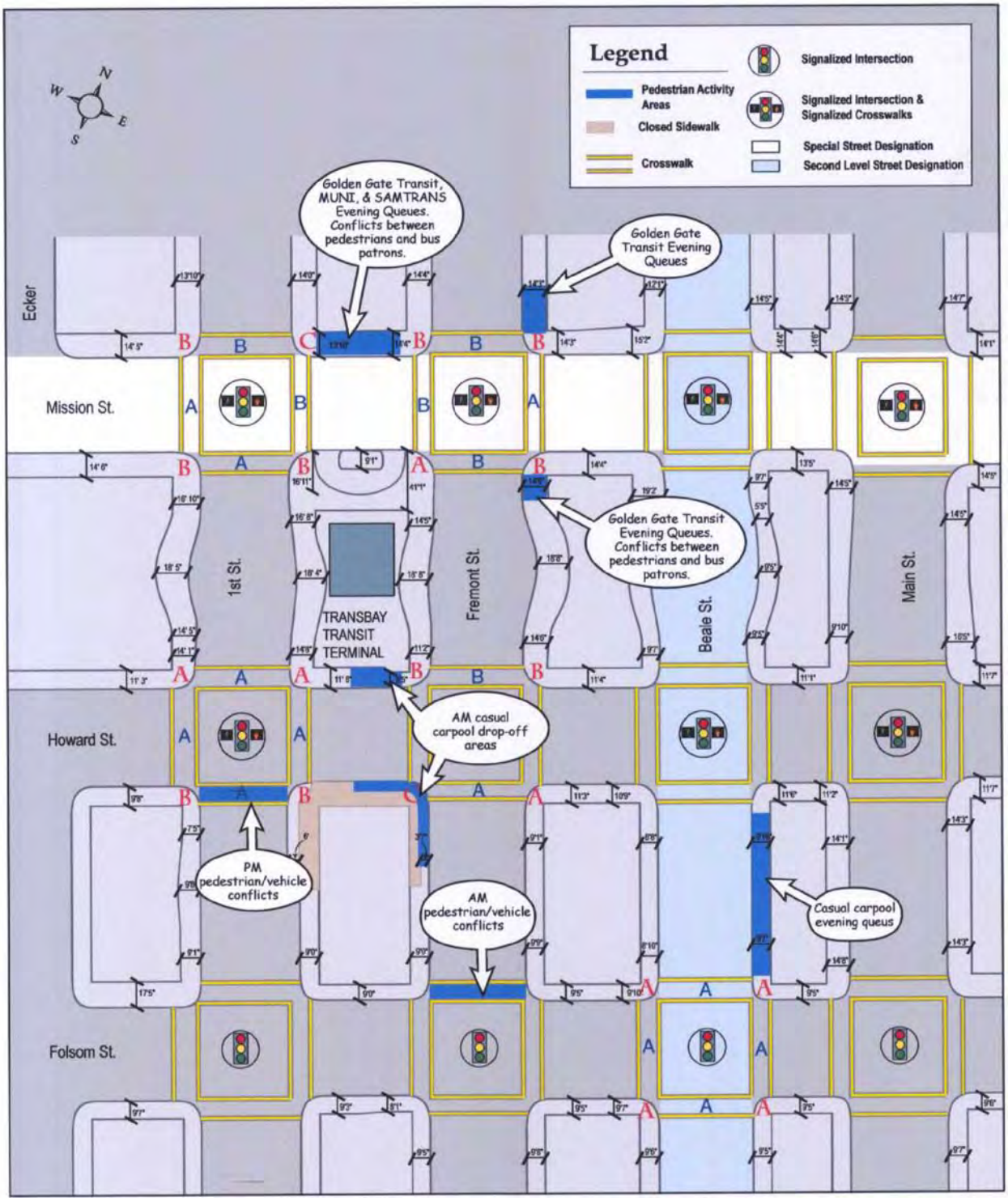
The GGT bus stops along Mission Street are well signed with a large GGT kiosk that clearly identifies which GGT buses stop where and includes some bus schedules. Passengers for GGT, SamTrans, and Muni buses line up along this 14-foot wide sidewalk area. The bus shelter is closest to First Street and to the Muni stops. It is not large enough to accommodate all waiting passengers. There is some queuing for the three bus services and sometimes it is unclear to the passenger which queue is for which bus. Overall, however, passengers line up in an orderly fashion and allow through-pedestrians to pass by. When rounding the corner from First onto Mission Street, there is some pedestrian blockage due to the location of the bus shelter and waiting passengers. This is also the corner with the highest observed peak pedestrian flows in the area (see Figure 3.4-1) and a pedestrian LOS of C.

The GGT bus stops along Fremont Street just south of Mission Street have the longest queues and create the most sidewalk congestion. The congestion peaks between 5:15 p.m. and 5:30 p.m. when as many as 25 people wait in a 144-square-foot area. The sidewalk width in this area is about 14.5 feet, but the bus shelter reduces its effective width. In addition, the sidewalk is bordered by a temporary plywood wall that prevents waiting bus passengers from being able to step back from the sidewalk. The bus queue travels up Fremont Street and at times provides only about two feet of clearance for through pedestrians. This GGT stop is also not well-signed. There is a poorly painted curbline stop and a GGT decal on a traffic signal post. Another difficulty at this stop is a lack of curb space for buses to pull up at the same time.

The third GGT bus stop in the area is located along Fremont Street just north of Mission Street. This stop has the fewest pedestrian queuing problems. The sidewalk at the stop is no wider than the sidewalk at the stop south of Mission Street, but the adjacent building features an overhang, which creates an additional six to ten feet of pedestrian space and provides shelter for waiting passengers. Passengers have enough room to create an orderly line that allows room for through pedestrians.

At all three stops, the highest number of pedestrians waiting for buses occurs between 4:30 p.m. and 5:15 p.m. Figure 3.4-3, Pedestrian Activity Areas, summarizes the pedestrian conditions in the Transbay area. Most GGT buses and all Golden Gate ferries are equipped to transport bicycles.

Figure 3.4-3 Pedestrian Activity Areas



3.4.1.4 Origin/Destination Analysis

It is important to understand the destination of pedestrians flowing out of the Transbay Terminal area to identify key pedestrian travel corridors. To gather this information, surveys were conducted around the Terminal. Passengers riding Golden Gate Transit, SamTrans and other transportation modes were intercepted outside the Transbay Terminal. In addition, surveys were distributed to waiting AC Transit passengers inside the Transbay Terminal. The surveys asked these Transbay Terminal area patrons about their destinations after leaving the terminal area and origins before coming to the terminal area. Valid surveys were collected from 2,570 Transbay Terminal patrons. About 690 surveys were collected from passengers outside the terminal and about 1,880 were collected from people inside the terminal.

The survey was conducted during evening commute hours and asked people about their travel patterns both when leaving the terminal in the morning and returning to the terminal area in the evening. Patrons were asked how they got to the Terminal area in the morning. The mode of travel to San Francisco of those surveyed is shown in Table 3.4-2.

Table 3.4-2: Mode of Travel to San Francisco

Mode	Frequency	Percent
AC Transit	1,078	41.95
Carpool	826	32.14
Golden Gate Transit	249	9.69
MUNI bus	159	6.19
BART	119	4.63
SamTrans	63	2.45
Napa Valley Commute Club	25	0.97
Drove	14	0.54
Ferry	9	0.35
Bike Shuttle	8	0.31
MUNI light rail	6	0.23
Walked	4	0.16
Greyhound	3	0.12
Other/No Response	3	0.12
Bicycled	2	0.08
Caltrain	1	0.04
VTA	1	0.04
Total	**2,570**	**100**

Source: Nelson\Nygaard, August 2001

Figure 3.4-4 shows the San Francisco destinations of the Transbay Terminal area patrons after leaving the terminal area in the morning.

Figure 3.4-4

AM Destinations of Transbay Terminal Area Patrons



The majority (78 percent) of Transbay Terminal area patrons walk from the Terminal (or Terminal area) to their morning destinations. Just 1.7 percent (44 people) use BART to get to their destinations, 7.3 percent use Muni buses and 3.0 percent use the Muni Metro light rail. Table 3.4-3 shows how terminal patrons get to their morning destinations within San Francisco.

Table 3.4-3: Mode of Travel from the Transbay Terminal to Morning San Francisco Destinations

Mode	Frequency	Percent
Walked	2001	77.86
MUNI bus	188	7.32
No Answer	138	5.37
MUNI light rail	76	2.96
BART	44	1.71
N/A-didn't come through area in morning [1]	27	1.05
Bicycle	26	1.01
Drove	24	0.93
Used a shuttle	23	0.89
Other	15	0.58
SamTrans/Golden Gate Bus	5	0.19
Caltrain	3	0.12
Total	**2570**	**100**

Notes: [1] Since the survey was conducted in the PM, this choice was provided.

Source: Nelson\Nygaard, August 2001

According to Table 3.4-3 above, 1.71 percent of Transbay Terminal Area patrons used BART to get their final destinations in San Francisco after coming to the Transbay Terminal area in the morning. Table 3.4-4 below shows the mode that patrons transferred from before getting on BART to travel within the city.

About 27 percent (12 of 44) of those who said they used BART to get to their morning destinations in the city from the Terminal area were actually on BART for the whole trip[9]. Just 32 of the 2,543 patrons surveyed (1.3 percent) who came through the Transbay Terminal area in the morning transferred from another travel mode to BART.

[9] Because the survey was conducted in the evening, it was possible to have surveyed patrons in the terminal area who rode BART for their entire morning commute and did not actually come through the terminal area in the morning. Thus, these people did not transfer from another mode to BART.

Table 3.4-4: Travel Mode of Survey Respondents Using BART To Get To San Francisco Destinations In the Morning

Mode	Number [1]	Percentage
AC Transit	11	25.00%
BART	12	27.27%
Carpool	9	20.45%
MUNI bus	3	6.82%
Golden Gate Transit	9	20.45%
Total	**44**	**100%**

Notes: [1] Terminal Area Patrons Using BART to get to their SF destination in the morning.
Source: Nelson\Nygaard, August 2001

3.4.2 BICYCLE CONDITIONS

3.4.2.1 Bicycle Access

Howard, Market, Folsom and Second Streets and the Embarcadero are designated as citywide bike routes serving the area. Howard, Folsom, and Embarcadero Street feature striped bike lanes while Market and Second Streets does not. The Howard Street bike lane runs on the north sides of the street between Fifth and Eleventh Streets but not within the area immediately around the Transbay Terminal. The San Francisco Department of Parking and Traffic is currently considering a proposal to extend the Howard Street bike lane eastward to Fremont Street and provide a new bike lane on Second Street.

There are many obstacles to bicycle riding on Folsom, Howard, and Market Streets. The six-foot-wide bike lane on Folsom Street is not continuous throughout the study area. The bike lane stops and starts to allow for on-street parking and right-hand-turn lanes. Street parking on Howard Street forces bikes and cars to share a narrow lane along much of its length while stopped transit vehicles and traffic islands can impede both bicyclists and cars alike on Market Street. At the intersections of First and Howard Streets and Beale and Howard Streets, right-hand-turn lanes force bicycles to merge into traffic.

Public transit serving the area accommodates bicycles. Both BART and Caltrain allow bikes on trains. Caltrain has bike racks on certain cars, and each train is able to accommodate up to 24 bikes. Most of AC Transit's Transbay buses and most of SamTrans' buses are equipped with bicycle racks. The Transbay Terminal itself has eight bike lockers. The City of San Francisco's Department of Parking and Traffic purchased these lockers with a Clean Air Quality grant. The lockers are maintained with user fees. Lockers can be rented for six months or a year, for $45 and $75, respectively. All are currently rented and there is a waiting list.

Caltrans operates a bike shuttle between the MacArthur BART station in Oakland and the Transbay Terminal during morning and evening commute hours. Service consists of six morning and six evening trips. Four of the morning trips run east to west (Oakland to SF) and two run in the reverse commute direction (SF to Oakland). In the evening, four trips run from the Transbay Terminal (SF) to MacArthur BART (Oakland) and two run in the opposite direction. The fare is $1.00 each way. Each trip can accommodate up to 14 bicycles.

3.4.2.2 Bicycle Traffic Levels

While there is no standard for defining bicycle Levels of Service, bicycles counts were conducted to get a sense of the volume of bicycle traffic flowing through the study area. The counts were conducted at the five-named intersections between 4:00 p.m. and 7:00 p.m. The peak 15-minute bicycle counts for each intersection are shown in Table 3.4-5.

Table 3.4-5: Peak 15-Minute Bicycle Traffic Volumes

Intersection	Street	Bikes Per Peak 15-Minutes
Mission & First	Mission	2
	First	5
Mission & Fremont	Mission	3
	Fremont	2
Howard & First	Howard	11
	First	5
Howard & Fremont	Howard	9
	Fremont	2
Folsom & Beale	Folsom	3
	Beale	3

The highest volumes of bicycle traffic in the evening peak were observed on Howard Street. Overall, bicycle traffic is light at the intersections observed. Figure 3.4-5 shows the bicycle network in the study area.

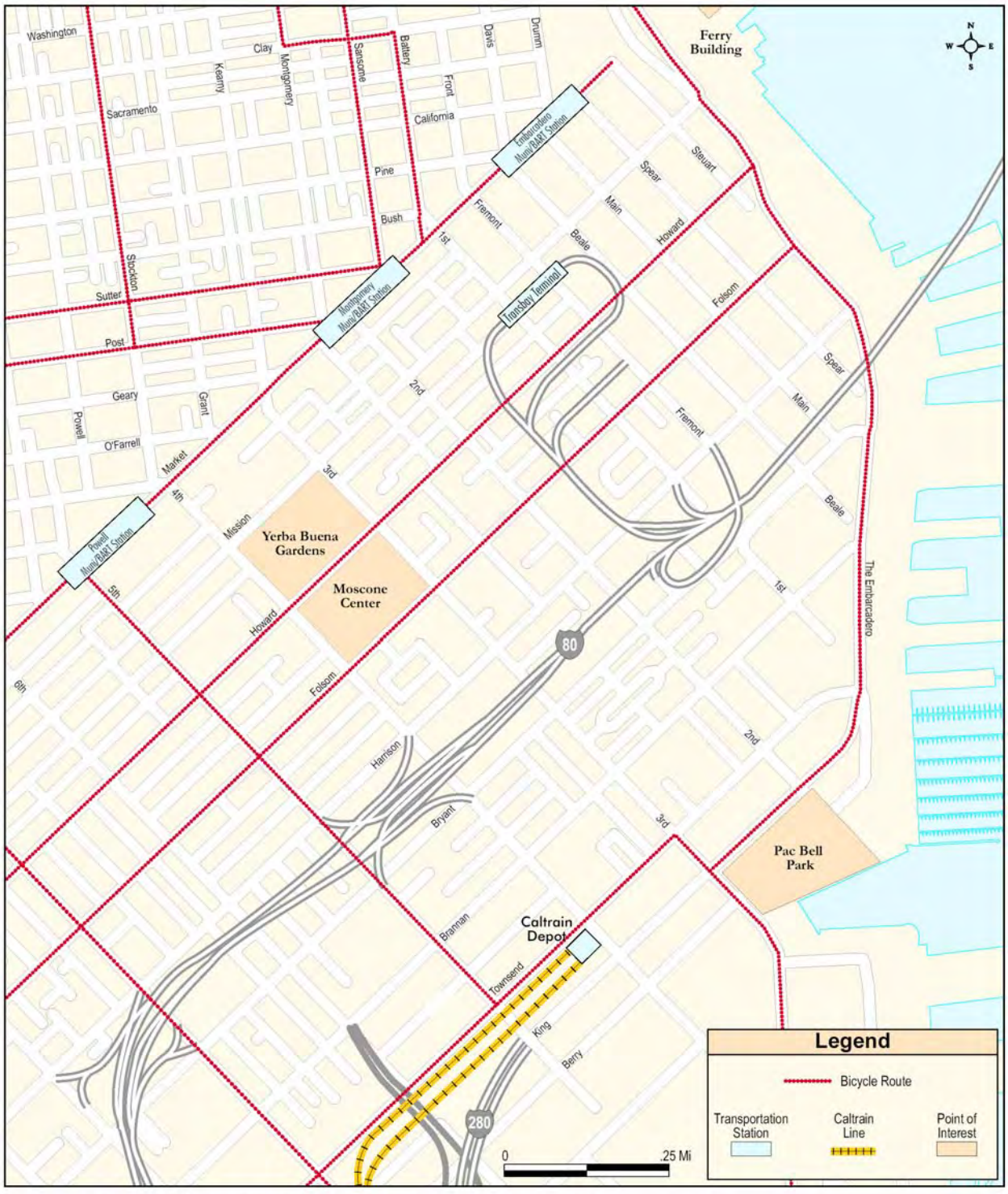


Figure 3.4-5 | Bicycle Routes in the Project Area

CHAPTER 4: AFFECTED ENVIRONMENT

This chapter presents information on the environmental setting in the project area, organized by environmental issue category. The project study area encompasses the geographic area potentially most affected by the project. For most issues involving physical effects, this is the project footprint, or the area that would be disturbed for or replaced by new project facilities. This area includes the proposed downtown extension alignment from the existing Caltrain terminal and storage yard at Fourth and Townsend Streets to the Transbay Terminal, and it also includes the proposed redevelopment area surrounding the Transbay Terminal. Socioeconomic effects may be felt over a larger area.

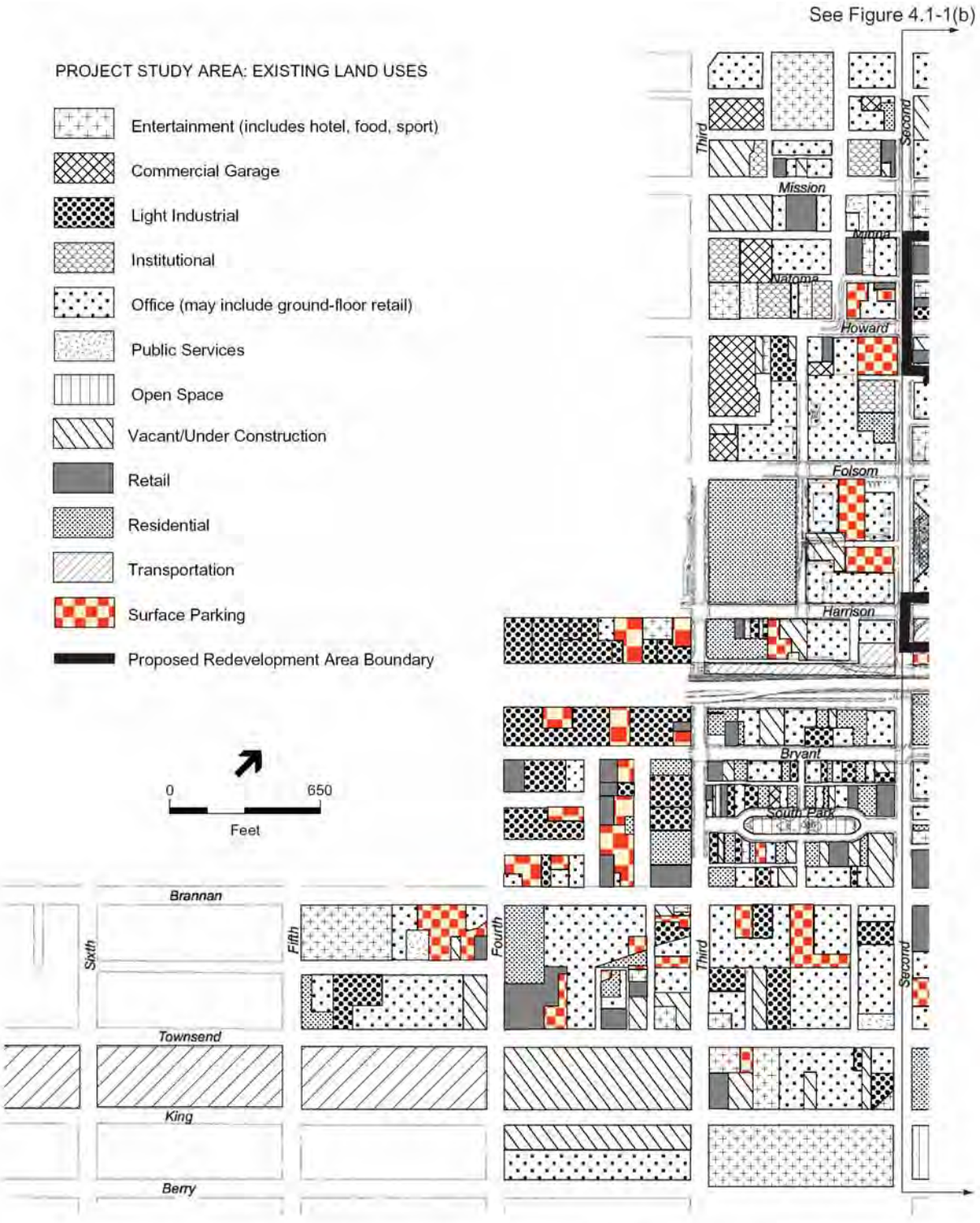
4.1 LAND USE, WIND AND SHADOW

The land use study area, as shown on Figure 4.1-1, includes areas near the Caltrain Downtown Extension Alternative routes as well as the proposed Transbay Redevelopment Area. The study area is bounded by Third, Fourth and Seventh Streets to the west, China Basin to the south, The Embarcadero and Steuart and Spear Streets to the east, and Howard and Market Streets to the north. Boundaries of the proposed Transbay Redevelopment Area (shown on Figure 4.1-1) encompass the Transbay Terminal and its immediate environs, except for some areas immediately south of the Transbay Terminal.

4.1.1 EXISTING LAND USES IN THE PROJECT AREA

The proposed project area contains a mix of light industrial, warehousing/distribution, commercial office, retail, live-work, and residential uses and surface parking lots. Since the 1930s, the area has been dominated by regional transportation facilities associated with the Bay Bridge, including the Bridge structure and approaches, the Terminal Separator Structure (Bay Bridge ramps), the Transbay Terminal and ramp structures that connect to the Bridge, and the Embarcadero Freeway. Due to the 1989 Loma Prieta Earthquake and subsequent demolition of the Terminal Separator Structure and Embarcadero Freeway, there are now a number of remnant and/or irregularly-shaped parcels interspersed throughout the area, most of which are used for surface parking. These parcels are the focus of proposed rezoning from P (Public) to C-3-O (Downtown Office), or to C-3-O (SD) – Downtown Office Special Development and potential development sites.

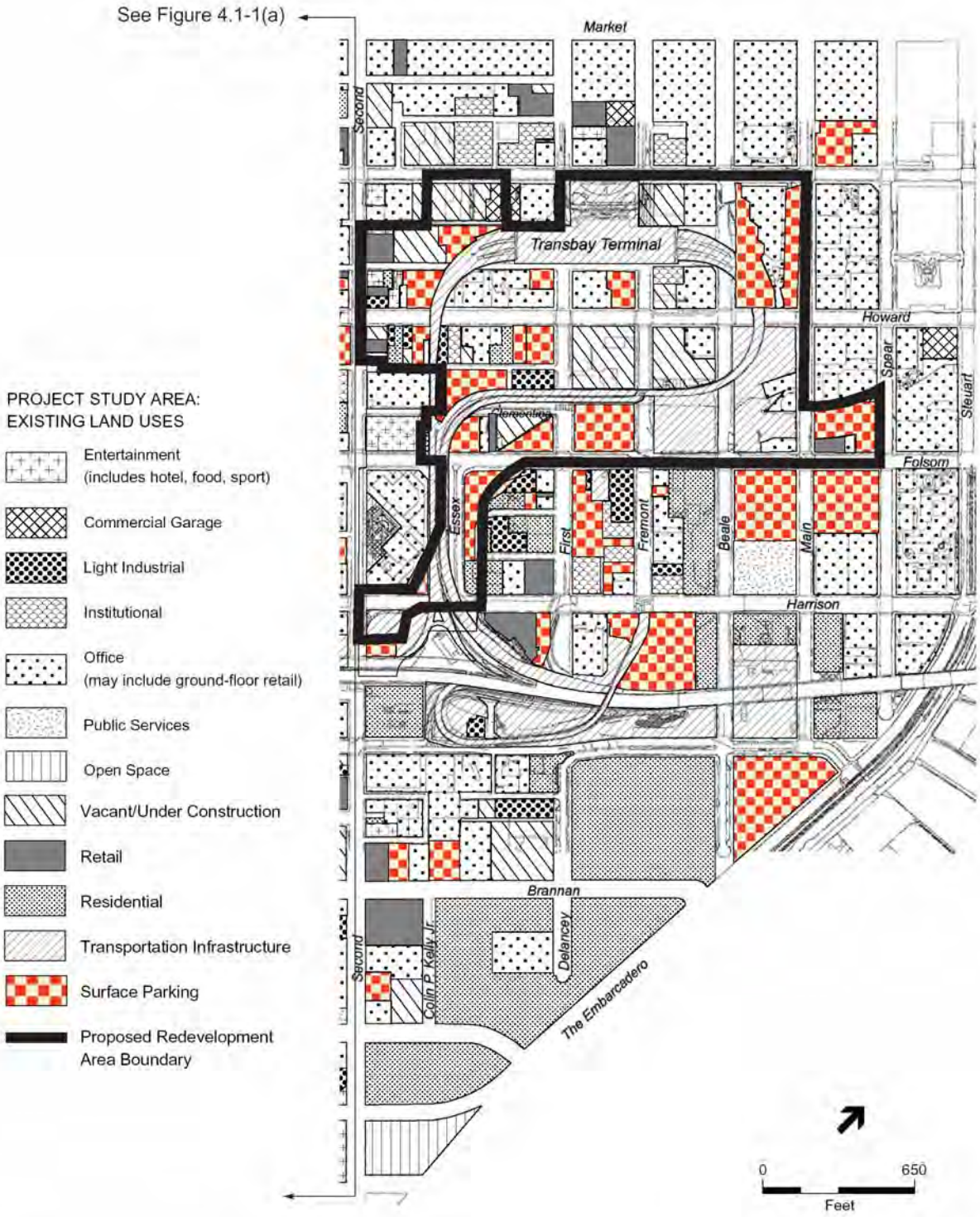
Office use was the predominant land use within the proposed Transbay Redevelopment Area in 1997, occupying about 89 percent of the developed square footage, much of it in high-rise buildings. Industrial uses occupied about four percent of the floor area, with hotel, institutional, retail, and residential uses occupying just under two percent each. Development since 1997 has



SOURCE: Parson's Transportation Group, Inc., Environmental Science Associates

Transbay Terminal/Caltrain Downtown Extension / 201050 ■

Figure 4.1-1(a)
Existing Land Uses



SOURCE: Parson's Transportation Group, Inc.; Environmental Science Associates

Transbay Terminal/Caltrain Downtown Extension / 201050 ■

Figure 4.1-1(b)
Existing Land Uses

consisted primarily of high-rise office towers, with some high-rise residential development. The area contains limited publicly accessible open space. Since there are no public parks in the area, the existing open space generally consists of building setbacks and areas between office towers.

Major educational uses include Golden Gate University and the Academy of Art College, both located north and west of the Transbay Terminal. Remaining industrial sites and service uses, such as auto repair shops, are clustered within and near the Transbay Terminal ramps and along First and Fremont Streets south of Folsom Street. Surface parking lots are located along the north side of Folsom Street, beneath the terminal ramps, and at various other locations scattered throughout the area.

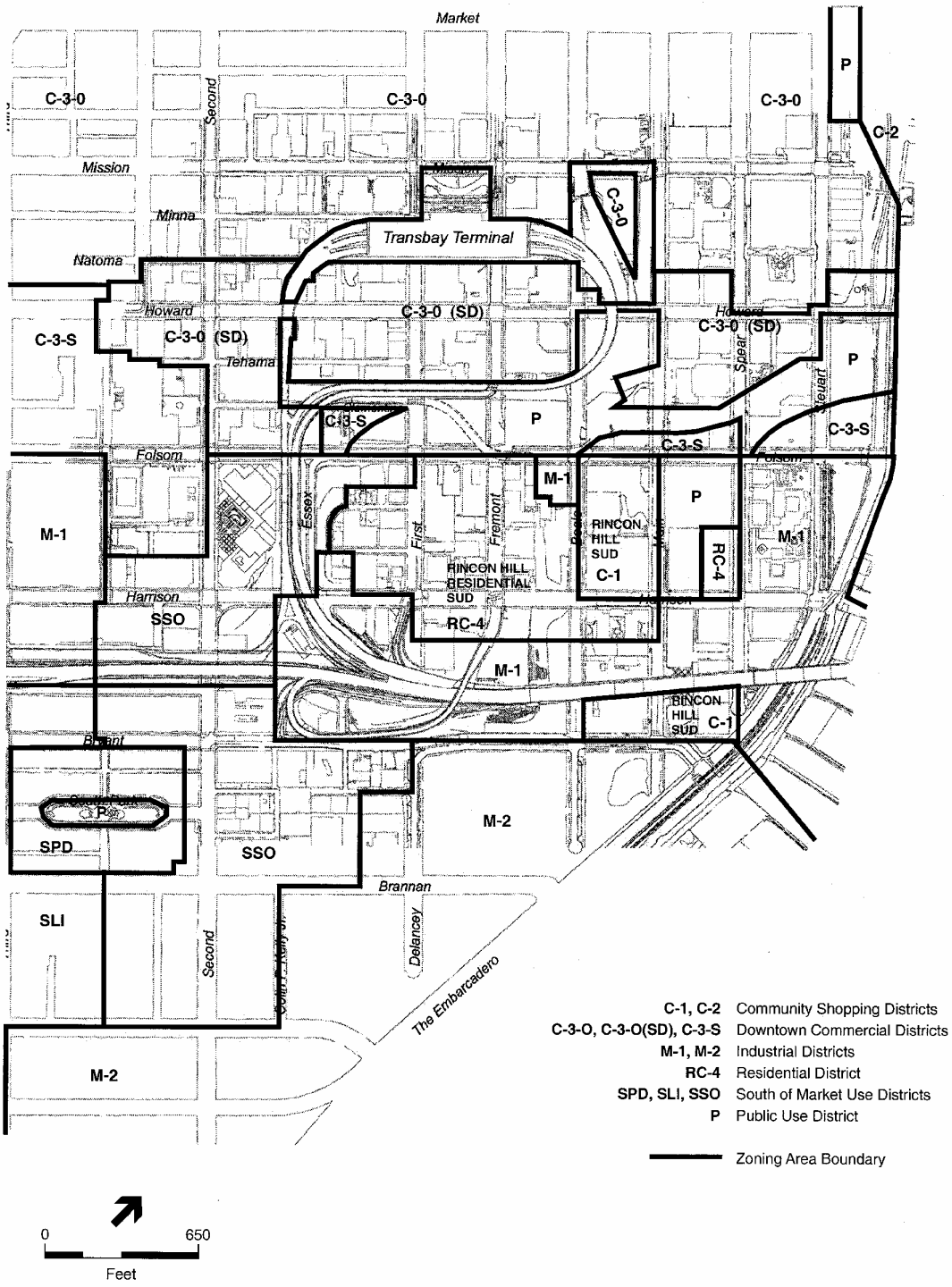
4.1.2 AREA PLANS AND ZONING

Existing plans and policies that affect not only the proposed project area, but also the larger land use study area, include the San Francisco General Plan and its elements, as well as area plans contained within the General Plan. The pertinent area plans include the Downtown Plan, the South of Market Plan, and the Rincon Hill Plan. Other area plans, such as the Northeastern Waterfront Plan, and San Francisco Redevelopment Agency Plans (including the Rincon Point-South Beach Redevelopment Plan, Yerba Buena Center Redevelopment Plan, and Mission Bay North Plan), guide land use in areas contained within the study area. A detailed listing of applicable plans and policies is included in the Technical Memorandum, Consistency with Existing Plans and Policies (ESA, 2001). Existing zoning is varied and reflects the multitude of different land uses found in the study area. Zoning districts in the area are described in Section 4.1.3 and shown on Figure 4.1-2.

4.1.3 NEIGHBORHOODS WITHIN AND ADJACENT TO THE STUDY AREA

This section provides a discussion of existing land uses, applicable plans and zoning regulations, and proposed development in each neighborhood within or adjacent to the study area. Figure 4.1-3 identifies neighborhood boundaries (land use subareas).

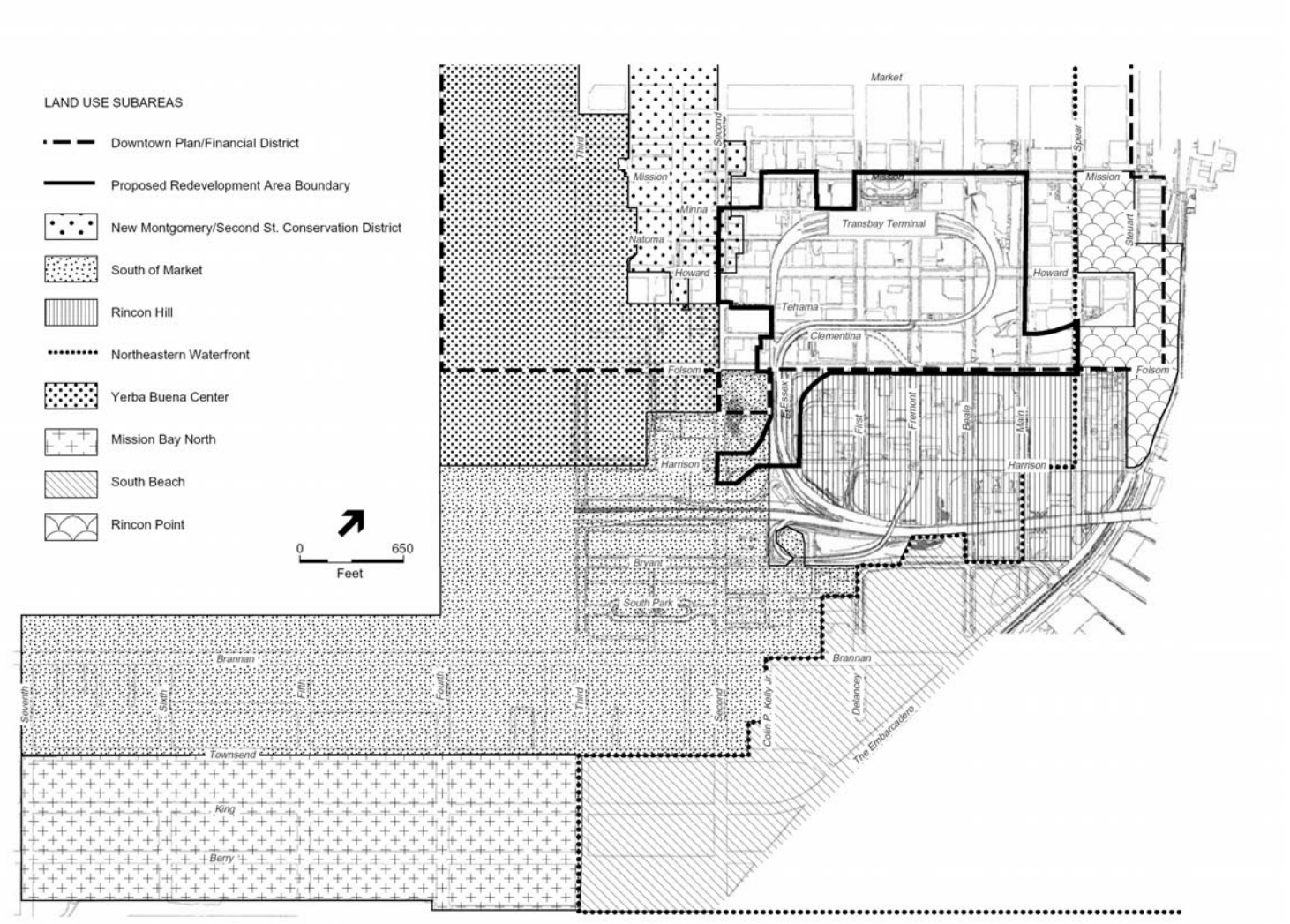
Height and bulk of new development is regulated by height and bulk districts established by the City of San Francisco in order to relate "the height of buildings to important attributes of the City pattern and to the height and character of existing development," and to relate the bulk of buildings to "the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction." (Planning Code Section 251). Height and bulk restrictions are of particular concern in the proposed Transbay Redevelopment Area and are discussed in Section 4.1.3.2, Transbay Terminal Environs. Figure 4.1-4 shows existing height and bulk districts in the area.



SOURCE: Parson's Transportation Group, Inc., Environmental Science Associates

Transbay Terminal/Caltrain Downtown Extension / 201050 ■

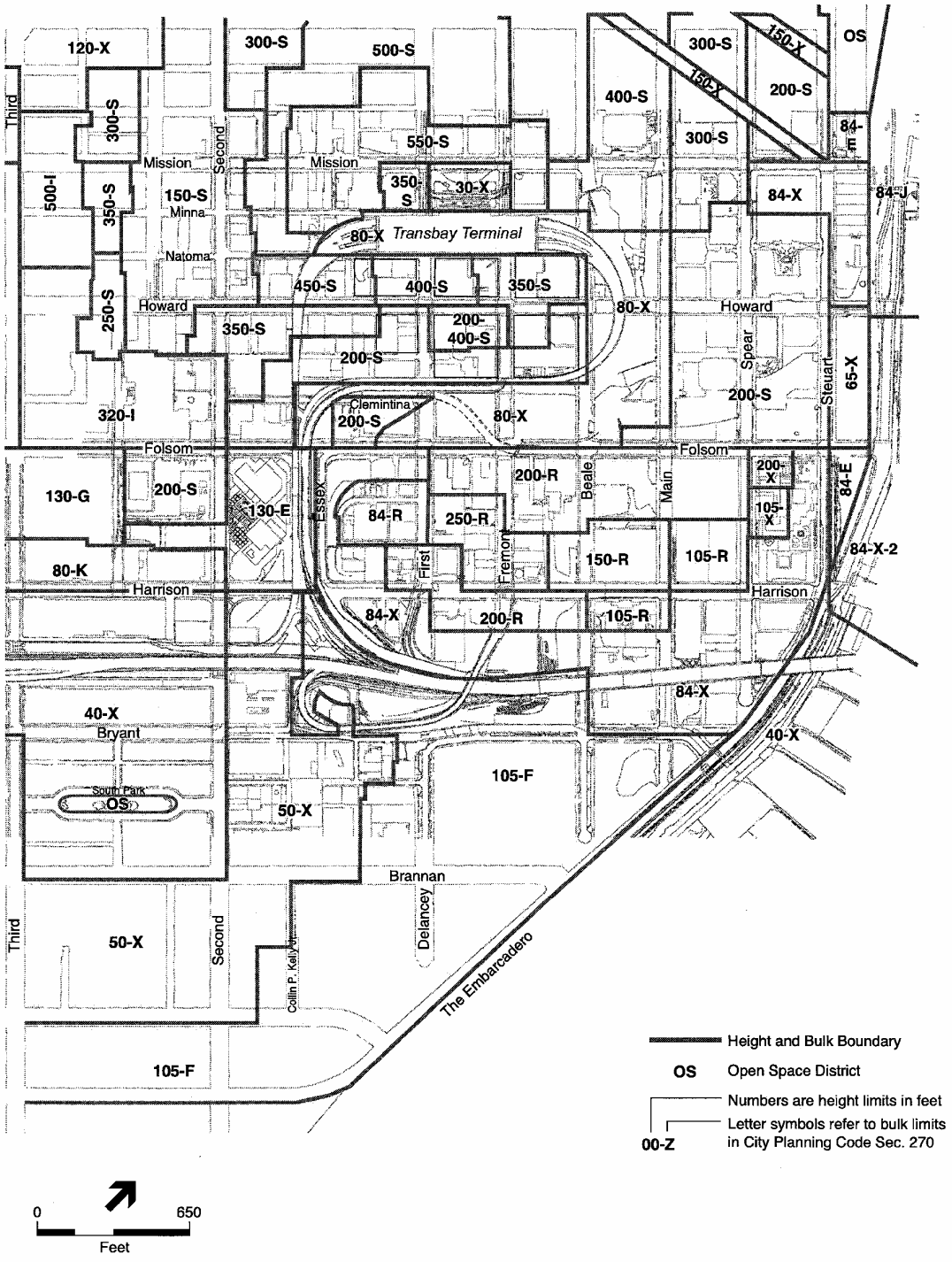
Figure 4.1-2
Existing Zoning



SOURCE: Parson's Transportation Group, Inc., Environmental Science Associates

Transbay Terminal/Caltrain Downtown Extension / 201050 ■

Figure 4.1-3
Land Use Subareas



SOURCE: Parson's Transportation Group, Inc., Environmental Science Associates

Transbay Terminal/Caltrain Downtown Extension / 201050 ■

Figure 4.1-4
Existing Height and Bulk Districts

4.1.3.1 Financial District

The Financial District, historically located north of Market Street, is composed of high-rise office buildings, most with ground floor retail. As described in the Downtown Plan (an Area Plan contained within the General Plan), the Financial District spills across Market Street south as far as Folsom Street. Along Spear and Main Streets, high-rise office buildings extend south nearly to Folsom Street. Thus, all of the project development north of Folsom Street *would* fall within the Downtown Plan's Financial District.

Between Market and Howard Streets, the Second Street corridor is characterized by historic office buildings of 100 feet or less in height with ground floor retail. These structures make up the New Montgomery/Second Street Conservation District of the Downtown Plan. Most of these are unreinforced masonry structures, several of which have been seismically upgraded, and are noted for architectural merit. Some older industrial buildings between Market and Folsom Streets have been converted to retail, office and residential uses. Warehouse buildings are being used for office buildings, factory outlets, live-work spaces, and media studios. Residential uses are located in converted commercial buildings and above the ground floor of commercial uses.

Recent development projects include new office buildings at 101 Second Street (at Mission Street), 199 Fremont Street (at Howard Street), One Second Street, and 631 Folsom Street. Another office building, the Gap headquarters, has been constructed immediately adjacent to the study area, at Folsom and Spear Streets. Recently completed residential (including live-work) projects include 370 Beale Street and a residential tower on Natoma Street near Second Street.

The Second Street corridor can be divided into two smaller subareas: contemporary offices and historic structures. The first subarea has several office buildings that were constructed in the 1970s and 1980s. These buildings, located between Folsom and Bryant Streets, have ground floor retail space and are typically 200 feet, or less, in height. Recently constructed buildings in the Second Street corridor include a 143-foot-tall office tower at 201 Second Street, the 180-foot Marriott Courtyard Hotel at 299 Second Street, the CNET building at 261 Second Street, and a residential mid-rise at 246 Second Street between Tehama and Clementina Streets. The second subarea, the New Montgomery-Second Street Conservation District, is described in Section 4.16.6.4.

A large portion of the Financial District is zoned C-3-O (Downtown Office), including the blocks south of Market Street, roughly to Minna Street. The C-3-O district is characterized by the intensity and compactness of its development, which permits face-to-face business contacts and offers the convenience of traveling by foot. Just south of this area is the C-3-O (SD) zoning district – Downtown Office Special Development – which is an area created to direct unused development potential, such as the transfer of development rights, near the downtown core. The C-S-3 District, which is located west of the study area near Third Street, accommodates functions such as wholesaling, printing, business services, and parking. This district has for the most part been underdeveloped.

Recently approved development in the Financial District includes the following:

- An office development at 524 Howard Street, approved in early 1999;
- The Foundry Square project, an office development consisting of four separate office structures at the intersection of First and Howard Streets, currently under construction;
- An addition of 60,000 square feet of office space to an existing office building at One Market Street;
- A 700,000 square foot office development at 554 Mission Street;
- A 24-story, 253,000-square foot office development with ground-floor retail at 535 Mission Street;
- Demolition of existing four-story warehouse building and construction of a seven-story office building at 235 Second Street;
- A 40,000-square foot office building at 272 Main Street;
- A 579,034-square foot office building at 555-569 Mission Street;
- Vertical addition of mezzanine and fourth story to an existing three-story building providing office and light industrial uses at 38-44 Tehama Street;
- A seven-story building to house mechanical, electrical, and data equipment at 57 Jessie Street;
- A 20-story, 200-foot tall mixed-use (commercial and residential) building at 48 Tehama Street;
- A 10-story, 45,800 square foot office building with ground-floor retail on the site of an existing surface parking lot at 201 Second Street;
- Construction of a seven-story, 95-foot tall office building with 24,435 square feet of office use at 69 Clementina Street;
- A two-story vertical addition to an existing three-story office building at 55 Natoma Street;
- A 10-story office building with ground-floor retail at 35 Hawthorne Street;
- 33 new live work or condominium units at 530-534 Folsom Street;
- 24 residential and eight live/work units on a vacant lot currently used for parking at 19 Clementina Street;
- 185 residential units in a 16-story-over-basement, 150-foot tall building on a lot currently used for surface parking at 199 New Montgomery Street;
- An eight-level, primarily short-term parking garage with 425 spaces at the San Francisco Museum of Modern Art;
- Three-story vertical addition to an existing nine-story parking garage at 51 Third Street;
- A 200-room hotel with ground-floor retail space at Mission and Steuart Streets;
- Improvements to the Embarcadero Music Concourse.
- *A 605-foot high-rise on the south side of Mission Street between Fremont and Beale Streets. 301 Mission Street was approved for development by the San Francisco Planning Commission on July 31, 2003. As approved, the 301 Mission Street project has been modified to be more compatible with the Second-to-Main alignment, which was selected as the Caltrain Extension Component of the Locally Preferred Alternative in March 2003.*

4.1.3.2 Transbay Terminal Environs

The existing Transbay Terminal is located in the Financial District and is bounded by Mission Street to the north, First Street (and slightly beyond toward Second Street) to the west, Natoma Street to the south, and Fremont Street to the east, with bus ramps that form an elevated loop connecting to the Bay Bridge to the south. The Transbay Terminal site is zoned for Public Use. The blocks encircled by the existing terminal and ramps currently are less intensely developed than other portions of the study area north of Clementina Street; however, recent project approvals by the Planning Commission would change the area. Industrial and service uses are generally located in one- to six-story buildings that front the alleys of Natoma, Tehama and Clementina Streets. Some of these buildings have been converted to office and some to residential use. Although buildings in the Terminal environs are typically less than six stories, the area includes four high-rise office buildings located at 100 First Street, 201 Mission Street, 301 Howard Street, and 199 Fremont Street. The latter two are the only high-rises inside the Terminal loop ramps, while others have been approved at 524 Howard Street, 545 Mission Street, 555 Mission Street, 575 Mission Street, and Foundry Square at First and Howard Streets. *The* 605-foot high-rise on the south side of Mission Street between Fremont and Beale Streets *has been approved for development by the San Francisco Planning Commission.* This area also has a noticeable amount of vacant land. Between Howard and Folsom Streets, there are a number of surface parking lots on remnant and/or irregularly shaped parcels that became vacant after the 1989 earthquake and subsequent demolition of the Terminal Separator Structure.

The proposed Transbay Redevelopment Area contains various height and bulk districts. The lowest building heights are established by the 30-X district located at the corner of First and Mission Streets; the tallest building heights have been established in a 400-S district on Assessor's Block 3718. The tallest buildings in the Transbay Terminal environs are in a 550-S district between First and Second Streets on Mission Street, which is outside the proposed Transbay Redevelopment Area. Figure 4.1-4 and Table 4.1-1 identify the existing zoning and height and bulk districts for the proposed Transbay Redevelopment Area.

4.1.3.3 Rincon Hill

Rincon Hill, bounded by Essex and Folsom Streets, The Embarcadero, the Bay Bridge, and portions of Bryant Street, contains 55 acres of land, subdivided into over 70 parcels. Rincon Hill borders the proposed Transbay Redevelopment Area on the south along Folsom Street. Buildings in the area are typically less than four stories high. Rincon Hill was San Francisco's first well-to-do residential neighborhood, but it has been a warehouse and distribution area since the latter third of the 19th Century. Industrial and commercial buildings dominate the area, although there are also residential uses. Vacant or underutilized parcels are interspersed throughout Rincon Hill. Within the last decade, encouraged by the Rincon Hill Plan, there has been an increase in the construction of residential space. New residential projects have been constructed at 388 Beale Street (Avalon Towers), 403 Main (Portside Condominiums) and live-work projects along Folsom Street and First Street and Guy Place.

The San Francisco Planning Code established a special use district for Rincon Hill to protect the existing environment and to further the goals and policies contained in the Rincon Hill Plan. The intent is to convert an outmoded industrial area to a unique mixed-use neighborhood close to downtown.

Table 4.1-1: Existing Zoning in the Proposed Transbay Redevelopment Area

Assessor's Block	Block Bounded by	Zoning Districts	Height/Bulk Districts
3718	Mission, Main, Howard, and Beale Streets	P, C-3-0, C-3-0 (SD)	80-X, 80X / 400S
3720	Mission, Fremont, Howard, and First Streets	P	30-X / 80-X
3736	Howard, First, Folsom, and Second Streets	P	80-X / 200-S
3737	Howard, Fremont, Folsom, and First Streets	P, C-3-0 (SD)	80-X
3738	Howard, Beale, Folsom, and Fremont Streets	P	80-X
3739	Howard, Main, Folsom, and Beale Streets	P, C-3-0, C-3-0 (SD), C-3-S	80-X, 90-X, 200-S
3740	Howard, Spear, Folsom, and Main Streets	P, C-3-S	40-X, 200-S
3749	Folsom, First, Harrison, and Second Streets	M-1	84-X
3764	Harrison, Rincon, Bryant, and Second Streets	P	50-X

Zoning Districts:
C-3-0: Downtown commercial office
C-3-0 (SD): Downtown commercial office (special development)
C-3-S: Downtown support
M-1: Light industrial
P: Public use
S: See Planning Code Section 270(d) or refer to Height and Bulk maps 1H, 2H and 7H of the Zoning Map.

Source: San Francisco Planning Department and Heller Manus Architects, June 2001

4.1.3.4 South of Market

The South of Market Area (SOMA) is generally bounded by Mission Street to the north, Townsend Street to the south, South Van Ness Avenue to the west and Second Street to the east. SOMA borders on the proposed Transbay Redevelopment Area to the east at Second Street, but does not overlap it. It was originally established as a well-to-do neighborhood during the mid-1850s, but was completely destroyed by the earthquake and fire of 1906. SOMA was subsequently rebuilt as a warehouse and working-class residential district. SOMA is now dominated by light industrial manufacturing and office uses, although pockets of post-1906 earthquake housing exist and substantial amounts of residential development – mainly in the form of live-work lofts – have been constructed within recent years. There are also cultural uses, generally clustered around the Yerba Buena Center, and entertainment uses along Folsom and Eleventh Streets.

Zoning in SOMA is characterized by service and light industrial land uses. The SSO (Service Secondary Office) and SLI (Service Light Industry) zoning districts are located south of the C-3-S district, extending to Townsend Street. Residential Enclave Districts (RED) encompass

the clusters of low-scale, medium density, predominantly residential neighborhoods located along the narrow side streets of the South of Market SLR district. Within these predominantly residential enclaves lie a number of vacant parcels, parking lots and other properties in open storage use.

4.1.3.5 Yerba Buena Center

Yerba Buena Center is an 87-acre redevelopment area within the SOMA District that extends from Market Street on the north to Harrison Street on the south, and from Second Street on the east to the west along Fourth Street. The boundaries of the Yerba Buena Center lie to the west of the proposed Transbay Redevelopment Area, and their boundaries do not overlap. Uses within the Yerba Buena Center include the San Francisco Museum of Modern Art, the Moscone Convention Center, and the Sony Metreon, as well as gardens, retail, recreation, amusement, entertainment, parking, and a substantial amount of housing.

4.1.3.6 South Park

South Park is a mixed-use neighborhood bounded by Bryant Street to the north, Brannan Street to the south, Third Street to the west, and Second Street to the east. South Park is within the SOMA Area Plan, but would not be part of the Transbay Redevelopment Area. South Park was San Francisco's first master-planned upscale residential neighborhood, but it was completely destroyed in the earthquake and fire of 1906. Rebuilt to generally reflect what existed prior to the earthquake, it is now a mixed-use neighborhood surrounding a grassy open space. Office and commercial uses are prevalent, and residential uses are interspersed throughout. Zoning controls in South Park are guided by Planning Code Section 814, intended to "preserve the scale, density and mix of commercial and residential activities within this unique neighborhood."

4.1.3.7 Northeastern Waterfront

The Northeastern Waterfront Planning Area is south and east of the proposed Transbay Redevelopment Area and extends from Aquatic Park to China Basin. This planning area contains four subareas, two of which – the Ferry Building Subarea and the South Beach Subarea – are directly adjacent to the study area for the present project. The Ferry Building Subarea surrounds the Ferry Building and contains a newly constructed open space plaza directly in front of the Ferry Building. The Ferry Building Subarea is linked to the South Beach Subarea by the waterfront promenade along The Embarcadero. Since the 1980s, the South Beach Subarea has been transforming into a new residential and commercial mixed-use neighborhood, which still retains some of its industrial and maritime flavor. The extension of the N-Judah Muni-Metro light rail line from Embarcadero Station provides a direct link to the downtown area. New mid-rise residential structures and a 45,000-seat baseball park (Pacific Bell Park) were recently constructed. This area contains a considerable amount of land zoned for manufacturing uses.

4.1.3.8 Mission Bay North

Mission Bay, under the jurisdiction of the San Francisco Redevelopment Agency, is divided into two redevelopment project areas: Mission Bay North and South. Mission Bay North borders on the study area and is bounded by Third Street, Townsend Street, Mission Creek, and Seventh Street. This area contains a portion of the Caltrain yard, as well as land uses that are in transition from their historical transportation and industrial functions. Construction of residential units, office space, retail, and public open space has begun in this area. The San Francisco Redevelopment Agency established land use controls regulating development of blocks encompassing and surrounding the Caltrain rail yard. The blocks that contain the Caltrain terminus and related spur alignments have been zoned MB-O, in order to be developed with large floor plan and smaller structures for office uses.

4.1.4 EXISTING WIND CONDITIONS

Wind tunnel testing was performed to characterize existing wind conditions throughout the proposed redevelopment area and to provide a baseline for comparison with wind conditions that would result from potential development. The tests used the methodology of Planning Code Section 148. The results of the wind tunnel test, as documented in the Wind Test Technical Memorandum, are summarized in Section 5.1.2. Existing wind speeds were measured at sixty-one locations within the Transbay Redevelopment Area, where speeds are moderate to windy. Wind speeds, expressed as speeds that are exceeded 10 percent of the time, range from three mph to 11 mph; the average of these wind speeds is 5.5 miles per hour (mph). The highest wind speed of 11 mph occurs on the south side of Harrison Street at Second Street. All 61 points tested meet the Planning Code's pedestrian-comfort criterion value of 11 mph. The Planning Code's wind hazard criterion is currently not exceeded at any of the tested locations. A description of conditions in the four wind test subareas within the proposed Transbay Redevelopment Area is provided below.

- **Adjacent to or near the Transbay Terminal Building.** Existing wind speeds are low, ranging from four to seven miles per hour.
- **Area bounded by Mission, Main, Folsom, and Beale Streets.** Existing wind speeds in this area are also low, ranging from three to six miles per hour.
- **Adjacent to Folsom Street.** Existing wind speeds are moderate to windy, ranging from three to ten miles per hour.
- **Adjacent to or near Essex Street.** Existing wind speeds are moderate to windy, ranging from five to 11 miles per hour.

4.1.5 SHADOW

The City of San Francisco Planning Code Section 295 generally prohibits new buildings that would cause substantial new shadow on open space under the jurisdiction of the San Francisco Recreation and Park Commission between one hour after sunrise and one hour before sunset, at any time of the year. Sections 146 and 147 of the Planning Code protect sunlight access to streets and sidewalks and provide for reduction of shadows on public and publicly accessible open spaces within the C-3 districts (the largest section of the plan area). The project would have an adverse impact if it would result in substantial new shadow on public open space under the jurisdiction of the Recreation and Park Commission during these hours.

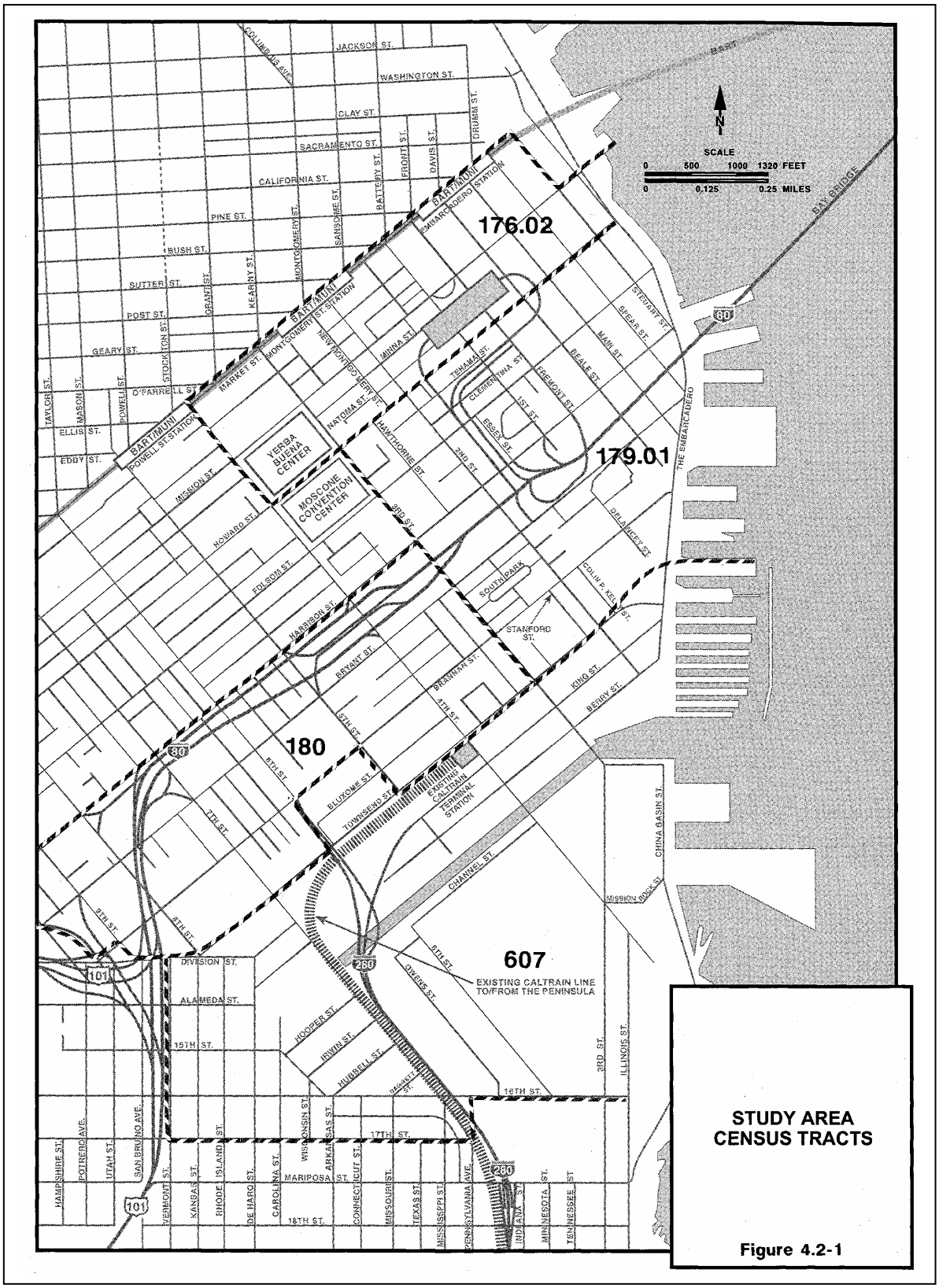
4.2 SOCIOECONOMIC CHARACTERISTICS

Study area socioeconomic character is described in terms of population, employment, housing, income, age, education, and racial composition. The area is experiencing rapid changes in population, housing, and local business activity. Data from the U.S. Census 2000 will be released over the next two years and will be incorporated into this document as it becomes available. Information from the 1990 census has been updated using Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC) data.

The project area is included within four census tracts covering the area from south of Market Street to Sixteenth and Seventeenth Streets and from the Bay to Vermont and Eleventh Streets. These tracts are shown in Figure 4.2-1. Each tract consists of two TAZs (MTC Traffic Analysis Zones) except for Tract 607, which includes three TAZs. All information presented herein is at the tract level; the more detailed TAZ data were analyzed when drawing conclusions about the spatial distribution of activity. Tract 607 includes the Fourth and Townsend station. The Caltrain Downtown Extension component would traverse Tract 179.01 and a portion of Tract 176.02 where the Transbay Terminal is located. The tail track would be located in Tract 179.01.

The U.S. Census 2000 estimated the study area total population to be 8,903, with a household population of 6,588 in 4,243 households. This represents a substantial growth over the 1990 population of 4,250 and 1,825 households. As shown in Table 4.2-1, the area now includes about 1.15 percent of the total estimated San Francisco population of 776,733, while in 1990, the area represented 0.6 percent of the population of 723,960. Household growth has been slightly greater than population growth. Housing is almost entirely multi-family, with 98 percent of all residential units containing two or more dwelling units. Household size in the area is about 1.6 persons, smaller than the 2.3 person average for the city as a whole.

As shown in Table 4.2-2, the area provided an estimated 132,714 jobs in 2000, representing about 21 percent of total city employment. Census Tract 176.02 contains just under 55 percent of the jobs in the study area.


176.02
179.01
180
607
EXISTING CALTRAIN LINE TO/FROM THE PENINSULA
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BART/MUNI EMBARCADERO STATION
BART/MUNI MONTGOMERY ST. STATION
BART/MUNI POWELL ST. STATION
YERBA BUENA CENTER
MOSCONE CONVENTION CENTER
EXISTING CALTRAIN TERMINAL STATION
SOUTH PARK
THE EMBARCADERO
BAY BRIDGE
JACKSON ST.
WASHINGTON ST.
CLAY ST.
SACRAMENTO ST.
CALIFORNIA ST.
PINE ST.
BUSH ST.
SUTTER ST.
POST ST.
GEARY ST.
O'FARRELL ST.
MARKET ST.
MISSION ST.
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FOLSOM ST.
HARRISON ST.
BRYANT ST.
BRANNAN ST.
BERRY ST.
KING ST.
TOWNSEND ST.
CHANNEL ST.
CHINA BASIN ST.
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DIVISION ST.
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8TH ST.
9TH ST.
4TH ST.
3RD ST.
2ND ST.
1ST ST.
STUART ST.
SPEAR ST.
MAIN ST.
BEALE ST.
FREMONT ST.
1ST ST.
ESSEX ST.
2ND ST.
3RD ST.
DELANCEY ST.
COLIN P. KELLY ST.
STANFORD ST.
ILLINOIS ST.
DAVIS ST.
FRONT ST.
DRUMM ST.
BATTERY ST.
SANSOME ST.
MONTGOMERY ST.
KEARNY ST.
GRANT ST.
STOCKTON ST.
POWELL ST.
MASON ST.
TAYLOR ST.
ELLIS ST.
EDDY ST.
NEW MONTGOMERY ST.
MINNA ST.
NATOMA ST.
HAWTHORNE ST.
TEHAMA ST.
CLEMENTINA ST.
ESSEX ST.
COLUMBUS AVE.
HAMPSHIRE ST.
POTRERO AVE.
UTAH ST.
SAN BRUNO AVE.
VERMONT ST.
KANSAS ST.
RHODE ISLAND ST.
DE HARO ST.
CAROLINA ST.
WISCONSIN ST.
ARKANSAS ST.
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MISSOURI ST.
TEXAS ST.
MISSISSIPPI ST.
PENNSYLVANIA AVE.
INDIANA ST.
MINNESOTA ST.
TENNESSEE ST.
HOOPER ST.
IRWIN ST.
HUBBELL ST.
DAGGETT ST.
ORTEGA ST.
BLUXOME ST.
101
280
80
STUDY AREA
CENSUS TRACTS
Figure 4.2-1

The median income of area households in 1989 ranged from approximately $21,000 (Tract 180) to $41,500 (Tract 179.01). The percentage of residents below the federal poverty level was 12.4 in 1990, approximately the citywide average (see Table 4.2-3).

Table 4.2-1: Project Area Population and Households in 2000

Census Tract	Total Population	Population in Households[1]	Total Households	Persons per Household
176.02	534	342	257	1.3
179.01	5,408	4,792	3,249	1.5
180	2,285	914	494	1.9
607	676	540	243	2.2
Project Area Total:	**8,903**	**6,588**	**4,243**	**1.6**
San Francisco:	**776,733**	**756,976**	**329,700**	**2.3**
Project Area as % of City:	1.15%	.87%	1.28%	

1 The discrepancy between total population and population in households is due to the number of individuals living in group quarters.

Source: U.S. Census 2000

Table 4.2-2: Project Area Jobs and Employment Status of Residents in 2000

Census Tract	Project Area Jobs	Employed Residents
176.02	72,645	2,543
179.01	32,594	4,783
180	18,018	1,031
607	9,457	926
Project Area Total:	**132,714**	**9,283**
San Francisco:	**634,430**	**444,851**
Project Area as % of City:	20.92%	2.09%

Source: San Francisco Planning Department, 2000; U.S. Census 2000; U.S. Census 1990

Table 4.2-3: Project Area Household Income and Poverty Status in 1989

Census Tract	Median Household Income ($1989)	Percent Below Poverty Level
176.02	$35,125	7.9%
179.01	$41,465	8.9%
180	$20,724	31.2%
607	$37,000	0.0%
Project Area Total	**$20,724 - $37,000**	**12.4%**

Note: Information will be updated once the U.S. Census 2000 data regarding income levels becomes available.

Source: U.S. Census 1990

Auto ownership within the study area is slightly less than for the city as a whole (0.7 autos per household compared with 1.3 citywide; see Table 4.2-4). This likely reflects the small household size and center-city location of the study area, but it points to a potential for high transit usage, similar to or even greater than that of San Francisco residents generally.

Table 4.2-4: Auto Availability of Project Area Households in 2000

Census Tract	Average Autos per Household	"0" Auto Households	%	"1" Auto Households	%	"2" or More Auto Households	%	Total Households	%
176.02	0.6	215	28.3	296	13.9	16	1.8	1,952	100
179.01	0.9	260	34.2	1302	61	734	80.3	3,596	100
180	0.6	275	36.2	215	10.1	215	23.5	1,121	100
607	0.9	10	1.32	71	3.3	31	3.4	1,019	100
Project Area Total	**0.7**	**760**	**20**	**2,135**	**56.1**	**914**	**24**	**7,688**	**100**
San Francisco:	**1.2**	**88,827**	**28.2**	**127,474**	**40.4**	**99,288**	**31.5**	**315,546**	**100**
Project Area as % of City:		0.86%		1.67%		0.92%		2.44%	

Note: Estimate prepared as part of demographic database for regional transportation modeling process.

Source: Metropolitan Transportation Commission, Forecasts for Regional Transportation Plan, 2000.

In 2000, the median age of study area residents ranged from 34 (Tract 180) to 37 (Tracts 607 and 176.02), below the city median of 37 years. The percentages of the very young (less than 16 years) and elderly (62 years or older) were both below the city averages, reflecting the working-age population of the study area (see Table 4.2-5). Over 87 percent of study area residents were high school graduates and 38 percent were college graduates, while the percentages for San Francisco are 78 percent and 35 percent, respectively. Similar to income and employment, educational attainment is highest in the eastern portion of the study area, where about 50 percent of the residents have at least one college degree.

Approximately 67 percent of area residents are white/Caucasian, which includes individuals of Hispanic origin. This is higher than the citywide average of about 54 percent. On the other hand, over 20 percent of study area residents are Black/African American, compared with 11 percent citywide. Approximately 34 percent of all area residents were members of minority groups, which may also include Hispanics, compared with about 46 percent citywide. The racial make-up of the study area is shown in Table 4.2-6.

Table 4.2-5: Age and Education of Project Area Residents in 2000

Census Tract	Median Age	Population by Age Group						Educational Attainment[1]	
		Under 16	%	16-61	%	62 & Over	%	% H.S. Grad.	% Col. Grad.
176.02	37.3	10	1.9	506	94.8	18	3.4	90.0	60.0
179.01	35.0	177	3.3	4,985	92.2	246	4.5	94.8	47.8
180	34.0	84	3.7	2,128	93.1	73	3.2	71.1	13.3
607	36.7	62	9.2	521	77.0	93	13.8	100.0	33.7
Project Area Total	**34.0 – 37.3**	**333**	**3.7**	**8,140**	**91.4**	**430**	**4.8**	**87.3**	**37.7**
San Francisco:	**36.5**	**100,150**	**12.9**	**552,889**	**71.2**	**123,694**	**15.9**	**78.0**	**35.0**
Project Area as % of City		0.33%		1.47%		0.35%			

[1] Information will be updated once the U.S. Census 2000 data regarding education levels becomes available.

Source: U.S. Census 2000; U.S. Census 1990

Table 4.2-6: Race of Persons in Project Area in 2000

Census Tract	Total Population		White		Black/African Amer.	
	Number	%	Number	%	Number	%
176.02	534	100	321	60.1	87	16.3
179.01	5,408	100	3,640	67.3	448	8.3
180	2,285	100	1,046	45.8	670	29.3
607	676	100	381	56.4	72	10.7
Project Area Total:	**8,903**	**100**	**5,388**	**60.5**	**871**	**9.78**
San Francisco:	**776,733**	**100**	**385,728**	**49.7%**	**60,515**	**7.8**
Project Area as % of City:	1.14%		1.4%		.112%	

Census Tract	Amer.Indian/ Alaska Native		Asian/Pac. Islander		Other		Hispanic Origin*	
	Number	%	Number	%	Number	%	Number	%
176.02	2	0.3	82	15.4	42	7.9	56	10.5
179.01	20	0.4	897	16.6	403	7.5	353	6.5
180	27	1.2	256	11.2	286	12.5	421	18.4
607	8	1.9	164	24.3	51	7.5	47	7.0
Project Area Total:	**57**	**0.6**	**1,399**	**15.7**	**782**	**8.8**	**877**	**9.9**
San Francisco:	**3,458**	**0.45**	**243,409**	**31.3**	**83,623**	**10.8**	**109,504**	**14.1**
Project Area as % of City:	0.07%		0.18%		.101%		.113%	

* Included in other racial categories

Source: U.S. Census 2000

4.3 COMMUNITY FACILITIES AND SERVICES

Figure 4.3-1 depicts a variety of community facilities in relation to the project study area, including police and fire safety services, medical facilities, parks and other recreational facilities, schools, and churches.

4.3.1 PUBLIC AND COMMUNITY FACILITIES

The U.S. Postal Service maintains two facilities in the study area: a local post office at 460 Brannan Street and a processing and distribution center at Folsom and Main Streets.

Medical/social welfare facilities include the Seafarers Medical Center, a non-profit clinic at 40 Lansing Street, and the Delancey Street housing complex at Delancey and Brannan Streets on The Embarcadero. Operated by the non-profit Delancey Street Foundation, this four-story complex serves individuals recovering from alcohol and drug-related or other social problems and includes offices of the foundation's moving and transportation company and a restaurant.

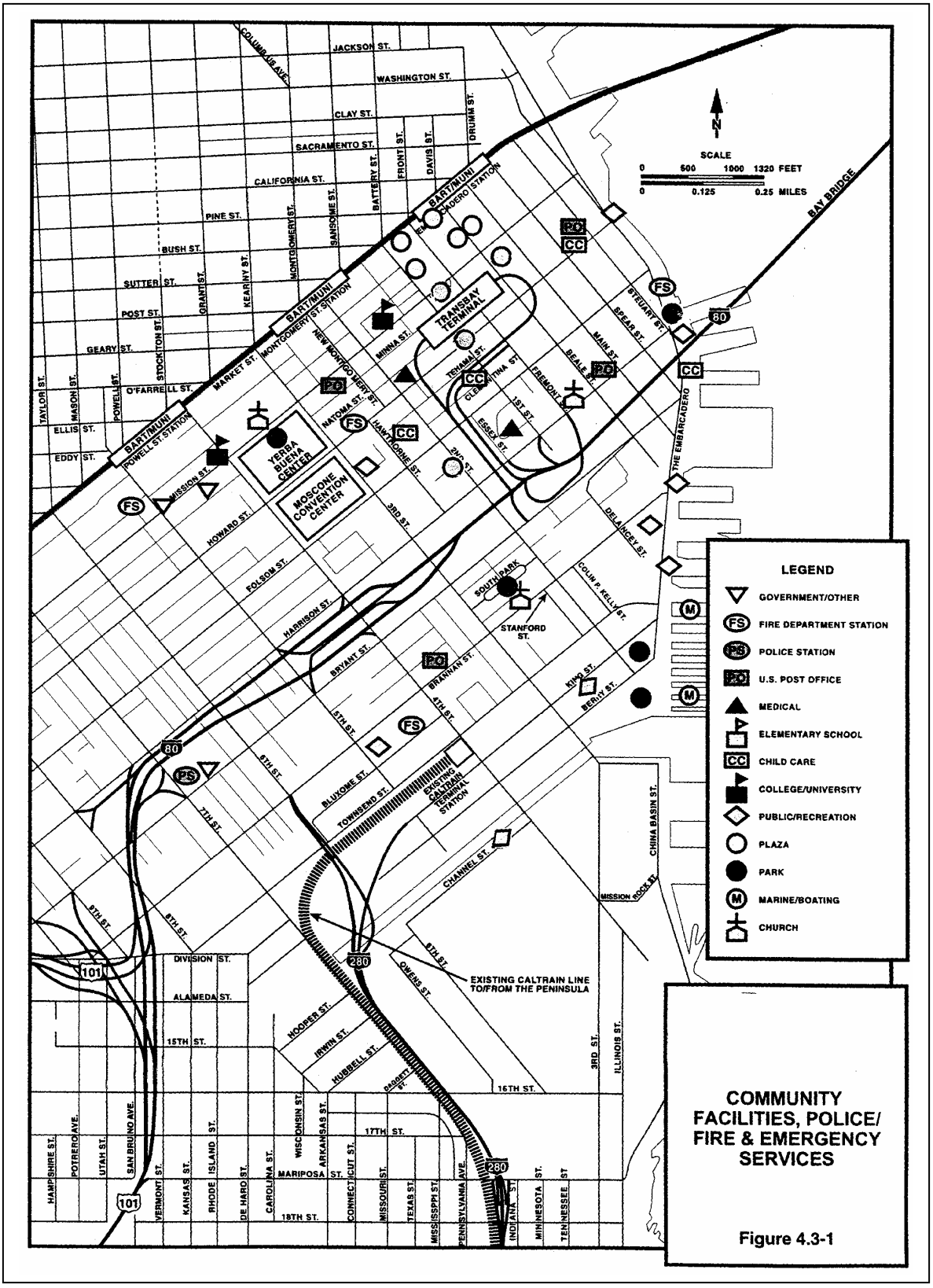
Five child care centers are located within the project study area: Discovery Treehouse Educational Center at 220 Spear Street; Healthy Environmental Child Development Center at 95 Hawthorne Street; Kinderhaven Children's Center at 474 The Embarcadero; South of Market Child Care Inc. at 366 Clementina Street; and PG&E building at Mission and Beale.

Parklands, schools and religious institutions are discussed in Section 4.4.

4.3.2 SAFETY AND EMERGENCY SERVICES

4.3.2.1 Police

The San Francisco City Police Department is responsible for general law enforcement in the study area, with both auto and foot patrols daily. The Police Department's Southern Station, located at 850 Bryant Street, provides police protection services to the study area. The Southern Police District is bounded by the Bay on the east, China Basin Channel on the south, Market Street on the north, and Duboce, Thirteenth, and Division Streets on the west. The district also includes the area bounded by Vermont, Sixteenth, and DeHaro Streets. Approximately 120 officers serve this district, and approximately five percent (six officers) are assigned to the proposed Transbay Redevelopment Area.


SCALE
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LEGEND
GOVERNMENT/OTHER
FIRE DEPARTMENT STATION
POLICE STATION
U.S. POST OFFICE
MEDICAL
ELEMENTARY SCHOOL
CHILD CARE
COLLEGE/UNIVERSITY
PUBLIC/RECREATION
PLAZA
PARK
MARINE/BOATING
CHURCH
EXISTING CALTRAIN LINE TO/FROM THE PENINSULA
COMMUNITY FACILITIES, POLICE/ FIRE & EMERGENCY SERVICES
Figure 4.3-1

In 2000, approximately 7,374 incidents – about 17 percent of the citywide total of Part I criminal incidents, which include violent crimes such as homicides, burglaries, and assaults – were reported in the Southern District. The average response time (measured from the time the call is received to the time officers arrive on the scene) for the Southern District is approximately five minutes for Priority A calls (life-threatening situations, severe assaults and crimes in progress) and about 15 minutes for Priority B calls (urgent situations where the crime has already occurred), which is about the same as citywide response times.

In addition to the local police force, the California Highway Patrol (CHP) has legal jurisdiction over the Transbay Terminal building and provides law enforcement officers to patrol the interior and the sidewalks surrounding the structure. Other security and enforcement agencies with jurisdiction in or near the study area include Amtrak, whose security officers police Caltrain vehicles and patrol Caltrain station and parking areas, and Bay Area Rapid Transit (BART) police who patrol the Embarcadero and Montgomery BART stations within the study area. AC Transit and Golden Gate Transit also have security personnel to monitor their facilities in the Transbay Terminal.

4.3.2.2 Fire and Emergency Medical Services

The San Francisco Fire Department provides fire suppression and prevention services as well as first response to medical emergencies. There are two fire stations within the study area: Station 1, located at 676 Howard Street, has fifteen personnel and is equipped with one engine (pumper), one (ladder) truck, one heavy rescue squad, and one ambulance; Station 8, at 36 Bluxome Street, has thirteen personnel, including a Battalion Chief, and is equipped with one engine, one truck, one hosetender, and one ambulance. Five other stations staffed with from six to fourteen personnel each and equipped with a total of five engines, two trucks, and five ambulances, are located nearby. Station 2, at 1340 Powell Street, has eleven personnel, including a Battalion Chief, and is equipped with one engine and one truck. Station 13, at 530 Sansome Street, has fourteen personnel, including a Division Chief and a Rescue Captain, and is equipped with one engine, one truck, and one ambulance. Station 29, at 299 Vermont Street, has six personnel and is equipped with one engine and one ambulance. Station 35/Fireboats, at Pier 22 ½ has eight personnel and is equipped with one engine, one ambulance, and two fireboats. Station 36, at 109 Oak Street, has six personnel, including a Battalion Chief, and is equipped with one engine, as well as the Department's Hazardous Materials Unit. A new fire station with one engine and an ambulance has recently been proposed to be located in the northeastern portion of the Mission Bay area, although the actual location is as yet unspecified.

The Fire Department uses both the low-pressure hydrant system and the high-pressure hydrant Auxiliary Water Supply System (AWSS) for fire fighting within the Transbay Redevelopment Area and the Caltrain storage yard properties. The AWSS provides an independent secondary source of water exclusively for fire fighting and is just inland of The Embarcadero. Covering the entire study area and vicinity, the AWSS system also includes two additional, back-up emergency water supplies: a Portable Water Supply System that can duplicate the underground

high-pressure system above ground, and a system of underground cisterns. There are five underground cisterns located within the study area, totaling 334,000 gallons of water storage capacity, one at Howard and Beale Streets, one at Howard and First Streets, one at Folsom and First Streets, one at Second and Folsom Streets, and one at First and Harrison Streets. The water mains that serve the area are in satisfactory condition and both the water supply and pressure are considered adequate for fire fighting purposes. The Fire Department has no planned water supply improvements to the AWSS; however, Mayor Willie Brown recently proposed a budget of approximately $180 million for a major upgrade to the City's water system for the fiscal year (2001-02), which, if implemented, should improve the low-pressure system.

Incidents involving known hazardous materials are handled by the Fire Department's Hazardous Materials Unit (Haz Mat 1), which is made up of members from Engine Company 36, located at 109 Oak Street, and backed by Rescue Unit and Battalion 2 members. The San Francisco Fire Code (as well as the San Francisco Health Code) establishes a system for permitting and monitoring the use and disposal of hazardous materials.

Emergency medical services in San Francisco are provided by Fire Department ambulances, which are complemented by Fire Department Rescue Units, and engines and trucks with "first response" capability. Ambulance Zone 1, the busiest of all eight San Francisco Zones, spans the study area, which represents nearly one fourth of the zone. Zone 1 extends from Van Ness Avenue on the west, Townsend Street on the south, and The Embarcadero on the northeast.

4.3.2.3 Disaster Preparedness

The San Francisco Mayor's Office of Emergency Services plans and coordinates emergency services in the event of a natural disaster. The City's Disaster Preparedness Plan divides the City into 10 districts. The Transbay Terminal and the Transbay Redevelopment Area are in District Three – South of Market Southern Waterfront. The designated fire station in the area is Battalion Station 8, located at 38 Bluxome Street. The designated first aid shelter is the South of Market Health Center located at 551 Minna Street. A staging area for the district has yet to be designated.

4.3.2.4 Solid Waste Management

Solid waste throughout the City is collected by Golden Gate Disposal Company and Sunset Scavenger Company, both subsidiaries of Norcal Waste Systems, Inc. Waste is transported to a transfer station at the San Francisco-Brisbane border, where it is hauled by the Sanitary Fill Company to the Altamont Landfill northeast of Livermore in Alameda County. San Francisco has a contract for disposal of all of its solid waste, up to a total of 15 million tons, at the Altamont Landfill until approximately 2010, the year at which the tonnage limit is expected to be reached, depending on changes in the rates of waste generation and diversion. At the beginning of 2001, about 6.4 million tons of contracted capacity remained at Altamont. Once the tonnage limit at Altamont has been reached, the City would likely contract with the Altamont Landfill or another nearby landfill for additional disposal capacity.

Approximately 42 percent of San Francisco's solid waste stream was diverted in 1999. Since the majority of waste produced is in the commercial and industrial sectors, much of the City's ability to reach the State mandated (AB 939) 50 percent diversion goal will rely on the reduction and diversion of commercial and industrial waste. Various conservation activities, such as recycling and public outreach programs, are in progress that may further reduce the volumes going to landfill.

4.4 PARKLANDS, SCHOOLS AND RELIGIONS INSTITUTIONS

4.4.1 PARKLANDS AND RECREATIONAL FACILITIES

Although the largely developed study area is notable for lack of publicly accessible open space and parks within its boundaries, the area does include public parks, a municipal marina, public waterfront areas, and several public plazas, as shown on Figure 4.3-1. South Park, described below, is the only open space within the study area under the jurisdiction of the San Francisco Recreation and Park Department. However, the Recreation and Park Department publicly provides and maintains open space near the study area including the South of Market Recreation Center, located on Sixth Street at Folsom Street, and Justin Herman Plaza at the foot of Market Street at The Embarcadero.

South Park, encircled by South Park Avenue between Second and Third Streets, is an approximately one-acre, wooded neighborhood park with pedestrian sidewalks and benches and a children's play area. South Beach Park is an approximately three-acre city park located along The Embarcadero between King Street and China Basin. South Beach Park adjoins the South Beach Harbor, a 690-boat berth marina for small boats. Mission Creek Park is approximately 15 acres, with portions bordering the north and south edges of China Basin Channel. The park is being developed as part of the Mission Bay North Redevelopment Plan. Rincon Point Park is approximately three acres located along The Embarcadero at Folsom Street, developed as part of the Rincon Point Redevelopment Plan. With the reconstruction of The Embarcadero roadway between Market and King Streets, improvements have been made along the Bay that provide increased public access and a continuous pedestrian walkway (Herb Caen Way) between South Beach Harbor, Market Street, and points north.

To the south and west of South Beach Harbor is China Basin, a channel extending from San Francisco Bay inland to just east of Seventh Street and I-280. The basin provides berths for sailboats, houseboats, and other moderately sized craft in the channel area west of Fourth Street. Along the south bank of the basin, just outside of the project area, is a linear community park with a pedestrian way and community garden plots.

Within the commercial office district in the vicinity of the Transbay Terminal are a number of privately developed plazas open to the public. Some are at street level; others are elevated and accessible by stairs or escalators.

Recreational facilities near the Caltrain Station at Fourth and Townsend include San Francisco Tennis Club at 645 Fifth Street and Pacific Bell Park, a 45,000-seat baseball stadium on King Street between Second and Third Streets.

4.4.2 SCHOOLS

No public or private schools (grades K-12) are located in the study area. Secondary-level private schools and colleges located within the study area include Golden Gate University's main campus, which is located on Mission Street, between First, Second, and Stevenson Streets. The campus includes administrative offices, classrooms, meeting facilities, and auditoriums. Approximately 5,000 full-and part-time undergraduate and graduate students attend. The Academy of Art College has academic facilities within the study area at 79 New Montgomery and Mission Street, and 180 New Montgomery and Howard Street. Heald College has facility locations at Fremont and Mission Streets and on Howard Street near Third Street. The San Francisco Institute of Architecture (SFIA), a recently formed graduate school in architecture, has a new facility at 555 Howard Street, between First and Second Streets that includes exhibit gallery space, a library, seminar rooms, computer rooms, workshop space, and a design studio. These community facilities are shown on Figure 4.3-1.

4.4.3 RELIGIOUS INSTITUTIONS

There is one religious institution in the study area, Apostleship of the Sea at 399 Fremont Street (at Harrison), which also provides temporary housing. The Grand Oriente Filipino Masonic Temple is located at 95 Jack London Street, south of South Park between Second and Third Streets. This religious institution is shown on Figure 4.3-1.

4.5 FISCAL/ECONOMIC CHARACTERISTICS

Existing residential and nonresidential privately-owned properties within the study area currently generate revenues to the City and County of San Francisco through direct and indirect taxation. These revenues include property taxes, payroll taxes, retail sales taxes, parking taxes, and other less significant taxes, such as utility taxes. Tax revenues associated with the properties to be acquired for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project are estimated in Section 5.6, Fiscal and Economic Impacts, which also includes an estimate of property acquisition costs.

Total revenues for the City and County of San Francisco in Fiscal Year 1999-2000 were approximately $2.5 billion, including $1.4 billion in tax revenues. Property taxes, which accounted for an estimated $544 million of the total revenues, are levied on the assessed value for all privately-owned property. The property tax rate for Fiscal Year 1999-2000 was 1.129 percent. Of the collected property tax, approximately 75 percent was allocated to the City and County of San Francisco's general fund; the remaining 25 percent of property tax revenues accrued to debt service and special revenue funds.

Business taxes accounted for approximately $268 million of Fiscal Year 1999-2000 revenues. At the time, business taxes paid by individual businesses were based on the payroll tax or a gross receipts tax, whichever netted the larger tax amount. The payroll tax was levied on payroll expenses of persons or associates doing business in San Francisco, while the business tax was a gross receipts tax on all business activities performed by persons or associates in San Francisco. Subsequently, business tax payments in the City and County of San Francisco were changed to be solely based on the payroll tax.

In Fiscal Year 1999-2000, the City and County of San Francisco's revenues included $547 million in "other local taxes, " which largely included sales taxes. The total sales tax rate in San Francisco in Fiscal Year 1999-2000 was 8.25 percent. Of this amount, the City and County of San Francisco received 1.25 percent (i.e., 1.00 percent to the City and 0.25 percent to the County). In San Francisco another 1.0 percent is levied and apportioned among the San Francisco County Transportation Authority, the San Francisco Educational Finance Authority, and the San Francisco Public Finance Authority.

Other major revenue sources for San Francisco in Fiscal Year 1999-2000 were intergovernmental transfers ($805 million), charges for services ($186 million), rents and concessions ($72 million), and interest and investment income ($47 million).

4.6 AIR QUALITY

This section describes regional, state, and federal air pollutant standards and presents information regarding existing air quality in the project area and vicinity.

4.6.1 FEDERAL, STATE, AND LOCAL AIR QUALITY STANDARDS

The Federal Clean Air Act of 1970 resulted in the adoption of federal air pollutant standards, known as National Ambient Air Quality Standards (NAAQS), for pollutants including carbon monoxide (CO), ozone (O_3), sulfur oxides (SO_x), nitrogen oxides (NO_x), and particulate matter less than 10 microns in diameter (PM_{10}), and fine particulate matter ($PM_{2.5}$). Areas exceeding federal NAAQS are identified and designated as nonattainment areas. The state air pollutant standards are known as the California Ambient Air Quality Standards (CAAQS), and are generally more stringent than the NAAQS. Federal and state standards are shown in Table 4.6-1.

Existing compliance (i.e., area "attainment") with the NAAQS and CAAQS for criteria pollutants is discussed below, along with existing pollutant concentrations.

Table 4.6-1: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	National Standard	California Standard
Ozone	1 hour 8 hour	0.12 ppm* 0.08 ppm	0.09 ppm N/A
Carbon Monoxide	1 hour 8 hour	35 ppm 9 ppm	20 ppm 9.0 ppm
Nitrogen Oxides	1 hour annual	--- 0.053 ppm	0.25 ppm ---
Sulfur Dioxide	1 hour 24 hour annual	--- 365 μ g /m^3 80 μg /m^3	0.25 ppm 0.04 ppm ---
Suspended Particulates (PM_{10})	24 hour annual	150 μg/m^3 50 μg/m^3	50 μg/m^3 30 μg/m^3
Particulate Matter - Fine ($PM_{2.5}$)	24 hour annual	65 μg/m^3 15 μg/m^3	----------

* ppm = parts per million; μg/m^3 = micrograms per cubic meter

Source: California Air Resources Board, 1999.

The project site is within the San Francisco Bay Area Air Basin (BAAB), which comprises the nine-county Bay Area. Air quality in the BAAB is regulated primarily by the Bay Area Air Quality Management District (BAAQMD), which is responsible for regulating stationary source emissions and submitting federally- and state-required documentation to the California Air Resources Board (ARB). The ARB regulates mobile source emissions and is responsible for reviewing state-required documentation submitted by regional agencies such as the BAAQMD, and for submitting federally-required documents to the United States Environmental Protection Agency (US EPA).

Regionally, BAAQMD has standards for project-related air contaminant emissions levels that it considers significant. These standards, expressed in terms of pounds per day, are presented in Table 4.6-2.

Table 4.6-2: BAAQMD Thresholds for Project-Related Contaminant Emissions

Pollutant	Pounds per Day From Project Operations
Reactive Organic Gas	80
Nitrogen Oxides	80
PM_{10}	80

Source: Bay Area Air Quality Management District, BAAQMD CEQA Guideline, Table 3, pg. 15, April 1996.

4.6.2 EXISTING AIR QUALITY AND REGIONAL ATTAINMENT STATUS

The transport and concentration of air pollutants are influenced by three principal meteorological factors: wind direction, wind speed, and atmospheric stability. The San Francisco Bay Area is in a large basin enclosed by hills that open into valleys. This topography creates the potential to trap and accumulate air pollutants and combines with variable weather conditions, airflow, and wind speeds to cause differing air pollution concentrations.

Existing air quality conditions in the study area are reflected by measurements taken at BAAQMD monitoring stations. The nearest monitoring station is the Arkansas Street monitoring station in San Francisco, located at 10 Arkansas Street, near Potrero Hill. Table 4.6-3 presents five years of data at this station to demonstrate pollution trends. The table also indicates federal and state standards for these pollutants, and where these pollutant standards have been exceeded.

According to BAAQMD, the BAAB is in attainment with national standards for carbon monoxide, nitrogen dioxide, sulfur dioxide, and annual PM10. It is designated non-attainment for ozone, and unclassified for PM2.5 and 24-hour PM10. With respect to California standards, the BAAB has attainment status for carbon monoxide, nitrogen dioxide, and sulfur dioxide. It is designated non-attainment for ozone and PM10.

The Bay Area experienced no days over the federal ozone standard in 1997, eight days in 1998, three days in 1999, and three days in 2000. This pattern can be attributed to differences in the number and severity of episodes of “ozone conducive” weather from one year to another. Even though there has been steady progress in reducing total volatile organic compounds (VOC) and NOx emissions in the Bay Area, the reductions have not been enough to prevent exceedences of the ozone standards under all meteorological conditions. The BAAQMD, the Metropolitan Transportation Commission (MTC), and the Association of Bay Area Governments (ABAG) recently prepared the Bay Area 2001 Ozone Attainment Plan. This plan is a revision to the Bay Area part of California's plan to achieve the national ozone standard. The plan was prepared in response to EPA's Federal Register notice of March 30, 2001 proposing to partially approve and partially disapprove the Bay Area's 1999 Ozone Attainment Plan. At a public hearing on October 24, 2001, the MTC and ABAG boards adopted the Plan and subsequently submitted it to the ARB. The ARB approved the 2001 Ozone Attainment Plan on November 1, 2001 and forwarded the Plan to the US EPA for review and approval.

Table 4.6-3: Air Quality Standards, Ambient Measurements and Violations, Arkansas Street, San Francisco

Pollutant	State Standard	Federal Standard	Year	Maximum Level	Violation Days
Ozone 1 hour	0.09 ppm	0.12 ppm	1996	0.07	0/0
			1997	0.07	0/0
			1998	0.05	0/0
			1999	0.08	0/0
			2000	0.06	0/0
Particulates (PM_{10}) 24 hours	50 µg/m^3	150 µg/m^3	1996	70.9	2/0
			1997	81.0	3/0
			1998	52.4	1/0
			1999	77.9	6/0
			2000	63.2	2/0
Carbon Monoxide 8 hour	9.1 ppm	9.5 ppm	1996	3.8	0/0
			1997	3.5	0/0
			1998	4.0	0/0
			1999	3.7	0/0
			2000	3.2	0/0
Nitrogen Oxides	25 ppm – 1 hr	0.05 ppm – annual	1996	0.08	0/0
			1997	0.07	0/0
			1998	0.08	0/0
			1999	0.10	0/0
			2000	0.07	0/0
Sulfur Dioxide	0.05 ppm – 1 hr	0.14 ppm – 24 hr	1996	0.008	0/0
			1997	0.007	0/0
			1998	0.005	0/0
			1999	0.007	0/0
			2000	0.008	0/0

Notes:
ppm = parts per million
µg/m^3 = micrograms per cubic meter
Violation days = number of days exceeding State or federal standard
Source: California Air Resources Board, Air Quality Data, 1996-2000.

4.6.3 REGULATORY SETTING

As amended in 1990, the federal Clean Air Act provides the current framework for air conformity. The Clean Air Act defines conformity to mean:

> "Conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards . . ."

Section 176 of the Clean Air Act specifies that no federal agency may approve, support, or fund an activity that does not conform to the applicable implementation plan. In late 1993, the EPA promulgated final rules for determining conformity of transportation plans, programs, and

projects. These final rules, contained in 40 CFR 93A (Code of Federal Regulations), govern the conformity assessment for the proposed project.

The BAAQMD, in coordination with the MTC and ABAG, is responsible for preparing air quality plans pursuant to the Federal and California Clean Air Acts. Under the Federal Clean Air Act, State Implementation Plans (SIPs) are required for areas that are designated as non-attainment for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, or inhaleable particulate matters. For the BAAB, a SIP is required for ozone since the region is currently designated as a federal non-attainment area for ozone. As discussed previously, the most current SIP is called the Bay Area 2001 Ozone Attainment Plan, which was adopted by the MTC, ABAG, and BAAQMD in October 2001. ARB adopted this Plan in November 2001, and EPA approved the associated emissions budget in February 2002.

Whereas the SIP is prepared pursuant to the Federal Clean Air Act, the Bay Area Clean Air Plan (CAP) is prepared to meet the requirements of the California Clean Air Act. The CAP is the region's plan for reducing ground-level ozone. The CAP identifies how the BAAB would meet the state ozone standard by its attainment date. The 2000 CAP focuses on identifying and implementing control measures that would reduce ozone. It was adopted by the BAAQMD in December 2000.

The MTC is responsible for *ensuring* that the Bay Area Regional Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP) conform to the SIP. *The 2001 RTP was adopted by MTC in March 2002 following EPA's approval of the Bay Area mobile source emissions budget. The 2003 TIP was adopted by the MTC on January 22, 2003 and was federally approved on February 3, 2003."*

4.7 NOISE AND VIBRATION

4.7.1 EXISTING NOISE ENVIRONMENT

The noise environment of the study area, like that in most urban areas, is dominated by automobile and truck traffic noise, with traffic on the Bay Bridge most pervasive in areas closest to the Bridge. Other noise sources in the project area include small aircraft flyovers and normal community activity.

A noise survey was conducted in July 1995, with one additional noise measurement in November 1996, for the Caltrain San Francisco Downtown Extension Draft EIS/EIR. Additional noise analysis was done in 2001. The original survey documented the existing noise environment in the study area and provided data necessary for accurate estimation of how the noise environment would change under project alternative conditions. Long-term (24-hour) noise monitoring sites were located at residential complexes and the site of a planned residential high-rise. Short-term (30 minutes) measurement sites were located near sensitive receptors

along the proposed alignments and near roadways that are the primary contributors to ambient noise levels.

The data obtained in the 1995-96 noise survey remain valid for the current project. Noise conditions in the corridor have not changed substantially. Supplementary measurements were taken in May and June of 2001. Table 4.7-1 presents results of the 24-hour and short-term surveys, and Figure 4.7-1 indicates the locations of the noise measurement sites.

Table 4.7-1: Summary of Noise Survey Results

Location	Type	Start		Results (dBA)	
		Date	Time	L_{dn}	L_{eq}
LT1: Bayside Village	24-hour	7/24/95	11:00	72	--
LT2: Bay Crest Residential	24-hour	7/24/95	12:00	76	--
LT3: Delancey Street	24-hour	7/25/95	13:00	71	--
LT4: South Beach Marina	24-hour	7/25/95	14:00	64	--
LT5: Oriental Warehouse	24-hour	7/26/95	15:00	67	--
LT6: Townsend Street	24-hour	6/18/01	08:00	76	--
ST1: Parking Lot near Bayside Village	30-minute	7/25/95	16:52	72*	69
ST2: South Beach Marina	30-minute	7/26/95	10:08	67*	64
ST3: Bayside Village, Bryant Street	30-minute	7/26/95	16:56	71*	68
ST4: Parking Lot, Planned Residential (Century Development)	30-minute	7/26/95	18:18	60*	57
ST5: Bay Crest Residential, Beale Street	30-minute	7/27/95	14:05	75*	72
ST6: Residential between Folsom and Harrison, Essex Street side	60-minute	11/4/96	15:50	68*	65
ST 7: Parking lot south of existing Caltrain Station and yard	30-minute	6/18/01	11:51	71*	69
ST 7: Parking lot south of existing Caltrain Station and yard	30-minute	6/19/01	07:43	71*	67

* L_{dn} at short-term sites estimated as L_{eq} + 3 dBA.

Source: Harris Miller Miller & Hanson, August 2001.

The results are typical for an urban area and are presented in terms of the L_{eq} (Equivalent Sound Level), which is the standard measure for traffic noise, and L_{dn} (Day-Night Equivalent Sound Level), which is a good representation of community noise levels.[1]

[1] L_{eq} is a measure of noise exposure over time, which is referred to as "equivalent" since it is equivalent to the level of a steady sound which, over a referenced duration and location, has the same A-weighted sound energy as fluctuating sound. Durations of one hour and one day are commonly used. L_{dn} is a measure of noise exposure over a 24-hour period, with an adjustment for nighttime noise to account for people being more sensitive to nighttime noises. Both measurements are presented here in terms of dBA, or A-weighted decibels, which are logarithmic units of measurement filtered to approximate human hearing.

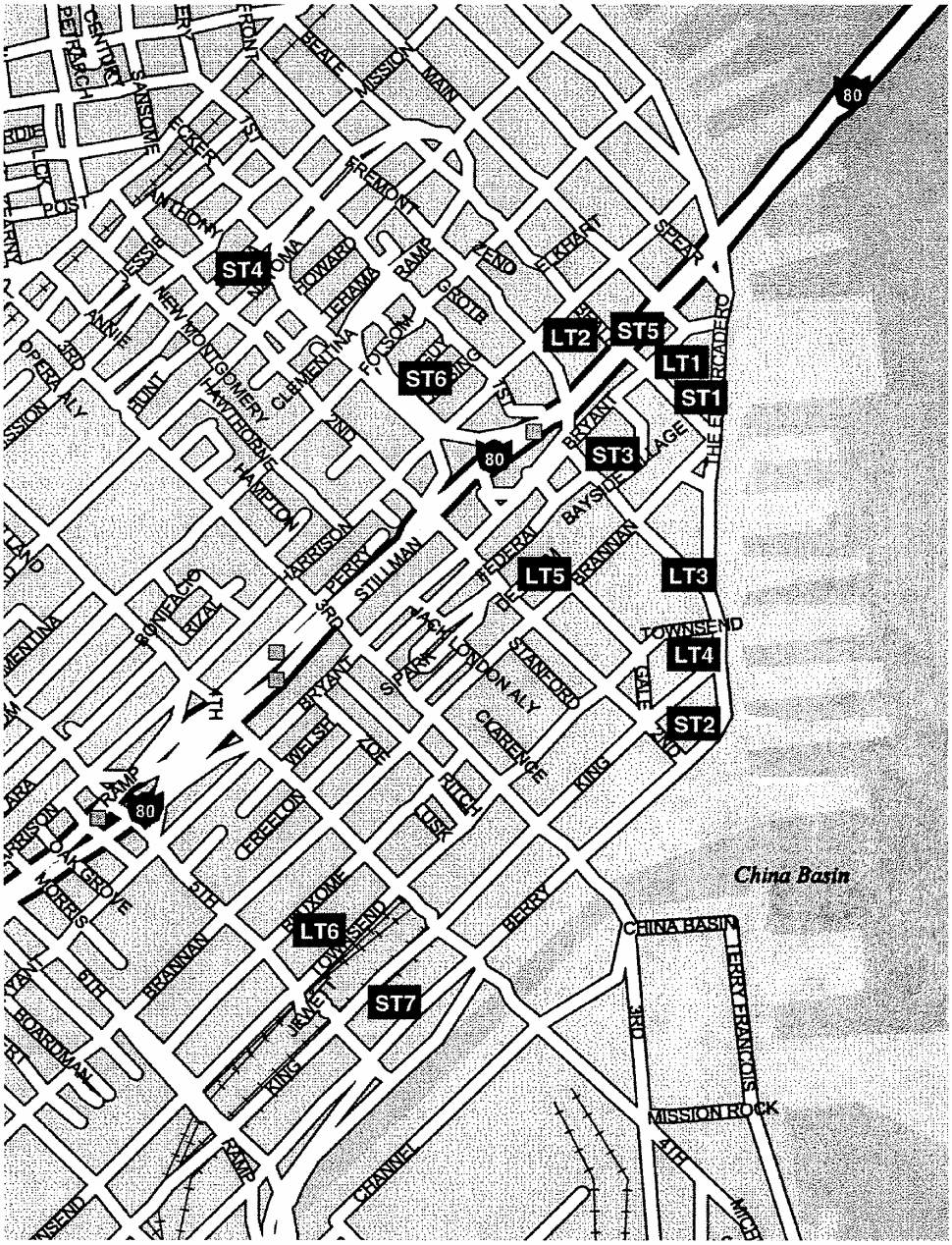


Figure 4.7-1: Noise Monitoring Locations

To account for most people being more sensitive to noise during nighttime hours, the calculation of L_{dn} includes a weighting factor for noise that occurs between the hours of 10 PM and 7 AM. The effect of this weighting factor is that a noise event, such as a loud truck, that occurs during the nighttime is equivalent to ten of the same events during daytime hours.

As shown in Table 4.7-1, existing L_{dn} measurements in the study area range from 60 to 76 dBA. The highest noise levels were measured at sites directly exposed to the Bay Bridge traffic. The lowest levels of noise exposure were measured at the South Beach Marina Apartments and at the site for the Century development. The South Beach Marina site was completely shielded from the bridge. Although the Century Development site is just south of Mission Street near several high traffic volume streets where L_{dn} would normally range between 65 to 70 dBA or higher, the noise levels are relatively low due to the shielding effect of large buildings around the site.

4.7.2 EXISTING VIBRATION

Ambient vibration measurements were performed as part of the 1995 noise survey and were taken simultaneously with the noise measurements at the five short-term measurement sites. Supplemental vibration measurements were taken in May and June of 2001 to further define the vibration propagation characteristics along the Second Street corridor, and to characterize the response of representative buildings to ground-borne vibration. The major existing sources of ground-borne vibration are traffic on local streets, particularly large buses and trucks, mechanical equipment associated with buildings, and existing Caltrain and Muni operations. Figure 4.7-2 indicates the locations of the vibration propagation test sites. Table 4.7-2 presents results of the vibration survey in terms of the range of route mean square (RMS) vibration velocity expressed in decibels (VdB in this analysis).[2] The normal threshold of human perception of vibration is around 65 VdB, and most people find levels up to 75 to 80 VdB acceptable for residential land uses as long as the vibration happens only intermittently. Typical levels of vibration measured in the study area were in the 40 to 50 VdB range, with the highest level at 58. This indicates that existing ground-borne vibration in the study area is almost always below the threshold of human perception.

The highest levels of ambient ground-borne vibration were measured at the Clock Tower building at Bryant and Second Streets. Both exterior and interior vibration was measured. The exterior location was on the sidewalk relatively close to the street. Even at this location, the highest vibration levels were only slightly above what can be perceived by most humans.

[2] RMS (root-mean-square) amplitude represents the average energy over a short time interval; typically one second is used to evaluate human responses to vibration. RMS is considered the best available measure of potential human annoyance from ground vibration; it differs from peak particle velocity (PPV), which is used to define the thresholds for potential building damage from construction vibration. PPV represents the maximum instantaneous peak in the velocity of an object's vibratory motion. VdB is used in this analysis to denote decibels.

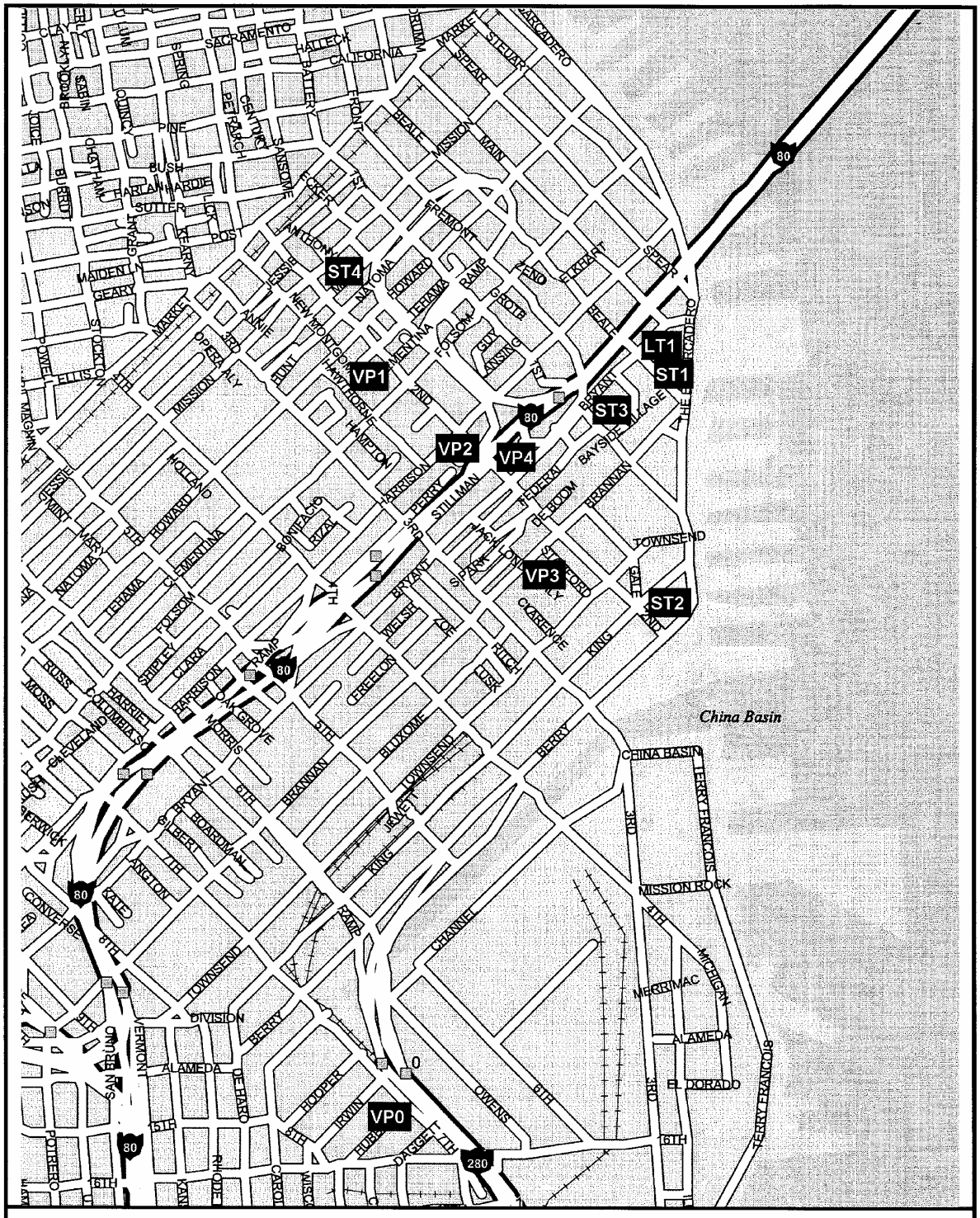


Figure 4.7-2: Vibration Propagation Test Sites

In addition to the measurements of ambient vibration, vibration propagation tests were performed to characterize how local geologic conditions affect vibration propagation in the study area. The vibration propagation tests performed for the study area used a weight dropped onto a load cell to cause a ground vibration pulse. The impact force of the weight was measured with the load cell, and accelerometers were used to measure the vibration pulse at distances from 25 to 200 feet away.

Table 4.7-2: Summary of Ambient Vibration Results

Measurement Site [1]	Location	Typical Background Vibration (VdB) [2]	Vibration Sources
V1 (ST1 on Figure 4.7-1)	Parking Lot near Bayside Village	35-40	Buses and trucks
V2 (ST2 on Figure 4.7-1)	South Beach Marina	35-40	Buses and trucks
V3 (ST3 on Figure 4.7-1)	Bayside Village, Bryant Street	40-50	Cars into building, trucks, traffic on Bay Bridge
V4 (ST4 on Figure 4.7-1)	Parking Lot (planned Century residential development)	35-40	Cars
V5 (ST5 on Figure 4.7-1)	Bay Crest Residential, Beale Street	40-43	Trucks, traffic on Bay Bridge, cars
V6 (VP2 on Figure 4.7-2)	Harrison Street Parking Lot	36-40	Trucks, traffic on Bay Bridge, cars
V7 (VP4 on Figure 4.7-2)	Second St. & Bryant (Clock Tower building, exterior)	55-65	Trucks, traffic on Bay Bridge, cars, people on sidewalk
V8 (VP4 on Figure 4.7-2)	Second St. & Bryant (Clock Tower building, interior)	50-60	Trucks, traffic on Bay Bridge, cars

Vibration measurements at V1 through V5 were taken in conjunction with short-term (ST) noise measurements. Vibration measurements at sites V6 through V8 coincided with vibration propagation (VP) tests.

Vibration levels are in terms of RMS vibration velocity in decibels with a reference quantity of 1 µin./sec.

Source: Harris Miller Miller & Hanson, August 2001.

A test of existing Caltrain vibration was also conducted at the intersection of Hubbell and Seventh Streets. The results of this test were used to develop a force density curve that is representative of the existing commuter rail equipment. The results of the vibration propagation tests in combination with the train vibration tests were used to estimate future ground-borne vibration levels from train operations along the proposed Townsend and Second Street corridors. Locations of vibration propagation testing sites are described in Table 4.7-3 and shown on Figure 4.7-2.

Table 4.7-3: Vibration Propagation Measurement Sites

Site #	Description
VP0	Hubbell and Seventh Street (existing train vibration). Both train vibration and transfer mobility were measured at this site. The information was used to develop a force density curve that is representative of the existing commuter rail equipment. The vibration measurements at this site were used to characterize the ground-borne vibration along Townsend before the subway structure would be founded in bedrock.
VP1	Marine Firefighter's Union Building, 240 Second Street (outdoor-to-indoor test). The test at this location represents the high-rise apartment building at 246 Second Street, and the Marriott Hotel under construction across from the Marine Firefighter's Union Building.
VP2	Parking lot adjacent to 400 Harrison Street (outdoor vibration propagation). Near the I-80 overpass at Second Street, this site represents the single family homes between Bryant Street and Brannan Street, west of Second Street. An accelerometer was placed on a landing at the rear of 400 Harrison Street, to provide an estimate of the ground-to-foundation coupling loss between a building and the ground.
VP3	Private parking lot on Brannon Street near Stanford Street (outdoor vibration propagation). This site represents the apartment building on Townsend Street, near the current layover facility. An accelerometer was placed on the foundation of the nearby Pac-Bell garage to provide an estimate of the ground-to-foundation couple loss.
VP4	Clock Tower residential buildings (outdoor-to-indoor vibration test). This site represents the outdoor-to-indoor vibration propagation at the Clock Tower Apartments.

Source: Harris Miller Miller & Hanson, August 2001.

4.8 GEOLOGY AND SEISMICITY

This section describes the geology of the project area and the susceptibility of site soils to seismically induced hazards.

4.8.1 GEOLOGIC SETTING

The project area, and the San Francisco Peninsula in general, is located in the Coast Ranges geomorphic province, although the dominant northwesterly trend of ridges and valleys characteristic of the Coast Ranges is somewhat obscured within the City of San Francisco, except for features such as Russian and Telegraph Hills. The regional topography is characterized by relatively rugged hills formed by Jurassic- to Cretaceous-aged bedrock, surrounded by low flat-lying areas that are underlain by Quaternary sedimentary deposits. Bedrock consists of highly deformed and fractured sedimentary rocks of the Franciscan assemblage. Locally, Franciscan bedrock contains large through-going shear zones such as the City College and Fort Point --Potrero Hill -- Hunters Point shear zones.

From a geotechnical standpoint, the study corridor is divided into two general areas: the portions of the study area that are located bayward of the historic shoreline, and portions of the study area

on the land side of that line. The portions of the study area that are bayward of the historic (c. 1848) shoreline represent areas reclaimed by filling former marshes and estuaries of the Bay, and include the former Yerba Buena Cove, South Beach, and Mission Bay. (See Figure 4.8-1.) Today these areas include much of the Financial District, South of Market, and Mission Bay areas of San Francisco. Soils in these areas are generally characterized by the presence of soft and compressible Bay Mud, under the surficial fill placed when these areas were reclaimed in the late 1800s and early 1900s. The depth of these sediments varies substantially depending on the position of the area of interest relative to the old shoreline. Fill materials also vary, and may include clay, dune sand, rubble, building demolition debris, buried ships, and other materials.

The portion of the project area that is inland from the historic shoreline is underlain by Franciscan bedrock at the surface or at shallow depths, although Bay Mud extends landward of the 1848 shoreline near the Transbay Terminal and in the southern portion of the project area between Third and Seventh Streets in areas of former marshlands. Quaternary sediments overlie bedrock throughout the project area except for Rincon Hill, which is the only surface exposure of Franciscan bedrock in the project area. Bedrock is less than 10 feet below ground surface near Townsend and Second Streets.

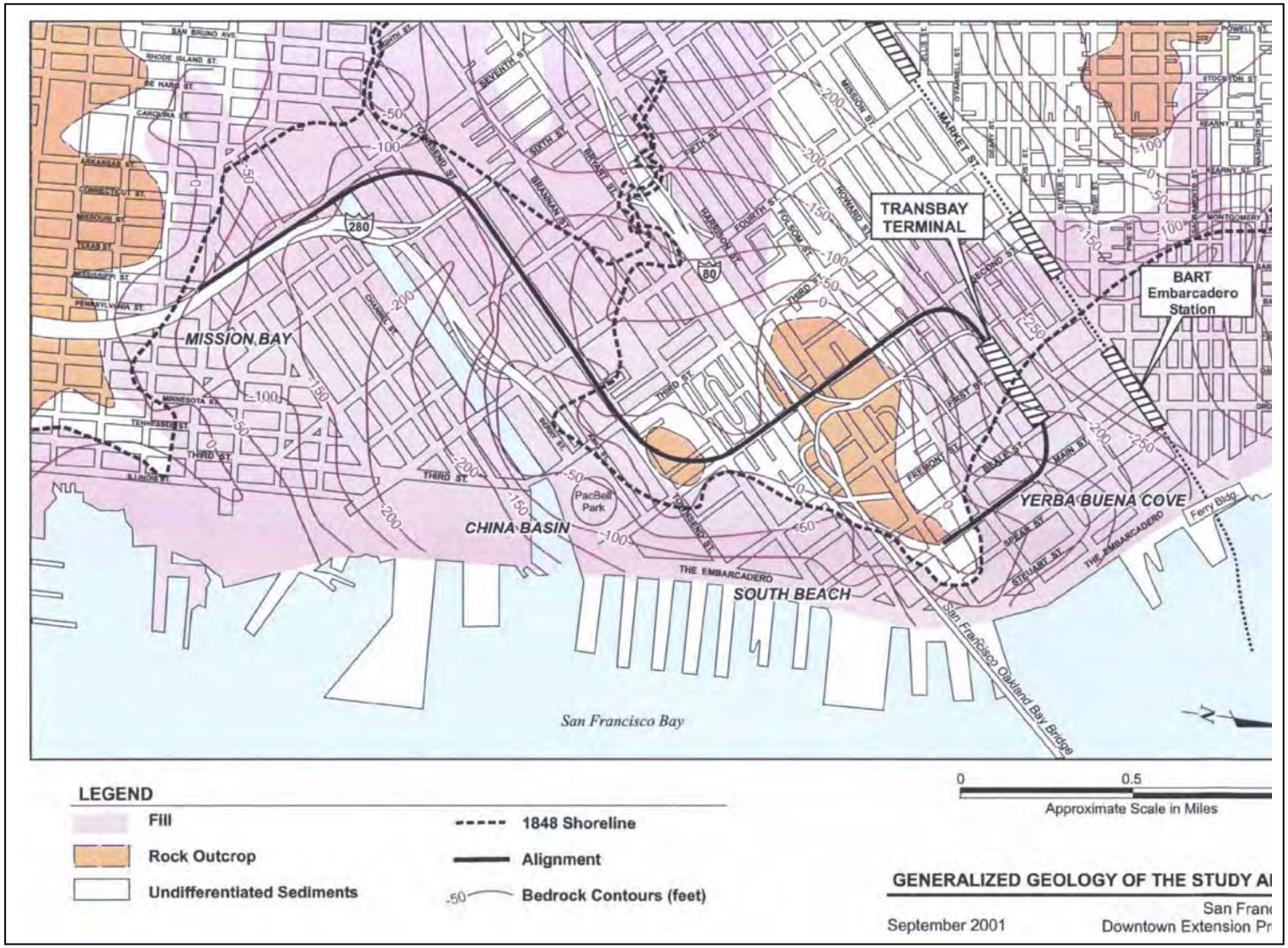
Groundwater is between Seven and 10 feet below ground surface in the flat-lying portions of the project area, which corresponds to elevations of -3 to -10 feet relative to City and County of San Francisco Datum (8.6 feet above mean sea level).

4.8.2 SEISMIC SETTING

The project area is seismically active, and ground shaking from earthquakes occurs periodically. Active faults in the Bay Area are illustrated in Figure 4.8-2.

The San Andreas and Hayward faults have the highest slip rates and are the most active of any faults in the Bay Area. The San Andreas Fault, which is approximately 8.5 miles west of the project site, was the source of the 1906 magnitude 8.2 earthquake and the 1989 magnitude 7.1 (Loma Prieta) earthquake. The Hayward Fault, which lies approximately nine miles east of the project site, was the source of the 1836 and 1868 magnitude 6.8 earthquakes. The Calaveras Fault, which is approximately 22 miles east of the project site, was the source of a 1911 magnitude 6 earthquake and a 1984 magnitude 6.2 earthquake.

Other important earthquake sources that are capable of producing large magnitude earthquakes are the San Gregorio, Rodgers Creek, and Greenville fault zones.


TRANSBAY TERMINAL
BART Embarcadero Station
MISSION BAY
CHINA BASIN
SOUTH BEACH
YERBA BUENA COVE
PacBell Park
Ferry Bldg
San Francisco Bay
San Francisco Oakland Bay Bridge
MARKET ST.
THIRD ST.
THE EMBARCADERO
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80
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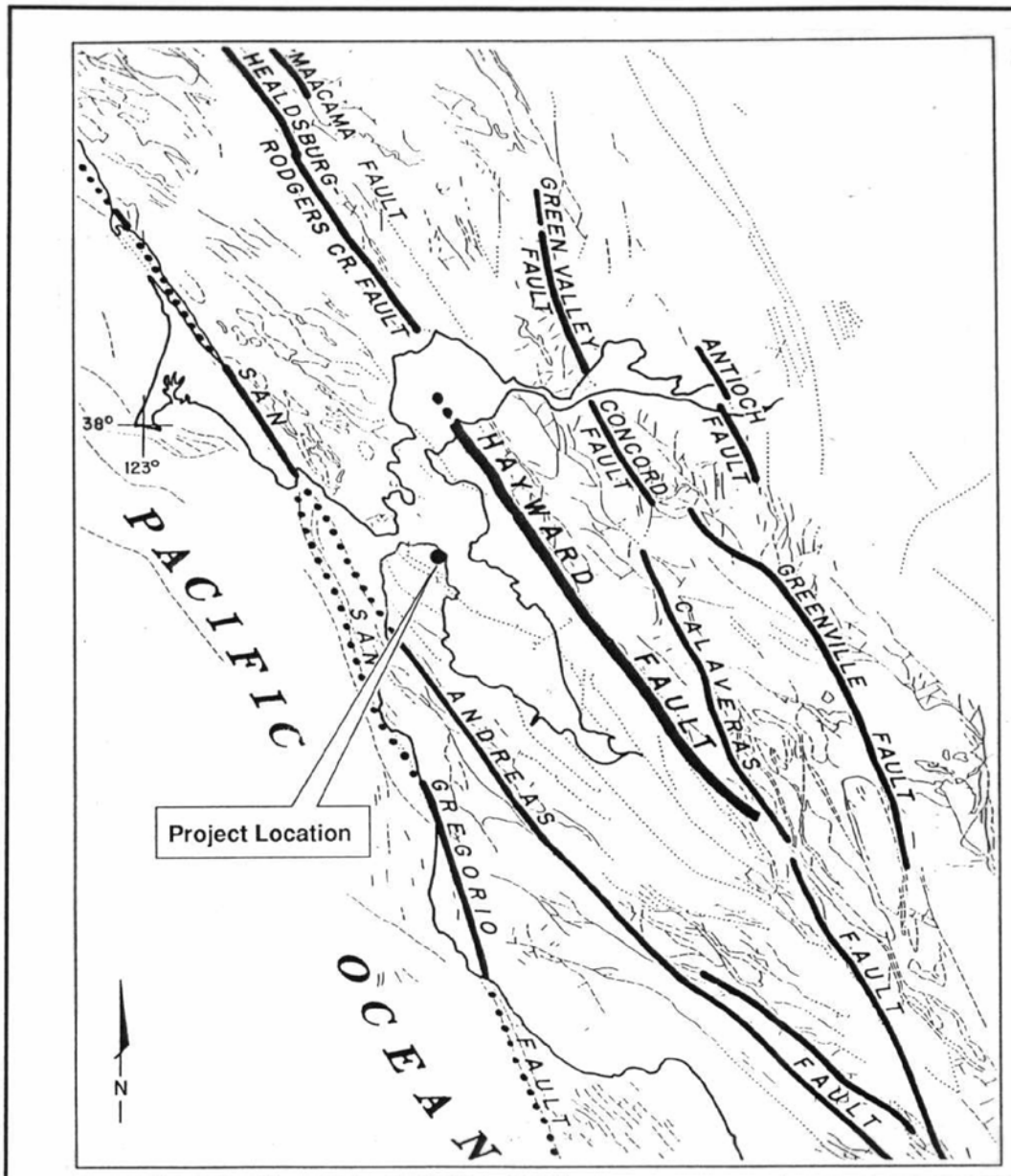

Source: California Division of Mines and Geology, Special Publication 78 (1987)

LOCATIONS OF ACTIVE FAULTS IN THE SAN FRANCISCO BAY AREA

Figure 4.8-2

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No known faults cross the project alignment; however the faults shown in Figure 4.8-2 may subject the study area to strong ground shaking. Estimates of peak ground acceleration from an earthquake on the San Andreas or Hayward fault within the study area range from 0.2g to 0.5g. Ground failure hazards during an earthquake can include settlement and liquefaction. During the 1989 Loma Prieta earthquake, ground deformation in the project area consisted of settlement, ground cracking, and/or sand boils. These features were observed between Beale Street and The Embarcadero from Market to Harrison Streets, and from Fourth to Ninth Streets between Mission and King Streets.

4.9 VEGETATION AND WILDLIFE

Portions of the project area lie within reclaimed areas formed by filling former marshes and estuaries of San Francisco Bay, including Mission Bay, South Beach and Yerba Buena Cove. Except for South Park and landscaping associated with recent residential developments in the South Beach/Steamboat Point area, the vicinity of the proposed project is generally paved with concrete and asphalt. No sizable natural habitat for biological plant, animal, or bird species remains.

Although the project area lies adjacent to the San Francisco Bay, all construction would occur outside the Bay Conservation and Development Commission's 100-foot "shoreline band," and no project alternatives would require filling of or construction within wetlands or Bay waters or affect water quality. No effects on San Francisco Bay bird species are anticipated.

These findings are consistent with the previous environmental studies conducted in the area, including the March 1997 Draft EIS/EIR for the Caltrain Downtown Extension Project, and the Draft EIS/EIR for Alternatives to Replacement of the Embarcadero Freeway and the Terminal Separator Structure, published by the City of San Francisco, Caltrans, and the Federal Highway Administration in 1995. Both these studies addressed an area similar to the present project area. The U.S. Fish and Wildlife Service indicated that no adverse effects on endangered species of wildlife and plants or their habitats are expected from the proposed improvements. A copy of the Service's August 10, 2001, letter is provided in Appendix D.

4.10 WETLANDS

The present China Basin Channel is not a naturally occurring tidal creek but the remains of the former Mission Bay. The entire site, like the project area in general, has been altered through extensive urban development or landscaping. No wetlands remain.

4.11 WATER RESOURCES

4.11.1 GROUND WATER RESOURCES

The occurrence of groundwater in the project area is related to the nature of shallow soil and bedrock. In the fill areas (see Figure 4.17-1 for the location of fill areas and the historic shoreline.), groundwater occurs at depths of two to ten feet below ground surface, and the elevation of groundwater corresponds with the level of San Francisco Bay. In areas underlain by alluvial soils and shallow bedrock, which generally correspond to the higher elevations in the project area, groundwater is typically found at depths greater than 20 to 30 feet.

Groundwater occurring within fill soils in the project area is expected to be shallow and, therefore, susceptible to contamination from past industrial land use, placement of contaminated fill material, and releases from underground storage tanks (USTs). Groundwater quality may be further degraded by seawater intrusion along The Embarcadero waterfront. The presence of chemical constituents such as petroleum hydrocarbons and chlorides may affect how water generated during construction dewatering will be handled and disposed. The City and County of San Francisco and the California Regional Water Quality Control Board do not consider water in this area suitable for potable supplies, but consider it potentially suitable for industrial purposes, although no known uses are reported within the project area.

The quality of the groundwater in the fill soils is generally poor. Brackish conditions exist in most of the project area due to the proximity of the Bay, where tidal fluctuations are generally in the range of six feet. Seawater intrusion resulting from tidal fluctuations has been known to occur several hundred feet from the Bay and tidal channels (e.g., China Basin Channel). The presence of chlorides in the groundwater can restrict the discharge of dewatering effluent to the City's combined sewer system because of chloride content limits imposed by the San Francisco Department of Public Works (DPW), which operates the sewage treatment plant.

Groundwater encountered in the fill areas of the alignment may contain varying concentrations of petroleum hydrocarbon contaminants, primarily because the South of Market area contains one of the highest densities of USTs in the City (see discussion of Hazardous Wastes, Section 4.17). Hydrocarbon contamination may affect dewatering programs, possibly requiring treatment of pumped groundwater prior to discharge to the storm sewers. Although polynuclear aromatic hydrocarbons (PAH) and lead are present in the fill soils, groundwater has not typically been affected by these contaminants.

4.11.2 SURFACE WATER RESOURCES

The relative density of impermeable surfaces within the project area is on the order of 95 percent. Most of the area is completely paved and developed and no surface water bodies exist with the exception of China Basin Channel and San Francisco Bay. All stormwater runoff

in the project area is captured by the City's combined sewer system, with one exception: storm sewers along the bayward portion of The Embarcadero discharge directly to the Bay.

The sewer system is served by an 18-foot by 18-foot box sewer, which runs along The Embarcadero, King, and Berry Streets to a pump station at Berry and Seventh Streets. From the pump station, the water is transported to a sewage treatment plant near Phelps and Jerrold Streets. Data on water quality were not available for the project area; however, due to the heavily urbanized nature of the project area, runoff water quality is expected to be poor.

4.12 FLOODPLAINS

The City and County of San Francisco does not participate in the Federal Emergency Management Agency's floodplain identification program, and no floodplains have been identified within San Francisco.

4.13 COASTAL ZONE

The McAteer-Petris Act of 1965, as amended, grants the San Francisco Bay Conservation and Development Commission (BCDC) permit authority over San Francisco Bay and over lands located within 100 feet of the Bay shoreline. BCDC's management plan for the San Francisco Bay, The San Francisco Bay Plan, has been certified by the Federal Department of Commerce as the Coastal Zone Management Program for the San Francisco Bay Segment of the California Coastal Zone Management Program pursuant to the Federal Coastal Zone Management Act (CZMA). Under the CZMA, federal projects and local projects that use federal funding or require federal approval must, to the maximum extent practicable, be consistent with a state's coastal management program if the project would affect the coastal zone, and BCDC's authority may extend inland more than 100 feet.

The Second-to-Mission Alternative is the closest alignment to BCDC’s jurisdiction. The alignment terminates at Mission Street and The Embarcadero and is approximately 190 feet (63 yards) from the shoreline. The alignment would not have any effects on shoreline access or water quality. No formal finding of consistency with the Coastal Zone Management Plan (i.e., the San Francisco Bay Plan) would therefore be required.

4.14 UTILITIES

The San Francisco Department of Public Works maintains a combined storm drain and sanitary sewer system in the Transbay Terminal, Caltrain Downtown Extension, and redevelopment area. Sewer types include vitrified clay pipe (VCP); older iron/steel pipe (ISP); very old brick collector sewers; medium-sized reinforced concrete interceptor sewers, and large reinforced concrete consolidation sewers that carry sewage and storm water from downtown to the

Southeast Treatment Plant. Sewers range in size from eight inch VCP to seven feet circular concrete.

The San Francisco Water Department maintains an interconnected grid of service lines throughout the area, and the San Francisco Fire Department maintains a second parallel system of auxiliary water lines exclusively for supplying fire hydrants (with potable water) and with provision for supplying salt water from the Bay for fire fighting. Water lines are primarily cast iron and range in size from two to 30-inches.

The City and County of San Francisco owns and operates the Hetch Hetchy water and power hydroelectric generating facilities that provide power to San Francisco via Pacific Gas and Electric Company's (PG&E) electrical transmission and distribution system. Electricity service is provided primarily from underground reinforced concrete vaults through a network of buried conduit and duct banks. PG&E maintains older, low-pressure cast iron natural gas lines from four to 16 inches in diameter, as well as new, high-pressure plastic lines from two to four inches in diameter.

Communication networks interlace the area. Most communication equipment is owned and operated by Pacific Bell and routed underground, similar to electrical service.

4.15 ELECTROMAGNETIC FIELDS

Electromagnetic fields (EMF) are associated with electromagnetic radiation, which is energy in the form of photons. Radiation energy travels and spreads as it goes and has many natural and human-made sources. The electromagnetic spectrum, the scientific name given to radiation energy, includes light, radio waves, and x-rays, among other energy forms. For purposes of describing the EMF setting for the proposed project and, in Chapter 5, the EMF effects of the proposed project, human-made sources of radiation energy and associated EMF are relevant.

The commonly known human-made sources of EMF are from electrical systems such as electronics, telecommunications, electric motors, and other electrically powered devices. The radiation from these sources is invisible, non-ionizing, and low frequency. Generally, in most living environments, the level of such radiation plus background natural sources of EMF is low and not considered hazardous. However, under extreme conditions, EMF can become intense, and hazards include shock and burn. Such conditions are nevertheless rare. The more pertinent concern over EMF exposure is the potential insidious biological and health effects to individuals as the number of EMF-generating activities increases. As more sources of EMF are introduced, the extent and level of human exposure increases. The potential biological and health effects are under much study and intense debate.

Another concern over EMF generation is the potential interference to other electromagnetic systems that can result when new or more intense sources of radiation are introduced into the environment. These effects are better understood and well documented. Electromagnetic

interference (EMI) may include the interruption, obstruction, or other degradation in the effective performance of electronics and electrical equipment. Depending upon the critical nature of this equipment, the effects can have serious consequences for the health and safety of individuals. Perhaps of less concern, but nonetheless important, is that the efficiency of affected systems may be reduced.

As the name implies, EMF has electrical and magnetic field components. With respect to electrical systems, electric fields result from the strength of the electric charge (voltage) while magnetic fields result from the motion of the charge. Direct current (DC) produces stronger EMFs than alternating current (AC). Electric field strength is measured in units of volts per meter (V/m) and is greater the higher the voltage. Field strength deteriorates rapidly with distance from the source. Magnetic field strength has several units of measure; the most commonly used are milligauss (mG) and the microTesla (mT). Ten milligauss equal one microTesla. Magnetic fields also deteriorate with distance but readily pass through most objects. Magnetic fields are typically the radiation of concern when evaluating EMFs. Consequently, EMF strength is measured in terms of milligauss.

Although modern society increasingly relies on electromagnetic systems, strong EMF fields are not associated with the normal living and working environment. Examples of EMF intensities from human activities include the following:

Overhead power transmission line:	32 to 57 mG (range of exposure to utility workers)
Household appliances:	8 to 165 mG (at a distance of 27 cm, or 12 inches)
Computer video display:	2 to 4 mG (at 35 cm, or 16 inches)
Rail vehicle (electrically powered)	400 mg (at 110 cm, or 43 inches from the vehicle floor) to 1,500 mG (at floor level)[3]

For comparison, in the natural environment apart from human activity, the earth's static magnetic field varies from 300 mG at the equator to over 600 mG at the magnetic poles.

The area of the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project is a moderate- to high-density urban environment with considerable commercial activity. As such, it contains numerous sources of EMFs. A major PGE substation exists at Fremont and Folsom Streets, and several telecommunications switching stations exist near Main and Spear and Harrison and Folsom Streets.

Sources of electromagnetic radiation would appear to be increasing with densification and development of the area, although the effects on EMF levels are indeterminate without historic data. Many modern appliances, electronics and communications systems have been improved to reduce electromagnetic radiation/EMF levels.

[3] Safety of High Speed Guided Ground Transportation Systems, EMF Exposure Environments Summary Reports, Federal Railroad Administration, August 1993.

The project area contains no known sources of high-level radiation or severe EMF exposures to the general public. EMF exposures, although common, are low-level.

4.16 HISTORIC AND CULTURAL RESOURCES

Potential historical and archaeological resources in the project area have been identified and evaluated in accordance with applicable regulations and guidelines. This section reports on the identification of such resources.

4.16.1 REGULATORY SETTING

Section 106 of the National Historic Preservation Act of 1966 requires federal agencies to take into account the effects of their activities and programs on historic properties. Section 110 of the Act lays out affirmative agency responsibilities with respect to historic properties and establishes the National Register of Historic Places (NRHP) for identifying and listing historic properties of importance to the nation, the states, and local communities.

Guidelines for implementing Section 106 requirements are promulgated by the Advisory Council on Historic Preservation (ACHP) in "Protection of Historic Properties" (36 CFR Part 800). These guidelines require agencies to comply also with other federal laws related to historic preservation, including the National Environmental Policy Act of 1969; the Archaeological and Historic Preservation Act of 1979; and Executive Order 11593 (1971), addressing "Protection and Enhancement of the Cultural Environment." Other agency-specific legislation requires consideration of the impacts of federal actions on cultural resources. Transportation projects must comply with the provisions of Section 4(f) of the Department of Transportation Act of 1966.

The State of California references cultural resources in the California Environmental Quality Act (CEQA—Public Resources Code (PRC) Division 13, Sections 21000-21178); archaeological and historical resources are specifically treated under Sections 21083.2 and 21084.1, respectively. California PRC 5020.1 through 5024.6 (effective 1992) creates the California Register of Historical Resources and sets forth requirements for protection of historic cultural resources.

The City and County of San Francisco has two sections of its Planning Code that deal specifically with the preservation of historic resources. Article 10 created the Landmarks Preservation Advisory Board and deals with the designation of landmarks and historic districts throughout the City. Article 11 deals with the preservation of historic buildings and creation of historic districts within the C-3 Districts (generally the downtown or central business district of San Francisco). The Landmarks Preservation Advisory Board makes recommendations to the Planning Department and Commission on the designation of landmarks and districts as well as the appropriateness of changes to historic buildings under the protection of Article 10 and permits to alter under Article 11. The City-designated structures and districts in Articles 10 and

11 are presumed historic resources under the California Environmental Quality Act (CEQA) as they are on a local register. In addition, resources listed or determined eligible for listing in the California Register of Historic Resources or in the Nation Register of Historic Places (NRHP) are also considered historic resources under CEQA.

4.16.2 ARCHAEOLOGICAL AREA OF POTENTIAL EFFECTS

An Area of Potential Effects (APE) for archaeological resources was delineated by FTA in consultation with the State Historic Preservation Officer (SHPO). This APE was defined as the extent of proposed construction for the project (i.e., the project "footprint"). The locations of project components are shown in Chapter 2. Figures 2.2-1 and 2.2-7 identify the location of the Transbay Terminal component, Figures 2.2-9 through 2.2-2*1* identify the Caltrain Downtown Extension alignment, and Figure 2.2-2*2* identifies the locations of Redevelopment properties.

4.16.3 HISTORIC ARCHITECTURAL AREA OF POTENTIAL EFFECTS

An APE for historic architectural resources was also delineated by FTA in consultation with the State Historic Preservation Officer (SHPO). The APE was defined to take into account the potential impacts associated with different project components. The APE also overlaps with several previous investigations. One previous survey, by architectural historian Michael Corbett, was conducted for an earlier proposal for the Caltrain portion of this project. The major difference between the present APE and the Corbett survey area is the inclusion of more buildings and structures at the west side of Second Street from Brannan to Folsom Streets, as well as both sides of Second Street between Folsom Street and roughly Natoma Street.

4.16.4 HISTORIC PROPERTIES SURVEY REPORT

A Historic Architectural Survey Report (HASR) and Historic Property Survey Report (HPSR), which identify and summarize potentially eligible historic and cultural resources within the APE, were prepared and submitted to the SHPO. The SHPO concurred in the determinations of eligibility on May 23, 2002. A copy of the SHPO's letter of concurrence is included in Appendix D. The following sections summarize information and National Register eligibility determinations contained in the HASR and HPSR; they also include available information regarding designations and eligibility at the local and State level.

4.16.5 ARCHAEOLOGICAL RESOURCES

Research for archaeological resources was conducted in 2001, and included review of historical maps and written sources, and a review of archaeological and historic site listings from the Historical Resources Information System Northwest Information Center at Sonoma State

University. There have been a relatively large number of archaeological studies conducted in the project vicinity in the past decade, including Caltrans' SF-480 Terminal Separation Rebuild Project (1993), the City of San Francisco's Alternatives to Replacement of the Embarcadero Freeway and the Terminal Separator Project (1995), and the Peninsula Corridor JPB's Archaeological Resources Investigations of the Caltrain San Francisco Downtown Extension Project (1996). These studies and others were reviewed as part of the current study. An Archeological Report (AR) was prepared in support of the HPSR.

The entire APE is covered by buildings and pavement, and the precise location, integrity and research potential of any archaeological resources that are present cannot be determined without subsurface excavation. The significance of an archaeological site is typically based on its potential to provide information important in prehistory or history, not on any intrinsic value in terms of style, materials, form of construction, or association with specific persons or events. Archaeological resources encountered before or during project construction would be evaluated in accordance with an Archaeological Research Design and Treatment Plan as described in Chapter 5.

4.16.5.1 Prehistoric Archaeology

Although five prehistoric archaeological sites have been recorded within approximately one mile of the APE, no known prehistoric archaeological sites are documented within the APE. Unidentified sites may exist, and it is possible to predict in general terms where such sites are likely to occur on the basis of prehistoric-period landscapes.

Prehistoric archaeological remains in the APE may include, but are not limited to, lithic materials, shells and bone beads, bone tools, heat-altered rock, dietary remains, locally darkened soil (midden), and micro-constituents (e.g., charcoal or fish remains). These remains are likely to be contained within two general property types: residential and non-residential sites. Both types may be eligible for listing in the NRHP.

Although it is impossible to determine where important archaeological remains are located without extensive fieldwork, it is possible to make general statements about the relative archaeological sensitivity of the project area. Because the proposed Transbay Redevelopment Area has the same prehistoric dune sand and bay margin environment as the location of a known prehistoric archaeological site, it is considered to have very high archaeological sensitivity. Geologic investigations conducted for the San Francisco-Oakland Bay Bridge Project indicate that Holocene-age deposits are present west of Second Street, and that these terrestrial landform deposits have a maximum thickness of nearly eight meters (25 feet) and may extend to a maximum depth of approximately 15 meters (50 feet). These deposits are less than 10,000 years old, which is within the range of known human occupation in California. The area along Second Street therefore has high archaeological sensitivity for prehistoric sites. More research is necessary for the area along Townsend Street, which appears to be under the former Mission Bay. If similar results are forthcoming, these deeply buried deposits may contain prehistoric

sites. For purposes of the present study, the entire length of the tunnel alignment can be considered highly sensitive for prehistoric architectural resources.

4.16.5.2 Historic Archaeology

Nineteen known or potential historic-era archaeological sites have been identified within or immediately adjacent to the project alternative alignments. Cultural remains from historic periods are likely to occur within the APE, and historic periods within the study area have been defined as follows: Spanish Period, 1769-1822; Mexican Period, 1822-1848; Early American Period, 1848-1868; the Metropolis of the West/Southern Pacific Railroad Era, 1868-1906; and Post-Earthquake San Francisco, 1906-1950. Historical research suggests that examples of the following historic-period archaeological types may be present within the project area:

- Domestic occupation sites –May consist of hollow features (wells, cisterns, garbage pits) and may occur in association with residences, schools, or other places where people lived.
- Domestic architecture – The remains of residences and domestic outbuildings.
- Commercial sites – Refuse caches and sheet deposits of refuse and fill, similar to resource types that occur on domestic sites, may also be expected on commercial sites.
- Institutional sites – These sites represent organizations established to promote a certain objective, and include schools, hospitals, asylums, prisons, churches, etc.
- Industrial Structures/Architecture – Archaeological remains of buildings and structures that housed or aided various industrial processes.
- Industrial features – Evidence of industrial processes themselves, as distinct from the buildings in which these processes were housed.
- Storage yards and warehouses – Storage facilities are unlikely to be NRHP-eligible themselves, but may protect earlier cultural strata that do have research potential.
- Buried ships – Remains of abandoned sailing vessels may have been left in the former Yerba Buena Cove when the cove was filled.
- Wharves – Archaeological remains of projecting wharves may be present on portions of the project area that straddled the shoreline at one time.
- Landfills – Both purposeful and inadvertent fill may be present.
- Gold Rush Period Sites – the scarcity of sites in San Francisco from the 1849-1853 Gold Rush era, and the subsequent depression (1853-1859) make any such deposit potentially eligible to the NRHP, as are historic sites that pre-date the Gold Rush.

Areas of high historic archaeological sensitivity include the Transbay Redevelopment Area, the Second-to-Main Alternative alignment, and the Second-to-Mission Alternative alignment – particularly those portions that are not within historic roadways. Portions of the alternative alignments that pass under existing/historic roadways – for example Second and Townsend Streets – are likely to be less sensitive than where the project crosses historically developed blocks.

4.16.6 HISTORIC ARCHITECTURAL RESOURCES

A Historic Architectural Survey Report (HASR) was prepared for this project and is summarized herein. Historical surveys that have previously been conducted in the vicinity of the proposed project were compiled and then supplemented with original field surveys and research where necessary. These previous studies include: Caltrans' San Francisco Bay Bridge Request for Determination of Eligibility (1983), Caltrans' I-280 Transfer Concept Program (1983), the City of San Francisco's South End Historic District (1990), the Embarcadero Freeway and Terminal Separator Structure HASR (1994), the Caltrain Downtown Extension HPSR (1996), and the National Register Nomination for Second and Howard Historic District (1999). The compilation of existing inventories, as well as original research and field investigations were conducted in 2001. Research was performed in various records of the San Francisco Planning Department, and information was also collected from the San Francisco Architectural Heritage (SFAH), the San Francisco Public Library, the California State Library in San Francisco, and at the Sacramento Public Library. A record search was conducted at the Northwest Information Center (at Sonoma State University), and the results of the record search were confirmed and updated.

There are more than 120 buildings within the APE. Of these, 85 were evaluated for eligibility for listing on the National Register of Historic Places (NRHP) because they were built in 1956 or earlier. As a result of this and previous studies, 39 of these properties have been determined eligible or appear to be eligible for listing on the *NRHP either individually or as a contributor to a historic property or district.* These properties are presented in Table 4.16-1 and are subject to Section 106 procedures and consultation described in the regulatory framework discussion above. Detailed descriptions for all potentially eligible properties are provided in the HASR. Chapter 5 of this EIS/EIR provides a description of each eligible *property* that would be affected by the proposed project.

Table 4.16-1 also shows the historic status assigned by the City and County of San Francisco Planning Department. If the resource is listed in Article 10, the table indicates whether the structure is a City Landmark, or, if the building is located in one of the City-designated historic districts such as the South End, the table indicates if the building is considered *contributing* (C), *contributing*-altered (CA), or non-*contributing* (NC). Resources that have historic status under Article 11 could be located within the boundaries of a City-designated historic Conservation District such as the New Montgomery-Second Street. These resources are classified into one of five categories. Categories I and II are considered significant buildings, while Categories *III* and IV are designated as *Contributing* Buildings. Category V buildings are neither significant nor *contributing* and are considered unrated.

Table 4.16-1: Historic Architectural Properties within the APE Listed on, or Determined Eligible for, the National Register

Building Address, Assessors Parcel No., or Bridge No.	*Date Constructed*	*NR Status*	*City Status (if any)*	*Notes*
Properties in the Transbay Terminal Area				
Upper Deck Approaches Bridge #34-116F	*1936*	*1*		*The SF-Oakland Bay Bridge, its approach structures, bus ramps (loop), and other elements were listed on the National Register of Historic Places on August 13, 2001.*
Upper Deck Approaches Bridge #34-118L	*1936*	*1*		
Upper Deck Approaches Bridge #34-118R	*1936*	*1*		
Transbay Terminal Loop ramp #34-119Y	*1936*	*1*		
Harrison Street Overcrossing #34-120Y	*1936*	*1*		
425 Mission Street (Transbay Terminal) 3719-003, 3720-001, 3721-006	*1939*	*1*		*The Transbay Terminal is a contributing element of the SF-Oakland Bay Bridge, which was listed on the National Register of Historic Places on August 13, 2001*
Properties in the Second and Howard Streets Area				
149 Second Street 3721-049	*1908*	*1D*	*Article 11 Category IV*	*These six buildings located on Second and Howard Streets are contributing elements of the Second and Howard Streets District, which was listed on the National Register in 1999.* *The four buildings with addresses on Second Street are also located within the City of San Francisco's New Montgomery-Second Street Conservation District. (The two buildings with Howard Street addresses are located outside the conservation district boundaries.)*
163 Second Street 3721-048	*1907*	*1D*	*Article 11 Category IV*	
165-173 Second Street 3721-025	*1906*	*1D*	*Article 11 Category IV*	
191 Second Street 3721-022	*1907*	*1D*	*Article 11 Category V*	
580-586 Howard Street 3721-092 through 106	*1906*	*1D*		
589-91 Howard Street 3736-098	*1906-1907*	*1D*	*Article 11 Category V*	

Table 4.16-1: Historic Architectural Properties within the APE Listed on, or Determined Eligible for, the National Register

Building Address, Assessors Parcel No., or Bridge No.	*Date Constructed*	*NR Status*	*City Status (if any)*	*Notes*
Properties in the Second and Townsend Streets Area				
301-21 Brannan Street 3788-037	*1909*	*3D*	*C*	*Unless otherwise noted, the buildings on Brannan, Second, South Park, and Townsend Streets are contributing elements of the Rincon Point/South Beach Historic Warehouse-Industrial District. This district was found to appear to be eligible for the National Register through a 1983 survey conducted by Caltrans. In those cases where OHP has concurred with those findings, the NRHP status is "2."* *All of these buildings are also located within the City of San Francisco's South End Historic District, established in 1990.*
461-67 Second St. 3764-071 through 197	*1909-38*	*2D2*	*C*	
500 Second Street 3775-001	*1919*	*3D*	*C*	
512 Second Street 3775-002	*1909*	*3D*	*C*	
522-524 Second Street 3775-004	*1923*	*3D*	*C*	
525 Second Street 3774-123 through 132	*1906*	*3D*	*C*	
543-545 Second Street 3774-064 and 065	*1907*	*3D*	*NC*	
544 Second Street 3775-005	*1922*	*3D*	*C*	
555-559 Second Street 3774-045	*1913*	*3D*	*C*	
563 Second Street 3774-044	*1907*	*3D*	*C*	
580 Second Street 3775-008	*1912*	*3D*	*C*	
599 Second Street 3774-031	*1923*	*3D*	*C*	
601-15 Second Street 3789-008	*1909*	*3D*	*C*	
625-35 Second Street 3789-007	*1905*	*2D2*	*C*	
634 Second Street (aka 35 Stanford Court) 3788-038	*1920*	*3D*	*C*	
640 Second Street 3788-002	*1926*	*2S2*	*C*	
650 Second Street 3788-049 through 073	*1922*	*2S2*	*C*	
670-80 Second Street 3788-043, 3788-044	*1913*	*2S2 (670), 3D (680)*	*C*	
1 South Park 3775-007	*1910*	*3D*	*C*	

Table 4.16-1: Historic Architectural Properties within the APE Listed on, or Determined Eligible for, the National Register

Building Address, Assessors Parcel No., or Bridge No.	*Date Constructed*	*NR Status*	*City Status (if any)*	*Notes*
130 Townsend Street 3788-008	*1910*	*3D*	*CA*	
136 Townsend Street 3788-009	*1902*	*3D*	*C*	
144-46 Townsend Street 3788-009A	*1922*	*3D*	*C*	
148-54 Townsend Street 3788-010	*1922*	*3D*	*C*	
162-164 Townsend Street 3788-081	*1919*	*3D*	*C*	
166-78 Townsend Street 3788-012	*1910*	*3D*	*C*	
180 Townsend Street 3788-013	*1921*	*3D*		
350-60 Townsend Street 3786-015	*1906*	*2S2*		*This building is individually eligible for the NRHP.*

Notes: National Register Status codes are as follows:

1D – Listed on the National Register as a contributor to a district or multi-resource property.
1S -- Separately Listed on the National Register.
2 – Determined eligible for National Register in a formal process.
2S1 -- Determined Eligible for Listing by the Keeper of the Register.
2S2 -- Determined Eligible for Listing by Consensus of the SHPO and a Federal Agency.
2D2 – Determined eligible as a contributor by consensus determination.
3D -- Contributor to a District that Appears Eligible. SHPO has yet to concur.

4.16.6.1 Transbay Terminal

The Transbay Terminal at 425 Mission Street occupies land extending from Mission Street on the north to Natoma Street on the south. The terminal building crosses Fremont Street on the east and First Street on the west. It is an 870-foot long flat slab with a 230-foot long central pavilion. The construction is reinforced concrete faced with California granite. Designed by Timothy Pfleuger, Arthur Brown, Jr., and John J. Donovan, consulting architects, and built in 1939, the Transbay Terminal was the functional successor to the Ferry Building. When electric trains began arriving over the Bay Bridge, use of the Ferry Building dropped to almost nothing overnight, and the Transbay Terminal took over as the primary gateway to the city[4].

[4] Caltrans, 1995.

Caltrans reports identify the introduction of electric train services on the Bay Bridge as causing the rapid decline in ferry use and the corresponding decline of the Ferry Building as a transportation hub. In addition, there was also a modal shift from public transit to private automobile use with the opening of the Bay and Golden Gate Bridges, which also contributed to the almost total loss of ferry patronage. During this era, the Transbay Terminal became the primary transit gateway into the city.

It should be noted that as congestion on the Bay and Golden Gate Bridges has increased, the Ferry Building reclaimed some of its historic importance as a transportation terminal. Current plans anticipate 33,000 to 40,000 weekday daily passengers on commuter ferry boats by 2020. (Water Transit Authority Implementation and Operations Plan, Section 2).

The Transbay Terminal is a contributing element of the San Francisco - Oakland Bay Bridge, which was listed in the NRHP in August 2001. Its present owner is the California Department of Transportation. Its current use is for commuter and inter- and intra-regional bus transportation.

The Transbay Terminal retains integrity with respect to exterior elevations, areas, and building materials; configuration of interior space; site; and the ramps that connect the building to the San Francisco - Oakland Bay Bridge. (The loop ramp is a component of the Bay Bridge, and it retains integrity as a bridge-related element.) The terminal building has remained in transportation use since it was constructed. Losses and compromises of integrity have occurred with modernization of elements such as doors, the new Greyhound passenger facility, and building materials; and seismic retrofit of various components to meet current earthquake safety standards.[5] The terminal requires substantial additional reconstruction to meet building and seismic codes and standards.

4.16.6.2 Transbay Terminal Loop Ramp

The Transbay Terminal Ramp structure consists of a 3,439-foot loop ramp connecting the San Francisco - Oakland Bay Bridge west span with the Transbay Terminal building. The loop ramp constitutes two of the six approach spans that remain from the original Bay Bridge project.[6] It is constructed of riveted steel girders on concrete and steel bents. A concrete slab and box girder bridge on slab wall piers carries the Transbay Terminal Ramp over Harrison Street. This loop ramp was originally designed to carry trolley trains from the bridge to the terminal; the tracks were removed as electrified trains gave way to buses in the late 1950s. The terminal loop ramp currently serves bus traffic exclusively and is used for midday storage of transit buses. It is a contributing element of the San Francisco - Oakland Bay Bridge *property, which is listed on the NRHP*.

[5] Caltrans, 1995.

[6] Caltrans, 1983.

4.16.6.3 Rincon Point/South Beach Historic Industrial Warehouse District

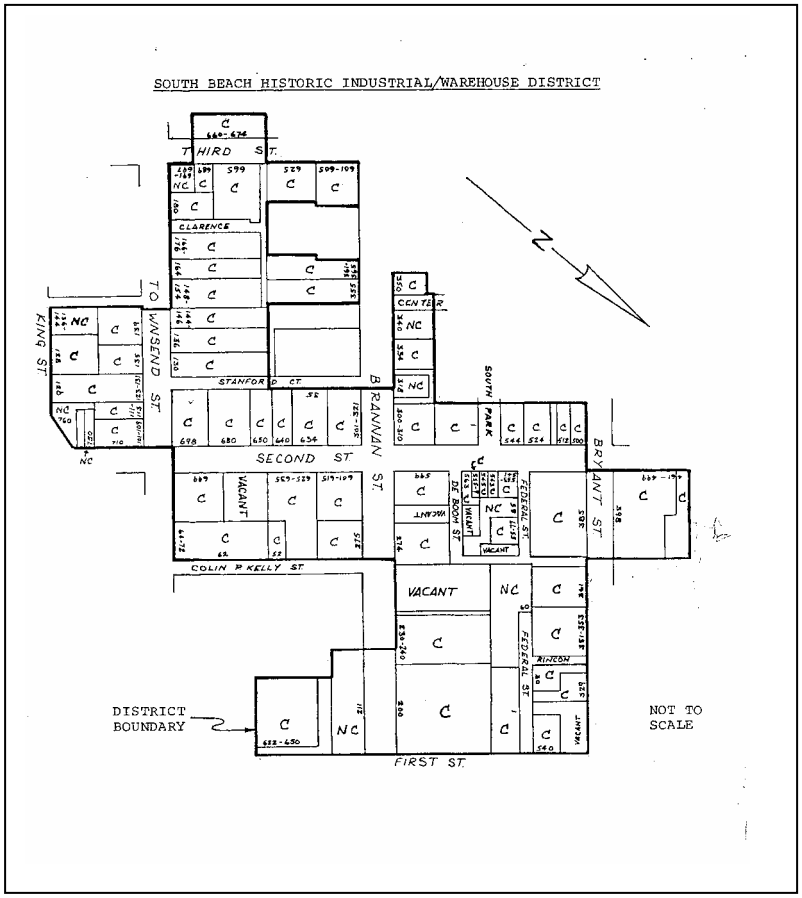
The Rincon Point/South Beach Historic Warehouse Industrial District is a NRHP-eligible district that was developed beginning in the 1850s and 1860s, when landfill efforts and warehouse construction changed the physical appearance of the "point" and "beach" forever. This district contains the greatest concentration of *historic* architectural resources within the project vicinity. The district was identified as appearing eligible for the National Register in 1983, based on research completed by Caltrans historians for the I-280 Transfer Concept Project. That research found that the district appeared eligible under all four National Register criteria. About 60 buildings within the district have been identified as contributing to the district's significance. About eight of these buildings date from before the 1906 earthquake, with several from the mid-1800s. The OHP Historic Property Data File shows a determination of eligibility for the district dated March 19, 1997 (suggesting that OHP has concurred with Caltrans eligibility finding); however, most of the individual buildings are still shown simply as “appears eligible,” or NRHP status.

The 1983 inventory and evaluation form states that the district appeared to be eligible under National Register criteria A, B, C, and D, at the state level of significance. The following is an excerpt from the significance statement included on that form:

> Development of the Rincon Point/South Beach area began in the 1850s and 1860s as an answer to economic pressures resulting from the Gold Rush. As sea trade expanded and San Francisco developed into the leading port on the West Coast, both areas developed to serve warehousing needs of the burgeoning state. During the Civil War, the mining riches of the Sierra Nevada and Comstock were handled through the port to help fund the Union cause. The same area saw great numbers of Chinese enter California, seeking employment in the new land. After the turn of the century and following the 1906 earthquake and fire which devastated large areas of San Francisco, the Rincon Point/South Beach areas became mixed in nature: apartments and hotels appeared among the family businesses, light industry and more traditional warehouses. As a result of efforts to improve the appearance of the port for the 1915 Panama Pacific International Exposition, Mediterranean style pier bulkheads were erected to provide a formal entrance from the Bay to the city.
>
> By the end of the 1860s, increased landfill activities had seen streets cut and graded and hills leveled to provide shoreline fill. Steamboat Point, adjacent to South Beach, was filled until it precluded further shipbuilding activities there, and South Beach also began to develop as a warehousing district. Early facilities included the San Francisco and Pacific Gas Company at Second and King Streets, and the Pacific Mail Steam Ship Company, this latter including warehouses, shops and wharves. Still standing today is one of the company’s warehouses, the Oriental (1867). Though the Oriental Warehouse’s associated dock no longer exists, this building remains important in history as San Francisco’s reputed principal shipping point for Sierra Nevada and Comstock gold, and as the point of entry for large numbers of Chinese.
>
> Construction of a new seawall during the period 1878 to 1924 permitted further development of warehouses, dry docks, shipyards and other industries in this area, as a readily accessible outlet to ocean and coastal shipping was provided. Evidence of the period of development from 1880

to 1915 may still be seen, though many of the warehouses from this period have been destroyed. Those remaining structures, however, still afford a picture of the area's general appearance during this important period. Rebuilding activities following the 1906 earthquake and fire altered the character of the area somewhat with the inclusion of hotels and apartments, though re-establishing warehousing and light industrial activities.[7]

The Rincon Point/South Beach Historic Warehouse-Industrial District, as well as other resources within the APE, have been designated locally and/or are eligible for or listed on the California Register of Historic Resources.[8]



[7] John Snyder, "Rincon Point/South Beach Historic Warehouse-Industrial District," Caltrans Architectural Inventory/Evaluation Form, prepared July 22, 1983, copy on file with Northwest Information Center, Sonoma State University.

[8] The California Register of Historic Resources was created in 1992 (AB 2881, Frazee), and Section 5024.1 of the Public Resources Code states that the California Register shall include "California properties formally determined eligible for, or listed in, the National Register of Historic Resources," State Historical Landmarks No. 770 and higher, as well as other State Historical Landmarks and Points of historical interest reviewed and included by the State Historical Resources Commission, and may include other resources of specified types, "if nominated for listing . . . and determined to be significant by the Commission," and resources listed as significant in historical resource survey under certain conditions.

4.16.6.4 New Montgomery-Second Street Conservation District (City of San Francisco)

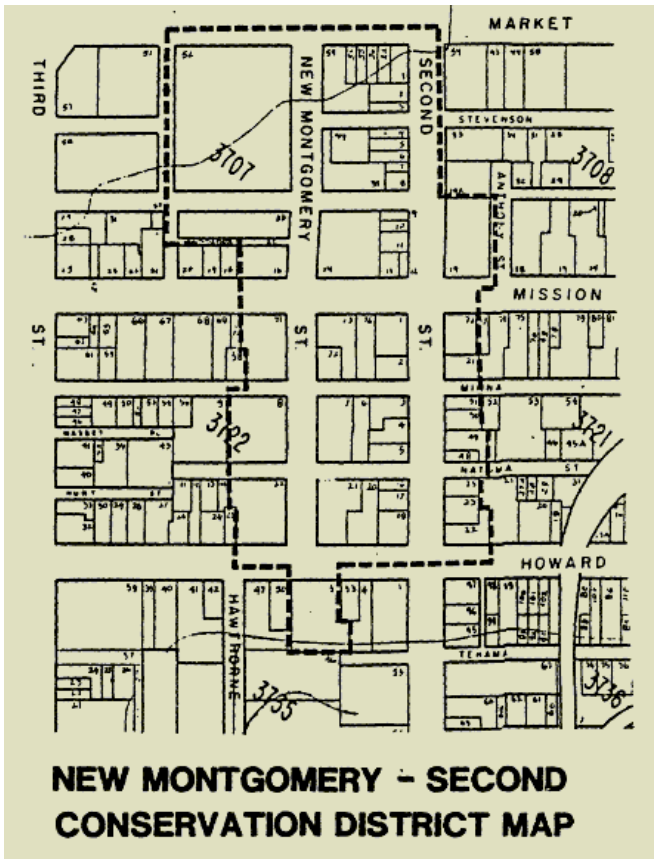
The Board of Supervisors of the City and County of San Francisco approved the formation of the New Montgomery-Second Street Conservation District in 1985, because the area "possesses concentrations of buildings that together create a sub-area of architectural and environmental quality and importance which contributes to the beauty and attractiveness of the City."[9] The location and boundaries of the New Montgomery-Second Street Conservation District were established on a map filed with the Clerk of the Board of Supervisors at that time.[10]

The characteristics of the New Montgomery-Second Street Conservation District that justify this designation include its history, architectural character, and visual and functional unity. The Planning Department also recognized the district's dynamic continuity and the benefits it offers to the city in general as well as to residents. The following is an excerpt from Appendix F, Article 11, San Francisco City Planning Code:

> **History of the District.** This corridor forms one of the earliest attempts to extend the uses of the financial and retail districts to the South of Market area. Since Montgomery Street was the most important commercial street in the 1870's, New Montgomery Street was planned as a southern extension from Market Street to the Bay. Opposition from landowners south of Howard Street, however, prevented the street from reaching its original bayside destination. William Ralston, who was instrumental in the development of the new street, built the Grand Hotel and later the Palace Hotel at its Market Street intersection. A wall of large hotels on Market Street actually hindered the growth of New Montgomery Street and few retail stores and offices ventured south of Market Street. The unusually wide width of Market Street acted as a barrier between areas to the north and south for many years.
>
> A small number of office buildings were built on New Montgomery Street as far south as Atom Alley (now Natoma Street) after the fire. Many buildings were completed in 1907, and most of the street assumed its present character by 1914. At 74 New Montgomery Street, the Call newspaper established its first headquarters. A noteworthy addition to the streetscape was the Pacific Telephone and Telegraph Building. At the time of its completion in 1925, it was the largest building on the West Coast devoted to the exclusive use of one firm. Until the 1960's, the office district on New Montgomery Street was the furthest extension of the financial district into the South of Market area. More characteristic were warehouses and businesses that supported the nearby office district. For example, the Furniture Exchange at the northwest corner of New Montgomery and Howard Streets, completed in 1920, was oriented to other wholesale and showroom uses along Howard Street.

[9] Added Ord. 414-85, App. 9/17/85. See Section 1103 of Article 11, San Francisco City Planning Code.
[10] Map under File 223-84-4, Added Ord. 414-85, App. 9/17/85.

One block to the east, Second Street had a different history from New Montgomery Street. The future of Second Street as an extension of the downtown depended upon the southward extension of the street through the hill south of Howard Street. At one time there was even a proposal to extend Second Street north in order to connect with Montgomery Street. The decision to extend Montgomery Street south rather than Second Street north due to the high cost of the Second Street Cut, however, discouraged retail and office growth on the street. As a result, by the 1880's Second Street was established as a wholesaling rather than retail or office area. In the 1920's, Second Street contained a wide mixture of office support services. These included printers, binderies, a saddlery, a wholesale pharmaceutical outlet, and a variety of other retail stores and smaller offices. Industrial uses were commonly located on the alleyways such as Minna and Natoma and on Second Street, south of Howard Street.



Basic Nature of the District. New Montgomery Street is characterized by large buildings that often occupy an entire section of a block defined by streets and alleys or a major portion of these sub-blocks. The buildings are of a variety of heights, but the heights of most of the buildings range from five to eight stories. Second Street is characterized by smaller, less architecturally significant buildings, but, because of their continuous streetwall, they form a more coherent streetscape. Without some sort of protection for the less significant buildings, the quality of the district would be lost due to pressure from the expanding office core.

Architectural Character. Although the scale and size of the structures on New Montgomery Street are somewhat monumental, the area remains attractive for pedestrians. The street has a number of outstanding buildings concentrated on New Montgomery, such as the Palace Hotel, the Pacific Telephone tower, and the Sharon Building. The styles range from the Gothic skyscraper massing and Art Deco detailing of the Pacific Telephone and Telegraph Building to the Renaissance Palazzo style of the Palace Hotel. The primary building materials are earth tone bricks, stone or terra cotta, with ornamental details executed in a variety of materials including terra cotta, metal, stucco and stone.

Second Street has a smaller, more intimate scale. While on New Montgomery Street, buildings typically occupy an entire subblock, on Second Street, three or four small

buildings will occupy the same area. The buildings are generally mixed-use office and retail structures, three to five stories in height, with Renaissance-influenced ornament.

The two streets are unified by several elements, including an architectural vocabulary that draws from similar historical sources, similar materials, scale, fenestration, color, stylistic origins, texture, and ornament.

Uniqueness and Location. The District is located close to the central core of the financial district and is adjacent to an area projected for the future expansion. It is one of the few architecturally significant areas remaining largely intact in the South of Market area.

Visual and Functional Unity. The District has a varied character ranging from the small and intimate on the alley streets to a more monumental scale on New Montgomery. In spite of this wide range, the district forms a coherent entity due to the buildings' common architectural vocabulary and the rhythm of building masses created by the District's intersecting alleys.

Dynamic Continuity. The District is an active part of the downtown area, and after some years of neglect is undergoing reinvestment, which is visible in the rehabilitation of the Pacific Telephone Building, and the repair and rehabilitation of other buildings in the District.

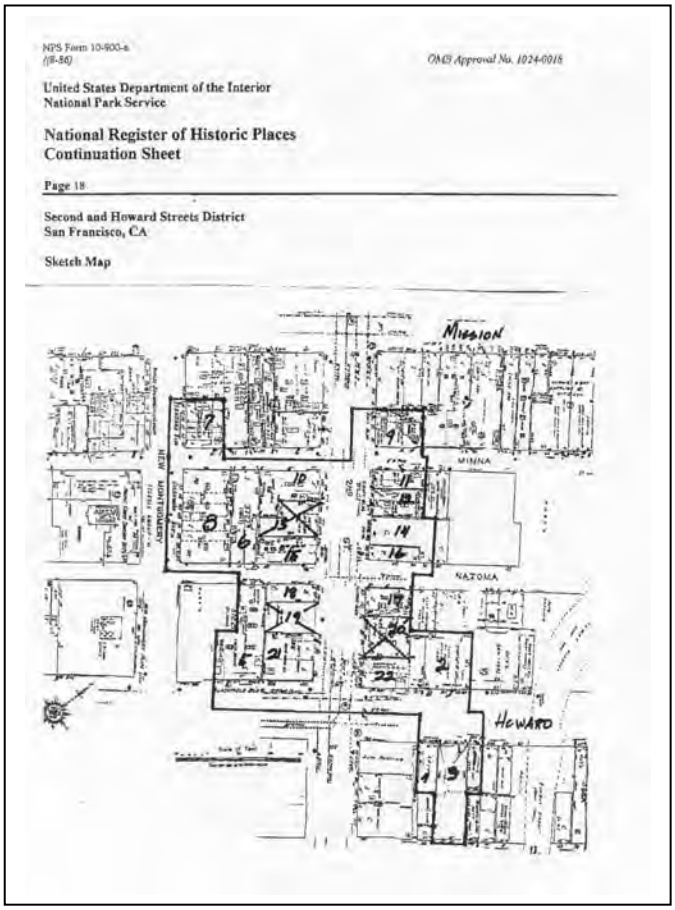
Benefits to the City and Its Residents. The District is a microcosm of twentieth century commercial architecture, ranging from low-level speculative office blocks to the City's premier hotels and executive offices of the time. The District now houses a variety of uses from inexpensive restaurants and support commercial uses, such as printers, to executive offices. The area retains a comfortable human scale, which will become increasingly important as neighboring areas of the South of Market become more densely developed. [11]

4.16.6.5 Second and Howard Streets District (National Register of Historic Places)

The Second and Howard Streets District is a National Register historic district that is almost entirely surrounded by the City of San Francisco's New Montgomery-Second Street Conservation District. The Second and Howard Streets District was evaluated in 1998 by Anne Bloomfield. Ms. Bloomfield submitted a *NHRP* Registration Form for the district to the California Office of Historic Preservation (OHP) in October 1998, OHP certified the district in June 1999, and the district was listed on the *NRHP* on July 28, 1999.[12]

[11] Added Ord. 414-85, App. 9/17/85. See, San Francisco City Planning Code, Article 11, Appendix F, http://www.ci.sf.ca.us/planning/.

[12] Anne Bloomfield, "Second and Howard Streets District," National Register of Historic Places Registration Form, prepared October 3, 1998, certified June 15, 1999, copy on file with Northwest Information Center, Sonoma State University; NPS, National Register Information System (NRIS), "Second and Howard Streets District," listing date July 28, 1999, as accessed at http://www.cr.nps.gov/nr/research/nris.htm.


NPS Form 10-900-a
(8-86)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

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Second and Howard Streets District
San Francisco, CA

Sketch Map

The Second and Howard Streets District has been determined eligible for the National Register of Historic Places at the local level of significance, under Criterion C, architecture, in the context of San Francisco's rebuilding after the great earthquake and fire of 1906. The district has a remarkable continuity of building type, scale, and style. Over 90 percent of the buildings contribute to the feeling of a district. All the contributing buildings were constructed [between] 1906 and 1912, the district's period of significance. All are masonry structures, half of them clad in brick, two in terra cotta (now painted), and the rest in stucco. All are Commercial Style with limited Renaissance-Baroque ornament. Ground floors are commercial and therefore, by design and practice, frequently altered to suit commercial needs. Upper floors most often are lofts. The area was built principally for services to the construction industry, perhaps the reason why it was built up so quickly after the 1906 earthquake and fire. The scale and modesty of the buildings demonstrates their intended uses as different from the city's main office sector to the north crossing Mission and Market Streets and to the west along New Montgomery Street. They are also different from the industrial sector to the east and south. Services to the construction industry used to continue westerly from New Montgomery, near the Builders' Exchange, a membership and mail boxes organization that in 1910 was located at 180 Jessie Street west of New Montgomery and Mission Streets. However, hardly any of the buildings housing that part of this service industry still exist. The 1910 classified directory shows the Second and Howard Streets District as headquarters for a plumbing supply house, nine electrical businesses, a terra cotta works (N. Clark & Sons), several engineers, metallurgists, a blueprint service, an asbestos supplier (Johns-Manville), a sheet metal works, chemists, and printers. The area of significance is architecture; significant dates are 1906, 1907, 1908, 1909, and 1912, the years of construction of the various buildings. The two non-contributing buildings [144-54 Second Street and 168 Second Street] have been altered significantly. The district retains a remarkable integrity in contrast to all the city's modern changes.[13]

[13] Anne Bloomfield, "Second and Howard Streets District," National Register of Historic Places Registration Form, prepared October 3, 1998, certified June 15, 1999, copy on file with Northwest Information Center, Sonoma State University.

4.16.6.6 The South End Historic District (City of San Francisco)

The San Francisco Board of Supervisors established the South End Historic District in 1990 because of its "special character and special historical, architectural and aesthetic interest and value [that] constitutes a distinct section of the City."[14] The location and boundaries of the South End Historic District were on a map filed with the Clerk of the Board of Supervisors under File No. 115-90-3.[15] The following is an excerpt from Appendix I, Article 10, San Francisco City Planning Code, beginning with the historic context of the district:

> For decades after the 1849 Gold Rush, San Francisco was the principal seaport and connection with the outside world for California and the West Coast. San Francisco's expansion and transformation into one of the most important cities in North America is attributable to the eminence of its port that, because of its sheltered location and deep water, became one of the best-suited on the Pacific Ocean.
>
> The development of warehouses over a 120-year period along the southern waterfront provides a benchmark from which to view architectural and technological responses to the rapid changes of growing industrial nation state and city. The interdependence of architecture and history can be seen from a look at the evolution of warehouse forms along the southern waterfront. Unlike most other areas of the San Francisco waterfront, the South End district contains an extraordinary concentration of buildings from almost every period of San Francisco's maritime history. Several street fronts—such as Second, Third and Townsend—are characterized by solid walls of brick and reinforced concrete warehouses. With this harmony of scale and materials, the South End Historic District is clearly a visually recognizable place.
>
> One-story warehouses were common in the nineteenth century but rare in the early twentieth due to the increasing cost of land. Two of the oldest warehouses in the historic district are one story in height: Hooper's Warehouse (1874) and the California Warehouse (1882). Their horizontal orientation is accentuated through the use of strong cornice lines with decorative brick patterns. Multi-story buildings have been more common along the southern waterfront since the turn of the century. After 1906, almost all new warehouses were constructed to be at least three stories in height, and several warehouses on Second and Townsend Streets reached six stories. The invention of the forklift in the 1930s eliminated advantages that multi-story buildings enjoyed over single-story structures. Since 1945, almost all warehouses constructed in the United States have been one story in height. Many multi-story warehouses and industrial buildings have been converted to other uses or are vacant because they have become obsolete for most warehouse or industrial functions.

[14] Added by Ord. 104-90, App. 3/23/90. See Section 1001, Article 10, City Planning Code.

[15] Added by Ord. 104-90, App. 3/23/90.

South End's period of historical significance, 1867 to 1935, comprises the era during which the waterfront became a vital part of the city's and nation's maritime commerce. The buildings of the South End Historic District represent a rich and varied cross-section of the prominent local architects and builders of the period. Four buildings remain from the nineteenth century; another four were constructed in the six-year interval preceding the 1906 earthquake. The majority of the buildings were erected between 1906 and 1929, a period during which trade along the waterfront increased dramatically.

The proposed historic district is an important visual landmark for the city as a whole. The large number of intact masonry warehouses which remain to this day are reminders of the maritime and rail activities which helped to make San Francisco a great turn-of-the-century port city. The warehouse district, because of its distinct building forms, is identifiable from many parts of San Francisco and the greater Bay Area.[16]

4.17 HAZARDOUS MATERIALS

The proposed project would involve construction within an urbanized area, where hazardous materials/hazardous wastes would be a concern due to past land uses and undocumented releases to the subsurface environment. Potential hazardous materials/waste sources or sites within the project alignment are discussed, along with a summary of data sources consulted.

4.17.1 INTRODUCTION AND DATA SOURCES

Potential areas of contamination that could affect the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project were identified by reviewing previous environmental documents prepared for the Caltrain portion of the project (mainly the 1997 Draft EIS/EIR); reviewing information from regulatory agency databases; walking the alignment to confirm listings in the data base report and making observations at several properties where subsurface work or excavation is currently being conducted; and reviewing results of past investigations in the area.

Review of regulatory agency databases focused on the following: (a) known or potential hazardous waste sites or releases; (b) sites currently under investigation for environmental violations; (c) sites that involve the manufacture, generation, use, storage, and/or disposal of hazardous materials or hazardous waste (owner and tenants); (d) sites with underground storage tanks (USTs), and (e) sites with recorded violations of regulations concerning USTs and hazardous materials/ hazardous wastes. A total of 37 federal, state and local regulatory agency lists were searched to identify listed facilities within the project alignment, including lists maintained by the U.S. Environmental Protection Agency (US EPA), the California

[16] Added by Ord. 104-90, App. 3/23/90. See, San Francisco City Planning Code, Article 10, http://www.ci.sf.ca.us/planning/. Additional historical information may be found in the South End Historic District Case Report No. 89.065L.

Environmental Protection Agency (Cal EPA), the California State Water Resources Control Board (SWRCB), and the Regional Water Quality Control Board (RWQCB).

During the previous 1997 study, Ms. Pamela Hollis, CIH, with the San Francisco Department of Public Health, was consulted to obtain information regarding known Article 20 (known as the Maher Ordinance) investigation sites within the project area. Article 20 was amended in 1999 and is now Article 22A of the San Francisco Public Works Code. Article 20, *which* was originally adopted in 1986, requires historical research and *possibly* subsurface investigation including soil/groundwater sampling at sites bayward of the City's historic (1851) high tide lines if more than 50 cubic yards of material will be excavated or disturbed. This is a requirement for the issuance of a building or construction permit from the City and County of San Francisco.

Existing environmental investigations reports within the project area were also reviewed. Other Relevant environmental investigation reports were identified and reviewed as part of this study.

4.17.2 RECORDED HAZARDOUS MATERIALS SITES

There are three main sources of potentially hazardous materials within the study area. By far the main source of potentially hazardous material or waste is the fill used to reclaim areas of the Bay along the historic shoreline. Additionally, past industrial land uses and the presence of USTs containing fuel hydrocarbons and other substances are also significant sources of soil and groundwater contamination along the proposed alignment. The proposed project alignment includes a large area of reclaimed bay and tidal areas that lay either along or bayward of the historic shoreline of San Francisco. (See Figure 4.17-1 for the location of fill areas and the historic shoreline.) Materials used to fill the shoreline/tidal areas included general debris (soil, ash, slag, etc.) and sources such as dune sand as well as a large amount of debris from the 1906 earthquake and resulting fire. Fill material from these sources are known to contain elevated concentrations of lead and other heavy metals, polyaromatic hydrocarbons (PAHs), and fuel hydrocarbons. In many areas testing of this material often reveals concentrations of constituents of concern that exceed State or Federal hazardous waste criteria.

Past industrial land uses near the historic shoreline contributed to potential contamination of soil and groundwater along the proposed alignment. These areas were typically chosen for their accessibility from the water and waste disposal practices at that time often included direct discharge to the ground surface or the Bay.

Coal gasification plants (also known as Manufactured Gas Plants (MGPs)) were historically located near Second and Townsend Streets and First and Natoma Streets and are known to have disposed of residual or waste material known as coal tar, directly to the waters of San Francisco Bay prior to some of these areas being reclaimed by filling. The old Yerba Buena Cove was commonly referred to as the "Tar Flats" which described the condition of the cove at low tide from the disposal of coal tar directly to the shallow waters of the cove. During reclamation of the land, fill material was deposited directly on top of the discharged coal tar. As such, this

material is often encountered during excavations in areas near the former MGPs. Additionally, the South of Market area in general contains a high density of USTs, many of which were abandoned, but not removed, which in turn leads to a high occurrence of soil and groundwater contamination by fuel hydrocarbons.

Record reviews identified 39 sites that have the potential to impact subsurface contaminants for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. Table 4.17-1 provides a summary of the sites, and site locations are shown in Figure 4.17-1. The main constituents of concern identified in the study area are coal tar residues, lead and other heavy metals, and petroleum hydrocarbons associated with USTs and are discussed briefly below.

4.17.2.1 Coal Tar Residues

Contamination was encountered at several Article 20 investigation sites within the project area, as shown on Figure 4.17-1.

The Oriental Warehouse site located at Delancey and Brannan Streets (Site 12) and a property located at Second and Townsend Streets (Site 13) each have coal tar residues. Historical records indicate one MGP existed near Townsend and Second Streets and another near King and Second Streets. Coal tar was discharged directly into Mission Bay and, in some areas, may have been transported there during filling of the Bay. The areas of the Bay that received the discharges were later filled as reclaimed land. The coal tar deposits from these two plants overlap and together range in thickness from approximately one to five feet and in depth from five to 10 feet below the ground surface. The deposits thin over short distances along Second Street north of Townsend Street but extend laterally to The Embarcadero, Mission Creek (China Basin), and Third Street.

The area in the vicinity of First and Natoma Streets is also the historical location of a MGP where coal tar was discharged to Yerba Buena Cove. Coal tar and coal tar residues have been encountered during investigation and construction of the two high-rise buildings along the southern side of the intersection of Howard and Beale Streets and beneath the foundation of the building on Fremont Street between Howard and Folsom Streets. Coal tar residues have also been detected during investigations conducted as far east as Main Street. Coal tar is known to exist on top of Bay Mud deposits along Beale Street from approximately Mission to Folsom Streets. It has been found as far east as The Embarcadero and is believed to extend as far west as Fremont Street. The thickness of the coal tar deposit ranges from near zero along the fringes of the deposit up to seven to 10 feet in the area of Beale and Howard Streets. The approximate depth to the top of the deposit is 10 to 12 feet at Beale Street, shallowing to the west and deepening to the east, although shallow deposits have been encountered near The Embarcadero at Howard Street. Coal tar residues are believed to be present in soil throughout the entire area of the former Yerba Buena Cove from First Street to The Embarcadero.

Table 4.17-1
Known Hazardous Materials Sites Identified within the Study Area (2)

Site No. (1)	Site Name and Location	Agency Database	Nature of Release	Resources Affected	Status	Remedial Actions	EDR Map ID (3)
1	Federal Reserve Bank, 100 Mission/ Main St	LUST	Gasoline	Not Indicated	Leak being confirmed	No Action Taken	12
2	Talco, Inc., 621 First St	LUST, CORTESE	Diesel	Soil Only	Remediation completed or deemed unnecessary	Excavate & dispose of contaminated soil	35
3	San Francisco Gas Light Co., 401 Howard St.	Coal Gas Sites	Coal Gas	Soil Only	Not Indicated	Not Indicated	51
4	Caltrans (Transbay Terminal), 150 First St.	LUST, CORTESE	Diesel	Not Indicated	Remediation completed or deemed unnecessary	Excavate and dispose of contaminated soil	29
5	San Francisco Gas Light Co., 166 Fremont St., 498 Howard St.	Coal Gas Sites	Coal Gas	Not Indicated	Not Indicated	Not Indicated	42
6	US Marine Corps –Supply Depot, 160 Harrison St.	LUST	Diesel	Soil Only	Case closed	Not Indicated	68
7	524 Howard St.	LUST, CORTESE	Heater Fluid	Soil Only	Case closed	Excavate and dispose of contaminated soil	72
8	Department of Transportation, 434 Main St	LUST	Diesel	Soil Only	Remediation completed or deemed unnecessary	Not Indicated	79
9	Caltrans, 120 Richards St	LUST, CORTESE	Gasoline	Ground-water	Leak being confirmed	Not Indicated	79
10	Dahl Beck Electric Co., 580 Howard St	LUST, CORTESE	Gasoline	Soil Only	Remediation completed or deemed unnecessary	No Action Taken	86
11	141 New Montgomery, 171 New Montgomery St.	LUST, CORTESE	Gasoline	Ground-water	Remediation completed or deemed unnecessary	Excavate & dispose of contaminated soil	91
12	Oriental Warehouse, Delancey and Brannan Streets	Not listed	PAHs/ LUST	Soil Only	Not Indicated	Not Indicated	Hollis, 1995
13	Unspecified Site, Second and Townsend Streets	Not listed	PAHs/ LUST	Soil Only	Not Indicated	Not Indicated	Hollis, 1995
14	Pacific Bell, 611 Folsom St.	LUST, CORTESE, RCRIS	Diesel	Soil Only	Not Indicated	No Action Taken	108
15	600 Harrison St.	LUST	Gasoline	Soil Only	Remediation completed or deemed unnecessary	Excavate and dispose of contaminated soil	115

Table 4.17-1
Known Hazardous Materials Sites Identified within the Study Area (2)

Site No. (1)	Site Name and Location	Agency Database	Nature of Release	Resources Affected	Status	Remedial Actions	EDR Map ID (3)
16	Photosynthesis LTD Chromeworks, 425 Bryant St.	LUST, CORTESE	Diesel	Soil Only	Not Indicated	No Action Taken	134
17	George Lithograph CO, 650 Second St.	LUST, CORTESE	Gasoline	Not Indicated	Remediation completed or deemed unnecessary	Not Indicated	143
18	San Francisco Fire Dept., 698 Second St.	LUST, CORTESE	Gasoline	Soil Only	Leak being confirmed	No Action Taken	150
19	Commercial Building, 35 Stanford St.	LUST	Gasoline	Soil Only	Not Indicated	Excavate and dispose of contaminated soil	158
20	Commercial, 101 Townsend St.	LUST	Diesel	Soil Only	Remediation completed or deemed unnecessary	Remove free product	163
21	San Francisco Gas & Electric Co., 120 King St.	Coal Gas Sites	Coal Gas	Soil Only	Not Indicated	Not Indicated	174
22	Pacific Gas Improvement Co., 169 Townsend St.	Coal Gas Sites	Coal Gas	Soil Only	Not Indicated	Not Indicated	177
23	McDonalds Corp., 701Third St.	LUST, CORTESE	Gasoline	Ground-water	Remediation completed or deemed unnecessary	Excavate and dispose of contaminated soil	186
24	Sun Chemical Corp.#1, 252 Townsend St	Cal-Sites (Cal-EPA)	Not Indicated	Not Indicated	No Further Action	Not Indicated	191
25	Unspecified Site	Not listed	Metals	Soil Only	Not Indicated	Not Indicated	Dames & Moore, 1990a
26	San Francisco Iron Foundry, 260 Townsend St.	Cal-Sites (Cal-EPA)	Not Indicated	Not Indicated	Referred to another agency	Not Indicated	193
27	Heublin, Inc., 601 Fourth St.	LUST, CORTESE	Diesel	Ground-water	Leak being confirmed	Not Indicated	189
28	Sun Pacific Imports, 530 Brannan St.	LUST, CORTESE	Gasoline	Ground-water	Remediation completed or deemed unnecessary	Excavate and dispose of contaminated soil	194
29	Commercial Building, 542 Brannan St	LUST	Gasoline	Undefined	No leak action taken after initial report	Excavate and dispose of contaminated soil	196
30	Southern Pacific Trans., 329 Townsend St.	LUST, CORTESE	Diesel	Ground-water	Assessment underway	Excavate & dispose of contaminated soil	203
31	SF Newspaper Agency, 590 Brannan St.	LUST, CORTESE	Gasoline	Ground-water	Cleanup in progress	Remove free product	201

Table 4.17-1
Known Hazardous Materials Sites Identified within the Study Area (2)

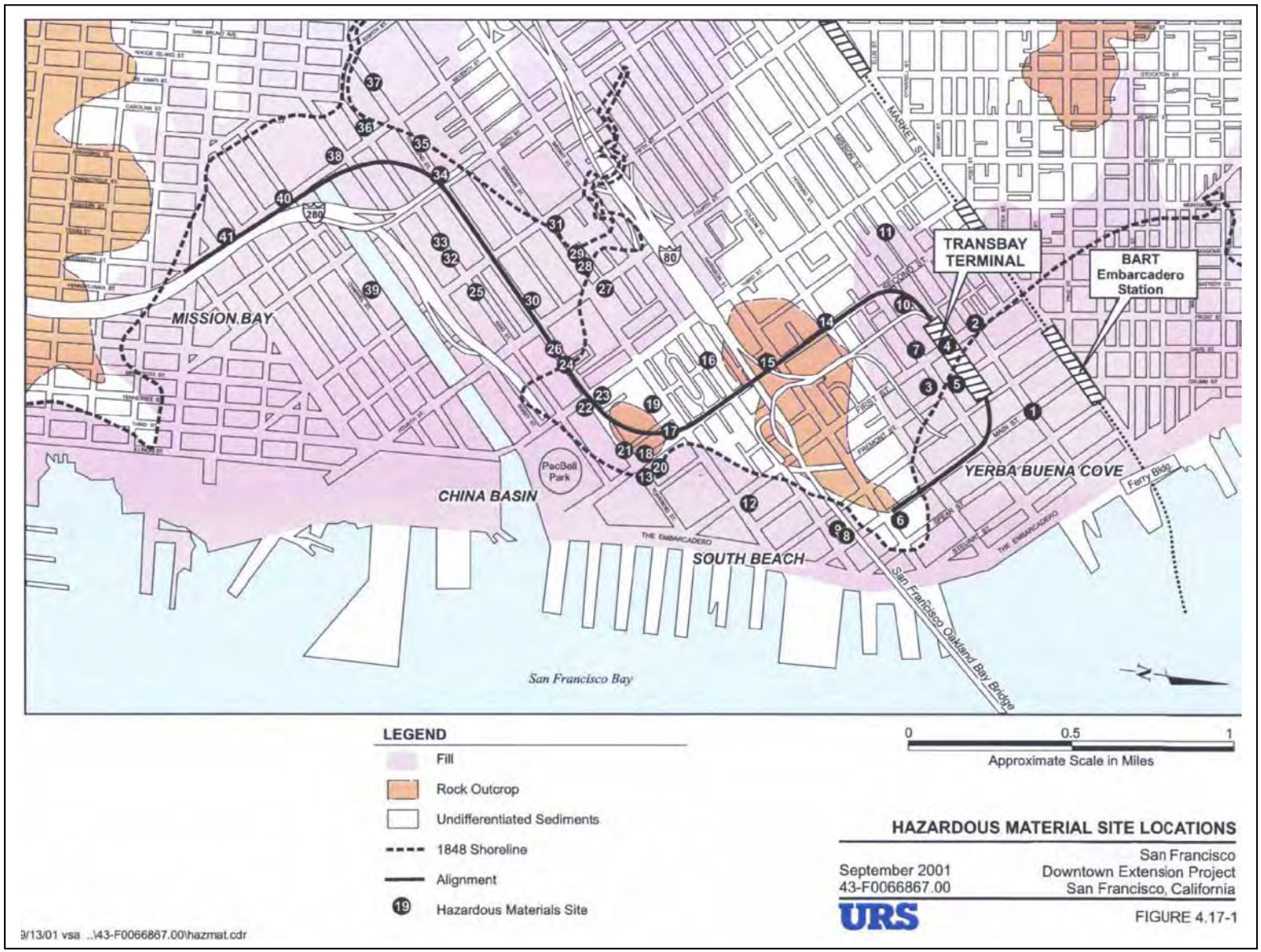
Site No. (1)	Site Name and Location	Agency Database	Nature of Release	Resources Affected	Status	Remedial Actions	EDR Map ID (3)
32	Unspecified Site	Not listed	Metals, Petroleum	Soil Only	Not Indicated	Not Indicated	Dames & Moore, 1990a; Mullinix, 1995
33	California Poultry Co., 777 Brannan St.	LUST, CORTESE	Gasoline	Ground-water	Leak being confirmed	No Action Taken	222
34	Flair Electro Sales, 516 Townsend St	LUST, Notify 65	Diesel	Ground-water	Leak being confirmed	No Action Taken	224
35	Independent Electric Supply, 550 Townsend St.	LUST	Gasoline	Ground-water	Pollution Characterization	No Action Taken	228
36	Baker/Hamilton Bldg. 638 King St.	LUST, CORTESE	Gasoline	Soil Only	Remediation completed or deemed unnecessary	No Action Taken	235
37	Baker/Hamilton Properties, LLC, 650 King St.	LUST	Fuel Oils	Soil Only	Remediation underway	Excavate & dispose of contaminated soil	237
38	Golden Gate Disposal Co., 900 7th St.	LUST, FINDS	Motor Oil	Undefined	Leak being confirmed	Excavate & dispose of contaminated soil & remove free product	238
39	Former Southern Pacific Co., 415 Channel St.	LUST	Gasoline	Soil Only	Leak was confirmed	No Action Taken	240
40	Greyhound Bus Depot, 150 Hopper St.	CA FID	None	Not Indicated	Not Indicated	No Action Taken	242
41	The Glidden Co.	LUST	Misc. Fuels & Solvents	Ground-water	Remediation is planned	No Action Taken	Dames & Moore, 2001

Notes:
(1) Site numbers correspond to site location numbers shown on Figure 4.17-1.
(2) Information presented in this table is from Environmental Data Resources, Inc. (EDR, 2001); agency correspondence; and Dames & Moore (URS) project files.
(3) EDR Map ID is the ID number as designated in the EDR reports.

Source: URS, 2001

4.17.2.2 Lead

The historic industrial land uses in the project area and the nature of the fill material placed during land reclamation have resulted in areas where lead concentrations and other heavy metals in soil exceed state and/or federal criteria for hazardous waste determination. For example, soil with lead was encountered during The Embarcadero Roadway and Muni Turnaround projects as well as at recent commercial and residential developments in the South of Market Area. Lead is also associated with old UST sites where leaded gasoline stored in USTs leaked and impacted soil/groundwater.


TRANSBAY TERMINAL
BART Embarcadero Station
MISSION BAY
CHINA BASIN
SOUTH BEACH
YERBA BUENA COVE
PacBell Park
Ferry Bldg
San Francisco Bay
San Francisco Oakland Bay Bridge
MARKET ST
THE EMBARCADERO
LEGEND
Fill
Rock Outcrop
Undifferentiated Sediments
1848 Shoreline
Alignment
Hazardous Materials Site
0
0.5
1
Approximate Scale in Miles
HAZARDOUS MATERIAL SITE LOCATIONS
September 2001
43-F0066867.00
San Francisco
Downtown Extension Project
San Francisco, California
URS
FIGURE 4.17-1
9/13/01 vsa ..\43-F0066867.00\hazmat.cdr

4.17.2.3 Underground Storage Tanks

Review of the regulatory agency databases included 29 UST (fuel tanks) release sites within close proximity of the proposed project as shown in Figure 4.17-1 and listed in Table 4.17-1. It is possible that other unidentified USTs may exist in close proximity to the proposed Project. Fuel hydrocarbons (gasoline, diesel, and motor oil), aromatic hydrocarbons (benzene, toluene, ethylbenzene, and xylenes), and lead are the contaminant types most frequently associated with leaking USTs.

4.18 VISUAL AND AESTHETIC SETTING

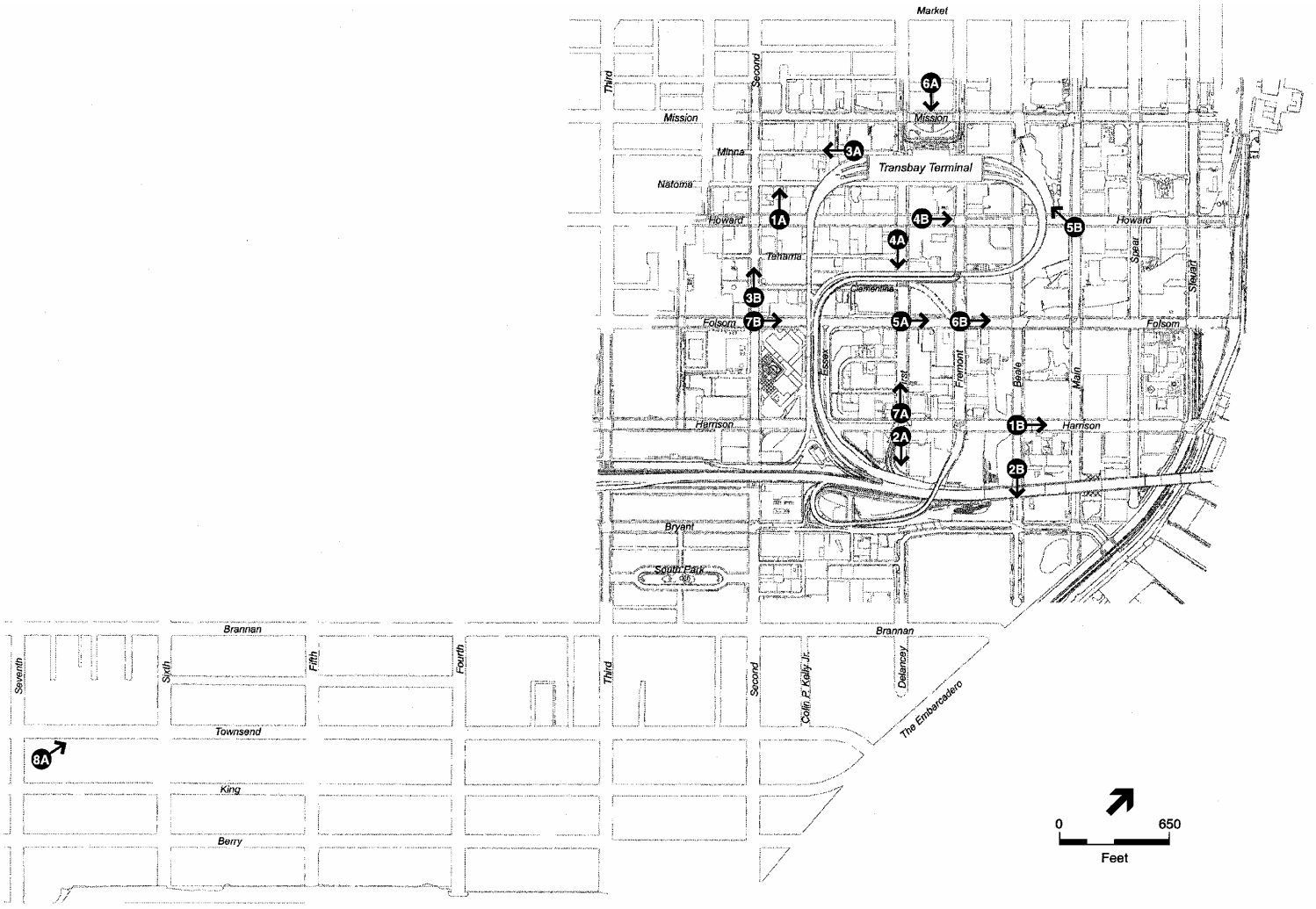
The visual and aesthetic environment in the study area is described below to establish the baseline against which to compare changes resulting from construction of project facilities and the demolition or alteration of existing structures or streetscape elements. This discussion focuses on the vicinity of the existing Transbay Terminal, the proposed Caltrain Downtown Extension and proposed Transbay Redevelopment Area, and associated properties where the project has the potential to change above-ground structures, affecting the visual appearance of the study area and views enjoyed by area users. The existing visual quality of the proposed study area is determined by a number of factors. Important factors include the:

- General "image" of the area that results from its location, its overall form, and the degree of spatial definition provided by its boundaries;
- Visual variety of landscape and architectural resources within the area, in terms of type and quality;
- Availability of public views, including of regional landmarks, within the area; and
- Position of the area in dynamic view sequences, such as entry to San Francisco by water or freeway, in which the area may be an important component of the larger cityscape.

The locations of viewpoints discussed in the following section are shown on Figure 4.18-1.

4.18.1 VISUAL CHARACTER OF THE AREA

The visual character of the study area is varied, reflecting changing development patterns and uses over the past 95 years. Its physical character is a combination of low-, mid-, and high-rise buildings, ranging from early 20th century historic structures and districts, to new, single and clustered office towers. A large amount of the Transbay Area is underdeveloped, much of it occupied by surface parking lots. Blocks and streets are punctuated by vehicular overpasses from the highway, the Bay Bridge, related off-ramps, and bus ramps. Low-scale neighborhoods exist in several disparate areas.



Transbay Terminal/Caltrain Downtown Extension / 201050 ■

SOURCE: Environmental Science Associates

Figure 4.18-1
Viewpoint Location Map

The overall Transbay Redevelopment Area does not currently have a high degree of visual definition or coherence. Certain elements provide a formal order, giving the area its general character. The street grid is rectilinear and regular and generally consists of larger blocks typical of South of Market. First Street acts as a seam between two development patterns south of Market Street. This is manifested in block orientation and building type, where the 550-foot by 825-foot blocks generally west of First Street are nearly twice as large as the blocks to the east and nearly four times as large as those north of Market Street. Coupled with the generally low-rise nature of development south of Mission Street and west of Beale Street and the lack of vertical relief north of Rincon Hill, the result is a pattern of small-scale buildings on large-scale blocks.

The northern boundary of the study area is visually defined by Market Street's abrupt transition from the diagonal street grid of the proposed Transbay Redevelopment Area to the alignment of streets to the north,[17] and also by the high-rise structures in the downtown urban core. These structures in aggregate produce a large-scale visual edge that is somewhat relieved by building qualities and exterior architectural treatments on the high-rise buildings (Figure 4.18-2A). The eastern boundary of the study area is also marked by the strong visual contrasts that typically occur at the water's edge: the clarity of the edge itself; vivid changes in forms, texture and color; and a moving open water surface juxtaposed with visual walls (Figure 4.18-2B). The western edge of the study area is less distinct, although the strong identity of Yerba Buena Gardens clearly comes into prominence west of Third Street.

The elevated Bay Bridge approach dominates views in a southerly direction along Rincon Hill, creating a visual boundary in the southern portion of the study area (Figure 4.18-3A). In places, the Bay Bridge Anchorage lacks ornament and formal variation and tends to be absorbed by surrounding structures, except where Rincon Hill falls away and the Beale Street anchorage and bridge steel work take on sculptural qualities (Figure 4.18-3B). South of Bryant Street, mid-rise residential structures and a collection of large-lot, mid-rise warehouses in the South End Historic District and vast expanses of open water of the San Francisco Bay characterize views of the study area's southern edge.

The relative flatness of the proposed Redevelopment Area adjacent to the Rincon Hill Area accentuates those features that do reach above the surrounding landscape. Such features include the Moderne form of the Pacific Telephone Building on New Montgomery Street (Figure 4.18-4A), the most striking element on the western edge of the study area; the Second Street corridor, with new development and contemporary design coexisting with the historic urban fabric (Figure 4.18-4B); and the heavily excavated yet important form of Rincon Hill on the south, with the newly remodeled spire of the Bank of America clock tower accentuating its height (Figure 4.18-5A).

[17] The South of Market street grid is oriented off of true north by approximately 45 degrees. Thus, Mission Street and streets parallel to it run in a southwest-northeast direction and perpendicular streets, such as First Street, run in a northwest-southeast direction. For purposes of this analysis, local convention directions are used. Thus, Mission Street runs in an east-west direction and First Street runs in a north-south direction.

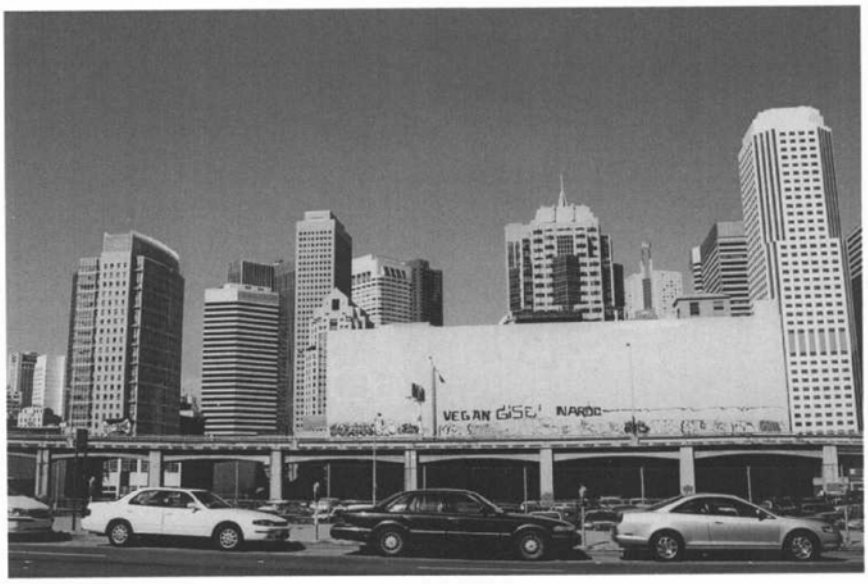


Fig 2A Folsom Street, Near First Street, Looking North to Downtown

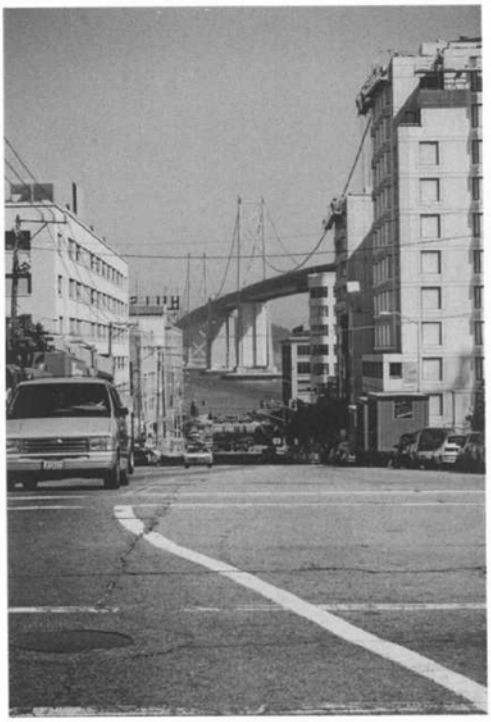


Fig 2B Harrison Street at Beale Street, Looking East to Bay Bridge

Transbay Terminal/Caltrain Downtown Extension / Redevelopment Project EIS/EIR ■

SOURCE: Environmental Science Associates
Parsons Transportation Group

Figure 4.18-2
Existing Views

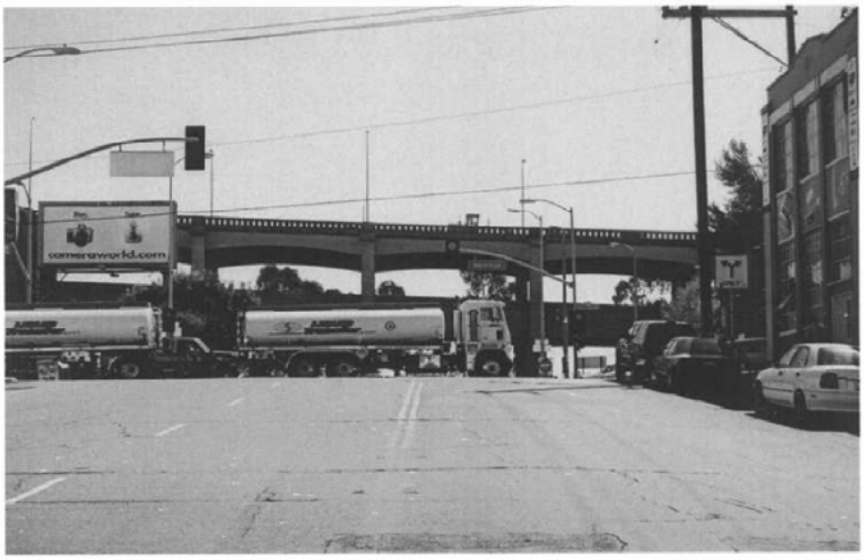


Fig 3A First Street, Near Harrison Street, Looking South to Elevated Bay Bridge Approach



Fig 3B Main Street, Looking South to Bay Bridge Steel Work

Transbay Terminal/Caltrain Downtown Extension /Redevelopment Project EIS/EIR ■

SOURCE: Environmental Science Associates
Parsons Transportation Group

Figure 4.18-3
Existing Views



Fig 4A Pacific Telephone Building (New Montgomery Street) from Minna Street



Fig 4B Second Street Corridor, Looking North

Transbay Terminal/Caltrain Downtown Extension /Redevelopment Project EIS/EIR ■

SOURCE: Environmental Science Associates
Parsons Transportation Group

Figure 4.18-4
Existing Views



Fig 5A First Street, Near Howard Street, Looking South to Bank of America Clock Tower

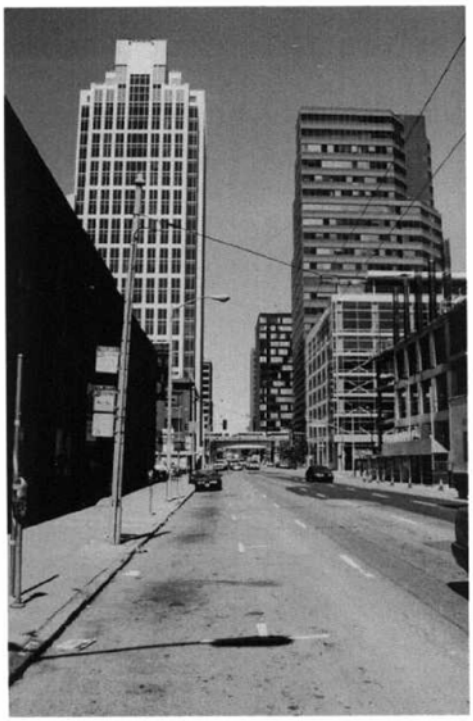


Fig 5B Howard Street, Near First Street, Looking East to New Office Tower (199 Fremont Street)

SOURCE: Environmental Science Associates
Parsons Transportation Group

Transbay Terminal/Caltrain Downtown Extension /Redevelopment Project EIS/EIR ■

Figure 4.18-5
Existing Views

Large structures visually define the northern and southern edges of the study area. The Bay Bridge stands high over the southeastern corner of the study area and a wall of modern skyscrapers define the northern and northeastern edge of the project area, while the office towers at 199 Fremont Street and 301 Howard Street rise above the Transbay Terminal ramps (Figure 4.18-5B). Building heights range from 550 feet along Mission Street, among the highest in the City, to 40 feet along Second Street between Harrison and Bryant. Building heights decrease toward the southern side of Rincon Hill. Smaller scale development characterizes South Park, where building heights are roughly 40 feet. South of the Bay Bridge anchorage, buildings are a more moderate scale, ranging from 40 to 105 feet. Heights at the eastern edge facing the waterfront step down from the maximum at Mission and Fremont, to between 100 and 250 feet in the Rincon Center and Rincon Hill districts. Building heights at the western end of the study area approaching Yerba Buena Gardens range from 350 feet near Mission off New Montgomery to 40 feet at the southern edge of the area adjacent to the freeway.

Certain subareas are visually distinctive within the study area. The buildings within the Second Street-New Montgomery Corridor to the east convey their historic character in design and materials; their scale, and the visual importance given to architectural elements that face directly onto the streets (e.g., windows, doors), emphasize activity at street level. This historic corridor, between Market and Howard Streets, has a more traditionally "urban" character than most of the project area, emphasizing the activity of workers, shoppers and students moving within a built environment that retains a human scale.

In recent years, new office, hotel, and residential developments have been constructed along Second Street. The 143-foot tall office tower, clad in buff limestone with cool aqua windows, is one of the newer office buildings at 201 Second Street. The C-Net Building at 235 Second Street is 88 feet tall and is clad with a masonry façade joined to a contemporary glass curtain wall. The Marriott Courtyard Hotel with its slender and slightly arched massing reaches a height of 170 feet on the corner of Second and Folsom Streets. The new development on Second Street, contemporary in design, respects the street wall established by older structures, by setting towers back from the street.

Three subareas within the Transbay Terminal Area present relatively coherent overall images of place: the corridor of undeveloped land along Folsom Street; the area to the east of the existing Transbay Terminal that is a visual extension of the downtown office district; and the area within the Terminal loop, with its collection of small-scale commercial buildings.

As shown in Figure 4.18-6A, an expanse of pavement and parking exists along Folsom Street in the former location of the now-demolished Embarcadero Freeway. This visual setting is repeated on parts of the south side of the street, as well, where commercial and Postal Service parking lots and a Golden Gate Transit bus storage lot are interspersed among occasional buildings, including the landmark Klockars blacksmith shop beneath the massive PG&E substation at Folsom and Fremont. The recently restored loft building at Beale Street, the renovated Hills Plaza, and the Gap building just outside the Transbay Terminal Area at Spear Street are exceptions to the general visual character of this area.

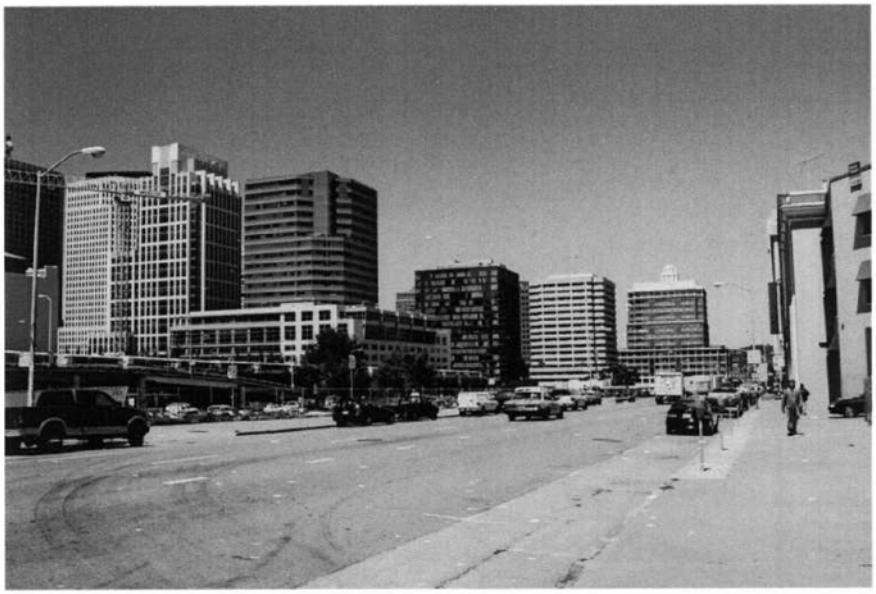


Fig 6A Folsom Street at First Street, Looking East



Fig 6B Main Street at Howard Street, Looking North

SOURCE: Environmental Science Associates
Parsons Transportation Group

Transbay Terminal/Caltrain Downtown Extension /Redevelopment Project EIS/EIR ■

Figure 4.18-6
Existing Views

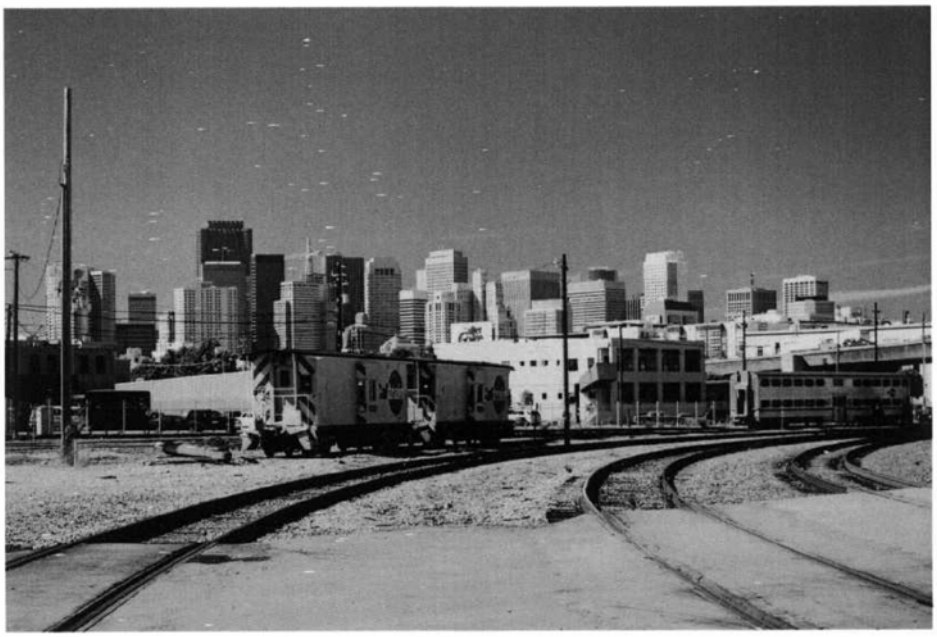
The downtown's large-scale buildings extend south of Mission Street, crossing at the Pacific Gateway Plaza at Beale and Mission Streets, reaching just south of Howard Street, east of Main Street (Figure 4.18-6B). In their relationship to the street, these newer buildings are in keeping with the post-1970 Market Street office towers, sometimes set back from the street and typically with plazas and other open spaces in front and behind. While differing from the uniform street wall typical of the early 20th century downtown, the spaces between and around newer towers set off these taller buildings and moderate the perceived scale of the South of Market blocks.

Within the Transbay Terminal ramp system, where development has been restricted by the presence of the ramp structures, is a relatively intact early 20th century commercial neighborhood. Looking out from within, the elevated ramps provide a sense of enclosure. This is particularly pronounced in the Tehama Street alleyway, where the scale of street and building combines to distance the larger city beyond.

The southern edge of the study area is visually defined by larger-scale industrial and warehouse structures, transportation infrastructure, residential buildings, and recreational facilities. Three to four-story brick structures with large floorplates front on wide (82.5 feet) streets in the vicinity of the existing Caltrain Station at Fourth and Townsend Streets. Many of these former manufacturing structures have been rehabilitated and adaptively reused. Transportation infrastructure visually dominates the area between Seventh to Fourth Streets along Townsend Street. Caltrain tracks traverse the rail yard, and parked trains, utility sheds, light stands, and power lines characterize the rail yard's visual attributes. Figure 4.18-7 shows the Caltrain storage yard in the foreground, the Sixth Street off-ramp from I-280 to the east, buildings fronting on Townsend Street to the north, and the distinctive downtown mound of high rises in the background to the northeast.

Residential development visually differs from the warehouse and light industrial structures in the area. Since the mid-1980s, mid- and large-scale residential buildings (generally four to 14 floors) have been constructed within the southern edge of the study area (predominately in the South Beach neighborhood along The Embarcadero). These taller structures stand out from the industrial buildings surrounding them due to their height and massing. Newer apartment buildings are taller and include landscaped open spaces. Mission Bay North, southeast of the existing Caltrain Terminus, is being developed with dense, large scale (80 to160 feet) residential structures on the blocks adjacent to Third, Fourth, Fifth, King, and Townsend Streets.

Recreational uses are concentrated in the southeastern section of the study area. These uses are characterized by larger-scale public facilities and smaller, more intimate spaces. Pacific Bell Park is located at Third and King Streets. The 45,000-seat baseball park recalls traditional architectural elements in its design, such as its location within the existing urban street grid, the use of building materials (brick and steel), public spaces with shops and restaurants, landscaping features and a unified signage program. The ballpark harmonizes with existing adjacent structures.



View of Caltrain Storage Yard and Downtown San Francisco Looking Northeast

SOURCE: Environmental Science Associates
Parsons Transportation Group

Transbay Terminal/Caltrain Downtown Extension /Redevelopment Project EIS/EIR ■

Figure 4.18-7
Existing Views

Just to the south of Pier 40, the South Beach Marina provides a visual break from the built environment along The Embarcadero. Watercraft can be seen docked in the marina. Strong and organized smaller-scale development adjacent to the grassy open space and play area in South Park creates an effective contrast and makes the street space between the two pleasing.

4.18.2 VISUAL RESOURCES

Within the general area near the proposed project (see Figure 4.18-1), several buildings, generally in the New Montgomery-Second Street Conservation District and adjacent Rincon Hill area, exhibit architectural styles of historical interest. The area also has a limited number of structures that have been recognized as possessing exceptional value either by themselves or because they represent the work of major architects. A notable example is the existing Transbay Terminal, designed by Timothy Pfleuger in 1939 (Figure 4.18-8A). Others in the Rincon Hill District include: the PG&E and Matson Buildings on Market between Beale and Main Streets; the aforementioned Bank of America (former Union 76) clock tower by Louis Hobart; the Hearst Building at Third and Market Streets; and the Pacific Telephone Building, Rialto Building, Sharon Building, Call Building, Palace Hotel, and Palace Garage, among others, in the New Montgomery-Second Street Conservation District. Most of these buildings are north of Mission Street, and nearly all are north of Howard Street.

Aside from the more distinguished examples of the architectural works listed above, the area contains a diversity of building forms, masses, building styles and materials that provide visual interest. Massive buildings visually define the northern boundary of the study area. High-rises, varying in height and bulk, color and façade treatment, punctuate the northern edge of the area and provide a clearly delineated visual edge from the generally low-rise area to the south. Narrow streets such as Minna, Natoma, Tehama, and Clementina Streets provide a diversity of scale and views compared to the larger blocks generally found west of First Street. Narrow streets (typically about 35 feet wide) are generally developed with lower structures with larger footprints and minimal setbacks that create a sense of enclosure at the street level. In contrast, the area also contains larger streets (typically about 86 feet wide) such as Folsom, Harrison and Mission Streets, developed with larger structures, some with setbacks or open space that tend to accentuate the width of the street and the size of the buildings fronting them.

Natural features such as the San Francisco Bay complement the built environment within the proposed Redevelopment Area and provide an edge to the area to the east. The water's edge provides a visual resource and is revealed at the termini of Folsom, Howard, and Mission Streets at the eastern edge of the district. Other than the landform of Rincon Hill, natural features within the study area are generally limited to landscaping associated with residential and commercial developments. Specific landscape designs create small areas of visual interest, such as the grassy oval park in South Park, the open space along the Embarcadero Promenade on the eastern border of the study area, or the grass "benches" in front of the Marathon Plaza on Second Street.



Fig 8A Transbay Terminal Building



Fig 8B Folsom Street, Near Fremont Street, Looking East to the Bay

SOURCE: Environmental Science Associates
Parsons Transportation Group

Transbay Terminal/Caltrain Downtown Extension / Redevelopment Project EIS/EIR ■

Figure 4.18-8
Existing Views

Transportation infrastructure provides other unique views within the Transbay Terminal Area. The network of ramps connected to the Terminal visually defines the area. These ramps cross over Howard, Beale, Fremont, First, Folsom, Essex, Clementina, Tehama, and Natoma Streets. Ramps interrupt views across the district and provide a sense of enclosure. From the Transbay Terminal, the ramps lead to the Bay Bridge. These ramps block views to the Bay and to Rincon Hill, create dark and cramped spaces underneath (generally attracting surface parking uses) and act as visual reference points within the Transbay Area. To the south, the proposed Transbay Redevelopment Area is visually subsumed and blocked by the greater mass of the Bay Bridge and its western approach.

4.18.3 SCENIC VIEWS AND VISTAS

Due to its location at the eastern edge of the City, its generally flat terrain, and the low-rise character of most of its developed uses, the proposed Transbay Redevelopment Area provides a rich variety of views. Unobstructed long-range views of major regional landmarks are available throughout the study area. These include the Bay, Treasure Island, Yerba Buena Island, the East Bay Hills, the Bay Bridge, Twin Peaks, and the downtown skyline. The study area also affords smaller-scale views, such as streetscapes in which visual interest is provided by architectural elements or vegetation in the foreground.

As a result of its generally level topography and the regular street grid, regional landmarks are framed in well-defined visual corridors established by such major streets as Market, Mission, Folsom, Harrison, and Howard Streets. In these axial views, Twin Peaks to the west and the Bay to the east provide the visual endpoints of the corridor and consequently a measure of orientation (Figure 4.18-8B). Where these endpoints are built elements, parallel horizontal lines defined by the roadway, sidewalks, and building elements appear to converge toward those buildings, further enhancing their visual importance (Figure 4.18-9A). Because the visual landmarks generally visible along the east-west corridors are natural features, they also provide strong and, under some lighting and water conditions, dramatic contrast with the built urban environment. In certain cases – for example, the easterly view down Market Street of the Ferry Building – the area's visual corridors may frame buildings with distinctive architecture and historic or civic meaning. Views toward the water are partially framed by buildings of varying height along Mission, Howard, Folsom and Harrison Streets. Views at some points are interrupted by overpasses, and dissipate and are distracted by the numerous surface lots (Figure 4.18-9B).

North-south axial views within the study area (e.g., First and Second Streets, Main, Beale, and New Montgomery Streets) typically focus on structures, although with expanses of sky behind. The structures, too, may be regional landmarks and include the Bay Bridge and downtown office towers. Under certain viewing conditions, the sky is an important component of the north-south axial views: in the evening, skyscrapers may be viewed against banks of fog blowing into the Bay, with the setting sun highlighting the edges of clouds and buildings.



Fig 9A Fremont Street at Harrison Street, Looking North to Downtown



Fig 9B Folsom Street at Second Street, Looking East

SOURCE: Environmental Science Associates
Parsons Transportation Group

Transbay Terminal/Caltrain Downtown Extension / Redevelopment Project EIS/EIR ■

Figure 4.18-9
Existing Views

The existing Transbay Terminal and its ramps obstruct important axial views including north-south views along First, Fremont, and Beale Streets that are walled off by the structure of the Terminal that bridges the street. In addition, views southward through the proposed Redevelopment Area are partially obscured by the Terminal ramps and the rising topography of Rincon Hill. Views in the southern section of the study area are of I-280, China Basin Channel, the Bay, Potrero Hill, the downtown high-rises, and intervening development in South of Market neighborhoods.

4.18.4 ELEMENT IN THE CITYSCAPE

The proposed Transbay Redevelopment Area is a component of panoramic views of the City and it is part of the dynamic view sequences experienced while entering the City on I-280 from the south and the Bay Bridge from the east. From northbound I-280, views of downtown are readily available to the north. From this vantage, the dense cluster of high-rises gradually rising in height from SOMA produces a total effect that characterizes San Francisco's dense downtown core. To the west, Sutro Tower is visible atop Twin Peaks and fragments of the Bay Bridge can be seen to the east.

In views from westbound lanes of the Bay Bridge, the Transbay Redevelopment Area occupies the near land edge; in northerly views from the approaches to the Bay Bridge, it establishes an open foreground for panoramic views of the downtown area beyond. In these views, the area's generally level terrain and lack of prominent large-scale structures reduce its visual importance, especially in relation to the distinctive features beyond (e.g., downtown high-rise structures, Twin Peaks). The proposed redevelopment area thus serves now as a generally neutral part of the visual context for major view elements.

Due to variations in San Francisco's topography, the proposed Transbay Redevelopment Area is visible from many locations from within the City. Views of the proposed project area are available from Dolores Park in the Dolores Heights neighborhood. The general flatness of the proposed redevelopment area contrasts with the high-rises located north of Market Street. This view is framed by the Bay and East Bay hills in the background. Similar views are available from Twin Peaks; the proposed project area is a part of a sweeping vista that stretches as far as Russian Hill to the north and Portrero Hill to the south. Views of the proposed Transbay Redevelopment Area are also available from the upper stories of downtown high-rises, specifically from windows with a southern orientation.

CHAPTER 5: ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

This chapter analyzes the potential impacts of the proposed project and suggests mitigation measures for the impacts identified. Long-term effects -- those associated with operation of the project or that result from project right-of-way requirements -- short-term, construction phase impacts, and cumulative impacts are addressed. Discussions are organized by environmental topic area, except that construction phase impacts are discussed together, following the presentation of longer-term effects. In order to avoid repetition, a few environmental issues are addressed primarily in the construction phase impacts section, because their associated effects would derive primarily from construction activities.

NEPA and CEQA incorporate differing provisions affecting identification and mitigation of impacts. CEQA requires identification of impact level of significance in an EIR, whereas NEPA considers level of significance in determining whether or not to prepare an EIS and, once the decision to prepare an EIS is made, reports project impacts without defining level of significance. Similarly, CEQA requires mitigation only for significant adverse impacts, while NEPA allows for mitigation of all of the impacts of a project. This combined NEPA/CEQA document reports all of the impacts of the proposed project, and proposes mitigation wherever practicable to reduce the impacts identified. Chapter 7 provides specific discussion of impact significance and mitigation in accordance with CEQA.

5.1 LAND-USE, WIND, AND SHADOW

This section evaluates long-term land-use, wind and shadowing impacts of the proposed project. Construction-phase impacts are addressed in Section 5.21.

5.1.1 Land Use Impacts

The land use impacts resulting from each of the three project components are considered and compared to the No-Project Alternative. A discussion is also included of the overall effects of the project on neighborhood character and its consistency with existing plans and policies.

5.1.1.1 Transbay Terminal Land Use Impacts

The proposed Transbay Terminal would be located at the site of the existing terminal structure on Mission Street at First, Fremont and Beale Streets, *approximately 150 feet to the west of the present terminal footprint.* The existing Terminal would be demolished and a new multi-modal transit facility would be constructed in its place. There are two alternatives being considered for the new Transbay Terminal: the West Ramp and Loop Ramp Alternative. The main differences between the West Ramp Alternative and the Loop Ramp Alternative are the size of the terminal,

amount of ramp area, and the potential availability of land opened up for new development by removing sections of the existing ramp network.

West Ramp Alternative. Under the West Ramp Alternative, the Transbay Terminal would be one story taller than under the Loop Ramp Alternative, but would be constructed *approximately* on the footprint of the existing terminal, *but about 150 feet to the west. This would result in the terminal structure no longer spanning Beale Street.* The existing ramp segments on the east side of the Transbay Terminal (north of Howard Street, just east of Beale Street, then looping south and west to Essex Street) would be removed. However, the I-80 Fremont Street off-ramp would remain in place west of Fremont Street. Circulation between the Terminal and the Bay Bridge would occur on a ramp segment oriented on a north-south axis. In terms of land use, the West Ramp Alternative would open up new developable area on the blocks south and east of the Terminal at Beale and Howard Streets and Folsom at Beale and Main Streets, and would create opportunities for mid-block pedestrian throughways between towers fronting on Folsom Street or increase the amount of mid-block open space.

Loop Ramp Alternative. Under the Loop Ramp Alternative, the existing ramp segments on the east side of the terminal would be rebuilt in generally the same location and would continue to provide circulation between the Terminal and the Bay Bridge. Thus, in terms of land use, the Loop Ramp Alternative would provide less land area for future new transit-oriented development. When compared with the West Ramp Alternative, the Loop Ramp Alternative would lessen the amount of developable area on the blocks south and east of the Terminal at Beale and Howard Streets and Folsom at Beale and Main Streets, and would possibly limit planned mid-block pedestrian throughways between towers fronting on Folsom Street or decrease the amount of mid-block open spaces. In addition, the ramps would continue to be seen by some as a barrier in the district, walling off uses inside of the loops from uses located outside. Under any Terminal Alternative, however, the I-80 Fremont Street off-ramp will continue to impinge on the development along Fremont Street north of Folsom Street.

Impacts Common to Both Transbay Terminal Alternatives. Land use impacts would result under either Transbay Terminal Alternative. Development of the Terminal and the temporary terminal would require the acquisition of *11* parcels and demolition of five buildings (see Section 5.2, Displacements and Relocation).

Additional impacts would occur due to off-site staging and parking requirements for both AC Transit and Golden Gate Transit. Buses would be stored *under the West Approach to the Bay Bridge between Stillman, Perry,* Second and Fourth Streets, a site currently used for automobile parking. The project would include the construction of a parking deck *immediately west of Fourth Street between Perry* Street to the north and *Stillman* Street to the south, to make up for the loss of surface parking being used as a transit storage area.

The new terminal, regardless of the design alternative selected, would cause an increase in pedestrian traffic in the vicinity of the transit facility, creating a possible heightened demand for ground-floor retail uses, including, but not limited to restaurants, cafes and convenience retail, to

serve the increased numbers of transit patrons. The new Transbay Terminal could intensify land uses in its vicinity. Other land use effects resulting from the proposed Terminal would mainly be associated with the construction and operation of its ramps and the temporary bus storage facilities required during the construction of the terminal structure.

No-Project Alternative. Under the No-Project Alternative, a new Transbay Terminal would not be constructed. The existing terminal would be retrofitted and low-capital-cost transportation improvements would be implemented. Opportunities for revitalization in the Transbay area, such as establishing new open spaces, would be substantially less for the No-Project Alternative compared to *the* West Ramp Transbay Terminal Alternative, for example. Under the No-Project Alternative, the existing ramp network would continue to act as a barrier by dividing proposed new development and existing land uses in the area. Additionally, the ramps occupy considerable ground area that would not be available for future development and also may limit future development of adjacent lots.

5.1.1.2 Caltrain Downtown Extension Land Use Impacts

Two alignment alternatives are considered for the Caltrain Downtown Extension: the Second-to-Main Alternative and the Second-to-Mission Alternative. Both a cut-and-cover and tunneling option have been defined for each Caltrain Extension Alternative. The alternatives and options present distinct engineering opportunities and constraints. The cut-and-cover construction method for either alternative would involve the acquisition and demolition of up to 23 existing buildings. Land use impacts associated with the loss of these buildings are described in this section, while more detail regarding the parcels and buildings that would be acquired is provided in Section 5.2. Interim disruptions to land uses that remain in the project area could be anticipated for either alternative, as described in Section 5.21.

The affected properties for both Caltrain Alternatives are located in the vicinity of Second and Howard Streets, with additional properties on Mission Street affected under the Second-to-Mission Street Alternative. Eleven additional parcels with 10 building in the Second and Townsend Streets area would be acquired and demolished under the Cut-and-Cover Option but would remain under the Tunneling Option. See also Figure 4.1-1, in Chapter 4, which shows the land use context for these affected properties.

Affected properties would be purchased according to the procedures set forth in the Real Properties Acquisition Act. Structures would then be demolished to facilitate cut-and-cover construction of the tunnel.

At the Townsend and Second Streets intersection, cut-and-cover construction would require demolition of structures located mainly along the north side of Townsend Street (west of Second Street) and the west side of Second Street (north of Townsend). Land uses at this location consist mainly of industrial uses, with some office uses and two residential buildings. The

affected structures were constructed between 1906 and 1927 (although some have been dated earlier), and one contemporary residential building was constructed in 1996.

At the Second/Howard Street intersection, the project would require demolition of structures generally located on the east side of Second Street (between Minna and Howard Streets) and on the north side of Howard Street (east of Second Street). These structures contain industrial, office, residential and restaurant uses. The affected structures were constructed between 1906 and 1921, and one contemporary residential building was constructed in 1980. Three structures slated for demolition as part of the project (Class B and C office buildings) are located within the New Montgomery-Second Street Conservation District, *which overlaps the Second and Howard Streets Historic District*. Two structures south of the Second/Howard Street intersection would also require demolition to permit cut-and-cover construction. These structures are located along Second Street and include Class C office uses (built between 1906 and 1912). There is also a vacant lot used for surface parking.

The existing land uses described above would be displaced by project construction. Once project construction is completed, the cleared properties would be made available for development. Future land uses on these sites would be required to conform to the area's zoning, General/Area Plan requirements, and Redevelopment Agency's Guidelines (for properties located within the Redevelopment Area).

In addition, there is at least one major development proposal that has the potential to conflict with the Second-to-Mission Caltrain Extension Alternative – a 605-foot tall, 1,068,400 gross square foot mixed use development proposed at 301 Mission Street (Assessors Block 3719, lots 1 and 17). This proposal *has completed its* environmental review *and has received* various approvals from *City decision-makers.* The *current* proposed configuration of the foundation piling and underground parking for 301 Mission *takes into account the need for a small amount of property on the southern-most part of the parcel by the Transbay Terminal/Caltrain Downtown Extension Project for the Second-to-Main Caltrain Extension Alternative, the adopted LPA.*

In the long-term, however, the Transbay Terminal*/Caltrain Downtown Extension* project would not disrupt or divide the physical arrangement of the established community. Because many of the buildings that would be removed are older buildings, some of which are listed or eligible for listing in the National Register of Historic Places (as described in Section 5.14), there would be a change in the character of the area. This change would be lessened by the fact that there are already many new buildings in the general vicinity. The majority of the square footage that would be demolished is in office use, representing only a small portion of the office space throughout the City. Loss of this office space would not adversely affect the City's supply, particularly given that many of the recently constructed buildings in the area provide additional office space.

5.1.1.3 Redevelopment Land Use Impacts

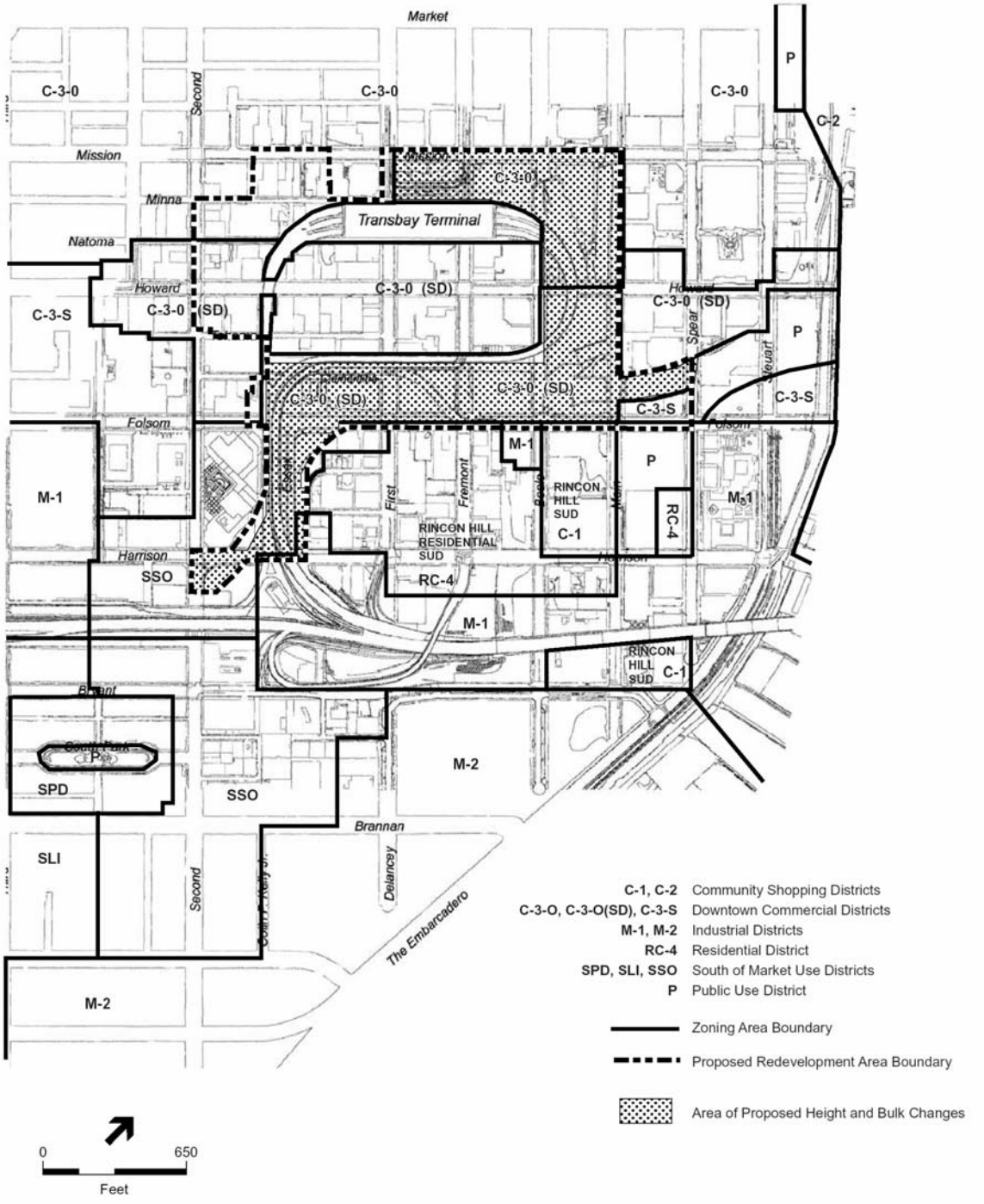
As described in Chapter 2, two redevelopment alternatives are proposed: the Full-Build Alternative and the Reduced Scope Alternative. Each alternative would include zoning changes and the establishment of a redevelopment area that generally would allow land uses that are currently allowed in the Transbay Study Area, with the exception of the P-zoned properties where the former freeway and ramps were located. Because the project would provide for new development, notable changes would be expected in the Transbay Redevelopment Area, especially with respect to urban form and the intensity of land use.

Full-Build Alternative. The Full Build Alternative would result in a mix of residential, office, hotel, and retail uses. This alternative would consist of land uses that are already permitted within the vicinity of the Transbay Study Area. As described in Chapter 2 and shown on Figure 2.2-22, the Full Build Alternative would result in development of 5.6 million square feet of residential uses (4,667 residential units, including affordable housing), close to 1.2 million square feet of office uses, 475,600 square feet of hotel uses, and more than 355,400-square feet of retail uses, or about 7.6 million square feet of development, overall.

Proposed changes to existing zoning would occur predominately along the blocks on Folsom Street, as well as those at the site occupied by the Transbay Terminal and along its ramps to the west of Essex Street to First Street. Existing parcels zoned P would be rezoned to either C-3-O or C-3-O (SD) to facilitate and further the goals of the redevelopment plan. Proposed changes to the height and bulk regulation would occur on the same blocks. These changes are identified in Table 5.1-1 and on Figures 5.1-1, 5.1-2, and 5.1-3.

As indicated in Table 5.1-1, existing height and bulk limits range from 30-X at the site of the current Transbay Terminal to 400-S at Mission and Beale Streets. Existing height limits are, on average, approximately 80 feet. Under the Full Build Alternative, height limits would range from 150 feet around Essex Street to 400 feet along Folsom Street. The maximum height limit established under the Full Build Alternative would be 550 feet, at a proposed hotel site at Mission and Fremont Streets, adjacent to the proposed Transbay Terminal.

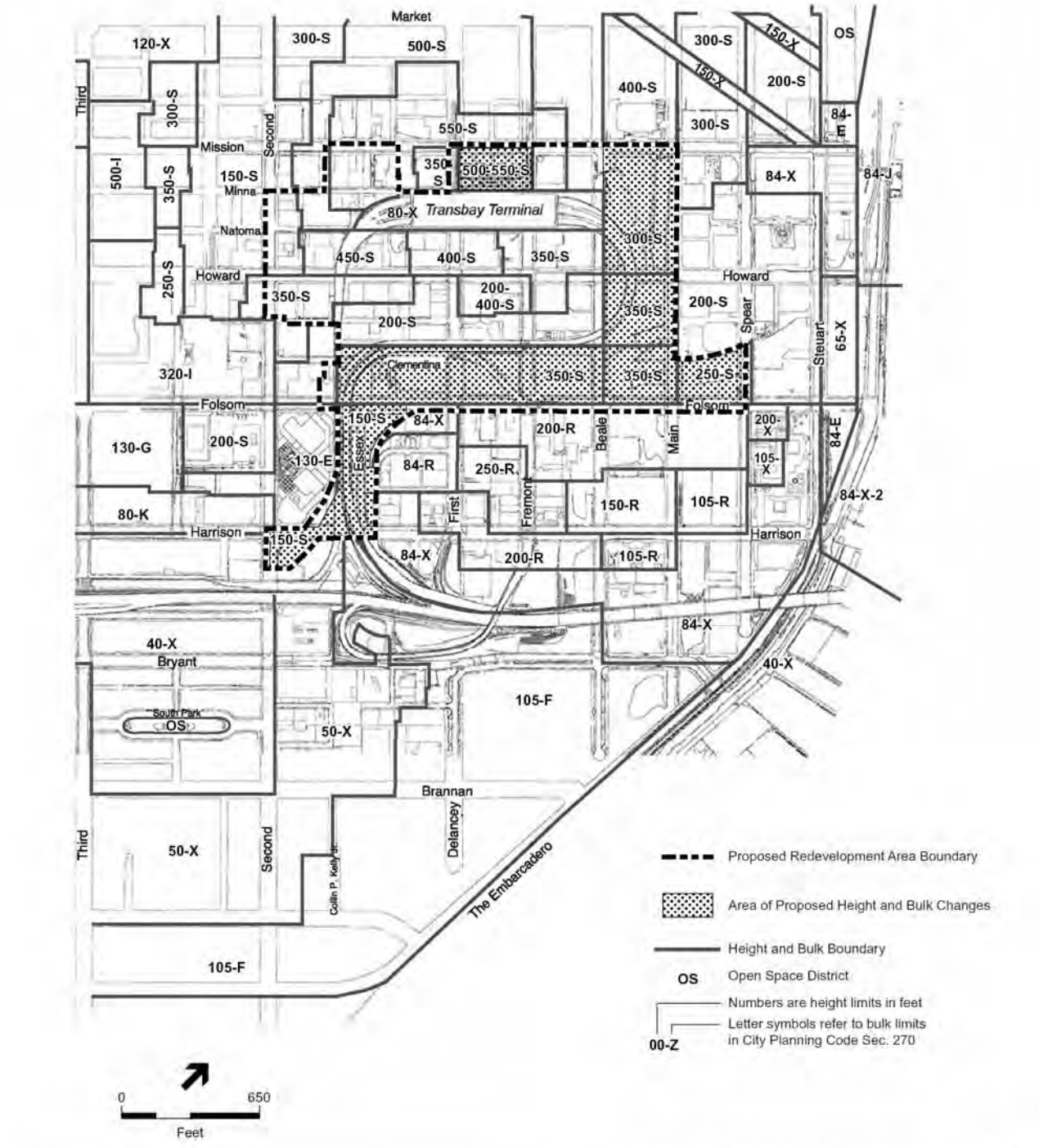
Reduced Scope Alternative. The Reduced Scope Alternative would result in less commercial and retail development and is weighted more toward housing. This alternative assumes approximately four million square feet of residential development (approximately 3,430 dwelling units), 350,000 square feet of hotel uses, and approximately 260,000 square feet of retail development, or 4.7 million square feet overall. The *base* zoning changes proposed under the Reduced Scope would be identical to those proposed under the Full Build, *although the height and bulk designations are different.* Existing parcels zoned P (Public) would be zoned to C-3-O or C-3-O (SD) to accommodate housing or retail uses.



SOURCE: Parson's Transportation Group, Inc., Environmental Science Associates

Transbay Terminal/Caltrain Downtown Extension / 201050 ■

Figure 5.1-1
Proposed Zoning,
Full Build and Reduced Scope Alternatives



SOURCE: Parson's Transportation Group, Inc., Environmental Science Associates

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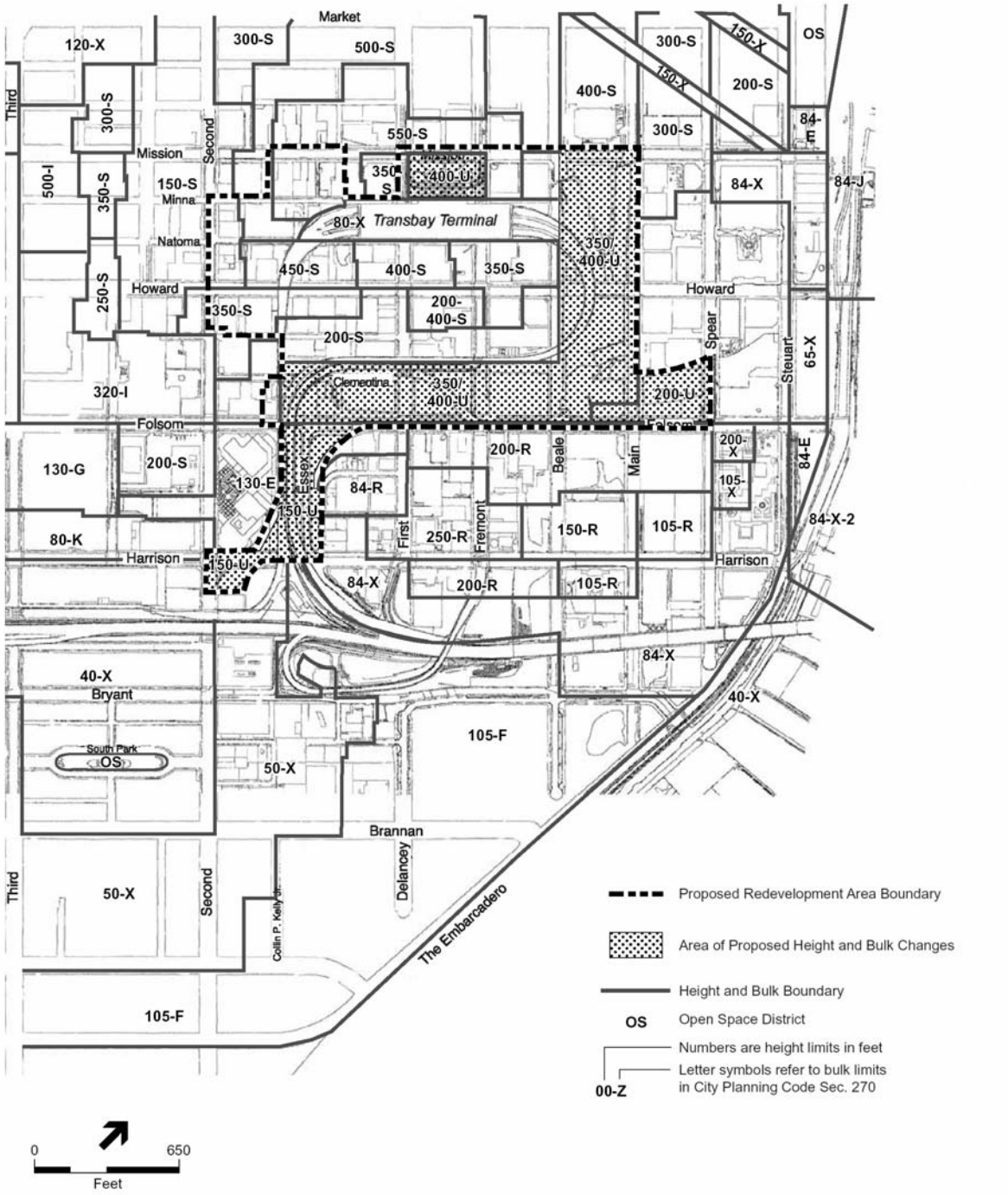
Figure 5.1-2
Proposed Height and Bulk Districts
Full Build Alternative



SOURCE: Parson's Transportation Group, Inc., Environmental Science Associates

Transbay Terminal/Caltrain Downtown Extension / 201050 ■

Figure 5.1-3
Proposed Height and Bulk Districts
Reduced Scope Alternative

Table 5.1-1: Existing and Proposed Zoning in the Proposed Transbay Terminal Redevelopment Area

Assessor's Block	Block Bounded by:	Zoning Districts		Height/Bulk Districts		
		Existing	Proposed*	Existing	Full Build	Reduced Scope
3718	Mission, Main, Howard, and Beale Streets	P, C-3-0, C-3-0 (SD)	C-3-0	80-X, 80X \ 400S	300-S	350-*U*
3720	Mission, Fremont, Howard, and First Streets	P	C-3-0	30-X / 80-X	550-S	400-*U*
3736	Howard, First, Folsom, and Second Streets	P	C-3-0 (SD)	80-X \ 200-S	350-S	400-*U*
3737	Howard, Fremont, Folsom, and First Streets	P, C-3-0 (SD)	C-3-0 (SD)	80-X	350-S	400-*U*
3738	Howard, Beale, Folsom, and Fremont Streets	P	C-3-0 (SD)	80-X	350-S	350-*U*
3739	Howard, Main, Folsom, and Beale Streets	P, C-3-0, C-3-0 (SD), C-3-S	C-3-0 (SD)	80-X, 90-X, 200-S	350-S	350-*U*
3740	Howard, Spear, Folsom, and Main Streets	P, C-3-S	C-3-0 (SD)	40-X, 200-S	250-S	200-*U*
3749	Folsom, First, Harrison, and Second Streets	M-1	C-3-0 (SD)	84-X	150-S	150-U
3764	Harrison, Rincon, Bryant, and Second Streets	P	C-3-0 (SD)	50-X	150-S	150-U

Zoning Districts: C-3-0: Downtown commercial office; C-3-0 (SD): Downtown commercial office (special development); C-3-S: Downtown support; M-1: Light industrial; P: Public use; S: See Planning Code Section 270(d) or refer to Height and Bulk maps 1H, 2H and 7H of the Zoning Map; U: Maximum plan dimensions for buildings over 80 feet but less than 300 feet in height: 100 feet (length), 125 feet (diagonal dimension); buildings greater than 300 feet: 115 feet (length). 145 feet (diagonal dimension). Building setbacks would be required pursuant to Planning Code Section 253.2.

* proposed *zoning district designation* for both the Full Build and Reduced Scope/Variant Alternatives are identical

Source: The San Francisco Planning Department, June 2001

The Reduced Scope Alternative differs from the Full Build scenario in the proposed the heights and bulks of the proposed new structures on certain blocks. Under the Reduced Scope Alternative, Assessor Block 3720 would accommodate a hotel at a height of approximately 400 feet, which would be up to 150 feet shorter than allowed under the Full Build Alternative. The Reduced Scope Alternative would permit building heights of up to 50 feet higher than under the Full Build Alternative on the blocks between Beale and Main and Mission and Folsom Streets, and on Folsom Street, along the southern boundary of the Transbay Redevelopment Area boundary.

As indicated in Table 5.1-1, existing height and bulk limits range from 30-X at the site of the current Transbay Terminal to 400-S at Mission and Beale Streets. Existing height limits are, on average, approximately 80 feet. Under the Full Build Alternative, height limits would range from 150 feet around Essex Street to 400 feet along Folsom Street. The maximum height limit established under the Full Build Alternative would be 550 feet, at a proposed hotel site at Mission and Fremont Streets, adjacent to the proposed Transbay Terminal.

Reduced Scope Alternative. The Reduced Scope Alternative would result in less commercial and retail development and is weighted more toward housing. This alternative assumes approximately four million square feet of residential development (approximately 3,430 dwelling units), 350,000 square feet of hotel uses, and approximately 260,000 square feet of retail development, or 4.7 million square feet overall. The zoning changes proposed under the Reduced Scope would be identical to those proposed under the Full Build. Existing parcels zoned P (Public) would be zoned to C-3-O or C-3-O (SD) to accommodate housing or retail uses.

The Reduced Scope Alternative differs from the Full Build scenario in the proposed the heights and bulks of the proposed new structures on certain blocks. Under the Reduced Scope Alternative, Assessor Block 3720 would accommodate a hotel at a height of approximately 400 feet, which would be up to 150 feet shorter than allowed under the Full Build Alternative. The Reduced Scope Alternative would permit building heights of up to 50 feet higher than under the Full Build Alternative on the blocks between Beale and Main and Mission and Folsom Streets, and on Folsom Street, along the southern boundary of the Transbay Redevelopment Area boundary. The main difference between the Reduced Scope and Full Build Alternative would be in building mass. Under the Reduced Scope, new towers would have, on average, smaller floor plates and would be more slender than those under the Full Build, due to the maximum diagonals of the building towers in the proposed U bulk district (see Table 5.1.3). The smaller, more slender floor plates also would result in increased spacing between towers, compared to bulkier building towers in the Full Build Alternative.

North of Folsom Street, there would be an expansion of office development, including high-rises, particularly near the site of the existing Transbay Terminal. As under the Full Build Alternative, the existing terminal at First and Mission Streets is proposed to be demolished, and a new terminal would be constructed at this site. Both alternatives would result in an expansion of educational and institutional uses, with open space surrounded by mid-rise structures. Farther west, existing historic buildings in the New Montgomery-Second Street Conservation District would remain, except for those buildings that would be demolished as part of the right-of-way acquisition for the Caltrain Downtown Extension alignment, providing a moderating buffer in building scale between Yerba Buena Gardens and the northwest corner of the Transbay Redevelopment Area. The Second Street corridor could become an increasingly attractive destination for street-level retail and restaurants and a pedestrian link between downtown and Pacific Bell Park at China Basin.

The main difference between the Reduced Scope and Full Build Alternatives would be in building mass. Under the Reduced Scope, new towers would have, on average, smaller floor plates and would be more slender than those under the Full Build, due to the maximum diagonals of the building towers in the proposed U bulk district (see Table 5.1.3). The smaller, more slender floor plates also would result in increased spacing between towers, compared to bulkier building towers in the Full Build Alternative.

North of Folsom Street, there would be an expansion of *residential* development, including high-rises, particularly near the site of the existing Transbay Terminal. As under the Full Build Alternative, the existing terminal at First and Mission Streets is proposed to be demolished, and a new terminal would be constructed at this site. Both alternatives would result in an expansion of educational and institutional uses, with open space surrounded by mid-rise structures. Farther west, existing historic buildings in the New Montgomery-Second Street Conservation District would remain, except for those buildings that would be demolished as part of the right-of-way acquisition for the Caltrain Downtown Extension alignment, providing a moderating buffer in building scale between Yerba Buena Gardens and the northwest corner of the Transbay Redevelopment Area. The Second Street corridor could become an increasingly attractive destination for street-level retail and restaurants and a pedestrian link between downtown and Pacific Bell Park at China Basin.

Draft Transbay Redevelopment Area Design for Development Vision (August 2003). *Implementation of the current Design for Development Vision would result in a mix of residential, retail, office and hotel uses that would be similar to those uses under both the Full Build and Reduced Scope Alternatives. The Design for Development Vision would consist of land uses already permitted within the vicinity of the Transbay Area, and would result in development of roughly 4.14 million square feet of residential uses (3,378 residential units, including affordable housing), approximately 965,000 square feet of office uses, 475,000 square feet of hotel uses, and approximately 30,670 square feet of retail commercial use, with a total of about 5.6 million square feet of development.*

This Design for Development Vision proposes land uses that would be consistent with the General Plan and the Planning Code, as they now exist and may be amended from time to time in the future. The Transbay Redevelopment Area Design for Development Vision would consist of three main land use zones: the Transbay Residential Zone (Zone 1), the Transbay C-3 Zone (Zone 2), and the Transbay Terminal and Ramp Environs (Zone 3). Because the Design for Development Vision would be consistent with the Full Build and Reduced Scope Alternatives, the changes to land uses in the Transbay Redevelopment area would be essentially the same as those illustrated on Figure 5.1-1.

The Redevelopment Area Design for Development Vision would result in land use effects identified for both the Full Build and Reduced Scope Alternatives. The Design for Development Vision would generally construct shorter buildings and fewer towers (specifically along Folsom Street) and fewer dwelling units than proposed under the Full Build Alternative. The Redevelopment Area Design for Development Vision would also include mid-block pedestrian passages, public open space in the form of parks, and private open spaces in the interiors of private residential developments.

Because the Redevelopment Area Design for Development Vision would be consistent with land uses analyzed for the Full Build and Reduced Scope Alternatives and because its proposed development program would be less dense (e.g., fewer dwelling units, less office and retail square footage) than the Full Build Alternative, the land use effects of the Design for

Development Vision would also not be adverse. As with both the Full Build and Reduced Scope Alternatives, rather than disrupting or dividing the community or adversely affecting its character, implementation of the Design for Development Vision could do the opposite by lending a positive neighborhood identity to an area that would provide a cohesive mix of jobs, housing and support services.

Impacts Common to Both Redevelopment Alternatives. Both alternatives are expected to result in substantial open space areas in several portions of the Transbay Redevelopment Area, to complement the more intensive development. Folsom Street itself could be transformed from a relatively quiet (except at rush hour) street bordered by numerous undeveloped parcels to a built-out boulevard with residential and commercial uses side-by-side and a large amount of pedestrian traffic. This street would play an important role in defining the identity of the Transbay Redevelopment Area as a cohesive neighborhood, providing a mix of jobs, housing and support services.

No-Project Alternative. Under the No-Project Alternative new development, driven by market forces, is anticipated in the Transbay area. Existing programmed land uses would continue to the year 2020. Growth of office and residential uses would continue, but more slowly than under the above-described alternatives, and perhaps with less design guidance. Without any coordinated planning effort in the Transbay area, development in the district would occur on a per-parcel basis depending on the demands placed on the market. Development would occur under existing zoning and height and bulk regulations. Any proposed development would also be subject to Proposition M requirements concerning the amount of office space to be built, the timing of such development, and the impacts of the office square foot limitations (Planning Code Sections 320 and 321) on development. Sponsors seeking to develop the parcels zoned P (Public) would be required to seek a rezoning as part of their projects.

Because the area is designated as part of the Downtown Plan's Financial District north of Folsom Street, it could be assumed that office uses would locate in the area. There is a considerable amount of under-used land in the Transbay area and, depending on market forces, the area would act as an expansion area for high-density office uses that would otherwise occur north of Market Street. Most of the increase in residential development likely would occur on or near Rincon Hill. Because development would continue to occur in a less directed manner, the area could continue to lack definition or strong neighborhood identification, particularly compared to the Full Build or Reduced Scope Alternatives.

5.1.1.4 Neighborhood Character and Compatibility

An important goal of the Transbay redevelopment planning effort is to promote the development of a new mixed-use neighborhood. Both alternatives of the project's redevelopment component anticipate the development of residential, office, retail, service, and entertainment uses in a neighborhood in which these uses co-exist side-by-side or even within the same building. The potential incompatibility among uses is minimized by the exclusion of heavy industrial uses.

While the project could indirectly result in notable changes in land uses in the Transbay area, future development would be expected to intensify the urban character of the area and, particularly if planning efforts are successful, to result in a more cohesive neighborhood with a true mixture of residential and commercial activities. Rather than disrupting or dividing the community or adversely affecting its character, realization of the project's goals could do the opposite.

5.1.1.5 Consistency with Existing Plans and Policies

A review was conducted to assess the project's conformity with the plans and policies that guide land use development in the study area. These plans include the San Francisco General Plan (with subsequent elements including: the Urban Design Element, the Commerce and Industry Element, the Transportation Element, the Residence Element, and the Recreation and Open Space Element); and local area plans contained within the General Plan, such as the Downtown Plan, the South of Market Plan, the Rincon Hill Plan, the Northeastern Waterfront Plan. Project compliance with San Francisco Redevelopment Agency Area Plans was also evaluated. These plans include the Rincon Point-South Beach Redevelopment Plan, the Yerba Buena Center Redevelopment Plan, and the Mission Bay North Redevelopment Plan. The proposed project would not conflict with any of the policies contained in the documents stated above.

The City's General Plan, which provides general policies and objectives to guide land use decisions, contains some policies that relate to physical environmental issues. The current project would not obviously or substantially conflict with any such policy that would apply to the project.

In general, any potential conflicts with the General Plan are considered by decision makers independently of the environmental review process, as a part of the decision whether to approve or disapprove a proposed project. Any potential conflict not identified here could be considered in that context, and would not alter the physical environmental effects of the proposed.

No mitigation measures are indicated. Relocation impacts and mitigation are addressed in Section 5.2.

5.1.2 Wind Impacts

A wind tunnel test was performed for two massing scenarios, as documented in the Wind Test Technical Memorandum and summarized in this section. The first massing scenario represents the Full Build Alternative and consists of generic building masses constructed to the height and bulk limits for each parcel or block. The second massing scenario represents the Reduced Scope Alternative. It contains nearly 35 percent less floor area but has towers that are taller and more slender than those of the Full Build Alternative.

The new Transbay Terminal design was used in both tests. For the wind tunnel testing, adverse impact was defined as wind conditions that exceed the City of San Francisco Planning Code Section 148 wind hazard criterion of 26 miles per hour for more than one full hour per year.

5.1.2.1 Wind Test Point Locations

Wind test locations are shown in Figure 5.1-4. The study evaluated conditions under the four prevailing wind directions (northwest, west-northwest, west and southwest) that are the most common in San Francisco.

In general, the testing focused on public streets and sidewalks located (generally near high-rise building sites) throughout the Transbay Terminal Redevelopment Area.[1] For purposes of this analysis, test locations were grouped into four subareas, as follows:[2]

- Adjacent to or near the Transbay Terminal building (15 test points).
- Within the redevelopment area bounded by Mission, Main, Folsom, and Beale Streets (17 test points).
- Within the redevelopment area adjacent to Folsom Street (31 test points).
- Within the redevelopment area adjacent to or near Essex Street (6 test points).

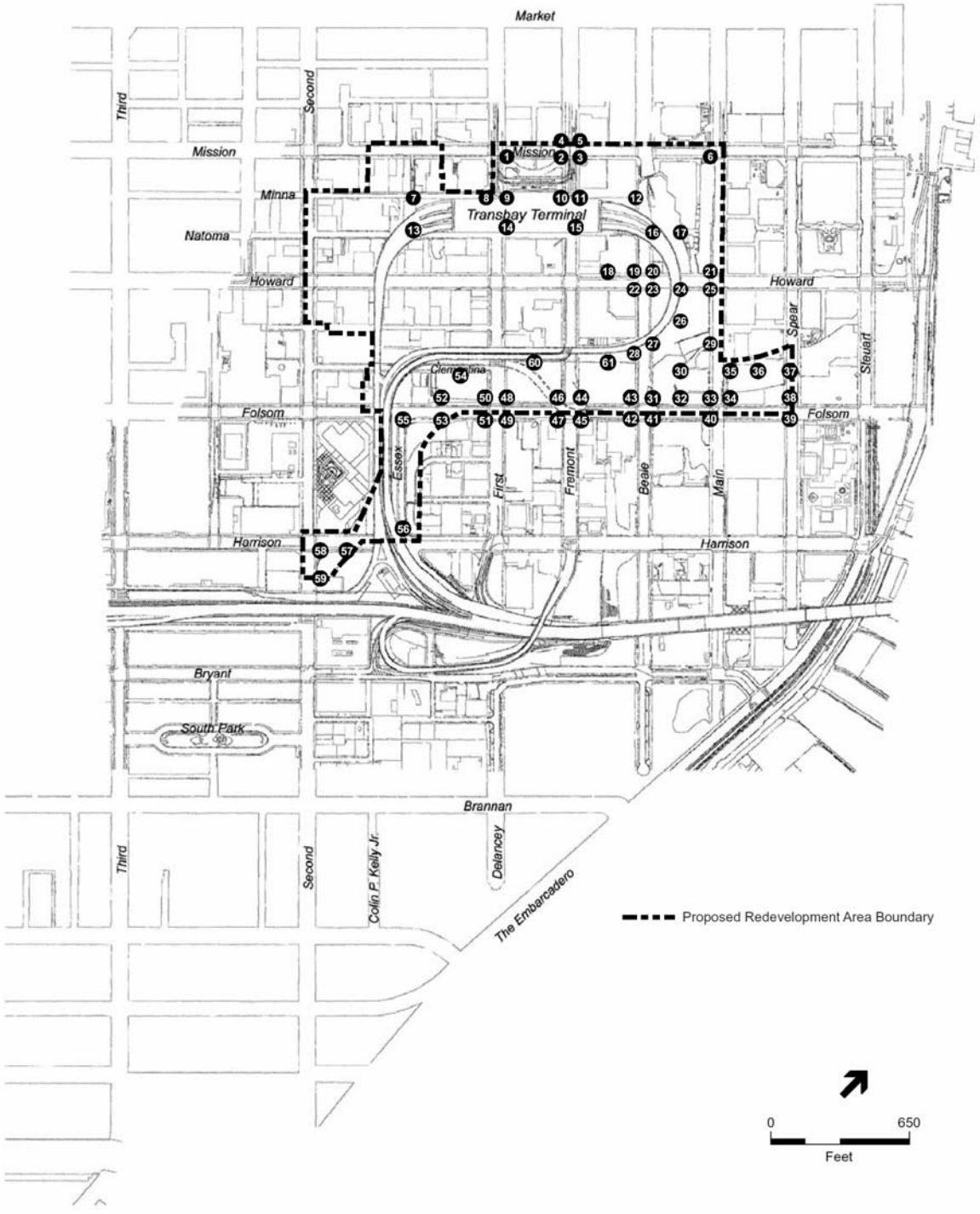
5.1.2.2 Full-Build Alternative, Wind Impacts

Development proposed as part of the Full-Build Redevelopment Plan would introduce new buildings at heights and massing greater than under current conditions. Wind conditions would be considered moderate to windy; the average for all 61 test points would be about seven mph, about 1.5 mph higher than the average for the existing conditions. Wind speeds in the pedestrian areas would range from one mph (No. 10) to 18 mph (No. 57). Wind speeds of 14 mph or higher would occur at three locations (Nos. 52, 57, 59). Fifty-two of the 61 locations would meet the Planning Code's pedestrian-comfort criterion value of 11 mph, while nine locations (Nos. 42, 48, 49, 52, 53, 56-59) would not. Under this Alternative, the Planning Code's wind hazard criterion would be exceeded at one of the 61 test locations: test site number 57 in the Essex Street wind study subarea.

Transbay Terminal Wind Study Subarea. Winds in this area would be moderate to windy, with speeds ranging from one mph (No. 10) to 10 mph (No. 2). Of the 15 points in this subarea, all would continue to meet the Planning Code's pedestrian-comfort criterion value of 11 mph.

[1] For purposes of this analysis, local north-south runs along Second Street and parallel streets, and east-west runs along Mission Street and parallel streets. Wind directions will refer to true compass directions.

[2] Note that in describing the wind test locations for the four subareas, some points were referred to in more than one group.



SOURCE: Environmental Science Associates

Transbay Terminal/Caltrain Downtown Extension / 201050 ■

Figure 5.1-4
Wind Test Point Location Map

Mission, Main, Folsom, and Beale Streets Wind Study Subarea. Winds would increase slightly compared to existing conditions, ranging from two mph (No. 30) to eight mph (Nos. 22, 24, 25, 29, 31). Of the 17 points in this subarea, all would continue to meet the Planning Code's pedestrian-comfort criterion value of 11 mph.

Folsom Street Wind Study Subarea. Winds would continue to be moderate to windy, and would range from two mph (No. 30) to 14 mph (No. 52). Of the 31 points in this subarea, 26 would continue to meet the Planning Code's pedestrian-comfort criterion value of 11 mph. Table 5.1-2 identifies the five test sites at which the comfort criterion would be exceeded.

Essex Street Wind Study Subarea. Winds would substantially increase in some portions of this area, with speeds ranging from nine mph (No. 55) to 18 mph (No. 57). Of the six points in this subarea, only one would continue to meet the Planning Code's pedestrian-comfort criterion of 11 mph. One site (No. 57) would exceed the hazard criterion, for a total duration of one hour per year. Site No. 57 is west of Essex Street just east of the intersection of Harrison and Second Streets. Table 5.1-2 identifies the test sites at which the comfort and/or hazard criteria are exceeded.

Table 5.1-2: Full Build Alternative Exceedences of Comfort and Hazard Criteria

Wind Study Subarea	Location	Locations with Exceedence of Comfort Criterion	Locations With Exceedence of Hazard Criterion
Folsom Street Subarea	South sidewalk of Folsom Street	Nos. 42, 49, 53	-
	North sidewalk of Folsom Street	Nos. 48 and 52	-
Essex Street Subarea	East of Essex Street	Nos. 53 and 56	-
	West of Essex, near Second Street	Nos. 57, 58, and 59	No. 57

Source: Environmental Science Associates, Wind Study Technical Memorandum, 2001

5.1.2.3 Reduced Scope Alternative, Wind Impacts

Under this Alternative, development would result in greater building heights and massing than under existing conditions. This variant assumes that new buildings would be slightly taller and more slender than those associated with the Full Build Alternative.

Wind conditions would be considered moderate to windy, with an average of 6.8 mph (for all 61 test points). This is approximately 0.2 mph lower than the average for the Full Build Alternative conditions. Wind speeds in the pedestrian areas would range from three mph (Nos. 8, 9, 12, 14, 15, 17, 26, 31-33, 50) to 18 mph (No. 57). Wind speeds of 14 mph or higher would occur at four locations (Nos. 52, 57-59). Under this Alternative, the highest wind speeds would continue to

occur at the same location as under the Full-Build Alternative (No. 57) just east of the intersection of Harrison and Second Streets, with a speed of 18 mph.

Wind conditions under this Alternative would be very similar to those under the Full-Build Alternative. Fifty-four of the 61 test sites would meet the Planning Code's pedestrian-comfort criterion value of 11 mph. This option would exceed the comfort criterion at a total of seven locations, two fewer than under the Full-Build Alternative. Six of these locations (Nos. 49, 52, 53, 57-59) would also experience exceedences under the Full-Build Alternative. The seventh exceedence is located at test site number 60, as shown in Table 5.1-3. With this Alternative, the wind hazard criterion would remain exceeded for one hour per year at the point just east of the intersection of Harrison and Second Streets (No. 57).

Table 5.1-3: Reduced Scope Alternative Exceedences of Comfort and Hazard Criteria

Wind Study Subarea	Location	Locations with Exceedence of Comfort Criterion	Locations With Exceedence of Hazard Criterion
Folsom Street Subarea	South sidewalk of Folsom Street	Nos. 49 and 53	-
	North sidewalk of Folsom Street	No. 52	-
	Between Folsom and Tehema St.	No. 60	-
Essex Street Subarea	East of Essex Street	No. 53	-
	West of Essex, near Second Street	Nos. 57, 58, and 59	No. 57

Source: Environmental Science Associates, Wind Study Technical Memorandum, 2001

5.1.2.4 Draft Transbay Redevelopment Area Design for Development Vision (August 2003)

Because the Design for Development Vision would construct an overall less intense (in terms of square footage) and less dense (in terms of the number of towers and more slender aspect of the towers) development program, wind effects would be less or essentially the same as those analyzed for both the Full Build and Reduced Scope Alternatives.

5.1.2.5 No-Project Alternative

The No-Project Alternative would result in less total development between the present and the horizon year 2020 than under the Full Build and Reduced Scope alternatives. The No-Project Alternative would be expected to have fewer tall buildings and thus fewer areas with increased ground level winds than the other alternatives considered. The wind conditions expected with this alternative would be expected to be similar or less substantial increases than those described under either build alternative.

5.1.2.6 Mitigation Measures

During the environmental review process that would precede the approval of any individual project proposed for the proposed Transbay Redevelopment Area, potential wind effects of that project shall be considered and, if necessary, wind tunnel testing shall be performed in accordance with City Planning Code Section 148. If exceedences of the wind hazard criterion should occur for any individual project, design modifications or other mitigation measures would be required to mitigate or eliminate these exceedences. Mitigation measures would need to be tailored to the individual needs of each project. Examples of mitigation measures that could be used include articulation of building sides and softening of sharp building edges.

5.1.3 Shadows

Shading impacts were evaluated for the Redevelopment Plan Alternatives using the two massing scenarios described in Section 5.1.2, above. The analysis included the shadow effect of the proposed Transbay Terminal, determined by using the 60-foot height of the West Ramp Alternative (worst-case shadow) for both Transbay Terminal Alternatives (West Ramp or Loop Ramp). Shadow effects attributable to the project were analyzed for representative times of day (9 a.m., 12 noon, and 3 p.m.) during the four seasons of the year: in December on the winter solstice, when the sun is at its lowest and shadows are at their longest; and in June on the summer solstice, when the sun is at its highest and shadows are at their shortest; at the spring equinox, when shadows are midway through a period of shortening; and at the fall equinox, when shadows are midway through a period of lengthening. Shadows on any other day of the year would be within the range of shadows presented during the seasons and times of day described above.

Given the height limits for high-rise towers in the Reduced Scope and Full-Build alternatives, it appears that the project would conform to Section 295. That means the project would appear not to cast new shadow on any open space under the jurisdiction of the San Francisco Recreation and Park Commission within or outside of the study area between one hour after sunrise and one hour before sunset. However, the City would still require a shadow analysis application for each individual development proposal. The discussion below identifies the shadow effects that would occur on open space areas.

5.1.3.1 Shading Impacts of the No-Project Alternative

The No-Project Alternative would result in a lesser total amount of development between now and 2020 than would the Full Build or Reduced Scope alternatives. Thus, the No-Project Alternative would be expected to have substantially less shadow effect than either of these two alternatives. Subsequent development projects greater than 40 feet in height would be subject to project-specific shadow analyses. No mitigation is indicated.

5.1.3.2 Shading Impacts of the Full-Build Alternative

The new shading caused by the project would not appear to affect open spaces protected by Section 295 of the Planning Code, such as South Park or South Beach Park. Future development would also be regulated by Sections 146 and 147 of the Planning Code, which protect sunlight access to streets and sidewalks and provide for reduction of shadows on public and publicly accessible open spaces within the C-3 districts. However, some publicly accessible, privately owned open spaces would be expected to see an increase in shading during certain periods of the day and the year, as described below.

Spring. In spring, new project shadow would generally fall in a northwesterly direction during the morning. Shadow from the proposed towers would extend from the southeast corner of Folsom Street to shade much of First, Fremont, Beale, and Main Streets to Howard Street. Surface parking on the south side of Howard Street could be shaded in the morning hours by proposed towers on Folsom Street.

At noon in spring, project shadows would be relatively short and would fall to the north. The Transbay Terminal shadow would cover Minna Street and the east side of Beale Street near the Terminal, as well as shading the proposed plaza area in front of the Terminal on Mission Street. New shadows cast from the proposed towers along Folsom Street would fall mid-block between Folsom and Howard Streets, shading less of First, Fremont, Beale, and Main Streets than they would have during the morning hours. To the east, new project shadow from the towers on Howard Street would shade Main Street from Folsom to Mission Streets.

During the afternoon hours, new shadows would lengthen and be cast more easterly. New shadows from the hotel and Transbay Terminal would fall mid-block on Assessor's Block 3718, which lies just east of the Transbay Terminal at Beale and Howard Streets. New shadows from the towers along Folsom Street would reach Folsom Street in the late afternoon. Under the Full Build Alternative, shadows would extend east just past the intersection of Steuart and Folsom Streets; under the Reduced Scope Alternative, shadows would also extend toward Steuart Street, but would fall short of the intersection.

Summer. During the summer solstice morning hours, shadows would fall to the west. Minna Street, directly north of the Transbay Terminal, would be in shadow. The Transbay Terminal would shade a portion of Mission Street between First and Fremont Streets, and the shadow would extend halfway to Market Street. New shade would be added to a portion of Howard Street between Main and Beale Streets. The southerly half of the block on Folsom Street between Essex and First Streets would also be newly shaded during morning hours.

During midday, relatively little new shading would occur, but would be in a northerly direction. Small portions of First, Fremont, Beale, Main and Spear Streets would be newly shaded by the proposed towers on Folsom Street.

During the late afternoon, shadows would fall to the east. New shading would occur along Folsom Street fronting the project towers. Shadows from the proposed towers would be longer and cross over the southern side of Folsom, specifically at Beale and Main Streets, but allow sunlight to reach the street. Guy Place would be shaded in the late afternoon hours from the proposed development on the corner of Folsom and Essex Streets.

Autumn. By the fall equinox, the position of the sun is lower in the sky, causing shadows to be longer. During the mid-morning through midday, new shadow caused by the project would extend generally northwest. The Transbay Terminal would create new shade on small sections of First and Fremont Streets, just south of Mission Street. New shadows from towers on Howard Street would cover Beale Street between Mission and Howard Streets. The northern half of First, Fremont, Beale, and Main Streets, between Folsom and Howard Streets, would be shaded by the proposed towers on Folsom Street. Because shadows would fall to the northwest, Folsom Street would generally not be shaded during the morning hours.

During midday, shadows would fall to the north. The proposed hotel in front of the Transbay Terminal would shade the intersection of Mission and Fremont Streets. The Transbay Terminal would shade the plaza in front of the Terminal. Along Howard Street, only the section between Beale and Main Streets would experience new shading. Along Folsom Street, shadow from the proposed towers on Folsom Street would be cast to the north, away from Folsom Street, but would fall on private mid-block open spaces just north of those project towers.

In the late afternoon hours, shadows would fall generally to the east. Folsom Street would be shaded both on the north and south sides of the street. Shadows cast by the proposed towers on Folsom Street would extend eastward to the intersection of Folsom and Spear Streets. The proposed high-rise on Folsom and Essex Streets would cast shadows in an easterly direction and partially shade Guy Place.

Winter. During the morning hours, the new shadows cast by the project would extend their farthest northwest during the winter season. Considerable shadowing occurs under existing winter conditions, so relatively little new shadow would be cast on the streets and sidewalks. To the north, the Transbay Terminal, the hotel and other project towers, would cast new shadows on Mission Street that would reach almost halfway up the block on First and Fremont Streets. New shadow would fall on both the north and south side of Howard Street, between Beale and Main Streets. In the morning, Folsom Street would not be shaded by the new development, except for new shadow that would occur between Essex and First Streets. New shadows cast by the proposed towers along Folsom Street would fall to the northwest and would shade mid-block throughways and planned open spaces, but would not shadow Folsom Street.

At midday, shadows would be cast to the north. New towers would shade interior block spaces along Folsom between First and Spear Streets. Shadows would reach east to the Gap Building. In the late afternoon hours, shadows would lengthen and reach their easternmost extent. With the exception of the shadow from the proposed towers along Folsom Street, new shadow would be minimal in the area due to the extensive existing shadow. Shadows from most new towers

would generally be cast on adjacent towers and not reach the street. However, in the late afternoon, shadows from the tower proposed at the corner of Folsom and Spear Streets could reach the planned Rincon Park and shade a small southern portion of the park.

5.1.3.3 Shading Impacts of the Reduced Scope Alternative

The effects of this alternative would be very similar to those of the Full-Build. The following discussion identifies specific locations in which the impacts differ.

Spring. In the late afternoon, new shadows from the towers along Folsom Street would reach Folsom Street and extend east toward Steuart Street, but would fall short of the intersection between Folsom and Steuart Streets. (This intersection would be in shadow under the Full-Build Alternative.)

Summer. During the late afternoon, shadows would fall to the east. Under the Reduced Scope Alternative, shadows from the Transbay Terminal and the proposed redevelopment would add new shadow on Howard Street between Beale and Main Streets. Shadows from the proposed towers along Folsom Street would generally not extend as far south (i.e., would not cross Folsom Street) as under the Full Build scheme, but greater lengths of Folsom Street would be shaded.

Autumn. The effects of the Reduced Scope Alternative would be identical to those of the Full-Build Alternative.

Winter. The effects of the Reduced Scope Alternative would be identical to those of the Full-Build Alternative.

5.1.3.4 Shading Impacts of the Draft Transbay Redevelopment Area Design for Development Vision (August 2003)

Because the Design for Development Vision would have fewer towers and because those towers would be taller and more slender than those of the Full Build Alternative, shadowing effects would be generally less than those of the Full Build Alternative and more similar to those of the Reduced Scope Alternative. No adverse effects to sites under the control of the Recreation and Parks Department would found. Therefore, these shading effects would not be adverse.

5.2 DISPLACEMENTS AND RELOCATION

5.2.1 No-Project Alternative

No residential or non-residential displacements would occur directly as a result of the No-Project Alternative. Therefore, this section focuses on the displacement effects of the proposed Transbay Terminal, Caltrain Downtown Extension, and Redevelopment Plan.

5.2.2 Transbay Terminal

Properties to be acquired for construction of the Transbay Terminal are shown in Table 5.2-1. These properties are shown as blue on Figures 5.2-1, 5.2-2 and 5.2-3. *Movement of the Transbay Terminal footprint to the west would require the acquisition of four additional properties for the terminal. These properties were formerly identified in the Draft EIS/EIR as necessary acquisitions under both Caltrain Extension Alternatives, so the properties were anticipated to be acquired for the Project in any event. The properties are now required for the terminal rather than the Caltrain Extension and are shown in the table in italics.*

Table 5.2-1: Property Acquisitions for the Transbay Terminal Alternatives

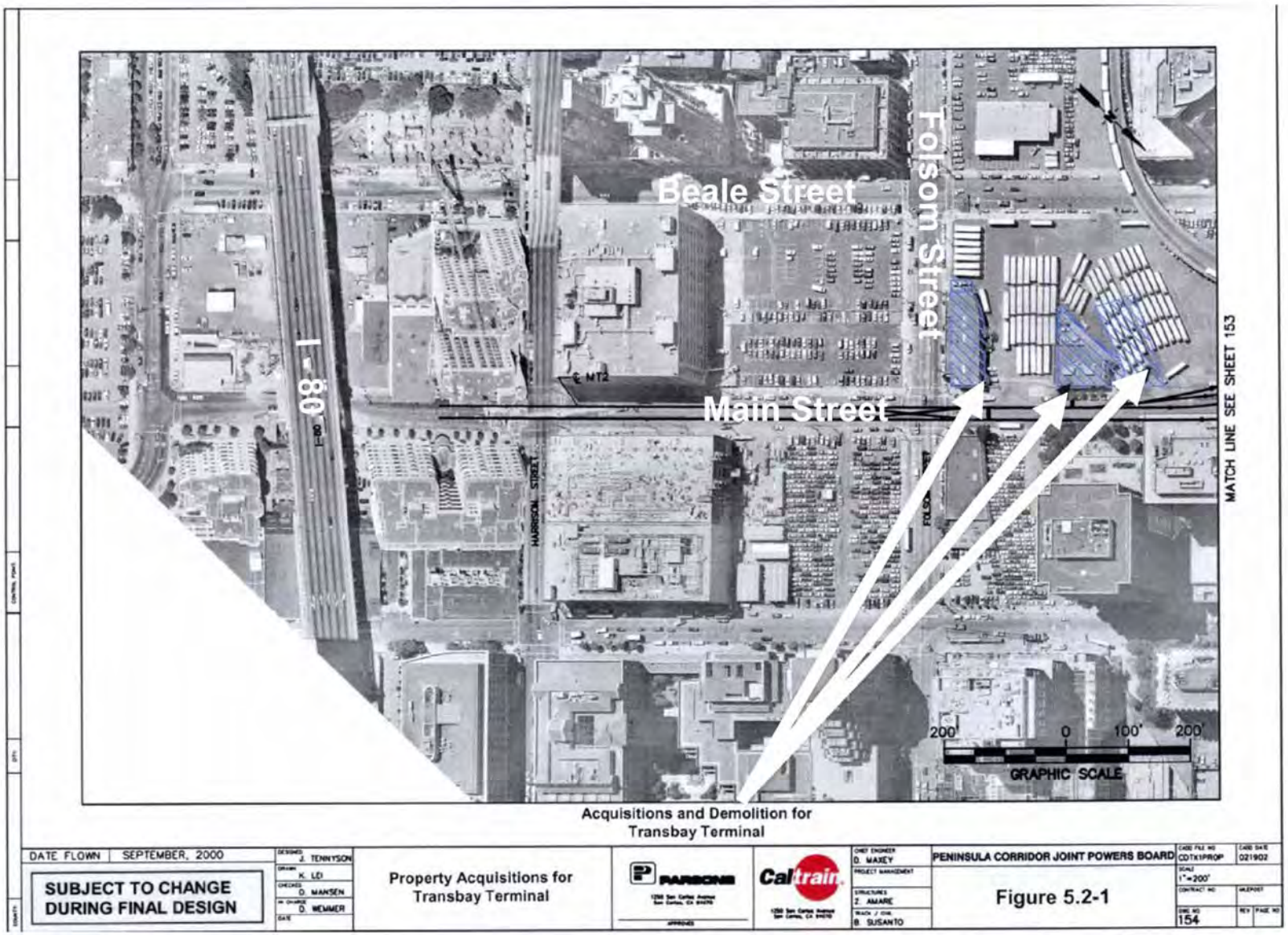
Block & Lot Number		Address
Full Acquisitions		
3721	*45A*	*70 Natoma Street [a]*
3721	*46*	*78-80 Natoma Street [a]*
3721	*53*	*81 Minna Street [a]*
3721	*54*	*65 Minna Street [a]*
3736	*74*	*57 Tehama [b]*
3739	2	Vacant lot on Main Street
3739	6	272 Main Street
3739	4 & 7	200 Folsom
3736	88	60 Tehama
Partial Acquisitions		
3721	16	546 Howard Few feet from northeast corner of building
3719	17	*101-129* Fremont Street (Southern portion of this parcel near the Transbay Terminal)

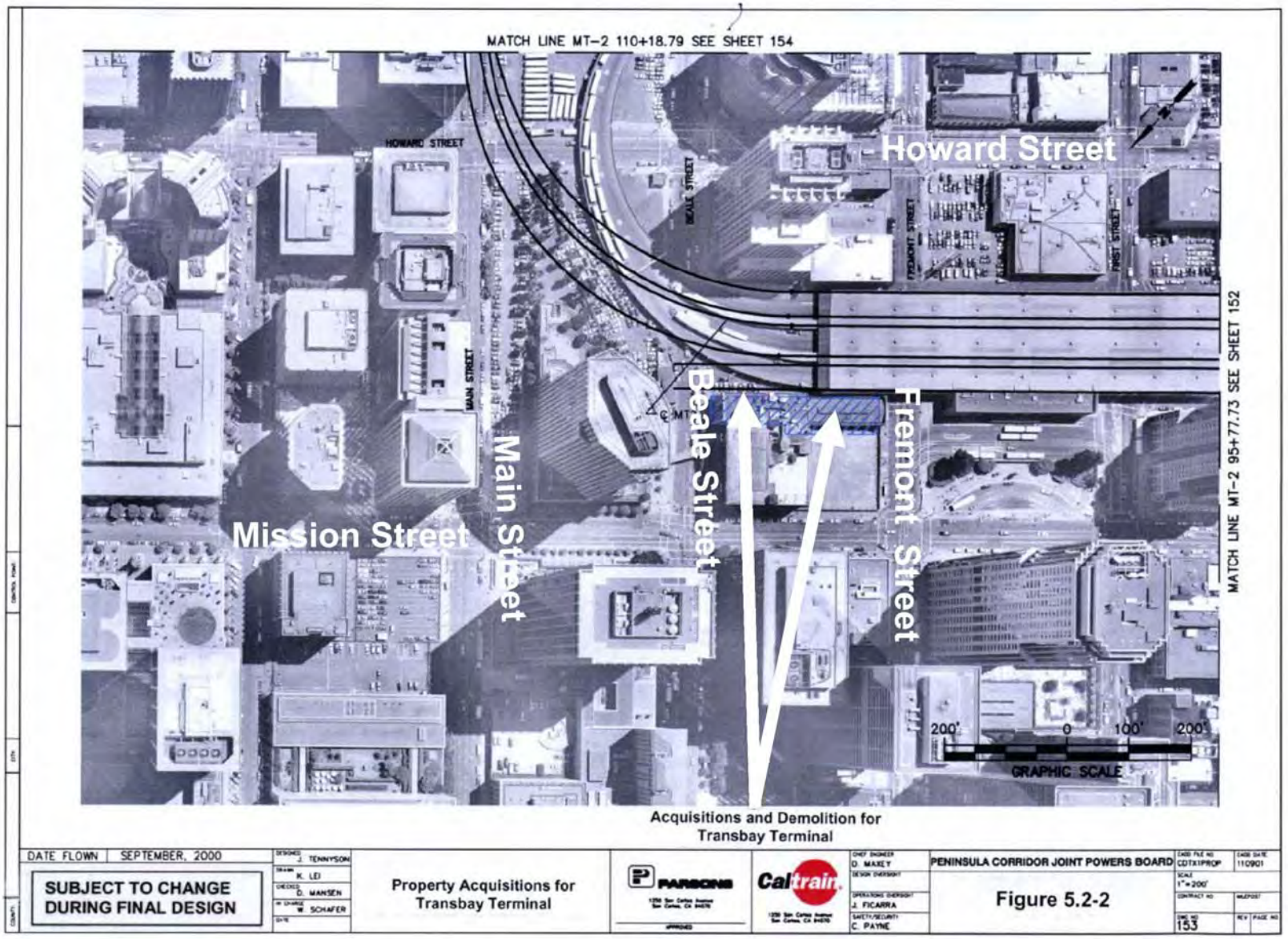
Notes:

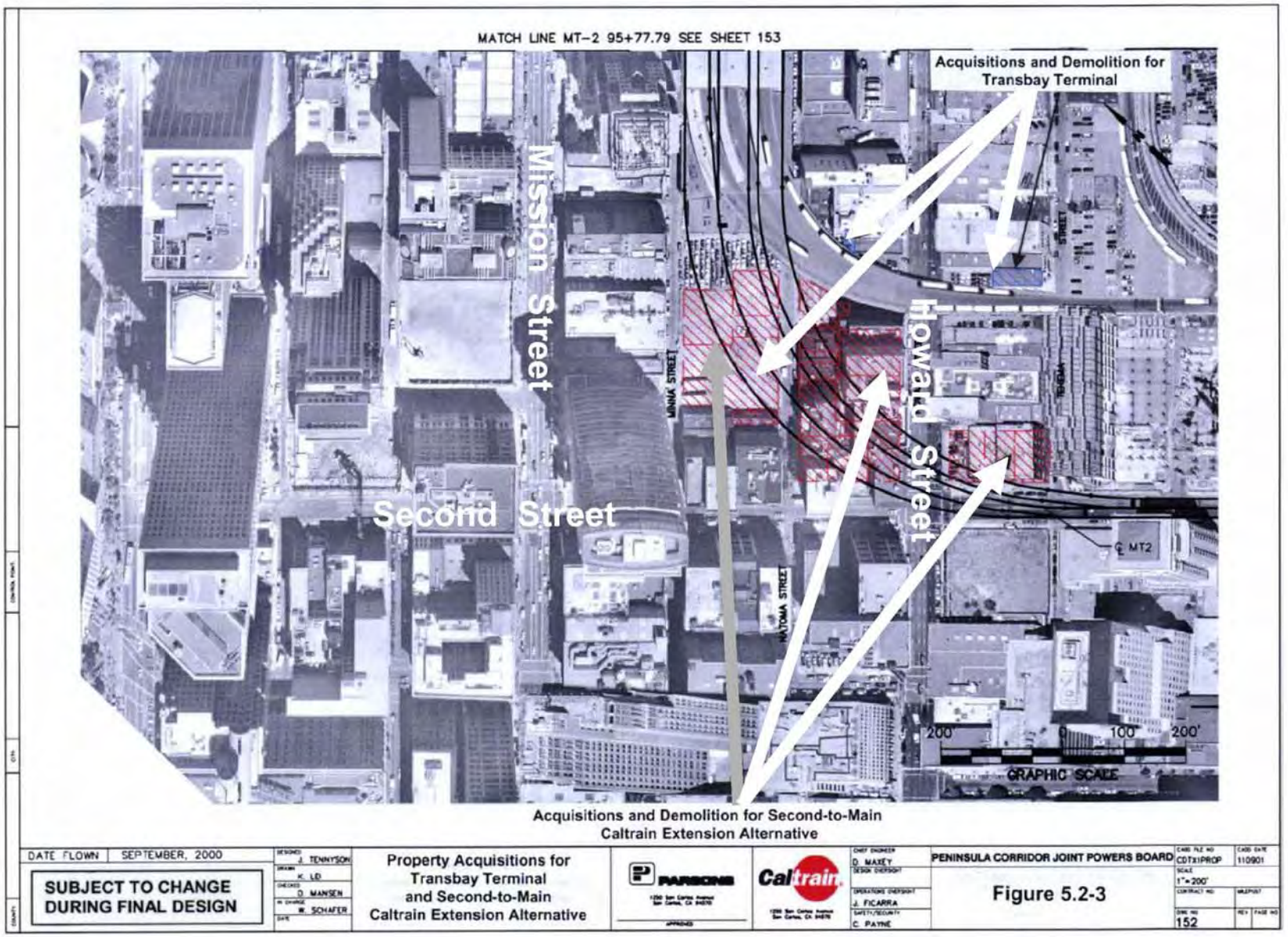
[a] Assumed for acquisition as part of the Caltrain Extension in the Draft EIS/EIR. Now assumed for acquisition as part of the Transbay Terminal in this Final EIS/EIR due to proposed movement of the terminal to the west.

[b] Additional property required for acquisition due to the necessary revisions between the Draft and Final EIS/EIR regarding the permanent bus ramp to the terminal.

Source: Sedway Group, Parsons, 2004.


Beale Street
Folsom Street
Main Street
I-80
HARRISON STREET
MATCH LINE SEE SHEET 153
200' 0 100' 200'
GRAPHIC SCALE
Acquisitions and Demolition for Transbay Terminal
DATE FLOWN SEPTEMBER, 2000
SUBJECT TO CHANGE DURING FINAL DESIGN
J. TENNYSON
K. LOI
O. MANSEN
O. WEMMER
Property Acquisitions for Transbay Terminal
PARSONS
Caltrain
D. MAXEY
Z. AMARE
B. SUSANTO
PENINSULA CORRIDOR JOINT POWERS BOARD
CDTX1PROP
021902
1"=200'
Figure 5.2-1
154


MATCH LINE MT-2 110+18.79 SEE SHEET 154
Howard Street
Mission Street
Main Street
Beale Street
Fremont Street
MATCH LINE MT-2 95+77.73 SEE SHEET 152
200' 0 100' 200'
GRAPHIC SCALE
Acquisitions and Demolition for Transbay Terminal
DATE FLOWN SEPTEMBER, 2000
SUBJECT TO CHANGE DURING FINAL DESIGN
Property Acquisitions for Transbay Terminal
PARSONS
Caltrain
PENINSULA CORRIDOR JOINT POWERS BOARD
Figure 5.2-2


MATCH LINE MT-2 95+77.79 SEE SHEET 153
Acquisitions and Demolition for Transbay Terminal
Mission Street
Howard Street
Second Street
MANA STREET
NATOMA STREET
MT2
200'
0
100'
200'
GRAPHIC SCALE
Acquisitions and Demolition for Second-to-Main Caltrain Extension Alternative
DATE FLOWN SEPTEMBER, 2000
SUBJECT TO CHANGE DURING FINAL DESIGN
J. TENNYSON
K. LO
D. MANSEN
W. SCHAFER
Property Acquisitions for Transbay Terminal and Second-to-Main Caltrain Extension Alternative
PARSONS
Caltrain
D. MAXEY
J. FICARRA
C. PAYNE
PENINSULA CORRIDOR JOINT POWERS BOARD
CDTX1PROP
110901
1"=200'
152
Figure 5.2-3

An additional property would be required for the permanent bus ramp. This property – Block 3736, Lot 74 (57 Tehama Street) – was not identified in the Draft EIS/EIR. The additional property is required due to necessary revisions to the permanent bus ramp resulting from: (1) responses to comments from Caltrans on the Draft EIS/EIR regarding the ramp structure shown in the Draft EIS/EIR, and (2) movement of the terminal to the west. This additional property is also shown in the table in italics.

5.2.3 Caltrain Downtown Extension

Properties that would need to be acquired or for which an underground easement would be required for either Caltrain Downtown Extension Alternative are shown in Table 5.2-2 and on Figure 5.2-4. Acquisition and demolition of these properties would occur for the Cut-and-Cover Option. Underground easement would be required for these properties for the Caltrain Extension Tunneling Option. *A construction easement will also be required for a portion of the private property (southern portion of Block 3718 – Lot 025) associated with 201 Mission Street, namely the parking area and access road to the loading docks for this structure. Temporary access will be provided from Main Street to the loading area for this structure during the construction period for the Caltrain Extension tail tracks.*

Properties that would need to be acquired and demolished for each of the Caltrain Downtown Extension Alternatives are shown in Tables 5.2-3 and 5.2-4. Properties shown as red on Figure 5.2-3 would be acquired for the Second-to-Main Alternative. Properties shown in red on Figures 5.2-5 and 5.2-6 would be required for the Second-to-Mission Alternative.

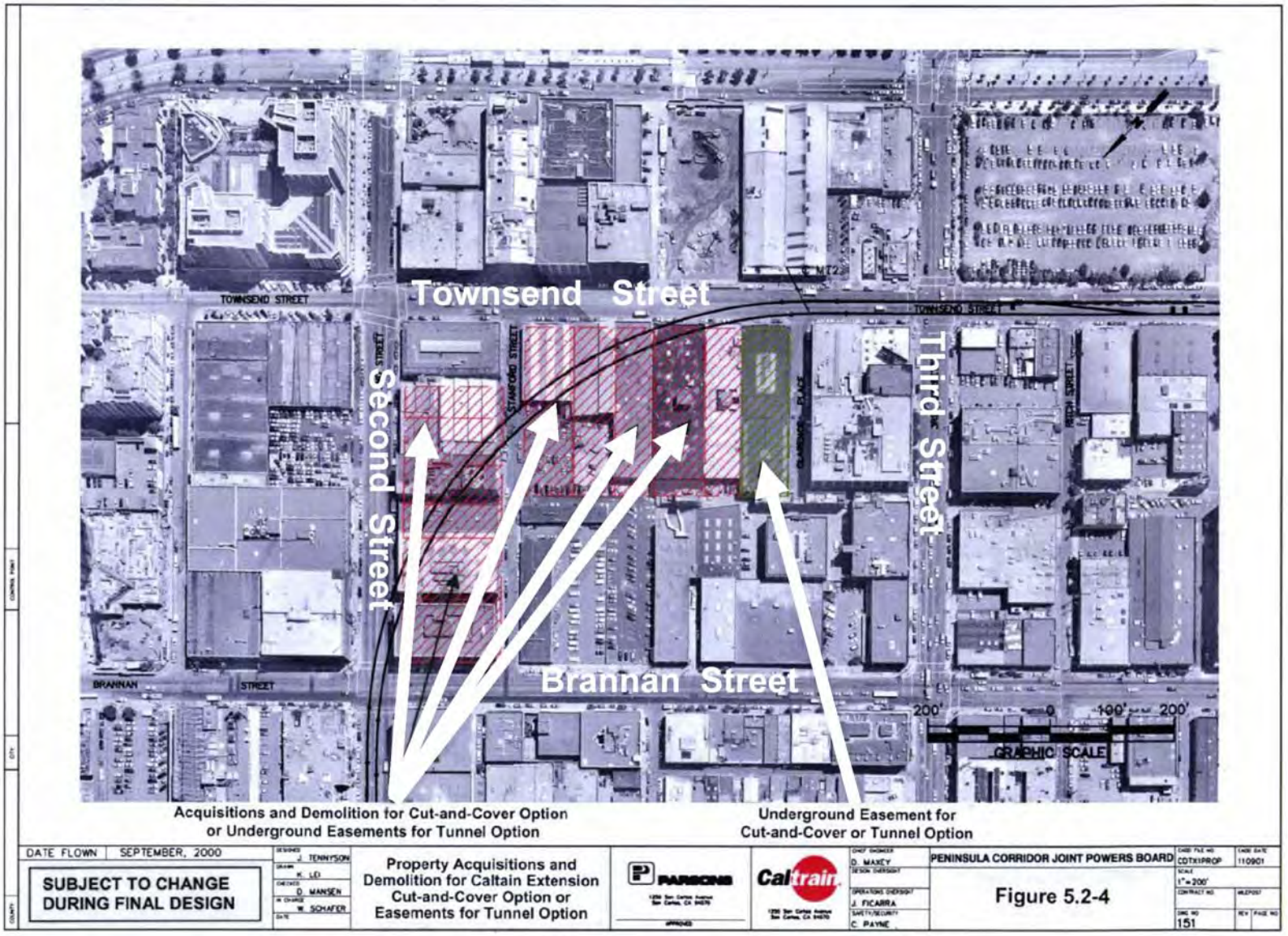

Townsend Street
Second Street
Third Street
Brannan Street
TOWNSEND STREET
BRANNAN STREET
STANFORD STREET
CLARENCE PLACE
FOURTH STREET
200' 0 100' 200'
GRAPHIC SCALE
Acquisitions and Demolition for Cut-and-Cover Option or Underground Easements for Tunnel Option
Underground Easement for Cut-and-Cover or Tunnel Option
DATE FLOWN SEPTEMBER, 2000
SUBJECT TO CHANGE DURING FINAL DESIGN
Property Acquisitions and Demolition for Caltain Extension Cut-and-Cover Option or Easements for Tunnel Option
PARSONS
Caltrain
PENINSULA CORRIDOR JOINT POWERS BOARD
Figure 5.2-4

Table 5.2-2: Properties to be Acquired or Underground Easement Properties
(Either Second-to-Main or Second-to-Mission Caltrain Extension Alternative)

Block and Lot Number		Address
Acquisitions and Demolition or Underground Easement [1]		
3788	*74 through 85*	164 Townsend Street
3788	10	148-154 Townsend Street
3788	9A	144-146 Townsend Street
3788	9	136 Townsend Street
3788	8	130 Townsend Street
3788	43	670 Second Street
3788	44	678-80 Second Street
3788	49 to 73	650 Second Street
3788	2	640 Second Street
3788	38	35 Stanford Street
3788	37	301 Brannan Street
Underground Easement for Either Cut-and-Cover or Tunneling Option		
3788	12	166-178 Townsend Street
Temporary Construction Easement (Second-to-Main Alternative – Locally Preferred Alternative)		
3718	*025*	*201 Mission (southern portion of site)*

Notes:
[1] Properties listed would be acquired and demolished under the Cut-and-Cover Option. For the Tunneling Option, underground easement would be required for the listed properties.

Source: *Sedway Group, Parsons, 2004.*

Table 5.2-3:
Property Acquisitions & Demolitions
Second-to-Main
Caltrain Extension Alternative

Block & Lot Number		Address
3736	95	217 Second Street
3736	96	205-215 Second Street
3736	97	201 Second Street
3721	22	191Second Street
3721	23	181 Second Street
3721	25	171 Second Street
3721	47	90 Natoma Street
3721	95	580-586 Howard Street
3721	*108*	81-83 Natoma Street
3721	*109 through 118*	85 Natoma Street
3721	29	77-79 Natoma Street
3721	20	568-576 Howard Street
3721	31	* Natoma Street

Notes:
***** indicates no address listed

Source: Sedway Group, Parsons Transportation Group, 2001.

Table 5.2-4:
Property Acquisitions & Demolitions
Second-to-Mission
Caltrain Extension Alternative

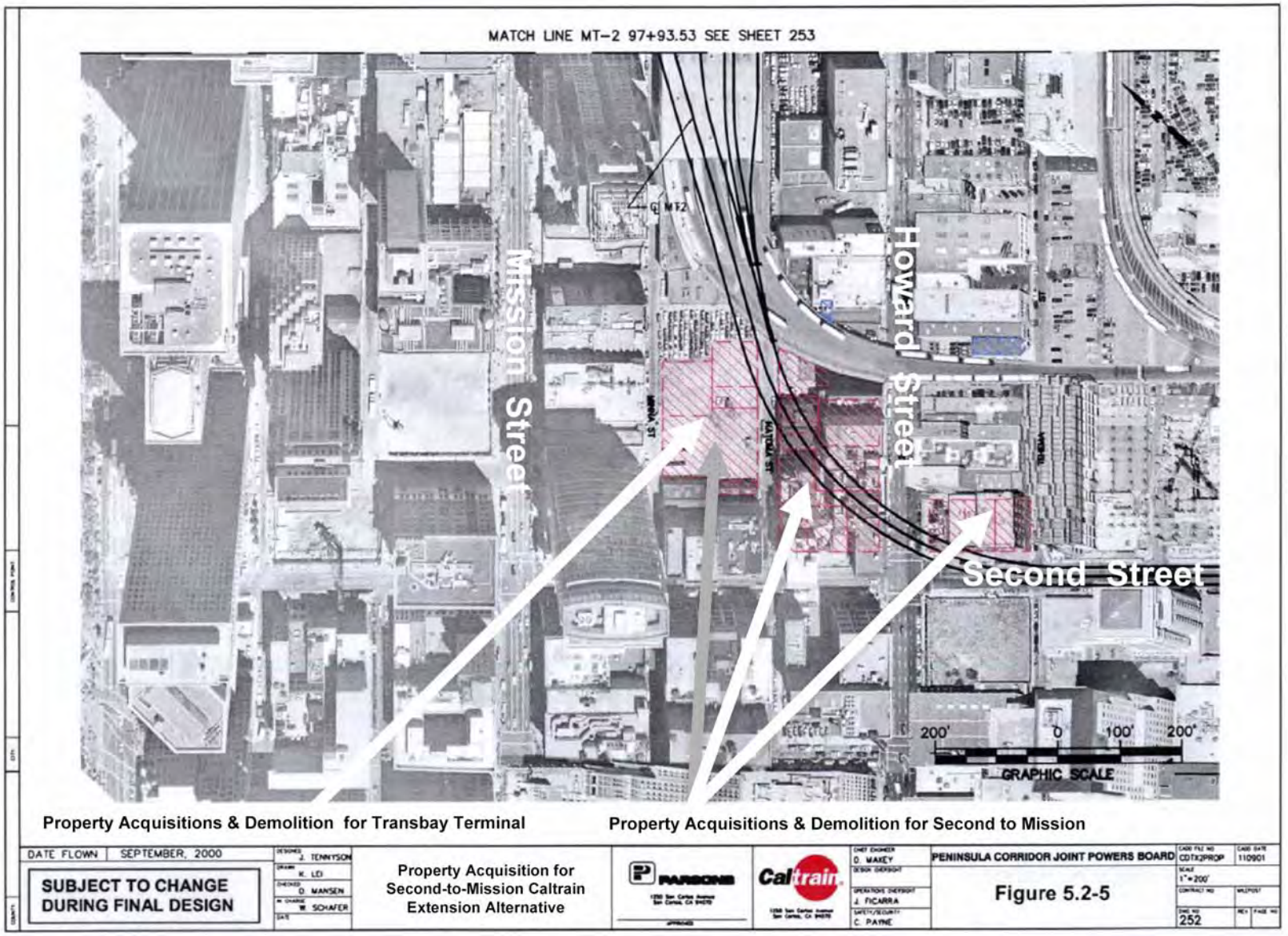
Block & Lot Number		Address
3736	95	217 Second Street
3736	96	205-215 Second Street
3736	97	201 Second Street
3719	1	301-315 Mission Street (northern portion)
3719	17	101-129 Fremont Street
3721	22	191 Second Street
3721	23	181 Second Street
3721	25	171 Second Street
3721	47	90 Natoma Street
3721	95	580-586 Howard Street
3721	*108*	81-83 Natoma Street
3721	*109 through 118*	85 Natoma Street
3721	29	77-79 Natoma Street
3721	20	568-576 Howard Street
3721	31	* Natoma Street

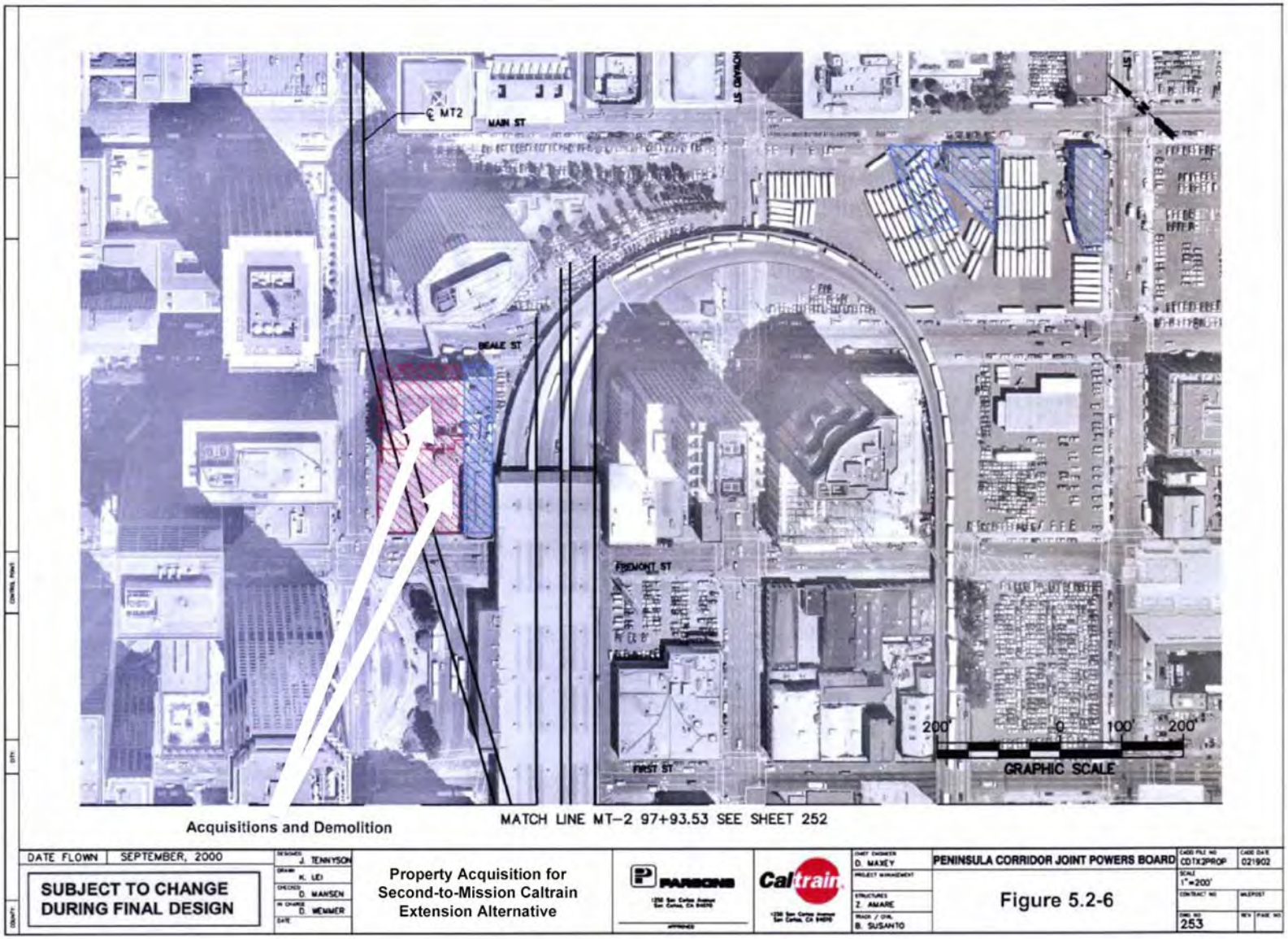
Notes:
***** indicates no address listed

Source: Sedway Group, Parsons Transportation Group, 200*4*

5.2.4 Transbay Redevelopment Plan

Properties identified for redevelopment as part of the Redevelopment Plan are principally occupied by surface parking. Impacts to parking are discussed in Section 5.19.5.


MATCH LINE MT-2 97+93.53 SEE SHEET 253
Mission Street
Howard Street
Second Street
200'
0
100'
200'
GRAPHIC SCALE
Property Acquisitions & Demolition for Transbay Terminal
Property Acquisitions & Demolition for Second to Mission
DATE FLOWN SEPTEMBER, 2000
SUBJECT TO CHANGE DURING FINAL DESIGN
Property Acquisition for Second-to-Mission Caltrain Extension Alternative
PARSONS
Caltrain
PENINSULA CORRIDOR JOINT POWERS BOARD
Figure 5.2-5


℄ MT2
MAIN ST
HOWARD ST
BEALE ST
FREMONT ST
FIRST ST
200'
0
100'
200'
GRAPHIC SCALE
Acquisitions and Demolition
MATCH LINE MT-2 97+93.53 SEE SHEET 252
DATE FLOWN SEPTEMBER, 2000
SUBJECT TO CHANGE DURING FINAL DESIGN
J. TENNYSON
K. LEI
D. MANSEN
D. WEMMER
Property Acquisition for Second-to-Mission Caltrain Extension Alternative
PARSONS
Caltrain
D. MAXEY
Z. AMARE
B. SUSANTO
PENINSULA CORRIDOR JOINT POWERS BOARD
CD1X2PROP
021902
1"=200'
253
Figure 5.2-6

5.2.5 Business and Residential Displacements

Field surveys and public records searches were performed to determine the potentially affected properties, the number and types of businesses occupying these properties, and the general character of the land uses. Businesses were consolidated into the following categories, as shown in Table 5.2-5: small or specialty retail, office/business services, restaurant/bar, industrial, warehouse, and parking. The estimated number of employees who may be displaced was determined from public business records or estimated by applying per-square-foot factors to the building areas of the affected properties. Estimates of affected employees are in full-time equivalents in all cases.

Because of the varied types of businesses in the SOMA, the high incidence of small specialty firms, and the relatively rapid changes in business activity, it is difficult to estimate accurately the number of businesses and employees that may be affected by acquisitions that would take place three to five years from now. The estimated acquisitions and displacements presented in this section are representative of conditions that may exist when the Transbay Terminal and Caltrain Downtown Extension would be implemented. Information would be updated during final design and during pre-construction surveys.

Residential Displacement. Construction of the Transbay Terminal and the Caltrain Downtown Extension could require acquisition of up to 60 residential units, including 14 live/work units. Twelve of these units have operating commercial businesses. Up to 120 persons per alternative would be relocated, assuming an average of two residents per unit.

Business Displacement. The Transbay Terminal and Caltrain Downtown Extension could displace up to 67 businesses, plus 12 businesses currently operating in the live/work units. Up to an estimated 1,600 respective employees could be displaced.

Federal and state laws require consistent and fair treatment of owners of properties to be taken, including just compensation for their properties. Uniform and equitable treatment of temporarily or permanently displaced businesses is also required by these laws. Acquisition costs are discussed in Section 5.6.

5.2.6 Relocation Resources

Acquisition of private properties required for the Caltrain Downtown Extension would represent a loss of up to 742,000 square feet of building space, of which up to 478,000 square feet is estimated to be office space; 127,000 square feet is estimated to be industrial space; 20,000 square feet is estimated to be retail/restaurant space; and 117,000 square feet is residential space.

Table 5.2-5: Estimated Residential and Non-Residential Acquisitions for Transbay Terminal, Caltrain Downtown Extension and Redevelopment Program

RESIDENCES

Project Component/ Alternatives	No. of Properties Acquired	Total Est. Land Area in Sq. Ft.	Total Est. Building Sq. Ft.	Estimated Number of Residential Units Displaced by Type					Estimated Persons Displaced
				Total Single Family Units	Mobile Homes	Multi-Family		Total	
						Buildings	Units		
Transbay Terminal & Redevelopment Area	No Residential Units Affected								
Caltrain Downtown Extension (Cut-and-Cover Option)									
Second-to-Main	4	41,000	117,000	0	0	4	60	60	120
Second-to-Mission	4	41,000	117,000	0	0	4	60	60	120
Caltrain Downtown Extension (Tunneling Option)									
Second-to-Main	2	14,000	50,000	0	0	2	23	23	46
Second-to- Mission	2	14,000	50,000	0	0	2	23	23	46

BUSINESSES

Project Component/ Alternatives	No. of Properties Acquired	Total Est. Land Area in Sq. Ft.	Total Est. Building Sq. Ft.	Estimated Number of Businesses Displaced by Type							Estimated Employees Displaced
				Retail	Office/Bus. Services	Rest. / Bar	Industrial	Warehouse	Parking	Total	
Transbay Terminal and Redevelopment Area											
	6	36,000	82,000	0	9	0	0	0	1	10	200
Caltrain Downtown Extension (Cut-and-Cover Option)											
Second-to-Main	25	224,000	433,000	6	32	4	2	1	3	48	1,084
Second-to-Mission	27	274,000	543,000	6	42	4	2	1	2	58	1,422
Caltrain Downtown Extension (Tunneling Option)											
Second-to-Main	16	81,000	146,000	5	29	4	0	0	2	40	425
Second-to-Mission	18	131,000	256,000	5	39	4	0	0	2	50	763

Source: Sedway Group, Parsons Transportation Group, 2001

Based on current market conditions for commercial and residential space, most businesses and residents should be able to be relocated within the study area. The study area is part of the broader South of Market Area (SOMA), which has witnessed a dramatic transformation over the past seven years with older buildings rehabilitated and new buildings constructed on previously vacant or underutilized parcels. This area was the epicenter of the "dot com" boom in 1999 and 2000, during which multimedia, technology, and Internet companies, fueled by venture capital, exhibited a healthy appetite for real estate. Correspondingly, vacancy rates plummeted, rents and sales prices spiked, and new development and redevelopment was widespread throughout SOMA.

However, by the end of 2000, stock market reductions hit the technology and Internet sector and space was increasingly placed on the market for sublease. In 2001, the overall economy has substantially slowed, affecting demand for space. As a result, vacancy rates have increased. The properties located at Second and Howard streets are within the South of Market Financial District office submarket, which posted a 12 percent vacancy on an inventory of 20.8 million square feet as of the end of September 2001. The properties located at Second and Townsend streets are in the SOMA South office submarket, which has been more severely affected by the downturn. As of September 2001, this market had a vacancy rate of 26 percent on a total inventory of 5.5 million square feet.

As demand for office space has deteriorated, so has demand for industrial and retail space. The residential market, while not as severely affected, has also experienced increasing vacancy rates, lowered rents, and, with respect to "for-sale" projects, lower sales prices and longer marketing periods. A recovery is expected, but may not commence until at least the end of 2002. An improvement in the market to the point of the extremely strong conditions experienced in 1999 and 2000 is not expected for a number of years. Therefore, displaced businesses and residents interested in relocating within SOMA would likely find an ample supply of comparable office, industrial, retail, or residential space.

The federal Uniform Relocation Act (Public Law 91-646) and the California Relocation Act (Chapter 16, Section 7260 et seq. of the Government Code) and related laws and regulations contain specific requirements that govern both land acquisition and relocation. All real property to be acquired *will* be appraised to determine its fair market value before an offer is made to each property owner. Minimum relocation payments are detailed in the laws, and include moving and search payments for businesses. For purposes of the relocation acts, parking lots are considered businesses.

The City and County of San Francisco and the *Transbay Joint Powers Authority will* provide information, assistance and payments to all displaced businesses in accordance with these laws and regulations.

5.3 SOCIOECONOMICS

5.3.1 No-Project Alternative

The No-Project Alternative would not directly affect residential or business access or the character of neighborhoods so as to adversely influence location choices or the local economy.

5.3.2 Transbay Terminal

Construction of the proposed Transbay Terminal would increase pedestrian activity and as a result would potentially contribute to the intensification of land uses and the redevelopment of underutilized parcels in the vicinity of the Terminal; thereby improving the economic vitality of the area.

Four nonresidential units would be displaced due to implementation of the Transbay Terminal. No residential units would be displaced by the Transbay Terminal component.

5.3.3 Caltrain Downtown Extension

The Caltrain Downtown Extension would provide improved access to the major employment center in the heart of downtown San Francisco, and therefore would enhance economic activity in this area.

Construction of the cut-and-cover tunnel configuration between Fifth Street and the Transbay Terminal would entail the acquisition and demolition of all existing buildings under which the Downtown Extension alternative alignments would pass. Following construction of the underground extension, however, it is anticipated that new buildings would be constructed as vacant sites become available for resale.

Construction of the Caltrain Downtown Extension Tunneling Option would involve fewer acquisitions and displacements. Specifically, underground easements would be required for the properties along Townsend and Brannan Streets and in the 600 block of Second Street, but these properties would not be demolished or vacated.

As described in Section 5.2.2, the Caltrain Downtown Extension Cut-and-Cover Option would displace up to 60 residential units, including 14 live/work units, with either the Second-to-Main or the Second-to-Mission alternatives. An estimate of up to 120 persons per alternative would be relocated, assuming an average of two residents per unit. All homeowners or renters displaced as a result of the project would be offered relocation assistance and replacement housing.

For the Cut-and-Cover Option, up to an estimated 58 businesses would be displaced for the Second-to-Mission Alternative. The lowest number of business displacements would occur for the Second-to-Main Tunneling Option, with an estimated 40 business displacements.

The City and County of San Francisco or the TJPA *will* acquire the properties, and each business owner *will* be offered relocation assistance. In the event the displaced businesses chose not to relocate within the area, a loss of jobs would result. The maximum number of jobs lost if no businesses relocated in the area is estimated to be between 425 for the Second-to-Main Tunneling Option to 1,422 jobs for the Second-to-Mission Cut-and-Cover Option.

In all likelihood, a number of the affected businesses would relocate nearby or elsewhere within the City and County of San Francisco. Also, other businesses might relocate or expand in the area, in part because of the general improvement in transportation facilities. As a result, net job loss attributable to the project would be minimal. Fiscal and economic impacts of residential and business displacements are discussed in Section 5.6.

5.3.4 Redevelopment Area Alternatives

The Redevelopment Area alternatives are expected to intensify the urban character of the area and to result in a more cohesive neighborhood with a balanced mixture of residential and commercial uses. Consequently, proposed development is anticipated to improve rather than to disrupt or adversely affect the character of the existing socioeconomic environment.

Displacement impacts *will* be mitigated in accordance with the relocation assistance programs summarized in Section 5.2, Displacements and Relocation. Since no other long-term impacts to residential populations, neighborhoods, community cohesion or land use patterns in the study area are anticipated, no further mitigation is suggested. Potential project impacts on community facilities and services, parklands, schools and churches are discussed in Sections 5.4, Community Facilities and Services, and 5.5, Parklands, Schools, and Religious Institutions.

5.3.5 Environmental Justice

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations), dated February 11, 1994, calls on federal agencies to identify and address disproportionately high and adverse human health or environmental effects of federal programs, policies, and activities on minority populations and low- income populations. In 1997, the U.S. Department of Transportation (DOT) issued its DOT Order to establish procedures for use in complying with EO 12898 for its operating administrations, including FTA.

Impacts and benefits of transportation projects result from the physical placement of such facilities, and also from their ability to improve or impede access to neighborhoods or portions of the region. This analysis examines whether ethnic minority and/or low-income populations in the project area would experience these types of impacts, and if they are inconsistent with the benefits created.

As noted in Section 4.2, the study area as a whole consists of relatively smaller percentages of ethnic and minority populations as compared to overall percentages for the City of San Francisco. Census Tract 180 at the west end of the study area, however, reveals higher concentrations of Black/African American and Hispanic populations relative to percentages citywide. With the exception of Census Tract 180, the percentage of residents below the federal poverty level was comparable to the citywide average. Auto ownership within the study area is slightly less than for the city as a whole.

The construction of the proposed Transbay Terminal, Caltrain Downtown Extension and Redevelopment Plan would have no long-term adverse effects on minority, low-income and transit dependent communities. As described above, the study area, particularly Census Tracts 176.02 and 179.01 where the majority of the project impacts would occur, has relatively lower percentages of minority and low-income populations as compared to the greater San Francisco area. Census Tract 180, where higher concentrations of minority populations occur, would have fewer project impacts. Minority populations are not disproportionately represented among those who would be displaced by the project or who would live adjacent to the project. Therefore, the project would have neutral environmental justice implications. The proposed project components would improve mobility for transit-dependent populations and would enhance intermodal connectivity. All transit services would remain continuous during the construction period. The proposed community revitalization and redevelopment plan, including the provision of affordable housing, would be an added benefit to the community.

5.4 COMMUNITY FACILITIES AND SERVICES

5.4.1 No-Project

Implementation of the No-Project Alternative would have no effect on existing community facilities and services. The demand for police protection, fire prevention, emergency medical services and waste management facilities as a result of No-Project development would be adequately accommodated through the horizon year 2020. Therefore, no impacts are anticipated with the implementation of the No-Project Alternative, and no mitigation measures are proposed.

5.4.2 Transbay Terminal

5.4.2.1 Public and Community Facilities

None of the public and community facilities described in Section 4.3 would be displaced, relocated, or otherwise affected by construction of either of the Transbay Terminal Alternatives.

5.4.2.2 Safety and Emergency Services

Police. Implementation of either the West Ramp or the Loop Ramp Alternative would increase the amount of pedestrian activity within the Terminal and general vicinity, and thus the potential for crimes reported in the area. Currently, the Terminal falls under the jurisdiction of the California Highway Patrol, but this would change with the change in Terminal ownership and the TJPA would need to determine how it would obtain police services for the new Terminal. *According to Lieutenant Pardini of the San Francisco Police Department (SFPD), the SFPD's Southern Station does not have the sufficient personnel to realign its staff and provide offices exclusively for the Terminal.*[3] Southern Station currently has no patrol officers assigned to the Terminal. Sources at the Department anticipate that a minimum of two Southern Station patrol officers would *need to* be assigned (24 hours per day, seven days per week), and this increase in demand could *not* be met by reorganizing existing staff *and would require a funding arrangement between the terminal and SFPD.*

It is likely that some Terminal police and protection services would remain with the security forces associated with Terminal transit agencies, including AC Transit and Golden Gate Transit. It is anticipated that these agencies would extend their security responsibilities to accommodate the new Terminal under either the West Ramp or Loop Ramp Alternative.

Fire and Emergency Medical Services. The development of the Transbay Terminal at a height and massing greater than the existing Terminal, coupled with an increase in the intensity of land uses associated with the site would increase demand for fire prevention and suppression and emergency services under either of the new terminal alternatives (West Ramp or Loop Ramp). Demand for fire prevention and suppression and emergency services would be expected to be greater under the West Ramp Alternative due to the increased mix of land uses, including the pedestrian concourse level with retail, commercial, conference, and cultural uses.

To ensure that adequate life safety measures and emergency access *will* be incorporated into the design and construction of either of the design alternatives, the Fire Department *will* review project plans at the time of permitting. *The San Francisco Fire Department will require "a risk analysis to accurately determine the number of personnel necessary to maintain an acceptable level of service" (written communication, Aaron Stevenson, San Francisco Fire Department, May 29, 2001)."* To reduce the potential for impacts to occur under either the West Ramp or Loop Ramp Alternative, development and implementation of a life safety plan *will* be required. A life safety plan *will* include provision of on-site measures such as a fire command post at the Terminal, the Fire Department's 800-megahertz radio system and all necessary fire suppression equipment.

[3] Lieutenant Albert Pardina, Planning Division, SFPD, letter to Joan Kugler, January 10, 2003.

5.4.2.3 Solid Waste Management

The West Ramp Alternative would provide for a greater intensity and mix of land uses, and thus would be expected to generate more solid waste than the Loop Ramp Alternative, which would entail about 110,000 square feet less space. Under either of the two alternatives, however, the generation of solid waste would be small when compared to the waste stream generated citywide (1.39 million tons). Impacts associated with the demolition of the existing Terminal would include a short-term increase in the amount of solid waste and debris disposed of which, according to sources at the Solid Waste Management Program, could be adequately accommodated by existing landfills.

Although an increase in solid waste generation and disposal would occur due to implementation of either the West Ramp or Loop Ramp Alternative, new or expanded facilities would not be required to accommodate the demand for Solid Waste Management Services, and therefore no mitigation measures are required. The following measures are recommended to achieve the 50 percent reduction goal specified in the California Integrated Solid Waste Management Act of 1989 (AB 939). In addition, compliance with all City and County ordinances regarding the minimization of waste though recycling would be expected to occur.

Short-term measures include utilizing recycled construction materials where feasible, encouraging recycling of construction and demolition materials, and including built-in compartmentalized recyclable material collection bins into the proposed developments.

Long-term measures include creating and implementing a long-term waste management plan for comprehensive recycling of materials. Such a plan would be developed in coordination with existing recycling programs in the area, and should target materials generated by office, residential and retail land uses such as paper, glass, aluminum beverage containers, and plastic. In addition, proposed development should have a designated space for the collection and storage of recyclable materials.

5.4.3 Caltrain Downtown Extension

5.4.3.1 Public and Community Facilities

None of the public and community facilities described in Section 4.3 would be displaced, relocated, or otherwise affected by construction of the Caltrain Downtown Extension Alternatives.

5.4.3.2 Safety and Emergency Services

Police. Implementation of either of the Caltrain Downtown Extension alternatives would not result in impacts to police protection services. As both alternatives would be located

underground, construction and use of the alignments would not be expected to require additional police staff or new or expanded police facilities. Caltrain security officers would continue to patrol the Caltrain vehicles en route towards the Transbay Terminal. Therefore, no mitigation measures are proposed.

Fire and Emergency Medical Services. Implementation of either of the proposed alternatives would be expected to increase the demand for fire prevention and suppression and emergency medical services during the construction and occupancy of the underground tunnel. To ensure that adequate life safety measures and emergency access would be incorporated into the design and construction of the design alternatives, the Fire Department *will* review project plans at the time of permitting. To reduce the potential for impacts to occur under either of the design alternatives, development and implementation of a life safety plan *will* be required. A life safety plan *will* include provision of on-site measures such as a fire command post near the tunnel operations, the Fire Department 800-megahertz radio system and all necessary fire suppression equipment located on the premises, if applicable, as well as adequate access to the underground tunnel.

5.4.3.3 Solid Waste Management

Impacts associated with implementation of either of the proposed underground Caltrain Downtown Extension alternatives would be limited to short-term construction impacts associated with tunnel-bore operations. Construction impacts associated with the Caltrain Downtown Extension are addressed in greater detail in Section 5.21. The City's Solid Waste Management Program previously determined that the amount of construction debris generated and disposed of could be adequately accommodated by existing landfills.

5.4.4 Transbay Redevelopment Area

The proposed project's redevelopment component would occur over time (through the year 2020). Generally, increases in population result in incremental increases in the demand for public services, in this case specifically for police and fire services. In written communication provided by both the police and fire departments, these providers plan to maintain the necessary staffing levels and equipment to meet the level and scope of service needs of the citizens of San Francisco, and to address the future growth resulting from the project.

5.4.4.1 Public and Community Facilities

None of the public and community facilities described in Section 4.3 would be displaced, relocated, or otherwise affected by construction of the Redevelopment Alternatives.

5.4.4.2 Safety and Emergency Services

Police. On the basis of the current ratio of police staffing to the population, the Police Department would require an estimated additional 85 to 115 staff under the Reduced Scope Alternative and Full-Build Alternative, respectively[4]. It is anticipated that an increase in demand such as this could be met by reorganizing existing staff (i.e., adjusting schedules, re-deploying officers), instead of hiring new staff. There are currently no plans for additional police facilities to serve this area.

The San Francisco Police Department divides the City into different geographic areas, known as patrol sectors. In the South of Market area, there are currently five patrol sectors. The Transbay Terminal Area is within the southern patrol sector and serviced by the Southern Station. The southern patrol sector extends from Market Street on the north, Bryant Street on the south, The Embarcadero on the east, and Third Street on the west. If additional police presence in the southern patrol sector would be required, the police department could reorganize staff allocated to specific patrol sectors or could reconfigure the geographic area of a specific patrol sector by reducing the geographic area of the southern patrol sector and increasing another patrol sector where service demands are less (personal communication, Lt. Al Pardini, San Francisco Police Planning Division, July 2, 2003).

Implementation of either development alternative would not be expected to require new or expanded facilities, and therefore no mitigation measures are required. To ensure adequate security measures are incorporated into the design of all new development, creation and implementation of a security plan, which would include measures that provide for state-of-the-art security and communications capabilities in each of the new facilities, is recommended.

Fire and Emergency Medical Services. The Fire Department anticipates that implementation of either the Full-Build Alternative or Reduced Scope Alternative could impact the Department's level of service in the study area. Demand may be great enough to require additional fire suppression personnel to maintain an adequate level of service. It is anticipated, however, that an increase in demand could be met through the reorganization of existing staff instead of hiring new staff. Furthermore, a proposal to build a new fire station in the nearby Mission Bay area could potentially offset any adverse impact to the Department's level of service in the area.

According to the San Francisco Fire Department (SFFD), response times for Station 1 and Station 2 are approximately three to five minutes, and development of the proposed project is not expected to adversely affect existing response times (personal communication, Battalion Chief Paul Chin, June 27, 2003).

[4] Projections based on Port of San Francisco Waterfront Land Use Plan (San Francisco Planning Department, 1997). It is likely that these figures are over estimated due to the fact that they were calculated based on a standard ratio of officers per capita, and do not reflect the most realistic estimates of how the need for additional staff changes as population of a neighborhood changes. Police Department staff were not able to provide more accurate figures.

As part of the building permit process required for all new construction or building renovation, the building owner/developer must show evidence of the proposed work meeting current building and safety standards. In the case of renovations, additions such as new sprinkler systems, fire alarms or new exits are likely, thus improving a structure's overall fire protection. For new construction, some projects would require the demolition of older buildings, thus reducing the existing fire hazards they may pose. Therefore, any level of future development in the Redevelopment Area would result in improved fire protection due to an increase in the number of structures that adhere to the most recent fire and safety code requirements.

Future development is assumed to result in a decrease in the amount of industrial square footage in the area. As the amount of industrial space diminishes and new construction activity results in the cleaning up of contaminated sites, the potential for fires or other incidents related to hazardous materials would be reduced. In addition, existing hazardous materials programs would likely be able to expand and receive additional financial support as the number of fee-paying businesses increases.

Additional development under either of the redevelopment area alternatives could adversely affect emergency medical resources, especially during daytime hours. Demand may be great enough to require larger staffing, but in most cases new staffing could be supported by new user fees, provided fee allocations allow for it.

5.4.4.3 Solid Waste Management

The City's Solid Waste Program calculates citywide solid waste generation by adjusting yearly taxable sales, the California Consumer Price Index (CPI), population growth, and employment. The annual diversion rate is then calculated by using the known disposal tonnage and the adjusted waste generation figure. The current diversion rate is 42 percent, which could likely increase to more than 50 percent by the horizon year 2020. Accordingly, solid waste generation tonnage could vary from approximately 1.39 million tons towards more than 1.5 million tons by 2020.

Based on development projections for recent studies in the Transbay Area, it is estimated that the Redevelopment Area would generate at least 15,000 tons and dispose of at least 12,000 tons per year of combined residential and commercial waste under the Full Build Alternative.[5] Given that the total citywide waste stream is approximately 1.39 million tons per year, the occupancy waste from development under either of the alternatives would constitute less than 0.9 percent of the entire solid waste stream.

[5] This figure was estimated using a 42 percent diversion rate and the following waste generation assumptions used by the City's Solid Waste Program: 3 lbs. per residential square foot during construction, 1.02 tons per household during occupancy, 11.5 lbs. per commercial square foot during construction, 2.6 lbs. per square foot of office space per year during occupancy and 3.1 lbs. per square foot of commercial space per year during occupancy.

As implementation of either the Full-Build or Reduced Scope alternatives would not result in an impact to Solid Waste Management Services, no mitigation measures are required. The measures outlined previously for the Transbay Terminal alternatives could potentially reduce the short-term and long-term impacts to Solid Waste Management, including the City's ability to achieve the state mandated 50 percent reduction goal (AB 939). In addition, compliance with current City and County ordinances regarding the minimization of waste through recycling would be required.

5.5 PARKLANDS, SCHOOLS, AND RELIGIOUS INSTITUTIONS

The No-Project Alternative would have no effect on parks, schools, or religions institutions. The remainder of this section therefore focuses on the Terminal/Extension/Redevelopment project effects.

With the exception of the set-back and porte-cochere (semi-circular drive) immediately in front of the existing Transbay Terminal, none of the open spaces, parks, recreational facilities, universities, or churches described in Section 4.4 would be displaced or affected as part of any of the Transbay Terminal, Downtown Extension or Redevelopment alternatives, except to the extent that transit access and traffic patterns would change.

5.5.1 Parklands

Both the Transbay Terminal alternatives would displace the set-back and porte-cochere located in front of the existing Transbay Terminal. The existing area is almost entirely paved, and would not be considered a "park" in most senses of the word, although the 1994 Draft Downtown Streetscape Plan developed by the San Francisco Planning Department calls for "retaining the area in front of the Terminal or other suitable areas for much needed open space," and "retaining . . . a garden walk pedestrian connection and open space," on the former freeway parcels south of the Terminal. The current concept for the new Transbay Terminal includes an open plaza for public use and a grand staircase as the front entrance to the new terminal.

Both Redevelopment Alternatives would introduce new public open space into the Transbay Redevelopment Area, an area currently lacking public open space and parks. The current open space concept for the area includes four primary public open spaces, with two open spaces forming Fremont Square, a primarily hardscaped plaza that would be adjacent to the new Terminal and would replace the existing open space and two new "green" open spaces. Natoma Green would be located between Minna and Natoma Streets and would serve as a mixed-use educational and cultural center, and Essex Green would be located between Tehama and Clementina Streets. In addition, smaller open spaces such as pocket parks, sitting areas, and playgrounds are proposed for the area. The addition of new public open space to the Transbay Redevelopment Area would represent an improvement over current conditions.

5.5.2 Schools

No schools would be displaced, relocated, or disrupted by the project. Private schools and colleges located within the vicinity of the Terminal, such as Golden Gate University, would likely benefit from the improved transit operations and the creation of new transit-oriented development (retail, cultural, commercial uses). Moreover, the new, aesthetic design of the Terminal would create a distinct point of interest in the Transbay Area, which could in turn attract new patrons. Short-term construction effects such as noise, redistribution of traffic, and dust would be anticipated to occur; these are discussed in Section 5.21.7, Construction Impacts on Parks, Schools, and Religious Institutions.

Increased public school enrollment at the K-12 level generated by proposed residential development in the Transbay Redevelopment Area would increase demand for school facilities. Based on the student generation rate of 0.203 students per new housing units used by the San Francisco Unified School District (SFUSD) for planning purposes, the number of students that could potentially be added to the Transbay Redevelopment Area would range from about 685 students under the Reduced Scope Alternative (3,373 housing units) to about 737 students under the Full Build Alternative (3,630 housing units).

Funding for school construction is generated by fees on new development, at levels capped by the State legislature. The current State legislature establishes a maximum fee for residential development at $1.93 per square foot, and $0.31 per square foot of commercial development. The San Francisco Board of Education has not adjusted the fees in the San Francisco Unified School District (SFUSD) since 1994; current SFUSD fees are $1.72 per square foot of residential development, $0.24 per square foot of office, and $0.13 per square foot of retail. Fees of $0.08, $0.09, $0.15, and $0.22 per square foot of lodging, warehouse, heavy industrial, and light industrial development, respectively, are also charged by the SFUSD. At the current rate fees, development proposed for the Transbay Redevelopment Area under the Full Build Alternative would generate about $10 million in fees, and about $7 million in fees would be generated under the Reduced Scope Alternative.

School development fees are considered under Senate Bill 50 (SB50) to mitigate any potential effect associated with the implementation of proposed residential development under either development alternative.

5.5.3 Religious Institutions

Due to their distance from the proposed improvements, none of the religious institutions identified in Section 4.4 would experience long-term impacts of the project components, although there would be limited short-term construction effects such as noise, redistribution of traffic, and dust. These impacts are addressed in Section 5.21.7.

As there would be no long-term adverse effects to parklands, schools, and churches, no mitigation is proposed.

5.6 FISCAL AND ECONOMIC IMPACTS

5.6.1 No-Project Alternative

The No-Project Alternative is the reference point for estimating the fiscal and economic impacts of the proposed project alternatives and therefore, by definition, would have no impacts. The rest of this section therefore focuses on the impacts of the Terminal/Extension/Redevelopment project.

5.6.2 Transbay Terminal/Caltrain Extension/Redevelopment

Because the Transbay Terminal, Caltrain Downtown Extension, and Redevelopment components are very closely related from the point of view of fiscal and economic impacts, these effects are discussed together in this section.

To construct the Caltrain Downtown Extension from Fourth and Townsend Streets to the site of the Transbay Terminal, land and buildings will need to be acquired, and permanent underground easements will need to be secured. Due to Caltrain design standards, local geology, and the resultant depth of the Caltrain alignment, the construction of either alternative, as presently envisioned, may involve the acquisition and demolition of buildings under which the alignment would pass, depending on the construction technique selected (cut-and-cover versus tunneling). After the underground extension is constructed, these properties would be available for resale as vacant sites ready for new construction. The properties that would be affected by the extension are detailed in Section 5.2.

Properties identified in Section 5.2 are in private ownership; publicly-owned properties are excluded from this fiscal analysis. These publicly-owned properties would be transferred to the Transbay Joint Powers Authority (TJPA – see Section 1.3, Project Sponsors) and the Redevelopment Agency from the State of California (see Section 6).

5.6.2.1 Net Order-of-Magnitude Land Building and Easement Cost

This analysis estimates the order of magnitude cost to acquire the privately-owned land, buildings, and easements needed to construct the Caltrain Downtown Extension Alternative. This order of magnitude cost estimate also includes the following items:

- Estimated premium associated with eminent domain proceedings, such as legal fees, appraisal costs, and other consulting and administrative costs;
- Estimated cost to relocate commercial and residential tenants and owner-occupants; and
- Estimated building demolition costs.

The cost estimate does not include payments associated with business interruption, loss of goodwill, and "nuisance" costs associated with the construction of the extension, including loss of property access. Costs would be partially offset by the estimated proceeds from resale of the properties as vacant sites become available for new construction.

Acquisition Costs. Compensation to owners of the acquisition parcels would be based on accepted appraisal techniques, specifically comparison to sales of other buildings in the broader South of Market neighborhood. Because the individual properties exhibit a wide range of building sizes, conditions, tenancies, etc., a broad price range was used to prepare the order of magnitude cost estimate. Individual properties have not been appraised at this stage; however, if a property recently transferred ownership, the actual transaction was factored into the analysis.

Using such sources as First American Real Estate Solutions, Comps Inc., and Marshall Valuation Service, estimated cost ranges were determined for each land use type to be acquired under each alternative and option. Based on these estimates, Tables 5.6-1, 5.6-2 and 5.6-3 provide a summary of the estimated acquisition costs for the Transbay Terminal and the two Caltrain Downtown Extension Alternatives for both the Cut-and-Cover and Tunneling Options.

Estimates include an assumed premium associated with possible eminent domain proceedings and relocation costs, which is based on information provided by the San Francisco Redevelopment Agency and professional experience with other redevelopment and eminent domain projects.

Table 5.6-1: Summary of Acquisition Cost Estimates
Transbay Terminal & Redevelopment Properties

	Low	High
Estimated Acquisition Cost [1]	*$34,000,000*	*$46,400,000*
Relocation Cost	$300,000	$300,000
Demolition Cost	$300,000	$300,000
Total Net Acquisition Costs	***$34,600,000***	***$47,000,000***

Notes:
[1] Includes premium for possible condemnation proceedings.
Sources: Sedway Group; City of San Francisco; First American Real Estate Solutions; Comps Inc.; Marshall Valuation Service, August 2001.

Table 5.6-2: Summary of Acquisition Cost Estimates Second-to-Main Alternative

	Low	High
Cut-and-Cover Option		
Estimated Acquisition Cost [1]	*$124,400,000*	*$202,400,000*
Easements	*1.200,000*	*1,200,000*
Relocation Cost	$4,100,000	$4,100,000
Demolition Cost	$3,200,000	$3,200,000
Resale Proceeds	*($27,200,000)*	*($88,100,000)*
Total Net Acquisition Costs	***$105,700,000***	***$122,800,000***
Tunneling Option		
Estimated Acquisition Cost		
Fee [1]	*$46,000,000*	*$69,800,000*
Easements	*$2,200,000*	*$2,200,000*
Relocation Cost	$2,400,000	$2,400,000
Demolition Cost	$1,100,000	$1,100,000
Resale Proceeds	*($7,600,000)*	*($24,900,000)*
Total Net Acquisition Costs	***$44,100,000***	***$50,600,000***

Note: [1] Includes premium for condemnation.

Sources: City of San Francisco; Sedway Group; First American Real Estate Solutions; Comps Inc.; Marshall Valuation Service, August 2001.

Table 5.6-3: Summary of Acquisition Cost Estimates Second-to-Mission Alternative

	Low	High
Cut-and-Cover Option		
Estimated Acquisition Cost [1]	$188,100,000	$277,800,000
Relocation Cost	$4,500,000	$4,500,000
Demolition Cost	$3,800,000	$3,800,000
Resale Proceeds	($66,000,000)	($148,500,000)
Total Net Acquisition Costs	**$130,400,000**	**$137,600,000**
Tunneling Option		
Estimated Acquisition Cost		
Fee [1]	$109,800,000	$145,300,000
Easements	$1,000,000	$1,000,000
Relocation Cost	$2,800,000	$2,800,000
Demolition Cost	$1,800,000	$1,800,000
Resale Proceeds	($46,400,000)	($85,200,000)
Total Net Acquisition Costs	**$69,000,000**	**$65,700,000**

Notes: [1] Includes premium for condemnation.

Sources: City of San Francisco; Sedway Group; First American Real Estate Solutions; Comps Inc.; Marshall Valuation Service, 2001.

Relocation costs are estimated at $35,000 per unit for residential units, $40,000 per business for small- and medium-sized businesses, and $120,000 for large businesses. The relocation costs used here are estimates to be used for planning and budgeting purposes. Actual relocation payments will be determined at the time of project implementation using state and federal guidelines.

Demolition costs are based upon cost estimates provided by Marshall Valuation Service. Depending upon the construction type of the building and other individual factors, demolition costs range from $3.60 to $8.10 per square foot of building area. An average of $5.85 per square foot of building was used.

After construction of the Caltrain Extension, the properties would be available for resale as developable vacant sites. The estimated resale proceeds would partially offset the estimated acquisition costs, resulting in a net acquisition cost estimate. Resale proceeds estimates are based upon land prices per square foot of land area. A broad range is used to reflect the wide variety of locations of the individual properties and their respective unknown redevelopment potentials. For commercial sites, the estimated range is $100 to $300 per square foot of land area, while for residential properties, the range is from $200 to $760 per square foot of land area.[6] As shown in the tables, estimated resale proceeds range from $34 to $113 million for the Second-to-Main Alternative and from $69 to $153 for the Second-to-Mission Alternative.

5.6.2.2 Total Net Acquisition Cost Estimate

Based on each of the acquisition components described above, the net acquisition cost estimate for the Transbay Terminal and the Caltrain Downtown Extension (in 2001 constant dollars), including land, buildings, and easement, is as follows:

Estimated net acquisition costs for properties required for:

- Transbay Terminal - *$34.6 to $47.0 million*
- Second to Main Caltrain Downtown Extension
    - Cut-and-Cover Option – *$105.7 to $122,8 million*
    - Tunneling Option – *$44.1 to $50.6 million*
- Second to Mission Caltrain Downtown Extension Alternative
    - Cut-and-Cover Option – *$130.4 to $137.6 million*
    - Tunneling Option - *$65.7 to $69.0 million.*

These cost ranges include estimated premiums associated with eminent domain proceedings, relocation costs, and demolition costs. Business interruption, loss of goodwill, and "nuisance" costs are not included.

[6] The two properties on Mission Street for the Second-to-Mission Alternative are estimated at $700 to $790 per square foot of land area, due to a recent partial transfer of these properties.

5.6.2.3 Fiscal Implications of Land Acquisition for Caltrain Downtown Extension

The acquisition of real estate parcels for construction of the Caltrain Downtown Extension would result in fiscal impacts to the City and County of San Francisco. These effects are anticipated to be short-term, lasting only for the duration of the construction period and any subsequent period required for property resale. This analysis assumes that all of the acquired properties are ultimately resold to private parties. If the properties remain in public ownership, the implications would be longer-term.

The properties identified for acquisition currently generate revenues to the City and County of San Francisco through taxation, both directly and indirectly. These revenues include property taxes, payroll taxes, retail sales taxes, parking taxes, and other less significant taxes, such as utility taxes. Once the properties are purchased by a public entity for construction of the Transbay Terminal and Caltrain Downtown Extension, they would no longer generate property taxes to the City and County of San Francisco, because public entities' owners are exempt from such taxation. In addition, the ultimate demolition of existing development will result in the loss of occupancy-related taxes, such as payroll taxes paid by existing businesses, retail sales taxes generated by existing restaurants and retailers, retail sales taxes generated by subject property residents, and parking taxes paid by existing parking operators.

Property Tax. The properties to be acquired for the Caltrain Downtown Extension for the Cut-and-Cover Option have a year 2000 assessed valuation of $76.0 million for the Second-to-Main Alternative and $104.0 million for the Second-to-Mission Alternative.[7] Pursuant to the annual allowable property value increase of two percent under Proposition 13, and a recent area real estate transaction involving 301-315 Mission Street and 101-129 Fremont Street[8] (which properties lie within the alignment for the Second-to-Mission Alternative), these assessed valuations for the year 2001 are assumed to increase to approximately $77.6 million for the Second-to-Main Alternative and $127.6 million for the Second-to-Mission Alternative.[9] Given the City and County of San Francisco's current property tax rate of 1.136 percent, these properties generate annual property tax revenues to various City and County funds of $881,109 for the Second-to-Main Alternative and $1,449,109 for the Second-to-Mission Alternative. For the Tunneling Option, fewer parcels will need to be acquired. Therefore, the property tax revenues associated with these properties are lower, estimated at $517,379 for the Second-to-Main Alternative and $841,426 for the Second-to-Mission Alternative. Regardless of option, the property tax revenues associated with the properties requiring acquisition for the Transbay Terminal total an additional $97,536.

[7] Assessed valuation as reported by First American Real Estate Solutions, August 2001.

[8] Eighty percent interests in these properties were recently sold for $40 million, implying a $50 million total valuation. It is assumed the County Tax Assessor will include this total valuation in the 2001 property tax rolls.

[9] The full figures are $77,562,377 for Second-to-Main and $127,562,377 for Second-to-Mission.

These revenues would be lost to the City and County of San Francisco for the time period the properties are under public ownership. However, many of the properties could be resold following construction of the Caltrain Downtown Extension. If the properties were resold to private parties following construction of the Downtown Extension, property tax revenues would again accrue to the City and County of San Francisco (and the San Francisco Redevelopment Agency pending formulation of a redevelopment project area). To the extent subsequent development occurs, higher property tax revenues might ultimately accrue to the City and County of San Francisco due to higher assessed values associated with new, more intense development with higher values than the present uses. Thus in the long run, the short-term property tax losses may be recouped and even exceeded following new development reflecting the highest and best use of each property.

Payroll Tax. Payroll taxes, assessed at a rate of 1.5 percent of gross payroll, are a significant revenue source to the City and County of San Francisco. There are up to 67 operating businesses located in the properties identified for acquisition for the Downtown Extension and the Transbay Terminal, depending upon alternative and option. An estimate of the number of employees associated with these businesses and their average annual payroll provides a basis for formulating a general estimate of annual payroll and associated payroll taxes. If any of these businesses were to close or relocate out of San Francisco, their payroll taxes would be lost to San Francisco. Although area-related payroll taxes would resume following redevelopment of the properties, any taxes lost during the construction and property resale period would not be recouped by San Francisco, unless these businesses were successfully relocated within San Francisco prior to or during construction. If these businesses were successfully relocated within San Francisco prior to or during construction, their payroll taxes would be preserved, both during and after construction.

For each alternative and option, the total square feet by land use and a square-foot-per-employee estimate provides a basis for estimating total affected employment. This, coupled with an annual per capita payroll estimate, provides an estimate of the maximum payroll taxes that would be foregone as a result of business closures and relocations out of San Francisco with the Caltrain Downtown Extension. The calculated results per alternative are presented in Table 5.6-4, which estimates that for the Cut-and Cover Option, 1,089 jobs are associated with the Second-to-Main Alternative properties and 1,219 jobs are associated with the Second-to-Mission Alternative properties. For the Tunneling Option the figures are lower, totaling 424 employees for the Second-to-Main Alternative and 762 employees for the Second-to-Mission Alternative. Assuming an annual average payroll of $52,000 per employee,[10] estimated annual payroll taxes for the Cut-and-Cover Option are $849,420 for the Second-to-Main Alternative and $1,113,060 for the Second-to-Mission Alternative. For the Tunneling Option, these figures are $330,720 for the Second-to-Main Alternative and $594,360 for the Second-to-Mission Alternative. While not included in Table 5.6-4, the Transbay Terminal properties have an additional estimated 200 office employees, with an associated payroll tax estimate of $156,000.

[10] Derived from County Business Patterns data for all San Francisco employees.

These are revenues that would be retained in both the short-term and long-term by the City and County of San Francisco if the affected businesses were to be successfully relocated within San Francisco. They would be lost only if the businesses were to close or relocate out of San Francisco following demolition of their existing space.

Retail Sales Tax. Retail sales taxes accrue to the City and County of San Francisco at a rate of 1.25 percent of total taxable sales. Retail sales taxes would accrue from the retail businesses and restaurants within the affected properties as well as from citywide spending by residents who live in the affected properties. As presented in Table 5.6-4, there are 19,680 square feet of retail and restaurant space included in the properties that would need to be acquired for both the Cut-and Cover and Tunneling Options. There are no additional retail properties associated with the Transbay Terminal. At a conservative $200 taxable sales per square foot annually, these operations generate an estimated $49,200 in retail sales taxes to the City and County of San Francisco annually. These revenues would be lost only if the affected businesses were to close or relocate outside of San Francisco. As with the payroll taxes, these retail sales taxes would be preserved if these operations were to be successfully relocated within San Francisco prior to or during construction.

For both Alternatives under the Cut-and-Cover Option, construction of the Caltrain Downtown Extension will require the acquisition and demolition of 60 residential units, including 14 live/work units. This translates into the relocation of an estimated 120 persons, assuming an average of two residents per unit. Under the Tunneling Option, only 23 residential units will be acquired and demolished. If each resident spends $7,200[11] in taxable retail sales in San Francisco, the total annual sales tax contribution to the City and County of San Francisco would amount to a rather low $10,800 for the Cut-and-Cover Option and $4,140 for the Tunneling Option. Thus retail sales taxes at risk of loss would total only $60,000 per year for the Cut-and-Cover Option and $53,340 for the Tunneling Option. These taxes would be lost to the city only if all of the affected residents were to do all of their spending elsewhere. There are no residential units associated with the Transbay Terminal; hence no additional retail sales tax impacts.

Other Tax. Other taxes generated by real estate may also be interrupted or cease subsequent to acquisition of the properties for construction of the Caltrain Downtown Extension. These include utility user taxes, franchise fees, and, for the three existing parking facilities (with less than an estimated 100 spaces), parking taxes. These tax revenues are likely to be very insubstantial relative to the preceding taxes, especially property and payroll taxes, and were not quantified.

[11] Assumes $9,000 per capita in retail sales expenditures, with 80 percent captured by San Francisco retailers.

Table 5.6-4: Estimated 2001 Payroll Tax Revenue Generated by Business Displaced by Construction of the Caltrain Downtown Extension Alternatives

	Cut-and-Cover Option		Tunneling Option	
	Second-to-Main	Second-to-Mission	Second-to-Main	Second-to-Mission
Industrial Space				
Square Feet	126,880	126,880	2,600	2,600
Square Feet Per Employee	750	750	750	750
Total Employment	169	169	3	3
Office Space				
Square Feet	286,358	396,315	124,157	234,114
Square Feet Per Employee	325	325	325	325
Total Employment	881	1,219	382	720
Retail/Restaurant				
Square Feet	19,680	19,680	19,680	19,680
Square Feet Per Employee	500	500	500	500
Total Employment	39	39	39	39
Total Employment	1,089	1,427	424	762
Average Annual Payroll (1)	$52,000	$52,000	$52,000	$52,000
Payroll Tax Rate (2)	1.5%	1.5%	1.5%	1.5%
Annual Payroll Tax Revenue	$849,420	$1,113,060	$330,720	$594,360

Notes:

(1) Annual payroll reflects countywide average annual payroll for all San Francisco workers in 1999 inflated three percent annually to 2001 dollars.

(2) Current payroll tax rate in San Francisco County

Sources: First American Real Estate Solutions; County Business Patterns; U.S. Bureau of the Census, 1999, San Francisco, CA; Office of the Treasurer and Tax Collector, City of San Francisco; and Sedway Group.

Summary Tax Implications. Table 5.6-5 summarizes the major annual tax revenues attributable to the properties that would be involved in the acquisition process for the Transbay Terminal and the Caltrain Downtown Extension. For the Cut-and-Cover Option, these revenues total $1.8 million for the Second-to-Main Alternative and $2.6 million for the Second-to-Mission Alternative. For the Tunneling Option, these revenues are much lower at approximately $0.9 million for the Second-to-Main Alternative and $1.5 million for the Second-to-Mission Alternative. The net increment attributable to the Transbay Terminal is estimated at approximately $250,000.

Table 5.6-5: Annual 2001 San Francisco Taxes at Risk of Loss Due to Property Acquisitions

Type of Tax	Cut-and-Cover Option		Tunneling Option		Transbay Terminal
	Second-to-Main	Second-to-Mission	Second-to-Main	Second-to-Mission	
Property	$881,109	$1,449,109	$517,379	$841,426	$97,536
Payroll	$849,420	$1,113,060	$330,720	$594,360	$156,000
Retail Sales	$60,000	$60,000	$53,340	$53,340	$0
Total	**$1,790,529**	**$2,622,169**	**$901,439**	**$1,489,126**	**$253,536**

At worst, all of these revenues would be lost to the City and County of San Francisco following acquisition of the properties to construct the Downtown Extension. At least, property taxes – which comprise the greatest portion of the total revenues – would be lost during the construction period due to public ownership of the property until the extension was constructed. The other revenue sources, however, might or might not be interrupted, depending upon whether or not the affected businesses and residents were successfully relocated within San Francisco prior to or during construction. To the extent they were successfully relocated, there would be no disruption in these tax revenues. Alternatively, if all of the businesses were not successfully relocated, some portion of the tax revenues would be lost, until such time as the properties were resold and redeveloped.

Given the size and nature of existing development, it is likely that subsequent redevelopment would be more intense and would more accurately reflect the highest and best use of the properties. Thus, in the long run, the short-term property and other tax losses may be recouped and even exceeded.

5.7 AIR QUALITY

This section considers long-term impacts and benefits of the three project components with regard to regional air quality. It also considers the project's conformity with the applicable State Implementation Plan (SIP), as required by the Clean Air Act amendments of 1993. Impacts are assessed by comparing conditions under the No-Project and project alternatives, and by comparing projected concentrations of pollutants to the ambient air quality standards (AAQS).

5.7.1 Regional Air Quality

Provision of a multi-modal transit facility and extension of Caltrain to Downtown San Francisco is projected to reduce the number of miles traveled by autos in the region, which in turn would result in an overall reduction of air emissions. This section estimates the direct auto travel and

air emissions reduction anticipated as part of the Caltrain Extension as calculated by the transportation modeling and ridership projections. As the Transbay Terminal is a replacement of an existing facility, anticipated auto travel reductions were not included in the modeling projections. To the extent that a new Terminal would attract new bus riders, auto travel and air emissions may be further reduced beyond the estimates provided.

The proposed redevelopment would generate additional trips, and the air emissions implications of these trips at local intersections are evaluated in Section 5.7.2. However, by locating large-scale, high density residential, commercial and institutional development near the site of a transit hub, the project can be expected to divert to public transit many trips that would otherwise be made by the private automobile. This transit-oriented development is expected to improve transit's ability to attract a larger mode share of persons commuting to jobs in the region, in that the Terminal and Caltrain Extension would provide an attractive transportation option to the automobile for new residents and workers in the area.

Auto travel and air emission reductions from the Caltrain Downtown Extension. Future emissions from automobile traffic were projected to evaluate the effect of the Caltrain Downtown Extension, based on projected ridership, which is expected to be identical for both the Second-to-Mission and the Second-to-Main alternatives. The effect of the Caltrain Downtown Extension on regional emissions of pollutants was calculated based on the number of vehicle miles diverted from private automobiles and public buses to the electric-powered trains operating on the Downtown Extension. The proposed project is expected to produce a decrease in vehicle miles of travel (VMT), and would therefore result in a reduction of emissions associated with automobiles. Specifically, the total daily VMT in the region (under either the Second-to-Main or Second-to-Mission alternatives) would be about 260,000 less than under the No-Project Alternative, including a 3,668 reduction in bus VMT. This decrease would result in incremental regional reductions in the projected daily local emissions burden (measured in pounds per day or tons per year) of some pollutants, as shown in Table 5.7-1.

Table 5.7-1: Reductions in Air Pollution Emissions Resulting from the Caltrain Downtown Extension [1]

Pollutant	Reduction in Emissions (pounds per day)	Reduction in Emissions (tons per year)
Reactive organic gases (ROG)	329	*52*
Carbon monoxide (CO)	5,211	*820*
Oxides of nitrogen (Nox)	899	*142*
Particulate matter (PM_{10})	30	*5*
Oxides of sulphur (Sox)	18	*3*

[1] The results are identical for either Caltrain Downtown Extension alternative (Second-to-Main or Second-to-Mission).

Source: Terry A. Hayes Associates, September 2001; Parsons, September 2001

5.7.2 Microscale Air Quality

Existing local carbon monoxide (CO) conditions were assessed using the carbon monoxide dispersion computer model CAL3QHC. The model uses state and federally approved emissions factors,[12] meteorological data, traffic volume, speed, and vehicle mix inputs. The results of the model are then added to the background or "ambient" conditions to provide an estimate of local conditions.

Within the urban setting, vehicle exhaust is the main source of CO. Therefore, the highest concentrations of CO are found near busy intersections. CO is a localized gas, and its concentrations decrease substantially as distance from the source (intersection) increases. To provide a worst-case simulation of CO concentrations within the area that may be affected by the proposed project, CO concentrations at sidewalks adjacent to eight area intersections were modeled. The study intersections (listed in Table 5.7-2 along with existing CO concentrations) were selected based on their potential to experience the greatest impacts with regard to volume, capacity, and level of service, and are intended to represent the "worst case" for impacts among the 27 intersections that were evaluated in the project traffic report.[13]

Table 5.7-2: Existing (2001) Weekday P.M. Peak Hour Carbon Monoxide Concentrations at Study Intersections (ppm)

Study Intersection	Highest Concentration at Intersection (ppm)			
	1-Hour Concentration	Standard Exceeded? (State-20.0 ppm Federal-35 ppm)	8-Hour Concentration	Standard Exceeded? (State & Federal-9.0 ppm)
First/Market	11.7	No	8.2	No
First/Mission	12.4	No	8.7	No
First/Howard	14.3	No	10.0	Yes
Beale/Howard	12.0	No	8.4	No
Second/Folsom	12.7	No	8.9	No
Second/Harrison	12.1	No	8.5	No
Fremont/Harrison	10.9	No	7.6	No
Main/Harrison	10.2	No	7.1	No

Source: California Air Resources Board and Terry A. Hayes Associates, LLC. September 2001.

[12] California Air Resources Board, MVEI7G Emissions Factors, Run, Date: 6/18/01.

[13] Wilbur Smith Associates, Transbay Terminal Area/Caltrain Extension Traffic Analysis, September 7, 2001.

5.7.2.1 Existing Carbon Monoxide at Local Intersections

For each of the eight intersections modeled, traffic-related CO contributions were added to the background conditions discussed above. Traffic CO contributions were estimated using the CAL3QHC dispersion model. As demonstrated in Table 5.7-2, none of the eight study intersections currently exceeds the state or federal one-hour CO concentration standard of 20.0 ppm. The intersection of First and Howard Streets, however, currently exceeds the state and federal eight-hour standard of 9.0 ppm.

5.7.2.2 Future Carbon Monoxide Concentrations at Study Intersections

The CAL3QHC micro-scale dispersion model was used to calculate CO concentrations for year 2020 No-Project Alternative and "project" conditions. The evaluation of project conditions assumed the Downtown Extension, with a "worst case"[14] development scenario (i.e., maximum development) that included the Full-Build Alternative and the Transbay Terminal West Loop Alternative.

Overall, CO concentrations are expected to be lower than existing conditions in the year 2020 due to stringent state and federal mandates for lowering vehicle emissions. Although traffic volumes would be higher in the future both with and without implementation of the proposed project, increases in traffic volumes are expected to be offset by increases in cleaner-running cars as a percentage of the entire vehicle fleet on the road.

Projected CO concentrations at the eight "worst case" intersections are shown in Table 5.7-3. As indicated, one-hour CO concentrations under project conditions would range from approximately 4.0 ppm to 5.7 ppm at these intersections. Project eight-hour CO concentrations are anticipated to range from approximately 2.8 ppm to 4.0 ppm. The state and federal one-hour standards would not be exceeded at any of the eight study intersections. Similarly, none of the eight intersections is anticipated to exceed the state or federal eight-hour standard. Incremental increases in CO concentrations at all intersections under both the one-hour and eight-hour scenario would be less than one part per million.

[14] Maximum development was considered "worst case" for this analysis, because it would generate incrementally more automobile trips than the Reduced Scope and Loop Ramp alternatives. Nevertheless, the number of automobile trips generated by any of the project alternatives is considered low. As stated in Section 5.19, the traffic analysis assumed a greater transit mode share than could be achieved in a location that does not have the transit access of the proposed Transbay Terminal Redevelopment Area.

Table 5.7-3: Future (2020) Weekday P.M. Peak Hour Carbon Monoxide Concentrations at "Worst Case" Intersections

Intersection	1-Hour Concentration (ppm)				8-HourConcentration (ppm)			
	No Project	With Project [1]	Change	Impact?	No Project	With Project [1]	Change	Impact?
First/Market	4.6	4.7	0.1	No	3.2	3.3	0.1	No
First/Mission	4.8	5.0	0.2	No	3.4	3.5	0.1	No
First/Howard	5.4	5.7	0.3	No	3.8	4.0	0.2	No
Beale/Howard	4.6	5.0	0.4	No	3.2	3.5	0.3	No
Second/Folsom	4.8	5.1	0.3	No	3.4	3.6	0.2	No
Second/Harrison	4.5	4.6	0.1	No	3.2	3.2	0.0	No
Fremont/Harrison	4.1	4.1	0.0	No	2.9	2.9	0.0	No
Main/Harrison	3.9	4.0	0.1	No	2.7	2.8	0.1	No

[1] "Project" includes the Caltrain Downtown Extension, as well as the Redevelopment and Transbay Terminal alternatives with the greatest development impact (the Full-Build and West Loop Alternatives)

Source**:** Terry A. Hayes Associates, LLC. September 2001.

5.7.3 Supplemental Air Quality Impact Analysis of the Permanent Bus Storage Area

In response to public comments on the Draft EIS/EIR, a supplemental air quality assessment was completed for the proposed permanent mid-day bus storage facility under the West Approach to the Bay Bridge between Second and Fourth Streets. The supplemental assessment evaluated the effect of the proposed relocation of the Transbay Terminal bus layover and storage area from the immediate terminal area to a new location between Second and Fourth Street and north of Stillman Street underneath the aerial structure of I-80. The assessment identified the change in year 2020 concentrations of three criteria pollutants that would typically have a direct localized effect on adjacent sensitive land uses, i.e. carbon monoxide, nitrogen dioxide and PM_{10}. Sensitive locations within approximately 500 feet of the relocated bus storage/layover area were evaluated.

The assessment was based on year 2020 diesel bus emission factors as set forth by the California Air Resources Board (CARB). These emission factors reflect the projected diesel bus fleet mix for the year 2020 and were adjusted to include bus models from the year 2008 until 2020 only, which reflects the anticipated fleet mix for the proposed project. CARB considers clean diesel technology when calculating its emission factors but does not assume that all buses running in the year 2020 will be clean diesel.

The air quality analysis incorporated meteorological data taken from the Arkansas Street air monitoring station, which is approximately one mile south of the proposed bus storage facility. Local wind patterns, as measured from the station, were taken into account in order to estimate pollution concentrations, including those associated with diesel buses. The analysis took into account the cumulative effect of various pollutant sources on the area. Included in the analysis

is the ambient background concentration as measured by the nearest air monitoring station as well as pollutant concentrations generated by street traffic and freeway traffic.

The proposed storage area is currently used for vehicular parking, and an additional vehicular parking structure is proposed to replace the existing parking (or a fraction thereof) lost as a result of the proposed project. The amount of vehicular parking would remain the same or decrease under the proposed Project scenario, and emissions from street traffic, which reflect traffic generated by the current parking lots, were included in the overall pollution concentration levels projected for future conditions. Thus, impacts from the proposed replacement parking structure were considered in the air analysis, and concentration levels due to the proposed parking lot would remain equal to or below the amount generated from existing parking.

The assessment assumed that buses would be running at the storage site for a few minutes each day. Specifically, when estimating pollutant concentration, it was assumed that the buses would be idling for three minutes and that they would be moving at 15 miles per hour on the dedicated ramps – a conservative estimate. It would take between six and 11 minutes for the buses to travel to the terminal from the proposed storage facility at this speed.

The analysis evaluated sensitive receptors within 500 feet of the proposed bus storage facility. These sensitive receptors include residences, parks, and schools. The analysis addressed air pollution concentrations (including PM_{10}) associated with buses, including pollutant emissions associated with diesel exhaust fumes, at the proposed bus storage facility.

For the sensitive receptor locations identified near the proposed off-site bus storage facility, air quality is heavily influenced by three primary sources: (1) vehicular traffic using the grid of surface arterials in the area (e.g., Harrison Street, Bryant Street, Brannan Street, etc.); (2) traffic volumes on the elevated segment of Interstate 80 that crosses the project area carrying between 218,000 to 232,000 vehicles daily; and (3) the volume of urban bus traffic servicing the Transbay Terminal.

The influence and added contribution of these mobile sources on localized pollutant concentration levels was calculated using the Industrial Source Complex Short Term Phase 3 (ISCST3) dispersion model. This model is used throughout California as well as other states to compute short term pollutant concentrations from multiple sources on specific locations. The United States Environmental Protection Agency (USEPA) recognizes ISCST3 as an accepted regulatory air model.

Table 5.7-4 illustrates year 2020 concentrations, along with their corresponding California Ambient Air Quality Standard (CAAQS), of criteria pollutants that would have a direct effect on adjacent land uses because of their localized dispersion characteristics. Estimates are given both for the bus storage and layover area remaining near its current location as well as for the relocated storage area. These estimated Year 2020 concentrations include the ambient background plus localized sources modeled in ISCST3 such as surface street traffic, freeway traffic and bus operations surrounding the Transbay Terminal area. Ambient background

concentrations were added to ensure that a worst-case scenario would be calculated. The ISCST3 model calculated year 2020 pollutant concentrations through the inclusion of several line and area sources of pollutant emissions. Line sources included emissions from local street traffic within 500 feet of the storage facilities, emissions from bus traffic along access ramps leading in and out of existing and future facilities, bus circulation within the new storage areas, and freeway traffic from the elevated freeway. Area sources included emissions from idling buses in the current and future bus storage areas.

Pollution rates were derived using San Francisco County EMFAC2002 emission factors for the year 2020. For vehicle emissions on local streets and on the freeway, peak hour traffic volumes were multiplied by emission factors for model years 1975 (the earliest year in the model) to 2020. Bus emissions were calculated based on information provided for both AC Transit and Golden Gate Transit that included bus model years, fuel type, and the number of buses in use during peak hours. Bus emission factors were calculated based on the assumption that all buses in use in the year 2020 would be model year 2008 or higher and would be diesel buses.

Urban diesel bus idling emission factors are not provided by EMFAC2002. School diesel bus idling emission factors, however, are calculated in EMFAC2002. The characteristics of school diesel buses most closely match those of urban diesel buses, and for purposes of this analysis, idling emission factors for diesel school buses were substituted for the missing urban diesel bus emission factors. By using these emission factors, a worst-case scenario is anticipated in that urban buses are expected to be technologically superior to school buses in limiting the amount of pollutant emissions, and school buses would most likely generate higher pollutant concentrations.

As shown on the table, the supplemental air quality analysis concluded that pollutant concentrations would not exceed the CAAQS, which are designated to protect public health with an adequate margin of safety, and thus, would not have an adverse impact at any sensitive receptor locations. Additional information can be found in the Supplemental Air Quality Analysis Report, which is available for review by appointment at the Planning Department.

An important design feature of the bus storage facilities is the addition of a sound wall along the south perimeter of the area to mitigate noise impacts on surrounding residents (see Section 5.8.6). The sound wall would also serve the dual purpose of changing the dispersion pattern and effectively elevating the release height of pollutant emissions from buses circulating and idling in the bus storage area. Thus, the emission release height would be equal to the height of the wall. The higher the release height, the lower the pollutant concentration would be at adjacent sensitive receptors.

Pollutant concentrations at all receptors are expected to remain below the applicable CAAQS even without the inclusion of the sound wall. Therefore, the sound wall will provide even further assurance that pollution levels would not adversely affect residents adjacent to the bus storage facilities.

Table 5.7-4: Estimated Year 2020 Concentrations With and Without Bus Layover Storage Relocation [b]

Sensitive Receptors		*CO (1 hr) ppm (CAAQS = 20)*		*CO (8-hr) ppm (CAAQS = 9)*		*NO_X (1-hr) ppm (CAAQS = 0.25)*		*PM_{10} (24-hr) ug/m3 (CAAQS = 50)*	
ID	*Type*	*w/o*	*with*	*w/o*	*with*	*w/o*	*with*	*w/o*	*with*
1	*Residential-2nd and Bryant Streets*	*2*	*2*	*2*	*2*	*0.14*	*0.20*	*31*	*30*
2	*Residential-Stillman St. Between 2nd & 3rd Sts.*	*2*	*2*	*2*	*2*	*0.14*	*0.15*	*31*	*31*
3	*Residential-Stillman St. Between 2nd & 3rd Sts.*	*2*	*2*	*2*	*2*	*0.14*	*0.14*	*31*	*30*
4	*Residential-3rd and Stillman Streets*	*2*	*2*	*2*	*2*	*0.13*	*0.15*	*30*	*30*
5	*Residential-3rd and Bryant Streets*	*2*	*2*	*2*	*2*	*0.11*	*0.12*	*29*	*29*
6	*Residential-Bryant St. Between 2nd and 3rd*	*2*	*2*	*2*	*2*	*0.11*	*0.11*	*29*	*29*
7	*Residential-Bryant St. Between 2nd & 3rd Sts.*	*2*	*2*	*2*	*2*	*0.11*	*0.11*	*28*	*28*
8	*Residential-Bryant St. Between 2nd & 3rd Sts.*	*2*	*2*	*2*	*2*	*0.11*	*0.12*	*29*	*29*
9	*Residential-Park Ave. Between 2nd & 3rd Sts.*	*2*	*2*	*2*	*2*	*0.11*	*0.11*	*28*	*28*
10	*Residential-Park Ave. Between 2nd & 3rd Sts.*	*2*	*2*	*2*	*2*	*0.10*	*0.11*	*28*	*28*
11	*Residential-Park Ave. Between 2nd & 3rd Sts.*	*2*	*2*	*2*	*2*	*0.10*	*0.11*	*28*	*28*
12	*Park*	*2*	*2*	*1*	*1*	*0.09*	*0.10*	*27*	*27*
13	*Residential-3rd St. Between Bryant and Brannan Streets*	*2*	*2*	*1*	*1*	*0.09*	*0.10*	*27*	*27*
14	*Residential-3rd and Harrison Streets*	*2*	*2*	*2*	*2*	*0.13*	*0.16*	*30*	*31*
15	*Residential 3rd and Harrison Streets*	*2*	*2*	*2*	*2*	*0.11*	*0.11*	*29*	*29*
16	*School*	*2*	*2*	*2*	*2*	*0.11*	*0.11*	*28*	*28*

/a/ Concentrations include ambient background concentrations added to the concentrations calculated by the ISCST3 model for each pollutant.

***Source**: Terry A Hayes Associates LLC*

The potential impact of pollutant trapping inside the storage area due to the sound wall and overhead freeway is regulated by the U.S. Occupational Safety and Health Administration's (OSHA) standards for air toxic exposure in the work place. OSHA has determined the interior threshold levels of CO, NOx, and PM10 air concentrations to be 50 ppm, 5 ppm, and 5000 µg/m3 respectively. These standards are well above the projected concentration levels of the pollutants inside the storage facility, as determined by the supplemental air quality impact analysis. Thus, no adverse air quality impact based on these standards would be anticipated. Should pollutant concentration levels exceed these limits, OSHA has established appropriate procedures for ventilating such pollutants to acceptable levels.

The criteria used to evaluate air quality impacts from the proposed project are the CAAQS. These outdoor air quality standards are adopted by the State's enforcement agency, the CARB, as provided for in the California Health and Safety Code section 39606. These standards set legal limits on outdoor air pollution and are designed to protect public health and welfare. Ambient air quality standards define clean air, and are established to protect even the most sensitive individuals. Typically, the outdoor CAAQS are more stringent and provide a wider margin of safety than indoor air quality standards promulgated by such agencies as OSHA.

An air quality standard defines the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. The standards are based on the CARB's on-going review of scientific studies on the health effects of individual air pollutants. As new scientific information on public health consequences becomes available the CAAQS are periodically revised. In light of new information and studies, CARB is responsible for determining whether CAAQS need to be revised to adequately protect human health, particularly sensitive population groups. For example, The Children's Environmental Health Protection Act (CEHPA, California Senate Bill 25, Escutia 1999) required the CARB and other state agencies to evaluate all ambient air quality standards by December 2000 to determine whether these standards adequately protect human health, particularly that of infants and children. The CEHPA also required staff to prioritize those standards found to be inadequate for full review and possible revision. The evaluation found that health effects may occur in infants, children, and other potentially susceptible groups exposed to pollutants at levels near several of the current standards, with PM10, ground-level ozone (O3) and nitrogen dioxide (NO2) receiving the highest priority for review and revision.

5.7.*4* Conformity Assessment

FTA cannot approve funding for project activities beyond preliminary engineering until it has reviewed the project in accordance with the Environmental Protection Agency (EPA) transportation air quality conformity regulations (40 CFR Part 93) and has found that the project conforms. This regulation, which became effective in December 1993, establishes criteria for project conformity that cover all possible situations.

The RTIP has been demonstrated by MTC to conform to the state air quality implementation plan (SIP) for the Bay Area Air Basin. The carbon monoxide modeling results presented in Table 5.7-3 demonstrate that the Terminal/Extension Project will neither cause nor contribute to any carbon monoxide violations in the year 2020. The conformity criteria that the Terminal/Extension Project must satisfy and the status of the project in meeting these criteria are as follows.

•§93.110 The conformity determination must be based on the latest planning assumptions.

Assumptions used in the transportation and traffic analyses for this project, upon which the microscale carbon monoxide and regional criteria pollutant analyses are based, are derived from the MTC's most recently adopted population, employment, travel, and congestion estimates. Travel forecasts are based on MTC's growth assumptions for the Year 2020.

•§93.111 The conformity determination must be based on the latest emission estimation model available.

All emissions estimates are based on the latest available version of the California Air Resources Board's model. Carbon monoxide modeling was conducted using the CAL3QHC model.

•§93.112 The Metropolitan Planning Organization must make the conformity determination according to the consultation procedures of this rule and the implementation plan revision required by §51.390.

The most current SIP is called the Revised 2001 Bay Area Ozone Attainment Plan, which was adopted by the MTC, ABAG, and BAAQMD in October 2001 and by ARB in November 2001. The EPA's approval of the Bay Area mobile source emissions budget was published in the Federal Register in February 2002 allowing MTC to make a conformity finding on the 2001 RTP. MTC's, FHWA's and FTA's conformity approval in March 2002 lifted the conformity lapse that had existed in the region since January 2002.[15] MTC's followed the consultation procedures in 40 CFR Part 93, as amended.

•§93.114 There must be a currently conforming transportation plan and currently conforming TIP at the time of project approval.

The current transportation plan and TIP are, respectively, the 2001 Regional Transportation Plan (RTP) and the *2003* Regional Transportation Improvement Program (RTIP). *The air quality conformity analysis for the 2001 RTP was approved by MTC in March 2002. The 2003 TIP was federally approved in February 2003. The proposed project is included in the 2003 TIP.*

[15] Under new FHWA/FTA guidance, circulation of this draft EIS/EIR would have been allowed, with or without a conformity lapse. However, FTA can make a finding of conformity in the Final EIS/EIR for this project only following the lifting of the conformity lapse.

•§93.115 The project must come from a conforming transportation plan and program.

The Transbay Terminal / Caltrain Downtown Extension / Redevelopment Project is included as one of the top funding priorities in the financially constrained portion (called "Track 1") of the Regional Transit Expansion Policy (RTEP).[16] The RTEP is the transit element of the 2001 Regional Transportation Plan (RTP). The 2001 RTP, including the RTEP, was adopted by the *MTC* in December 2001.

•§93.116 The FHWA/FTA project must not cause or contribute to any new localized carbon monoxide or PM_{10} violations or increase the frequency or severity of any existing carbon monoxide and PM_{10} violations in carbon monoxide and PM_{10} nonattainment and maintenance areas.

By its nature, the Terminal/Extension Project would result in changes in travel patterns and concentrations of motor vehicle traffic in the vicinity of the Transbay Terminal area, which would cause small increases in pollutant concentrations for these road segments, but no standards would be violated. At the same time, the proposed project would result in a decrease in regional vehicle trips and vehicle miles of travel, which would reduce the emission of criteria pollutants, when compared to the No-Project Alternative.

The microscale carbon monoxide analysis indicates that the project would neither cause nor contribute to new carbon monoxide violations during operation. The source of PM_{10} emissions typically associated with transportation is the effect of tires stirring up dust on roadways. PM_{10} is not associated with electric commuter rail transit operations. The project can be considered beneficial in terms of PM_{10}, in that it would remove vehicle trips from area roadways.

•§93.117 The FHWA/FTA project must comply with PM_{10} control measures in the applicable implementation plan.

The project would comply with all PM_{10} control measures in the most recent SIP document for the region.

•§93.118 The transportation plan and TIP must be consistent with the motor vehicle emissions budget(s) in the applicable implementation plan (or implementation submission).

The RTP and RTIP are consistent with the motor vehicle emissions budget in the applicable implementation plan, as indicated by the MTC's approval of the conformity analysis in December 2001.

[16] The Project is identified as the "Caltrain Downtown Extension/Rebuilt Transbay Terminal" in the RTEP and RTP.

No exceedences of state or federal AAQS are projected under either alternative in the future analysis year of 2020, and no mitigation is proposed for long-term air quality effects resulting from project operation.

5.8 NOISE AND VIBRATION

This section analyzes anticipated increases in noise and vibration resulting from the proposed project. Sources of noise and vibration considered include airborne noise from trains operating along Seventh and Townsend Streets south and west of the subway portal near Fifth Street, traffic noise from any increases in traffic volumes or changes in traffic patterns, storage yard noise, and ground-borne vibration from trains operating both above and below ground.

5.8.1 Sensitive Receptors

A visual survey of the project area was conducted to determine the location of residential land uses (including live/work units) that might be affected by changes in noise or vibration. Noise monitoring sites identified in Section 4.7 and shown in Figure 4.7-1 were selected to satisfy the conditions of being noise-sensitive receptors and being representative of other neighborhoods in the study area with similar noise characteristics. Residential land uses are generally considered most sensitive to changes in noise and vibration, except where research or manufacturing activities require vibration sensitive instrumentation or where background noise can pose a problem, such as in recording studios. Although multi-media companies are located within the study area, their operations are not uniquely sensitive to outside noise and vibration except where studio recordings are being prepared. Based on a visual survey of the study area, the closest recording studio is approximately 700 feet from the proposed Caltrain Downtown Extension alignments, and impact from rail noise or vibration is therefore extremely unlikely.

5.8.2 FTA Criteria for Noise and Vibration

The FTA noise impact criteria[17] are founded on well-documented research on community reaction to noise and are based on change in noise exposure using a sliding scale. The amount that the transit project is allowed to change the overall noise environment is reduced with increasing levels of existing noise. FTA's noise criteria consider the combination of existing noise exposure and project-specific increases in relation to three sensitive land use categories:

- Category 1: buildings or parks where quiet is an essential element of their purpose;
- Category 2: residences and buildings where people normally sleep; and
- Category 3: institutional land uses with primarily daytime and evening use (e.g., schools, libraries, churches).

[17] Transit Noise and Vibration Impact Assessment, Federal Transit Administration, 1995.

There are two levels of impact included in the FTA criteria: "severe" and "impact":

- **Severe**: Severe noise impacts are considered "significant" as this term is used in the National Environmental Policy Act (NEPA) and implementing regulations. Noise mitigation will normally be specified for severe impact areas unless there is no practical method of mitigating the noise.
- **Impact**: This range is sometimes referred to as moderate impact. In this range, other project-specific factors are considered to determine the magnitude of the impact and the need for mitigation. Other factors can include predicted increases over existing noise levels, types and numbers of noise-sensitive land uses affected, existing outdoor-indoor sound insulation, and the cost effectiveness of mitigating noise to more acceptable levels.

Noise impact criteria are summarized in Table 5.8-1. The first column shows the existing noise exposure, and the remaining columns show the additional noise exposure caused by the transit project. Future noise exposure would be the combination of the existing noise exposure and the additional noise exposure caused by the project.

Table 5.8-2 gives the information from Table 5.8-1 in terms of the allowable increase in cumulative noise exposure (noise from existing sources plus project noise) as a function of existing noise exposure. As the existing noise exposure increases, the amount that the transit project can increase the overall noise exposure before there is impact decreases.

Vibration criteria for three categories of sensitive receptors are summarized in Table 5.8-3. Ground-borne vibration from transit trains is characterized in terms of the root mean square (RMS) vibration velocity amplitude. A one second RMS time constant is assumed. This is in contrast to vibration from blasting and other construction procedures that have the potential of causing building damage. It is very rare that ground-borne vibration from any type of train operations will be high enough to cause any sort of building damage, even minor cosmetic damage. The only real concern is that the vibration will be intrusive to building occupants or interfere with vibration sensitive equipment.

The threshold of vibration perception for most humans is around 65 VdB, levels in the 70 to 75 VdB range are often noticeable but acceptable, and levels in excess of 80 VdB are often considered unacceptable. For urban transit systems with 10 to 20 trains per hour throughout the day, limits for acceptable levels of residential ground-borne vibration are usually between 70 and 75 VdB.

For human annoyance, there is some relationship between the number of events and the degree of annoyance caused by the vibration. More frequent vibration events, or events that last longer, will be more annoying to building occupants. To account for this effect, FTA's Guidance Manual includes an eight VdB higher impact threshold if there are fewer than 70 trains per day.

Because it is projected that as many as 132 trains per day would eventually use the proposed tunnel, the adjustment for infrequent events is not applicable.

Table 5.8-1: FTA Noise Impact Criteria

Existing Noise Exposure* L_{eq} or L_{dn}	Project Noise Exposure Impact Thresholds (dBA)			
	Category 1 or 2 Sites		Category 3 Sites	
	Impact	Severe Impact	Impact	Severe Impact
<43	Amb.+10	Amb.+15	Amb.+15	Amb.+20
43-44	52	58	57	63
45	52	58	57	63
46-47	53	59	58	64
48	53	59	58	64
49-50	54	59	59	64
51	54	60	59	65
52-53	55	60	60	65
54	55	61	60	66
55	56	61	61	66
56	56	62	61	67
57-58	57	62	62	67
59-60	58	63	63	68
61-62	59	64	64	69
63	60	65	65	70
64	61	65	66	70
65	61	66	66	71
66	62	67	67	72
67	63	67	68	72
68	63	68	68	73
69	64	69	69	74
70	65	69	70	74
71	66	70	71	75
72-73	66	71	71	76
74	66	72	71	77
75	66	73	71	78
76-77	66	74	71	79
>77	66	75	71	80

Notes: * L_{dn} is used for land uses where nighttime sensitivity is a factor; 1-hour L_{eq} is used for land use involving only daytime activities.

Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, 1995.

Table 5.8-2: Increase in Cumulative Noise Levels Allowed by FTA Criteria

Existing Noise Exposure* L_{eq} or L_{dn}	Impact Threshold for Increase in Cumulative Noise Exposure(dBA)			
	Category 1 and 2 Sites		Category 3 Sites	
	Impact	Severe Impact	Impact	Severe Impact
45	8	14	12	19
46	7	13	12	18
47	7	12	11	17
48	6	12	10	16
49	6	11	10	16
50	5	10	9	15
51	5	10	8	14
52	4	9	8	14
53	4	8	7	13
54	3	8	7	12
55	3	7	6	12
56	3	7	6	11
57	3	6	6	10
58	2	6	5	10
59	2	5	5	9
60	2	5	5	9
61	1.9	5	4	9
62	1.7	4	4	8
63	1.6	4	4	8
64	1.5	4	4	8
65	1.4	4	3	7
66	1.3	4	3	7
67	1.2	3	3	7
68	1.1	3	3	6
69	1.1	3	3	6
70	1.0	3	3	6
71	1.0	3	3	6
72	0.8	3	2	6
73	0.6	2	1.8	5
74	0.5	2	1.5	5
75	0.4	2	1.2	5

Notes:

* L_{dn} is used for land uses where nighttime sensitivity is a factor; 1-hour L_{eq} is used for land use involving only daytime activities.

Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, 1995.FTA Noise/Vibration Criteria, 2001.

Table 5.8-3: Ground-Borne Vibration and Noise Impact Criteria

Land Use Category	Ground-Borne Vib. Impact (VdB re 1 micro-inch/sec)		Ground-Borne Noise Impact (dB re 20 micro-Pascals)	
	Frequent [1] **Events**	**Infrequent** [2] **Events**	**Frequent** [1] **Events**	**Infrequent** [2] **Events**
Category 1: Buildings where low ambient vibration is essential for interior operations.	65 VdB [3]	65 VdB[3]	- [4]	- [4]
Category 2: Residences and buildings where people normally sleep.	72 VdB	80 VdB	35 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	83 VdB	40 dBA	48 dBA

Notes:
[1] Frequent Events" is defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.
[2] "Infrequent Events" is defined as fewer than 70 vibration events per day. This category includes most commuter rail systems.
[3] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.
[4] Vibration-sensitive equipment is not sensitive to ground-borne noise.

Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, 1995.

There are some buildings, such as concert halls, TV and recording studios, and theaters that can be very sensitive to vibration and noise but do not fit into any of the three categories shown in Table 5.8-3. Because of the sensitivity of these buildings, they usually warrant special attention during the environmental assessment of a transit project. Table 5.8-4 gives criteria for acceptable levels of ground-borne vibration and noise for various types of special buildings.

Table 5.8-4: Ground-Borne Vibration and Noise Impact Criteria for Special Buildings

Type of Building or Room	Ground-Borne Vibration Impact Levels (VdB re 1 micro-inch/sec)		Ground-Borne Noise Impact Levels (dB re 20 micro-Pascals)	
	Frequent [1] **Events**	**Infrequent** [2] **Events**	**Frequent** [1] **Events**	**Infrequent** [2] **Events**
Concert Halls	65 VdB	65 VdB	25 dBA	25 dBA
TV Studios	65 VdB	65 VdB	25 dBA	25 dBA
Recording Studios	65 VdB	65 VdB	25 dBA	25 dBA
Auditoriums	72 VdB	80 VdB	30 dBA	38 dBA
Theaters	72 VdB	80 VdB	35 dBA	43 dBA

Notes: [1] "Frequent Events" is defined as more than 70 vibration events/day. Most transit projects fall into this category.
[2] "Infrequent Events" is defined as fewer than 70 vibration events/day. This category includes most commuter rail systems.
[3] If the building will rarely be occupied when the trains are operating, there is no need to consider impact. As an example, consider a commuter rail line next to a concert hall. If no commuter trains will operate after 7 pm, it should be rare that the trains interfere with the use of the hall.

Source: Harris Miller Miller and Hanson, 2001

5.8.3 Train Noise

The Caltrain Downtown Extension is the only component of the proposed project that would result in train noise. For both the Second-to-Main and Second-to-Mission Alternative, the proposed rail line would be in a tunnel, except for a short section south of the intersection of Seventh Street and Townsend Street. This is the only track section where train operations have potential to create noise impact. The land use along this segment of the alignments is almost exclusively commercial and industrial. In a walking survey, the closest noise sensitive receptors were found to be live/work lofts on Townsend Street, more than 1,500 feet from the subway portal. There is no impact predicted at this building from the train noise.

5.8.4 Traffic Noise

5.8.4.1 Methodology

The traffic noise impact assessment was based on a comparison of the Transbay Terminal/ Caltrain Downtown Extension/Redevelopment Alternatives to the No-Project Alternative. A screening procedure was used to locate areas of potential noise impact where a more detailed assessment of traffic noise may be required. Areas were identified in which the projected increase in traffic volume (under the "worst case conditions" – i.e., Full Build Alternative) could cause a noticeable increase in noise exposure at residential land uses and other noise-sensitive receptors in the study area. It is generally assumed that a two to three dBA increase in noise exposure is required before residents consider the increase to be of any consequence. This translates to an increase in traffic volume of at least 60 percent before there is potential for noise impact. The screening procedure used was based on the logarithmic ratio of the project alternatives to the No-Project Alternative. The formula used was:

Approximate Change in Noise Exposure = 10 x log (No. of vehicles/No. of base vehicles).

All areas where the approximate increase in noise exposure exceeded one dBA were identified. The Full Build Alternative and No-Project traffic volumes were derived from the one-hour turning movements results for all the streets in the study area using the traffic studies performed by the San Francisco County Transportation Authority. This included numbers for afternoon and morning peak hours.

5.8.4.2 Results of Traffic Noise Analysis

The noise predicted at each of the street sections for the project alternatives was compared to the future No-Project Alternative. Results of the traffic noise analysis are summarized in Table 5.8-5. The table lists street sections and corresponding cross streets where there is at least a one dBA increase in either direction. The numbers for both directions are included to provide a complete picture along the segment being analyzed. The modeled number of vehicles for the

Full Build and No-Project Alternatives are also shown. The last column shows the decibel increase (or decrease, as the case may be) for the build Alternatives as compared to the No-Project Alternative. A traffic volume increase of 25 percent or greater is necessary for a one-decibel increase in noise exposure.

Table 5.8-5: Summary of Traffic Noise Analysis

Street	Dir.	From Street	To Street	TOTAL Vehicles		Approximate Change in Noise Level (dBA)
				No Project	Build	
Weekday PM Peak Hour						
1. Mission St.	NE	First St.	Fremont St.	639	817	1
	SW	Fremont St.	First St.	637	700	0
2. Howard St.	SW	Beale St.	Fremont St.	1461	1843	1
	NE	Fremont St.	Beale St.	350	390	0
3. Howard St.	SW	Main St.	Beale St.	830	1324	2
	NE	Beale St.	Main St.	410	455	0
4. Folsom St.	NE	First St.	Fremont St.	1063	1345	1
5. Folsom St.	NE	Fremont St.	Beale St.	1015	1272	1
6. Folsom St.	SW	Spear St.	Main St.	136	290	3
	NE	Main St.	Spear St.	780	878	1
7. Folsom St.	NE	Spear St.	The Embarcadero	967	1086	1
	SW	The Embarcadero	Spear St.	183	264	2
8. Harrison St.	NE	First St.	Fremont St.	84	130	2
	SW	Fremont St.	First St.	1431	1547	0
9. Beale St.	SE	Howard St.	Folsom St.	975	1314	1
10. Spear St.	SE	Howard St.	Folsom St.	563	813	2
11. Main St.	SE	Folsom St.	Harrison St.	195	252	1
	NW	Harrison St.	Folsom St.	334	456	1

Source: San Francisco County Transportation Authority, Harris Miller Miller & Hanson, Wilbur Smith Associates, 2001.

There are a total of eleven road segments where a noise exposure increase of one decibel or greater is projected for the build alternatives during the weekday PM peak hour. The areas with the greatest traffic increases and the potential for noise impacts are:

- Mission Street between First Street and Fremont Street. The land use in this area is almost exclusively commercial and office space. No noise impact from the increased traffic noise is projected.
- Howard Street between Fremont Street and Main Street. There are no noise-sensitive receptors in this area.
- Folsom Street between First Street and Beale Street. The land use in this area is primarily office space, industrial space, and parking, with some residential space near Folsom and Beale Streets. No noise impact from the increased traffic noise is projected.

- Folsom Street between Main Street and The Embarcadero. The land use in this area is mostly office space and parking. Between Main and Spear Streets, the hourly traffic volume in the southwest direction is projected to increase from 136 vehicles per hour to 290 vehicles per hour. Since traffic volume in the opposite direction is approximately 800 to 900 vehicles per hour, the volume increase in the southwest direction will not contribute significantly to noise exposure when compared to the volume in the northeast direction. Therefore, no noise impact from the increased traffic noise is projected.
- Harrison Street between First Street and Fremont Street. The hourly traffic volume in the northeast direction is projected to increase from 84 vehicles per hour to 130 vehicles per hour. Since traffic volume in the opposite direction is approximately 1,500 vehicles per hour for the No-Project Alternative, the volume increase in the northeast direction will not affect overall noise exposure and no impact is projected.
- Beale Street between Howard Street and Folsom Street. There are no noise-sensitive receptors in this area.
- Spear Street between Howard Street and Folsom Street. The land use in this area is mostly office space. No noise impact from the increased traffic noise is projected.
- Main Street between Folsom Street and Harrison Street. The land use in this area is mostly office space and parking. No noise impact from the increased traffic noise is projected.

In no case does the projected noise exposure increase exceed one decibel in both directions. In residential areas, the projected change in noise exposure does not exceed one decibel. In other office, industrial, commercial, and parking areas, the projected change in noise exposure does not exceed three decibels. The potential noise exposure increase for all other road segments is clearly below FTA impact thresholds.

5.8.5 Caltrain Storage Yard Noise

Normally storage yards and layover facilities can be a significant source of noise because much of the activity takes place during nighttime or early morning hours. Diesel locomotives are required to idle for a short amount of time before starting revenue service operations and are usually a source of annoyance near storage yards.

A live/work loft at 388 Townsend Street is currently the only residential area near the planned storage yard. A lot located to the southwest is expected to undergo residential development in the near future and was included in the noise assessment. Under existing conditions, noise at both the live/work loft on Townsend and the proposed new residential development is often dominated by Caltrain noise, trains entering or departing the station, or idling locomotives.

Projections are that the proposed project will result in lower noise levels at both noise sensitive receptors near the storage yard because most locomotives would be electric instead of the current diesel. This would virtually eliminate the noise from idling locomotives.

5.8.6 Bus Storage Facility Noise

Noise would also be generated by operations at the bus storage facilities proposed beneath the Bay Bridge approach (between Fourth and Third Streets, between Third and Second Streets, and immediately east of Second Street). Noise would occur as vehicles enter and exit these storage lots, and while engines warm up before starting revenue operations.

In response to public comment on the Draft EIS/EIR, a supplemental noise assessment was made of the proposed permanent off-site bus storage facility under the Western Approach to the Bay Bridge between Second and Fourth Streets. The assessment was conducted using bus source noise levels and noise projection formulas contained in the FTA Guidance Manual. Noise projections were made for noise sensitive receptors near the bus storage facility and compared with the appropriate impact criteria. Where noise impact is projected, mitigation measures are recommended.

Existing noise conditions were based on the nearest long-term noise measurement conducted as a part of the noise and vibration study for the EIS/EIR. Long-term (24-hour) noise measurements were made in July 1995 at a parking lot near the intersection of Brannan and Second Street. This measurement was used to characterize the ambient noise at sensitive receptors near the proposed bus storage facility.

Since the bus facility would be in use only during the morning and evening peak-hour periods, the noise assessment was based on the existing ambient hourly Leq for the hours of operation of the bus storage facility. Table 5.8-6 summarizes the measurement results for the time periods that the bus storage facility would be in use. The hourly Leqs shown in the table were used in the assessment of noise impact at sensitive receptors near the bus storage facility.

Table 5.8-6: Existing Noise Levels

Site #	*Location*	*Date*	*Time*	*Hourly Leq (dBA)*
1	*Parking Lot (Brannan & Second)*	*7/95*	*7:00am*	*64*
		7/95	*8:00am*	*68*
		7/95	*4:00pm*	*61*
		7/95	*5:00pm*	*61*
		7/95	*6:00pm*	*62*

The methodology used for the impact assessment follows that described in the detailed noise assessment section of the FTA Guidance Manual. Projections of Project noise levels from the bus storage facility were based on source noise levels contained in the FTA Guidance Manual and formulas for projecting noise from both bus idling and bus operations. The operations data, including information on the number of buses using the facility, bus speeds in the facility and on the ramp, and durations of bus idling in the facility during the afternoon is based on the terminal facility operations assumed as part of the Project. For purposes of analysis, it was assumed that approximately 104 buses (71 Golden Gate Transit buses and 33 AC Transit buses) would enter the proposed storage facility in the peak morning hour of 8:00 AM. In addition, a total of 119 buses (67 Golden Gate Transit buses and 52 AC Transit buses) would leave the proposed storage facility, and a total of 57 AC Transit buses would arrive at the proposed storage facility during the peak afternoon hour of 4:00 PM. Buses were assumed to be traveling at a speed of 15 mph on average and idling for approximately three minutes in the storage facility before leaving in the afternoon. In the morning, Golden Gate Transit buses would gain access the storage facility via Fourth Street at Perry and AC Transit buses would gain access to the facility via the ramp structure east of Second Street. In the afternoon, both the Golden Gate Transit and AC Transit buses would use the dedicated ramp when leaving the proposed storage facility.

The projected noise levels for the peak hour of activity (4:00 PM) at the closest noise-sensitive receptors adjacent to the storage facility are shown in Table 5.8-7. The results indicate that noise impacts are projected at residences to the north and south of the AC Transit storage facility.

Table 5.8-7: Bus Storage Facility Projected Noise Levels

Location	***Sound Level (Leq, dBA)***		***FTA Noise Impact Criteria (Leq, dBA)***		***Impact?***
	Existing	***Project***	***Impact***	***Severe***	
Residences North of AC Transit Facility at Perry and Third Street	*61*	*66*	*59*	*64*	***Severe***
Residences South of AC Transit Facility along Stillman Street	*61*	*62*	*59*	*64*	***Impact***
Residences South of the Golden Gate Transit Facility along Stillman Street	*61*	*59*	*59*	*64*	***Impact***
Residences South of AC Transit Facility along Stillman Street	*61*	*55*	*59*	*64*	*No*

Source: Harris Miller Miller, Hanson, 2003.

5.8.7 Noise Mitigation

Based on this analysis, there appears to be no need to mitigate train noise, traffic noise, or Caltrain storage yard noise.

Based on the results of the noise assessment, mitigation is recommended at three locations adjacent to the bus storage facility. The proposed noise mitigation locations are:

- *Residences North of the AC Transit Facility. Severe noise impact is projected for the residences to the north of the AC Transit facility at the corner of Perry and Third Street. Because of the configuration of the site, noise barriers are not an option for noise mitigation. Therefore, sound insulation will be installed to mitigate the noise impacts at this location. At a minimum, sound insulation will be applied to the façade facing the bus storage facility (the south façade).*

- *Residences South of the AC Transit Facility. Noise impact is projected for the residences to the south of the AC Transit facility along Stillman Street. For these residences, a combination of two barriers would mitigate the noise impacts. The first noise barrier will be approximately 10-12 feet high and run along the southern edge of the AC Transit storage facility. The second noise barrier will be approximately 5-6 feet high and will be located on the portion of the ramp at the southwestern corner of the AC Transit facility. To minimize the potential for reflections off the underside of the freeway, noise barriers will be treated with an absorptive material on the side facing the facility.*

- *Residences South of the Golden Gate Transit Facility. Noise impact is projected for the residences to the south of the Golden Gate Transit facility along Stillman Street. A noise barrier would mitigate the impacts. The barrier will be approximately 10-12 feet high and run along the southern and a portion of the eastern edge of the Golden Gate Transit storage facility. To minimize the potential for reflections off the underside of the freeway, the noise barriers will be treated with an absorptive material on the side facing the facility.*

Noise walls will be landscaped, although the actual design will be developed in cooperation with area residents. *The walls will be constructed prior to the development of the permanent bus facilities.*

5.8.8 Ground-Borne Vibration

5.8.8.1 Methodology

The ground-borne vibration and ground-borne noise projections are based on the force density curve developed from train noise tests described in Section 4.7, and based on transfer mobility data derived from vibration propagation tests described in Section 4.7. One factor that the vibration analysis has not been able to account for is that only electric locomotives would be used in the new tunnel, and these electric-powered locomotives will generate different vibration levels than the existing diesel locomotives.

Another factor that could not be accounted for is that, in many cases, the subway structure will be founded in bedrock and the building foundations will be in soil, sometimes supported by piles that have been driven down to the bedrock. The vibration path from the subway foundation though the bedrock, into the soil overburden and finally into the building foundation will tend to be a less efficient vibration path than what was measured at the vibration test sites. Vibration propagation tests were all performed at the surface, meaning that the testing force was in the soil layer rather than the rock layer.

The vibration projections are based on the most representative vibration propagation test. All of the ground-borne vibration projections include a five decibel "safety factor" to account for vibration amplification that will occasionally be caused when floor resonances are excited by the ground vibration, and to account for the normal fluctuation in ground-borne vibration caused by variations in ground conditions.

In most cases, the measurements were at closer distances than the subway would be. The additional distance was accounted for using the attenuation curves from the propagation tests at sites VP2 and VP3. These were the only sites in the corridor where there was sufficient open space to obtain information on vibration attenuation with distance.

5.8.8.2 Results of Ground-Borne Vibration Analysis

Vibration projections were developed for all buildings along Townsend and Second streets that appear to have residential occupants. Projections of ground-borne vibration and ground-borne noise were developed for all buildings along the proposed corridor that were identified as having residential uses. These include live/work lofts, apartment buildings, row houses, and a new hotel under construction that was under construction during the testing. The vibration projections are summarized in Table 5.8-6.

Buildings at which vibration impacts are projected without mitigation are listed below.

- **388 Townsend Street:** The projections indicate vibration levels will exceed the FTA 72 VdB impact threshold by three VdB, and the ground-borne noise will exceed the 35 dBA impact threshold by 10 dBA.

- **Clocktower Building:** Projected vibration levels exceed the FTA impact threshold by two VdB at the hallway site.

- **Second Street Apartment Building and new Marriott Courtyard:** The projections at these two buildings are based on the measurements at the Marine Firefighter's Union building. It was not possible to obtain permission to test at the apartment building and the Marriott Courtyard was still under construction. The projections at the test location closest to the front of the building exceed the vibration and noise impact thresholds by less than one VdB. No mitigation is indicated.

After mitigation, groundborne noise impact at 388 Townsend Street and vibration impact at the Clocktower Building would still exceed the impact threshold by one decibel. This level of impact would not constitute a substantial adverse change requiring further mitigation, in terms of FTA guidance. The next level of mitigation that would be effective would be to install floating slab under the Caltrain alignment trackage for 600 to 800 feet on either side of each building (at a construction cost of $1,000 per linear foot), which would add installed costs approaching one million dollars or even more per building. Such high mitigation costs would not be a prudent and reasonable expenditure to eliminate the last one decibel of impact at these two sites.[18]

There are *four* buildings at which projected vibration exceeds FTA impact thresholds. Only one location – 388 Townsend Street – is projected to exceed the FTA thresholds by more than a marginal amount.

[18] Per FTA guidelines, "to be feasible, the measure, or combination of measures, must be capable of providing a significant reduction of the vibration levels, at least 5 dB, while being reasonable from the standpoint of the added cost."

Table 5.8-8: Summary of Vibration Projections

Location	Horiz. Distance (feet)	Depth to Top of Rail (ft)	Train Speed (mph)	Without Mitigation (stiff DF fasteners)		With Mitigation (resilient track system)	
				Vib. (VdB)	Noise (dBA)	Vib. (VdB)	Noise (dBA)
Live/Work Condos, 388 Townsend Street (VP0, Hubbell and Seventh)							
Front rooms	70	32	35	**75**	**45**	72	**36**
San Francisco Residences on Bryant (VP2, Harrison Parking Lot Site)							
Building 1	120	74	35	61	28	--	--
Building 2	150	74	35	60	26	--	--
Building 3	170	74	35	59	25	--	--
Clock Tower Building (VP4)							
Hallway	30	82	35	**74**	**38**	**73**	33
Elevator	30	82	35	72	29	72	25
Room 132	30	82	35	70	25	70	21
Room 131	30	82	35	69	18	69	16
2nd Floor Stair	30	82	35	66	28	65	22
Second Street High Rise and new Marriott Courtyard (VP1, Marine Firefighter's Union)							
Inside, 16 ft	30	69	35	**73**	**35**	72	31
Inside, 37 ft	30	69	35	69	30	68	26
Inside, 58 ft	30	69	35	65	23	64	20

Notes:
All projections include a five-decibel safety factor to account for potential that there will be amplification from floor resonances and to allow for normal fluctuations caused by variations in ground conditions.

Numbers in bold indicate where projections exceed the FTA impact threshold for residential land uses. The applicable thresholds are 72 VdB for ground-borne vibration and 35 dBA for ground-borne noise.

Source: Harris Miller Miller and Hanson, 2001.

5.8.8.3 Vibration Mitigation

As shown in Table 5.8-6, the projected ground-borne vibration and ground-borne noise levels can be mitigated with the use of high-resilience track fasteners or a resiliently supported tie system. With this mitigation measure, the projected vibration levels would be reduced by zero to three VdB, and the projected noise levels would be reduced by four to nine dBA.[19]

[19] The variation is caused by the differences in the frequency spectrum of the vibration.

5.9 GEOLOGY AND SEISMICITY

This section focuses on the potential for geologic or seismicity features of the project area to affect the proposed project, or for the project to increase the potential exposure of people to hazard from geologic or seismic risks. In this context, the No-Project Alternative does not have potential impacts, but serves as a basis of comparison with the Project Extension Alternatives.

5.9.1 Geology

The primary geologic elements that could affect the proposed project include Bay Mud and artificial fill. Impacts associated with these elements can be mitigated through appropriate design and are discussed below.

For the Transbay Terminal and Redevelopment sites, fill soils possess adverse characteristics such as rubble, heterogeneity of composition and depth, and locally high permeability. Similar to Bay Mud, these characteristics could affect the stability of excavations and resultant ground deformations.

Bay Mud overlain by artificial fill would be encountered beneath the southwestern portions of the Caltrain Downtown Extension alternatives, and would be the primary factor potentially affecting non-seismic settlement of the storage yard, surface tracks, rail stations, and cut-and-cover subways.

Differential settlement of Bay Mud is expected to occur within the storage yard and along the surface tracks; however, the degree of settlement is expected to be relatively minor. Without appropriate foundation support, settlement of the rail facilities would occur due to the presence of the mud. With respect to cut-and-cover and station construction, the low strength and moderate deformation characteristics of Bay Mud could affect the stability of the face of the tunnel, the stability of excavations, the degree of ground deformation caused by the excavations, and the resulting response of adjacent structures.

Core drillings were taken in the corridor in 1996, and the rock was identified as “fractured rock.” A panel of experts[20] recommended that a “specialized tunneling” technique known as “spiling” be used in this rock. Because the proposed Caltrain Extension Alternatives Tunneling Option includes a larger tunnel (three tracks instead of two) than was proposed in 1996 and would pass under historic structures, a tunneling technique known as “stacked drift” is now proposed. This technique, which is designed to assure no tunnel collapse, is described in the Construction Section 5.20. Additional core drillings are proposed along the tunneling portion of the Caltrain Extension Alternatives to assure that this is the best tunneling approach.

[20] The panel included professor Thomas D. O’Rourke of Cornell University, Professor Tor L. Brekke of the University of California, Berkeley, and Mr. Norman A. Nadel, of Nadel Associates, Brewster, New York. The Panel was chaired by Demetrious Koutsoftas, URS, San Francisco, who has extensive experience with development and tunnel projects in the Project Area and a substantial knowledgeable regarding the Project area’s geology.

5.9.2 Seismicity

Seismically-induced ground shaking could damage a new Transbay Terminal, Caltrain Downtown Extension, or new development. The primary hazards related to seismically-induced ground motion are liquefaction and associated ground deformation (e.g., subsidence and lateral spreading). Portions of the Transbay Terminal/Caltrain Extension, and redevelopment sites are underlain by soft sediments that are susceptible to amplified ground motion.

Seismic shaking may cause subsidence and lateral spreading of the ground surface as a result of liquefaction of saturated fill soils. This type of ground deformation could damage or obstruct the surface train lines or limit the use of the new Transbay Terminal or Caltrain storage yard and surface tracks until track repairs are completed. Up to 50 feet of soil sediments consisting of fill, Bay Mud, and loose to medium dense marine sands would be encountered along the northernmost cut-and-cover Caltrain segment between Folsom Street and the new terminal. The invert elevation of the subway would be below the base of the fill layer, thereby mitigating liquefaction hazards associated with the fill. However, the subway may be subjected to amplified ground motion.

The potential liquefaction hazard associated with the marine sands is considered to be minor. Moreover, since the terminal would be supported on deep foundations, the effects of liquefaction and earthquake ground motion would be minimal.

Portions of the tunnel sections of the Caltrain Downtown Extension would intersect Bay Mud along Seventh and Townsend to Fifth Street. Bay Mud extends to depths of almost 100 feet below the ground surface along this portion of the alignment. Because Bay Mud is a primary contributing factor to ground motion amplification during earthquakes, this section of the alignment is considered to be the most susceptible to amplified ground motion of any portion of the proposed project alignment. As noted above, liquefaction of fill soils should not affect the cut-and-cover subway because its invert depth lies below the base of the fill layer.

The cut-and-cover subway would encounter Bay Mud only immediately east of the Fifth Street portal. Although fill soils along the tunnel alignment are susceptible to liquefaction, the proposed subway depth should place the subway invert below the bottom of fill deposits, except at the portal.

Due to the rock formations, the alignment between Fifth and Folsom Streets would be the least affected by ground motion and should not have major ground deformation related to earthquakes, regardless of the alignment alternative.

The geologic impacts and seismic concerns discussed above are similar to those associated with numerous high-rise buildings in downtown San Francisco, and with the BART and Muni tunnels. Mitigation of these impacts *will* be accomplished through the application of geotechnical and

structural engineering principles and conventional construction techniques, similar to the design and construction of high-rise buildings and tunnels throughout the downtown area.

Consistent with current practice along other portions of the Caltrain corridor that overlie soft soils, potential settlement of the storage yard and surface tracks is best mitigated by regular maintenance of the tracks. Track repairs *will* be performed as part of Caltrain's ongoing track maintenance program.

Potential settlement of the surface and underground stations *will* be mitigated through proper design and construction of pile supported foundations for both structures. Stability of the excavations for both stations and the resultant impacts on adjacent structures can be controlled within tolerable limits by proper design and implementation of the excavation shoring systems.

Mitigation of seismic impacts on surface tracks may be handled in two ways: reinforcement or stabilization of soils beneath the tracks, or implementation of contingency plans for rapid repair of damaged rails resulting from ground shaking. Reinforcing or stabilizing soils beneath the rails is very expensive and may not guarantee that the tracks would remain operable after a strong earthquake. Consistent with current practice along other portions of the Caltrain corridor that overlie soft soils, potential impacts due to seismically induced ground motion are best mitigated by provisions for rapid rail repair. At present, these provisions include emergency communications links and work stations to expedite mobilization of personnel and equipment to damaged areas.

Structural components of the project *will* be designed and constructed to resist strong ground motions approximating the maximum anticipated earthquake (0.5g). The cut-and-cover portions would require pile supports to minimize non-seismic settlement in soft compressible sediments (Bay Mud). These supports would also serve to minimize settlement and lateral displacement resulting from seismic shaking. The underground Caltrain station at Fourth and Townsend would require pile-supported foundations due to the presence of underlying soft sediments. These foundation designs combined with seismically resistant building structures should adequately mitigate seismic impacts to the stations.

5.10 WATER RESOURCES

No impacts to surface or groundwater resources would result from the No-Project Alternative.

Piles underlain by Bay Mud would be used to support the Transbay Terminal and portions of the Caltrain Extension Alternatives. Although the piles could create a conduit for contaminants in shallow groundwater to migrate to deeper groundwater zones (as discussed in Section 5.21.14), the geotechnical properties of Bay Mud suggest that a tight seal will develop around the piles, minimizing downward migration of contaminated groundwater.

Stormwater along the Caltrain Extension Alternatives will discharge to the City's combined storm/sanitary sewer system. During construction, sediment transported by stormwater would not affect surface water bodies in China Basin or San Francisco Bay. For further discussion on the effects to water resources during construction, see Section 5.21.11. No mitigation measures are required for impacts to water resources.

5.11 FLOODPLAIN

No portions of the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project area would encounter surface water bodies, including creeks or reservoirs. Also, according to the City and County of San Francisco Planning Department, no portions of the project area lie within recognized flood hazard zones with the exception of potential tsunami inundation. No flood hazard zones have been mapped by the Federal Emergency Management Agency (FEMA) in San Francisco. Mitigation measures are not required.

5.12 UTILITIES

As noted in Chapter 4, the Transbay Terminal/Caltrain Downtown Extension/Redevelopment area is served by the City and County of San Francisco combined storm drain, sanitary sewer system, water supply and fire suppression system. Numerous communications systems exist in the area. The Transbay Terminal and the redevelopment would connect to these utility systems consistent with utility provider requirements.

The Project includes the proposal to increase development in the proposed Redevelopment Area. Thus, the Project would increase the demand for and use of water and energy consumption, but not in excess of the amounts expected and provided for in the area. There would be no need for major expansion of power or water facilities due to the Project.

San Francisco consumers have recently experienced rising energy costs and uncertainties regarding the supply of electricity. The root causes of these conditions are under investigation and are the subject of much debate. Part of the problem is thought to be that the State does not generate sufficient energy to meet its demands and must import energy from outside sources. Another part of the problem may be the lack of cost controls as a result of deregulation. The California Energy Commission (CEC) is currently considering applications for the development of new power-generating facilities in San Francisco, the Bay Area, and elsewhere in the State. These facilities could supply additional energy to the power supply "grid" within the near future. These efforts, together with conservation, will be part of the statewide effort to achieve energy sufficiency. The Project would not be built and occupied until after 2008; therefore, additional generating facilities may have been completed by the time the Project components are utilizing electricity. The Project-generated demand for electricity would be negligible in the context of the overall demand within San Francisco and the State and would not in and of itself

require a major expansion of power facilities. Therefore the energy demand associated with the proposed Project would not result in a major, adverse environmental effect.

The cut-and-cover portion of the Caltrain Extension Alternatives would require the relocation of utilities or the utilities would be supported in place along the cut-and-cover segments on Townsend, Second, Mission, and Main streets. Utilities intercepted or blocked by cut-and-cover excavation would experience the greatest potential effects. Pressure lines crossing tunnels would either be relocated out of the excavation or supported in place during construction. Gravity sewer lines would have to be rerouted around tunnels or routed over/under by siphon and/or pumping. Large consolidation sewers are especially problematic. Rerouting of these sewers would require extensive planning and coordination with the San Francisco Department of Public Works during all phases of design and construction.

Utilities crossing the alignments *will* typically be supported in place from the excavation cross-bracing. Large utility crossings (36-inch and larger) may require specially designed supporting structures. Longitudinally running utilities *will* be permanently relocated outside the excavation area or temporarily supported along the side of the excavation, then permanently relocated over the subway during street restoration.

Substantially fewer utilities would be affected by the Tunneling Option, which would be constructed below the level of utilities. A summary of anticipated utility impacts for cut-and-cover segments along the Second-to-Main and Second-to-Mission Caltrain Alternatives is provided below for the Caltrain Extension Alternatives and options.

Utility modifications will need to be evaluated in more detail during final design. Careful and continuous coordination with utility providers *will* be initiated during preliminary engineering and *will* continue through final design and construction. Utilities *will* be avoided, relocated, and/or supported as necessary during construction activities to prevent damage to utility systems and to minimize disruption and degradation of utility service to local customers. Coordination efforts *will* focus on identifying potential conflicts, planning utility reroutes, and formulating strategies for overcoming problems that may arise.

5.12.1 Sewer and Storm Drains

Townsend Street from about 100 feet east of Fifth Street to Clarence Place (for both Caltrain Extension Alternatives) – a three foot by five foot brick sewer would be affected. Cross street sewers affected include a 6.5-foot circular sewer at Fourth Street and three by five-foot brick sewer at Luck, Ritch, and Third Streets.

Second Street from Brannan to Howard Streets (for the Cut-and-Cover Option) or from Folsom to Howard Streets (for the Tunneling Option) -- both Caltrain Extension Alternatives) – a three by five-foot brick sewer would be affected. Cross street sewers affected include three by five-foot brick sewer at Brannan, and a three by five-foot brick sewer at Bryant,

Folsom, and Howard streets (east side of Second), and Natoma street (east side of Second Street).

Main Street from Howard Street towards the Transbay Terminal (Second-to-Main Alternative only) – a four by six-foot concrete sewer would be affected. Cross street sewers affected include seven-foot circular concrete sewer at Howard Street (east side of Main), a three by five-foot brick sewer at Howard Street (west side of Main), and a three by five-foot brick sewer at Folsom Street (east and west of Main Street).

Mission Street from Beale to Main Streets (Second-to-Mission Alternative only) – a 3.5 by 5.25-foot concrete sewer would be affected. Cross street sewers affected include a four by six-foot concrete sewer at Main Street (south of Mission) and a three-foot force main at The Embarcadero (north and south Mission Street).

5.12.2 Communications

Relocation of Pacific Bell's existing conduit and manhole structures, particularly underneath Second Street, would, according to Pacific Bell, require construction of duplicate structures on different paths, placing new copper and fiber optic cable, and splicing the existing cable to the replacement cable and removal of the existing cables on the existing path. Pacific Bell notes that structure construction and the cable replacements would take many years to complete, provided that new paths could be found. Pacific Bell would require specific details and an in-depth study before commenting on the feasibility of the Terminal/Extension Project as it relates to their facilities.

5.13 ELECTROMAGNETIC FIELDS

Although short-term human health effects from exposure to electromagnetic fields (EMFs) are well established, such as effects on the central nervous system and heating of the body, the long-term effects from EMF exposures are not clear. Several reports have proposed a link between EMF exposures and such health problems as cancer, including childhood leukemia. However, the preponderance of authoritative scientific studies has found no firm evidence of long-term health risks from low-intensity EMF exposures. Despite the lack of scientific evidence of harm, the public continues to express concern, and health and regulatory agencies continue to study the matter.

5.13.1 Regulatory Setting

Neither the federal government nor the State of California has set standards for EMF exposures. The Federal Drug Administration, Federal Communications Commission, Department of Defense, and Environmental Projection Agency at various times have considered guidelines. The

California Department of Education has established a policy of "prudent avoidance" for the location of schools in the vicinity of high voltage power lines. Several states and other countries have standards for electrical field exposures. The International Radiation Protection Association has proposed limiting electric field exposure to five kV/m and magnetic field exposure to 2000 mG.

5.13.2 Impacts

EMF effects of the Transbay Terminal / Caltrain Downtown Extension / Redevelopment Area Project pertain mainly to the implementation of electrified passenger rail service and its attendant systems in the area between the current Caltrain terminal and the proposed new terminus at the site of the present Transbay Terminal. The extension of rail service would result in new sources of EMF generation and exposure to passengers and to individuals working on commuter rail systems or passing in the vicinity of such systems. The main sources of EMF generation include overhead train power distribution systems; power substations with connecting lines to the major utility lines; passenger facilities, with their various electrical systems for lighting, communications, utilities, fare machines, among other systems, and their proximity to power distribution networks; and electrically powered locomotives or commuter rail passenger vehicles.

EMF intensities associated with trains vary considerably. The greatest potential fields, and therefore potential for exposures, are for passengers within the electric rail vehicle. Stations would also be a location of EMF exposure to passengers and any station personnel. Train operator and attendants' exposure would also be greatest in the motorized vehicle. Other worker exposure would likely be greatest when working close to an activated overhead contact system and substations.

Strong fields that carry a greater possibility of health risks are not associated with these environments, however. The field strengths of electrified rail systems are low and below recommended exposure levels. Measurements of direct current (DC) magnetic fields at substations on the San Francisco Bay Area BART system, which receives alternating current (AC) power at 34.5 kV, 60 Hertz from two parallel transmission lines, found field strengths to be small where public exposure might occur and diminishing rapidly. At the substation fence perimeter, field strengths above background ranged from 0.3 to 13.0 mG and averaged four mG, a typical exposure level of household appliances. At approximately 14 feet from the fence line, magnetic field strength was at natural background levels, or around 400-500 mG (Summary of Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement, BART-San Francisco Airport Extension), BART/U.S. Department of Transportation; SamTrans, January 1995). On-board BART trains, which contain major propulsion equipment below floor level, field strengths are higher, with measurements ranging from 1,600 to 2,000 mG total, which is four to five times the natural background level.

For Caltrain, which would be electrified at 25kV, 60 Hz AC, EMF field strengths near substations, overhead power systems, and on-board passenger vehicles would likely be less, or at least no greater, than on the BART system. In studies sponsored by the Federal Railroad Administration, measurements of average magnetic fields for overhead electrically-powered rail vehicles ranged from 400 mG at head level to 1500 mG at floor level (Safety of High speed Guided Ground Transportation Systems, EMF Exposure Environments Summary Report, Federal Railroad Administration, 1993). The duration of exposures to EMFs for Caltrain passengers and individuals passing through or by commuter rail facilities would be relatively brief in comparison to their daily exposure from office equipment, household appliances, cell phones, and other electronic equipment.

Furthermore, because the rail extension itself would be almost entirely in tunnel, the potential for non-users and businesses/residences at ground level to experience EMF exposures would be minimal. At present, the evidence is that any increased health risks from EMF exposures attributable to the project would be very small.

The potential for EMI effects from the Terminal/Extension Project can be minimized by ensuring that all electronic equipment is operated with a good electrical ground and that proper shielding is provided for electronic system cords, cables, and peripherals. Installing specialized components, such as filter, capacitors and inductors, can also reduce EMI susceptibility of certain systems. No additional restrictions or protective measures for low-intensity EMF exposures attributable to the project would be warranted.

Because EMF intensities and exposures from Caltrain operations are below thresholds indicating potential health risks, no mitigation measures are proposed.

5.14 HISTORIC AND CULTURAL RESOURCES

The regulatory framework governing treatment of historic and cultural resources is detailed in Section 4.16. This EIS/EIR affords the State Historic Preservation Officer (SHPO) early notice, pursuant to California PRC 5024.5(a), of a project potentially affecting resources listed in, or eligible for, the California Register of Historic Resources. *A summary of effects to historic and cultural resources is* presented herein. *A* Finding of Effects report *was* prepared and submitted to the SHPO for concurrence.

There are no impacts to historic and cultural resources as a result of the No-Project Alternative. The remainder of this section focuses on impacts of the three components of the proposed project.

5.14.1 Archaeological Resources: Impacts

5.14.1.1 Prehistoric Archaeology

Although five prehistoric archaeological sites have been recorded within approximately one mile of the area of potential effects (APE), no known prehistoric archaeological sites are documented within the APE. Unidentified sites may exist, however, and could be affected by the implementation of any project alternative. Appropriate procedures for the treatment of such finds are identified in the mitigation section below.

5.14.1.2 Historic Archaeology

Nineteen known or potential historic-era archaeological sites have been identified within or immediately adjacent to the APE.

The entire APE is covered by buildings or pavement, as well as great depths of artificial fill, and it is not possible to determine the locations of archaeological sites that may be affected by construction without extensive fieldwork. An archaeological Research Design and Treatment Plan, as described in the mitigation section, will be prepared once detailed construction plans for the proposed project are approved. This plan will govern testing, evaluation, and assessment of impacts to any such resources, and describe appropriate treatment strategies.

Areas of high historic archaeological sensitivity include the whole Transbay Terminal Redevelopment Area, the Second-to-Main Alternative alignment, and the Second-to-Mission Alternative alignment – particularly those portions that are not within areas that have long been used as roadways. Portions of the alternative alignments that pass under existing/long-standing roadways – for example Second and Townsend Streets – are generally less sensitive than areas where development has been present for many years.

5.14.2 Archaeological Resources Mitigation

Mitigation measures for archaeological, *historic archaeological* and historic architectural resources *are* set forth in a Memorandum of Agreement (MOA)*, included as Appendix G to Volume I of this Final EIS/EIR. Signatory parties to the MOA will be FTA and SHPO. Invited concurring parties include the Transbay Joint Powers Authority (TJPA), the City and County of San Francisco, the Peninsula Corridor Joint Powers Board (JPB), and Caltrans. For mitigation measures related to historic architectural resources, please see Section 5.14.3.5.*

The MOA includes an Archaeological Research Design and Treatment Plan to avoid and mitigate potential impacts to archaeological resources. The plan provides for organizing the various phases of archaeological work – identification, evaluation, and data recovery – into a single pre-approved plan covering the treatment of all on-site archaeological properties, and help

to avoid lengthy interruptions of construction activities. The Plan covers any additional archaeological research investigation standards and procedures, field excavation strategies, monitoring, artifact handling and analysis procedures, treatment of human remains, and ownership and curation of materials. Requirements for final reporting of all field methods, results, and findings *are* also specified. Finally, the Plan ensures that all federal and State laws and regulations regarding the treatment of Native American cultural materials and Native American burials *will* be adhered to, including appropriate notification of the California Native American Heritage Commission and local Native American organizations regarding findings of Native American artifacts.[21]

The Plan *will* be developed with the coordination and concurrence of FTA, SHPO, and the City and County of San Francisco's Environmental Review Officer (ERO) in accordance with ACHP and the Secretary of the Interior's standards and guidelines (36 CFR 800.9 (c) (1)). The various phases of work *will* be performed under the supervision of professional archaeologists who meet or exceed the Secretary of the Interior's qualification standards.

Copies of the final reports on these archaeological investigations *will* be provided to the SHPO, the Historical Resources Information System, the Northwest Information Center of California Archaeological Inventory, the San Francisco Planning Department, and the San Francisco Public Library.

If human remains are encountered during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.88.

Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. TJPA or its consultants will carry out, in consultation with the Caltrain Joint Powers Board (JPB) and the City and County of San Francisco (CCSF), the following activities regarding mitigation of potential archaeological resource impacts.

TJPA or its consultants will carry out, in consultation with the JPB and City and County of San Francisco, the following activities regarding mitigation of potential archaeological resource impacts.

[21] Reference *will* be made to the Archaeological Research Design/Treatment Plan for the Embarcadero Freeway Replacement/Terminal Separator Structure Project, Holman & Associates, 1996, which covers a similar geographic area and deals with many of the same potential archaeological resources as the proposed project.

A. Research Design/Treatment plan development*. The TJPA will have a comprehensive Research Design/Treatment Plan for archeological resources prepared by a qualified consultant. The Research Design/Treatment Plan will be consistent with the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37) and take into account the ACHP publication, Treatment of Archaeological Properties: A Handbook (ACHP 1980), and SHPO guidelines.*

B. Research Design/Treatment Plan Specifics. *The Research Design/Treatment Plan will include, at a minimum:*

1. ***An Historical Context for the Area of Potential Effects for Archaeological Resources (APEAR).*** *The Historical Context will present prehistoric and historic-era overviews of the project area. The Historical Context should incorporate data developed in the Archaeological Research Design and Treatment Plan for SF-480 Terminal Separation Rebuild (Praetzellis and Praetzellis, 1993) and the San Francisco-Oakland Bay Bridge, West Approach Replacement: Archaeological Research Design and Treatment Plan (Ziesing, 2000) for the portions of the APEAR within the scope of these documents.*

2. ***A Research Context for the APEAR.*** *The Research Context will identify expected archeological property types and develop research themes, questions, and data needs. To the extent applicable to expected property types, the Research Context will incorporate the research framework developed in the Revised Historical Archaeology Research Design for the Central Freeway Replacement Project (Thad M. Van Bueren, Mary Praetzellis, Adrian Praetzellis, Frank Lortie, Brian Ramos, Meg Scantlebury and Judy D. Tordoff).*

3. ***Testing/Data Recovery Plan*** *that will specify, at minimum:*

   - *The properties or portion of properties where evaluation and/or data recovery are to be carried out;*
   - *The properties, if any, that will be affected by the Undertaking but for which no data recovery will be carried out;*
   - *The manner in which inadvertent discoveries will be treated;*
   - *The methods to be used for data recovery, with an explanation of their relevance to the research questions/themes;*
   - *The methods to be used in cataloguing, analysis, data management, and dissemination of data;*

- *The proposed disposition of recovered materials and records, including discard and deaccession;*
- *The manner in which any human remains and associated/unassociated funerary objects, including those of Native American or Native Hawaiian origin, will be treated;*
- *The security procedures to be undertaken to protect the archeological testing/data recovery site from vandalism, theft, or unintended damage;*
- *The final report summarizing, describing and interpreting the results of testing/data recovery;*
- *The measures to be undertaken to ensure curation of recovered data determined to have appropriate research potential.*
- *Research Design/Treatment Plan Review*

TJPA will submit the Research Design/Treatment Plan to all parties signing the MOA for a thirty (30) calendar day review following receipt of the Plan. If any party fails to submit their comments within thirty (30) days, TJPA may assume that party's concurrence with the Research Design/Treatment Plan. TJPA will take any review comments into account, revise the Research Design/Treatment Plan accordingly, and will notify any party whose comments were not incorporated into the Plan.

C. Notification. *TJPA will promptly notify the SHPO, FTA, and Caltrans, as appropriate, if any properties are found that meet the conditions for eligibility for inclusion in the NRHP.*

D. Report Standards and Dissemination. *TJPA will ensure that all reports from implementation of the Research Design/Treatment Plan meet contemporary professional standards and the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37). Copies of all final reports will be provided to the SHPO, the Northwest Information Center at Sonoma State University, the Federal Transit Administration, Caltrans, and the Environmental Review Officer of the CCSF.*

E. Confidentiality. *Historic properties covered by this Agreement are subject to the provisions of § 304 of the National Historic Preservation Act of 1966 and § 6254.10 of the California Government Code (Public Records Act), relating to the disclosure of archeological site information and, having so acknowledged, will ensure that all actions and documentation are consistent with § 304 of the National Historic Preservation Act of 1966 and § 6254.10 of the California Government Code.*

F. Annual Report. *TJPA will prepare an annual report describing the status of its efforts. The annual report will be prepared following the end of the each fiscal year (July 1 to June 30) until TJPA determines that the applicable mitigation measures regarding archaeology have been completed.*

5.14.3 Historic Architectural Resources: Impacts

Historic architectural resources identified within the project APE consist of individual buildings and structures, some of which are contributors to two districts that are eligible or appear to be eligible for the National Register of Historic Places (NRHP). These are the Rincon Point / South Beach Historic Warehouse-Industrial District and the Second and Howard Streets Historic District. Both NRHP districts have boundaries somewhat overlapping two local historic districts designated by the City of San Francisco, the South End Historic District, and the New Montgomery – Second Street Conservation District. *Properties listed on* or determined eligible for listing on the NRHP, either individually or as contributors to an historic district, are identified in Table 4.16-1. The NRHP and City of San Francisco historic districts are described in Sections 4.16.6.3 through 4.16.6.7.

Impacts to historical architectural resources are reported by major project component; impacts to *individual properties* are presented first, followed by impacts to *contributing elements* of the NRHP and local historic districts.

5.14.3.1 Impacts of Transbay Terminal Alternatives

Either Transbay Terminal alternative would require demolition and removal of the existing Transbay Terminal, a property that is listed on the National Register as a contributing element to the San Francisco-Oakland Bay Bridge. The bridge is a multi-component property that was listed on the NRHP on August 13, 2001. Both Transbay Terminal alternatives would also require demolition and removal of the existing Terminal Loop Ramp structures, which are also contributing elements of the Bay Bridge property. The demolition of these structures would constitute an adverse effect under Section 106 and under the California Environmental Quality Act (CEQA).

The San Francisco-Oakland Bay Bridge East Span Seismic Safety Project, currently under construction, will eliminate the East Span, one of the major elements included in the NRHP listing for the entire Bridge. After completion of both the Transbay Terminal/Caltrain Downtown Extension/ Redevelopment Project, and the East Span Seismic Project (a construction project already underway), two major elements of the current bridge – namely the West Span bridge structures and the Yerba Buena Tunnel – would remain. It is anticipated that these remaining structures and buildings would continue to be eligible for the NRHP.[22] *This is based upon the definition of "historic district" and "historic structure" presented in National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation (1990 and 2002). "A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development," and "the term 'structure' is used to distinguish from buildings those functional construction made*

22 Letter from Meta Bunse, JRP Consulting to David Mansen, Parsons, March 12, 2004.

usually for purposes other than creating human shelter." Certainly they are important for their technological and engineering achievements. If reevaluation of the bridge property indicates that it would be more appropriate for the remaining structures to be listed on the National Register as individual properties, it is anticipate that these remaining structures would continue to appear to be eligible and would merit individual listing. The MOA (Appendix G of this Final EIS/EIR) includes a provision (III.E) for the revaluation of the remaining bridge components following completion of the Project.

In accordance with California Public Resources Code Section 5027, the Transbay Terminal and terminal loop ramp, as NRHP-eligible structures that would be transferred from state (Caltrans) ownership to another public agency (the Transbay Joint Powers Authority) may not be demolished without the prior approval of the California Legislature. The California Legislature has considered the importance of proceeding with the Transbay Transit Terminal project and has granted a specific exemption to State Law prohibiting the demolition of historic structures with the following language: "the Legislature hereby approves demolition of the Transbay Terminal building at First and Mission Streets in the City and County of San Francisco, including its associated ramps, for construction of a new terminal at the same location, designed to serve Caltrain in addition to local, regional, and intercity bus lines, and designed to accommodate high-speed passenger rail service." (AB 812, 2003)

5.14.3.2 Impacts of Caltrain Downtown Extension Alternatives

Either Caltrain Downtown Extension alternative would result in the acquisition and demolition of buildings that *are individually eligible or that are contributing elements of* a district that is eligible for listing in the NRHP.

The Cut-and-Cover Option for either the Second-to-Main Alternative or the Second-to-Mission Alternative would result in the demolition of 13 historic buildings, 10 of which are contributors to the Rincon Point / South Beach Historic Warehouse-Industrial District, and three of which are contributors to the Second and Howard Streets Historic District. These demolitions would constitute *an adverse effect under Section 106 and under CEQA. The demolition of the three buildings in the Second and Howard Streets Historic District would also result in an adverse effect by isolating three other contributory buildings from the remainder of the district.*

A construction easement through the corner of the *parcel* occupied by a fourteenth *contributing* property of the Rincon Point/South Beach Historic Warehouse-Industrial District would also be required. The construction easement would be necessary to construct the Caltrain subway beneath the southeast corner of the building at 166-78 Townsend Street. The building would be underpinned during construction and maintained in place. There would be no adverse effect to this building from the construction easement.

The Tunneling Option for either the Second-to-Main or Second-to-Mission Alternative would substantially reduce the impacts to historic resources. This Option would result in the demolition of three historic buildings that *are contributing elements of* the Second and Howard Streets Historic District but would *not have an adverse effect on* the buildings within the Rincon Point / South Beach Historic District. The buildings that would be demolished under the Tunneling Option are the same three contributors to the Second and Howard Streets District that would be demolished under the Cut-and-Cover Option. The demolitions would constitute *an adverse effect under Section 106 and under CEQA. The demolition of these three buildings would also result in an adverse effect by isolating three other contributory buildings from the remainder of the district.*

A construction easement through the southeast corner of the *parcel* occupied by the building at 166-78 Townsend Street, which is a *contributing element* to the Rincon Point/South Beach Historic Warehouse-Industrial District, would also be required, *as for the Cut-And-Cover Option*. There would be no adverse effect to this building from the construction easement. The building would be underpinned during construction and maintained in place.

5.14.3.3 Redevelopment Components

Neither of the redevelopment component alternatives (Full Build or Reduced Scope) would result in an adverse effect to historic properties.

5.14.3.4 Affected Properties

Brief descriptions of the historic properties that would be affected by the project are provided in the following paragraphs and accompanying figures. *Individually listed NRHP properties* are described first, followed by the *districts and their contributing elements*. The effects on the NRHP and locally designated districts are then discussed. The NRHP and City of San Francisco historic districts are described in detail in Sections 4.16.6.3 through 4.16.6.7.



Transbay Terminal. The Transbay Terminal at 425 Mission Street occupies land extending from Mission Street on the north to Natoma Street on the south; the terminal building crosses Fremont Street on the east and First Street on the west. It was designed by Timothy Pfleuger, Arthur Brown, Jr., and John J. Donovan,

consulting architects. Built in 1939, the Transbay Terminal was the "functional successor to the Ferry Building. When electric trains began arriving over the Bay Bridge, use of the Ferry Building dropped to almost nothing overnight, and the Transbay Terminal took over as the primary gateway to the city." (Caltrans, 1983). *The Terminal is a contributing element of the San Francisco-Oakland Bay Bridge property, which was listed on the NRHP on August 13, 2001.* The present owner of the Transbay Terminal is Caltrans. Its current use is for commuter and inter- and intra-regional bus transportation.

Transbay Terminal Loop Ramp. The Transbay Terminal loop ramp structure constitutes two of the six approach spans that remain from the original SFOBB project. *The Terminal Loop ramp structures are contributing elements of the San Francisco-Oakland Bay Bridge property, which was listed on the NRHP on August 13, 2001.* Originally designed to carry trolley trains from the bridge to the terminal, the ramp's tracks were removed as electrified trains gave way to buses in the late 1950s. The terminal loop ramp currently serves bus traffic exclusively and is used for midday storage of transit buses.



San Francisco – Oakland Bay Bridge. The San Francisco – Oakland Bay Bridge (SFOBB) is an eight and one-half-mile-long series of connecting structures carrying two levels of traffic between San Francisco and Oakland. Opened to service in 1936, in its original design, the bridge upper level carried two-way auto traffic while the lower level carried truck and trolley traffic. Structurally, the bridge is distinctive in its use of a variety of bridge-building technologies, the length of its 1,400-foot cantilever channel span on the east (Oakland) side, and the length of the two 2,320-foot suuspension spans on the west (San Francisco) side. The outstanding engineering feature is the center pier between the two suspension spans of the western half of the bridge. The tunnel connection between the east and west spans on Yerba Buena Island was the first double-decked highway tunnel in the United States. Notable individuals connected wth the project were Charles H. Purcell, Chief Engineer; Charles E. Andrew, Bridge Engineer; Glenn B. Woodruff, Design Engineer; and T. L. Pfleuger, Arthur Brown, Jr., and John J. Donovan, consulting architects. *The San Francisco-Oakland Bay Bridge is a multi-component property that was listed on the NRHP on August 13, 2001.*

Rincon Point / South Beach Historic Warehouse-Industrial District. The Rincon Point / South Beach Historic Warehouse-Industrial District *appears to be eligible for the NRHP*. It was developed beginning in the 1850s and 1860s, when landfill efforts and warehouse construction changed the physical appearance of the "point" and "beach" forever. This district contains the

greatest concentration of *historic architectural* resources within the project vicinity. The district was identifed as appearing eligible for the NRHP in 1983, based on research completed by Caltrans historians for the I-280 Transfer Concept Project. That research found that the district appeared eligible under all four National Register criteria. About 60 buildings within the district have been identified as contributing to the district's significance. Approximately eight of these buildings date from before the 1906 San Francisco earthquake, with several from the mid-1800s.

The Rincon Point / South Beach Historic Warehouse Industrial District has also been designated locally significant and is eligible for listing in the California Register of Historic Places.

In 1985, the San Francisco Department of City Planning (DCP) proposed the "South End Historic District," and the City Planning Commission designated this district in February 1990 under Article 10, Historic Preservation. The South End Historic District had nearly identical boundaries and was nearly the same size as the Rincon Point District identified by Caltrans; it is described in detail in Section 4.16.6,7. The National Register status of *these resources*, whether recognized as part of the South End District or Rincon Point / South Beach District is the *same: they appear to be eligible for listing.* For purposes of CEQA, these properties are historic resources.

Second and Howard Streets Historic District. Ann Bloomfield prepared a National Register of Historic Places nomination for the Second and Howard Streets District in 1998. This small district consists of 19 contributing *elements* and three non-contributors (two heavily-altered buildings and a vacant lot) with addresses on Second, Howard, Natoma and New Montgomery Streets. The contributing buildings date from 1906 to 1912; the primary original uses of these buildings were wholesaling, light manufacturing, and printing. The area was built for services to the construction industry. The permit for the first building to be erected in the District was approved on July 5, 1906, just two and a half months following the 1906 earthquake and fire.

The Second and Howard Streets Historic District is partially surrounded by a locally recognized district known as the "New Montgomery – Second Street Conservation District." This district is described in detail in Section 4.16.6.5. The San Francisco Planning Commission uses the conservation district designation to recognize parts of the city that have substantial concentrations of "special architectural and aesthetic importance." For purposes of CEQA, these properties are historic resources.

The following are individually eligible properties, or are contributing elements of an historic district that would be adversely affected under one or both of the project options.

130 Townsend Street



A one-story warehouse of brick masonry construction, this property lies within the boundaries of the Rincon Point / South Beach Historic Warehouse - Industrial District and is a contributor to the district. The Caltrans 1983 survey dated this building ca. 1910, but information obtained for the 1996 survey from the San Francisco Architectural Heritage (SFAH) indicated that the building appears to have been built in 1895 or 1896 and was first occupied by Stevens, Arnold and Co., agents for Inglenook Vineyard of Napa County. By 1906, the property was owned by Gustave Niebaum of the Alaska Commercial Company. Under the name B. Arnhold Company, the original tenants remained until the 1920s.

136 Townsend Street



This two-story and clerestory industrial building was dated 1902 by the Caltrans 1983 survey, but information obtained from SFAH for the 1996 survey suggested that it was designed in 1913 by engineer R.V. Woods for L.A. Norris of the Clinton Fireproofing Company and was originally used for wire and iron storage. The building was twice its current width, but in 1922, the southern half was replaced with the more substantial structure at 144 Townsend Street for the same company. It lies within the Rincon Point / South Beach Historic Warehouse Industrial District, to which it is a contributing element.

144-46 Townsend Street



This three-story reinforced concrete warehouse with decorated façade was designed and built in 1922 by architect H.C. Bauman for the Clinton Construction Company (L.A. Norris, owner); it was originally used for storage of wholesale wire. This building is within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district.

148-154 Townsend Street



This building is within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district. A three-story, reinforced concrete warehouse in the Mediterranean style, it was designed by H.C. Bauman and Edward Jose in 1922 for the Winchester-Simmons Company, wholesale dealers in hardware, guns, and ammunition. By 1950, the building was occupied by Western Asbestos Company.

162-164 Townsend Street



This building was designed by H.C. Bauman for the L.A. Norris Company and was built by the Clinton Construction Company in 1919. By 1929, it was occupied by the Central Warehouse and Drayage Company. Work being done on the building during the 1996 survey included removal of the sign for West Coast Ship Chandlers at the front. This building is within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district.

166-168 Townsend Street



This distinctive building was dated 1910 by Caltrans in 1983, but information obtained from SFAH for the 1996 survey suggests that it was designed by Percy and Hamilton in 1888 for the California Electric Light Company, which may have been the first public electric power company in the state; it first generated electricity for the public in 1879.

On August 1, 1888, the company was awarded the contract for lighting outlying districts of San Francisco, and this building may have been built to address the need for extra capacity. By 1894, ownership was held by the Edison Light & Power Company and by 1901, it had passed to the San Francisco Gas and Electric Company, which made it their Arc Light Plant Station B. By December of 1905, this building was no longer in operation for electricity service, probably because a new plant was built across Townsend Street.

From 1908 to 1927, the building was used for hay and grain storage and as a feed mill (W.W. Robinson Co., 1908-1910 and Producers Hay Co., 1913-1927). The high stack at the rear of the building was removed in 1995, following damage in the 1989 Loma Prieta earthquake. This alteration would affect its potential for individual eligibility, but the rest of the large building remains, and it remains a contributor to the Rincon Point/South Beach Historic Warehouse District.



640 Second Street

Another Bauman design for L.A. Norris, this building lies within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district. It was built in 1925-26 and was first occupied by the United States Radiator Corporation.



650 Second Street

This building is within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district. A six-story reinforced concrete office and warehouse with a Spanish tiled parapet, this building was designed in 1922 by Baumann (sic) and Jose, architects for J. Sheldon Potter, capitalist. It was occupied by B.F. Goodrich Rubber Company until 1934, when it was altered inside for use as a bottling plant.

670-680 Second Street

This building was designed in 1913 by Leland S. Rosner, engineer, for Moore and Scott Iron Works as a castings, forging, machine shop, and boiler works. The company was an important ship builder during World War I under the name, Moore Shipbuilding & Dock Company. The building is within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district.



301-321 Brannan Street

This building was determined individually eligible for the NRHP by Caltrans in 1982. It also lies within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district. It was designed by architect Lewis P. Hobart and built in 1909 as the west coast headquarters of an eastern pipe and plumbing supply company, the Crane Company.



165-173 Second Street

This six-story, brick clad Electric Building was designed in 1906 by John Cotter Pelton. In 1910, it was being used by the Westinghouse Electric Company. It lies within the Second and Howard Historic District and is a contributing element to the district.



191-197 Second Street

This four-story, brick clad building was designed in 1907 by Ross & Burgen. In 1910, it was being used for wholesaling by the American Chicle Company, Badische Company (chemicals) and Jesse Moore Hunt Company (liquor wholesaling). It lies within the Second and Howard Historic District and is a contributing element to the district.



580-586 Howard Street



The first building to go up in the Second and Howard Historic District, this four-story, brick clad building was designed in 1906 by A. W. Smith and constructed by the R.W. Kinney Company for its own business, plumbing supplies. The building permit was approved July 5, 1906, only two and a half months after the 1906 earthquake and fire. This use may have sparked the whole District's specialization in construction services. In 1910 the building was still being used for plumbing supplies wholesaling as well as printing. It lies within the Second and Howard Historic District and is a contributing element to the district.

Project effects on these individually eligible properties and the districts to which they are contributing elements are summarized in Table 5.14-1 and described in the following paragraphs.

New Montgomery-Second Street Conservation District (City of San Francisco) and Second and Howard Streets District (National Register of Historic Places). Many of the buildings in this area are located within two overlapping districts of historic buildings, one designated by the City of San Francisco, the New Montgomery-Second Street Conservation District, hereafter "Conservation District," and the other certified by the Keeper of the National Register, the Second and Howard Streets District, hereafter "National Register District." Both proposed Caltrain Downtown Extension alternatives (Second-to-Main and Second-to-Mission) would involve demolition of three buildings located near the intersection of Second and Howard Streets in San Francisco. These impacts would occur under either the Cut-and-Cover Option or the Tunneling Option. *The Tunneling Option has been identified for this component of the Locally Preferred Alternative.*

The three buildings within the Historic Architectural APE for this project that would be demolished under the Caltrain Downtown Extension alternatives are listed below and shown in the following photographs:

580-*586* Howard Street,
APN: *3721-092 through 3721-106*

***165-173* Second Street,**
APN: 3721-025

191 Second Street,
APN: 3721-022



View of buildings at corner of Second and Howard

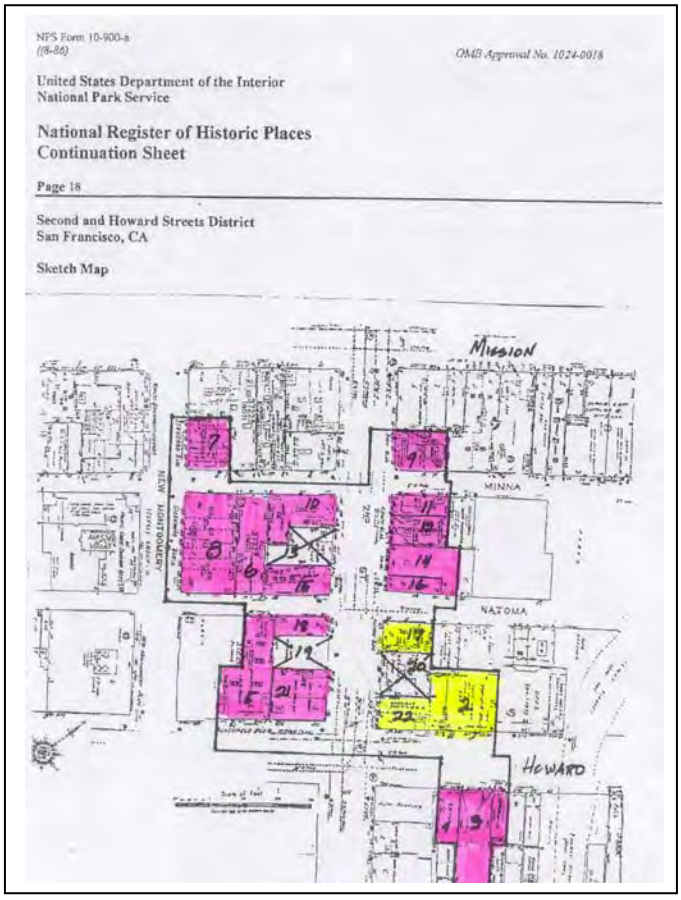
The two Second Street buildings are located within the Conservation District. All three buildings are contributing elements of the National Register District. The demolition of these buildings would be an adverse effect to each individual building and to the National Register District to which they contribute. Because the term "adverse effect" applies only to *properties* that are eligible for and/or that are listed on the National Register, there is technically no "adverse effect" to the Conservation District. As both buildings in the Conservation District would be historic resources according to CEQA Guidelines Section 15064; however, the demolition of these buildings would be a substantial adverse change under CEQA.



View of 171 Second Street
165-173 Second Street is brick building on the left.
191 Second Street is building on the right).

The Conservation District covers a much larger area than the National Register District, so the quantitative effect of demolishing these buildings is less for the Conservation District than for the National Register District. The Conservation District would lose two of approximately 53 parcels located within its boundaries, while the National Register District would lose three of its total of 19 contributing buildings. Affected buildings make up less than four percent of the Conservation District, while the demolished buildings make up over 15 percent of the National Register District. *Nonetheless*, loss of the two buildings would constitute a substantial adverse effect to the Conservation District under CEQA, given that the loss could have an effect on the overall integrity of the district.

Another expected adverse effect to the National Register District would be the possible alteration of the district boundaries. The loss of the three buildings of the National Register District would create a wide gap that would separate the south-easternmost contributors (577-79, 583-87, and 589-*591* Howard Street) from the rest of the district. None of these Howard Street properties is being proposed for demolition, but all would be adversely affected by the demolition of the *contributing elements* listed above because they would become isolated from the larger, more cohesive group. *The building at 163 Second Street would also experience an adverse effect due to the loss of a nearby contributing building. It does not appear that this loss would cause 163 Second Street to experience a change in status and it would continue to be eligible as a contributing element of the district.*[23]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OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

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Second and Howard Streets District
San Francisco, CA

Sketch Map

In summary, each of the individual buildings proposed for demolition in this part of the project would be adversely affected by either Caltrain Downtown Extension alternative. Although both districts would lose buildings that exist within their boundaries, only those that contribute to the National Register District would be "adversely affected." Furthermore, the National Register District itself would be adversely affected through the loss of three contributing



577-79, 583-87, and 589 Howard Street

23 *Letter from Meta Bunse, JRP Consulting to David Mansen, Parsons, March 12, 2004.*

buildings, and by the fact that *three* additional buildings (not scheduled for demolition) would become more isolated from the rest of the contributors. The cumulative effects are not expected to result in a de-listing of the National Register District, nor would it necessarily result in rescission of the Conservation District.

It is anticipated that the adverse effect of demolishing these three buildings would not require a change in the NRHP status of the district. According to the NRHP, "a district derives its importance from being a unified entity, even though it is often composed of a wide variety of resources," and explains further that the interrelationship of the contributing elements of the district "can convey a visual sense of the overall historic environment or be an arrangement of historically or functionally related properties."[24] *The district currently contains 19 contributing buildings, so the demolitions associated with the Project would leave 16 elements. Of the 16, three buildings (discussed below) would be isolated from the remaining district leaving 13 contributing buildings after implementation of the Project. These 13 buildings are expected to retain the strong visual linkage that helps to define the buildings as a district. It is anticipated that the portion of the district formed by the 13 contributing elements that would remain after completion of the Undertaking would retain this important linkage and together would continue to be eligible as a historic district.*[25] *The MOA (Appendix G of this Final EIS/EIR) includes a provision (IV.D) for the revaluation of the District following completion of the Project.*

Three contributing elements of the Second and Howard Streets District would be adversely affected by demolition of nearby contributing buildings thus impairing their linkage with the remaining contributing elements of the district. These buildings are: 589-591 Howard Street, San Francisco (HPSR Map Reference #28); 579 Howard Street, San Francisco (outside of APE); and 583-587 Howard Street, San Francisco (outside of APE). It appears that the demolition of nearby contributing elements discussed above would impair the linkage between these three buildings on Howard Street and the remainder of the district. The reevaluation of these properties after completion of the Project would determine whether or not they should be removed from the district listing and whether or not they are individually eligible for the National Register.

Both districts would retain numerous contributing buildings and each would still display the elements that define the character and nature of each district. It is important to note, however, that the piecemeal demolition of additional contributing *elements* would have a cumulative adverse effect on the National Register District. Additional demolitions could lead to de-listing of the district, especially if the district had already suffered previous losses of contributing buildings. Demolition of the two buildings within the boundaries of the Conservation District, on the other hand, must be approved via the processes set forth in Article 11 of the City of San Francisco Planning Code.

24 NPS, NRHP, *National Register Bulletin 15*, 5.

25 *Letter from Meta Bunse, JRP Consulting, to David Mansen, Parsons, March 12, 2004.*

The South End Historic District (City of San Francisco) and the Rincon Point/South Beach Historic Warehouse-Industrial District (Eligible for National Register of Historic Places). Both Caltrain Downtown Extension alternatives (Second-to-Main and Second-to-Mission) would involve demolition of ten buildings located near the intersection of Second and Townsend Streets, if the Cut-and-Cover Option is selected. Under the Tunneling Option, *which has been identified for the Caltrain Downtown Extension component of the Locally Preferred Alternative,* these impacts would not occur. Many buildings in this area are located within two overlapping districts of historic buildings, one designated by the City of San Francisco, the South End Historic District, hereafter "Historic District," and the other a National Register eligible district called the Rincon Point/South Beach Historic Warehouse-Industrial District, hereafter "National Register District."[26]

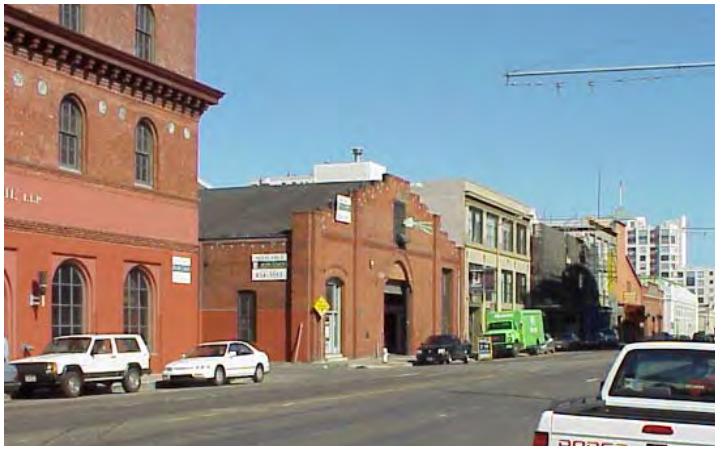
The ten buildings within the Historic Architectural APE for this project that would be demolished under the cut-and-cover alternative are listed below and shown in the photographs that follow:

Address		APN
162-164	Townsend Street	*3788-081*
148-154	Townsend Street	3788-010
144-146	Townsend Street	3788-009A
136	Townsend Street	3788-009
130	Townsend Street	3788-008
670-680	Second Street	3788-043 & 044
650	Second Street	3788-049 *through 3788-073*
640	Second Street	3788-002
634	Second Street	3788-038
301	Brannan Street	3788-037

The demolition of these buildings *would* cause adverse effects to each individual building. The *contributing elements* listed above *are located* within the boundaries for both the National Register District and the *locally-designated* Historic District. The demolition of these buildings would be an adverse effect to the National Register District to which they contribute. Because the term "adverse effect" applies only to *properties* that are eligible for and/or that are listed on the National Register, there is technically no "adverse effect" to the local Historic District designated by the City of San Francisco. As these buildings are *contributing* to and in the Historic District, they are historic resources according to CEQA Guidelines 15064.5 nonetheless, and demolition of these buildings would be a substantial adverse change under CEQA.

[26] This district has been fully documented and appears to be eligible for the National Register. Although it is not yet listed on the National Register, it has been submitted to the Office of Historic Preservation and is considered eligible for the National Register for the purposes of Section 106 review.

The quantitative effect of demolishing these buildings is roughly equivalent for the two districts because the Historic District would lose ten of the approximately 60 buildings within its boundaries, while the National Register District would lose ten of its total of 60 contributing buildings. (While these counts are similar, the boundaries of the two districts are not identical.) Affected buildings represent about one sixth of the buildings within each district.



View looking east on Townsend toward intersection with Second Street.

Another expected adverse effect to the National Register District would be the possible alteration of the district boundaries. The loss of the ten buildings of the National Register District would be a substantial adverse effect to two streetscapes within the district: one on the northwest side of the 100 block of Townsend and the other on the southwest side of the 600 block of Second Street. The loss of these ten buildings would create a gap that would break up the continuity of the center of the district in a city block that includes a high percentage of contributing buildings. The National Register District currently contains three blocks of streetscapes with contributing buildings lining both sides of the street. If these buildings were removed, only the 500 block of Second Street would retain buildings along both sides.



View looking north on Second Street from intersection of Townsend and Second.

Building at left is 698 Second Street. It would not be demolished, although the buildings to the north up to Brannan Street would be demolished under the cut-and-cover option.

The demolition of the two rows of buildings would also have an adverse effect on 698 Second Street, an important contributor to the National Register District. This building was built in 1910 as San Francisco Fire Department Pumping Station Number One and it was separately listed on the National Register of Historic Places in 1982. While this building is outside the APE for this project, and not proposed for demolition, it would be adversely affected by the demolition of buildings on either side of its corner location. An additional portion of the National Register

District would be largely separated from the rest of the district by the proposed demolitions. The contributing buildings along Third Street and those buildings on Townsend and Brannan Streets that are near Third Street would be isolated from the larger, more cohesive group. The loss of the ten buildings at the center of the district would substantially impair its visual continuity and the district's ability to impart a sense of time and place. The City's Historic District boundary may also need to be changed to reflect the loss of the same ten buildings on Townsend and Second Streets.

In summary, each of the ten individual buildings proposed for demolition in this part of the project would be adversely affected by the Cut-and-Cover Option under either Caltrain Downtown Extension alternative. Although both districts would lose buildings that exist within their boundaries, only those that contribute to the National Register District would be "adversely affected." The National Register District would not only be adversely affected through the loss of contributing buildings, it would also have the result that entire rows of adjacent contributors that form two sides of important streetscapes within the district would be demolished. Additionally, a contributor to the district that is already listed on the National Register (698 Second Street) would be adversely affected through its isolation from its existing historic streetscape. These cumulative effects may result in a de-listing of the National Register District. It would also have serious implications in terms of the integrity of the Historic District for the same reason. *Because the Tunneling Option has been identified for the Caltrain Downtown Extension component of the Locally Preferred Alternative (LPA), these effects of the Cut-and-Cover Alternative would not occur under the LPA.*.

Table 5.14.1 lists the affected properties with the assessor's parcel number, NRHP status, and type of impact for each. The table also groups the properties according to their respective district.

Table 5.14-1: Summary of Project Effects on Listed or Eligible Properties in APE

Address/ Assessors Parcel Number	**NRHP Status**	**Contributing *Element of***	**City Status**	**Const. Date**	**Type of Impact**
Properties Affected by Either Transbay Terminal Alternative					
425 Mission Street (Transbay Terminal) / 3719-003,3720-001,3721-006	*1*	S.F-Oakland Bay Bridge		*1936*	Demolition
Bay Bridge Approach / *#34-116F*	*1*	S.F-Oakland Bay Bridge		*1936*	Demolition
Bay Bridge Approach / *#34-118L*	*1*	S.F-Oakland Bay Bridge		*1936*	Demolition
Bay Bridge Approach / #34-118R	*1*	S.F-Oakland Bay Bridge		*1936*	Demolition
Terminal Loop Ramps / #34-119Y	*1*	S.F-Oakland Bay Bridge		*1936*	Demolition
Harrison Street Overcrossing / #34-120Y	*1*	S.F-Oakland Bay Bridge		*1936*	Demolition

Table 5.14-1: Summary of Project Effects on Listed or Eligible Properties in APE

Address/ Assessors Parcel Number	NRHP Status	Contributing *Element of*	City Status	Const. Date	Type of Impact
Properties Affected by Either Caltrain Downtown Extension Alternative Either Construction Option (Cut-and-Cover and Tunneling Options)[27]					
589-591 Howard Street / 3736-098	*1D*	Second & Howard District & New Montgomery/ Second Street	Article 11 Category V	*1906*	*Adverse effect to linkage with district*
163 Second Street / 3721-048	*1D*			*1907*	*Adverse effect due to loss of nearby contributing building*
165-173 Second Street / 3721-025	1D			1906	Demolition
191 Second Street / 3721-022	1D			1907	Demolition
580-586 Howard Street / *3721-092 through 3721-106*	1D	Second and Howard District		1906	Demolition
166-78 Townsend Street / 3788-012	*3D*	*Rincon Point/South Beach District & South End District.*		*1910 [1] 1888[2]*	*Construction easement; no demolition; no adverse effect*
Properties Affected by Either Caltrain Downtown Extension Alternative Cut-and-Cover Option Only					
640 Second Street / 3788-002	*2S2*	Rincon Point/South Beach District & South End District.	Article 10 Contributing	*1926*	Demolition
650 Second Street / 3788-049 *through 3788-073*	*2S2*			1922	Demolition
670-680 Second Street / 3788-043, 3788-044	*2S2 (670), 3D (680)*			1913	Demolition
301-321 Brannan Street / 3788-037	3D			1909	Demolition
130 Townsend Street / 3788-008	3D		Article 10 Contributing Altered	1910 [1] 1895-6 [2]	Demolition
136 Townsend Street / 3788-009	3D		Article 10 Contributing	1902 [1] 1913 [2]	Demolition
144-46 Townsend Street / 3788-009A	3D			1922	Demolition
148-54 Townsend Street / 3788-010	3D			1922	Demolition
162-164 Townsend Street / 3788-*081*	3D			1919	Demolition

Notes: National Register Status Codes are as follows:
1 Listed on the NRHP
2S1 Determined eligible for listing by the Keeper of the Register
2S2 Determined eligible for listing by consensus of the SHPO and a federal agency.
1D Listed on National Register as a contributor to a district or multi-resource property
2D2 Determined eligible as a contributor by consensus determination
3D Appears eligible as a contributor to a fully documented district
[1] Caltrans, 1983, [2] Corbett and Bradley, 1996 **Source:** JRP Historical Consulting, Parsons Transportation Group, 2001.

[27] *The buildings at 577-79 Howard Street (built in 1907, parcel 3736-100) and 583-87 Howard Street (built in 1912, parcel 3736-099), which are outside the APE but are contributing elements to the National Register District, would also experience a substantial adverse change to their linkage with the remainder of the district.*

5.14.3.5 Potential Mitigation Measures for Historic Architectural Resources

Mitigation measures *are* set forth in a Memorandum of Agreement (MOA – Appendix G of Volume I in this Final EIS/EIR). *Signatory parties to the MOA will be FTA and SHPO. Invited concurring parties include the Transbay Joint Powers Authority (TJPA), the City and County of San Francisco, the Peninsula Corridor Joint Powers Board (JPB), the San Francisco Redevelopment Agency, and Caltrans.* They include measures as discussed below.

- ***Documentation.*** Because it is unlikely that relocation of historic *properties* will be feasible, recordation *will occur* to ensure a permanent record of the properties' present appearance and context. Under this mitigation, *prior to the start of any work that would have an adverse effect on historic properties, TJPA will consult with the California SHPO, to ensure that the Transbay Transit Terminal has been adequately recorded by past efforts. Collectively, these past studies, which include California Department of Transportation's (Department's) past recordation of a series of remodeling and seismic retrofit projects that have occurred since 1993, may adequately document the building, making Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation unnecessary. In addition, TJPA, assisted by Department, will seek to obtain the original drawings of the Transbay Transit Terminal by the architect Timothy Pflueger. If the drawings cannot be copied and included in the documentation, then TJPA will consult with SHPO regarding recordation level and specifications for completing additional documentation. When the SHPO finds the documentation to be adequate, then TJPA will compile this documentation into a comprehensive record. All documentation will be submitted to SHPO and Department Headquarters Library with a xerographic copy to the Department District 4 Office. TJPA will contact the following repositories to inquire if they would like to receive a xerographic copy of the documentation: History Center at the San Francisco Public Library, San Francisco Architectural Heritage, the Oakland History Room of the Oakland Public Library, the Oakland Museum of California, and the Western Railway Museum. TJPA will ensure that these records are accepted by SHPO prior to demolition of the Transbay Transit Terminal.*

  ***Permanent* Interpretive Display.** *TJPA will direct the design and engineering team for the Undertaking to integrate into the design of the new terminal a dedicated space for a permanent interpretive exhibit. The interpretive exhibit will include at a minimum, but is not necessarily limited to: plaques or markers, a mural or other depiction of the historic terminal, and Key System, or other interpretive material.*

  TJPA will consult with Department regarding the availability of historical documentary materials and the potential use of salvaged items from the existing Transbay Transit Terminal for the creation of the permanent interpretive display of the history of the

original Transbay Transit Terminal building and its association with the San Francisco-Oakland Bay Bridge and the potential salvaged items from the existing Terminal.

Department will assist TJPA in planning the scope and content of the proposed interpretive exhibit. In addition, TJPA will also invite the Oakland Heritage Alliance, the San Francisco Architectural Heritage, the California State Railroad Museum, and the Western Railway Museum to participate. TJPA, while retaining responsibility for the development of the exhibit, will consider, jointly with Department, the participating invitees' recommendations when finalizing the exhibit design. TJPA will produce, install, and maintain the exhibit.

TJPA will also consult with the City of Oakland about its interest in having a similar interpretive exhibit in the East Bay. If agreement is reached prior to completion of final design of the Terminal, TJPA will provide and deliver exhibit materials to a venue provided by the City of Oakland.

Museum Exhibit. *TJPA will consult with Department and the Oakland Museum about contributing to Department's exhibit at the Oakland Museum relating to the history and engineering of the major historic state bridges of the San Francisco Bay Area. TJPA will propose contributions to such an exhibit that may include an interpretive video including the history of the Transbay Transit Terminal and the Key System. Components to such an exhibit may include photographs, drawings, videotape, models, oral histories, and salvaged components from the terminal. In addition, TJPA will assist the Museum by contributing to the cost of preparing and presenting the exhibit, interpretive video, as well as the costs of an exhibit catalog or related museum publication in conjunction with the exhibit, in a manner and to the extent agreed upon by TJPA, Department, and the Oakland Museum of California if consultation results in agreement between TJPA and Oakland Museum prior to demolition of the existing Transbay Transit Terminal. TJPA has established a maximum budget of $50,000.00 for the Oakland Museum of California exhibit and the interpretive video.*

Opportunities for Salvage. *TJPA, in consultation with Department, will identify elements of the existing Transbay Transit Terminal that are suitable for salvage and interpretive use in the exhibit in the new Terminal or in museums. Within two years of signing of this agreement, TJPA will offer these items to San Francisco Architectural Heritage, the California State Railroad Museum, Sacramento, the Western Railway Museum, the Oakland Museum, and any other interested parties. Acceptance of items by interested parties must be completed at least 90 days prior to demolition of the Transbay Transit Terminal. TJPA will remove the items selected in a manner that minimizes damage and will deliver them with legal title to the recipient. Items not accepted for salvage or interpretive use will receive no further consideration under this agreement.*

The above measures are set forth in the MOA, *Appendix G of this Final EIS/EIR.*

5.14.4 Consultation and Coordination

The Finding of Effect was transmitted to SHPO on August 29, 2003. SHPO concurred in the findings of effect presented herein on November 25, 2003; copies of their letters are provided in Appendix D. This environmental document presents measures designed to address impacts on archaeological and historic resources, as set forth in this section and in the MOA, Appendix G, Volume I of this Final EIS/EIR.

5.15 HAZARDOUS MATERIALS

This section focuses on the risk of exposure to or releases of hazardous materials from *the* project. Impacts of hazardous materials sites related to construction of the Transbay Terminal, the Caltrain Extension, and the *R*edevelopment *P*lan *A*lternatives are discussed in Section 5.21.14.

Production and/or handling of new hazardous materials are not anticipated under the Transbay Terminal or Redevelopment Plan Alternatives. Hazardous materials handling for Caltrain operations is discussed below.

Impacts from Hazardous Materials Used in Train Operations. The proposed storage yard options would contain a fueling facility to provide diesel to non-electric locomotives served by the Fourth and Townsend Yard (e.g., trains that may come across the Dumbarton Bridge or from Monterey). Additionally, cleaning solvents associated with the routine maintenance operations would also be present on the site. This facility would involve services similar to those at the current Caltrain yard and, therefore, potential impacts would be similar to those under the No-Project Alternative.

The fueling facility would be constructed and operated to comply with local, state and Federal regulations regarding handling and storage of hazardous materials. Diesel fuel pumps would be equipped with emergency shut-off valves and, in compliance with U.S. EPA requirements, fuel USTs would be equipped with leak detection and monitoring systems. Any aboveground storage tanks would employ the use of secondary containment systems. These safeguards would limit the amount of diesel fuel that could potentially be released from a storage system, provide early detection in the event the storage tank should leak, and provide secondary containment to prevent the material from contaminating soil and/or groundwater. Cleaning solvents would be stored in 55-gallon drums, or other appropriate containers, within a bermed area to provide secondary containment. Paved surfaces within the fueling facility and the solvent storage area would be sloped to a sump where any spilled liquids could be recovered for proper disposal.

Handling and storage of fuels and solvents will follow California OSHA and local standards for fire protection and prevention. These measures include appropriate storage of flammable liquids and prohibition of open flames within 50 feet of flammable storage areas. Additionally, a Hazardous Materials Management/Business Plan would have to be filed with the CCSF Department of Public Health in addition to the handling and storage procedures described above. This is essentially the permit for the storage of these materials at the site.

5.16 VISUAL AND AESTHETICS

Visual changes attributable to the construction of a new Transbay Terminal, Caltrain Downtown Extension and implementation of the Redevelopment Area are described in this section, with resulting changes to views currently enjoyed by residents and other users of the area.

5.16.1 NO-PROJECT ALTERNATIVE

Under the No-Project Alternative, there would be no visual/aesthetic changes to the project area. The Transbay Terminal would remain in its current location and low-cost capital improvements would be made to the building. These improvements would most likely focus on the operational aspects of the Terminal, and it is unlikely that the Terminal's aesthetic condition would be markedly improved. The Terminal would continue to obstruct southerly views from the north of the district, especially from Mission and Market Street. The existing elevated ramps to the Terminal would continue to loop through the area in their current position and would be retrofitted. The Caltrain rail service would terminate at the existing Fourth and Townsend station, and no tunnel would be constructed downtown.

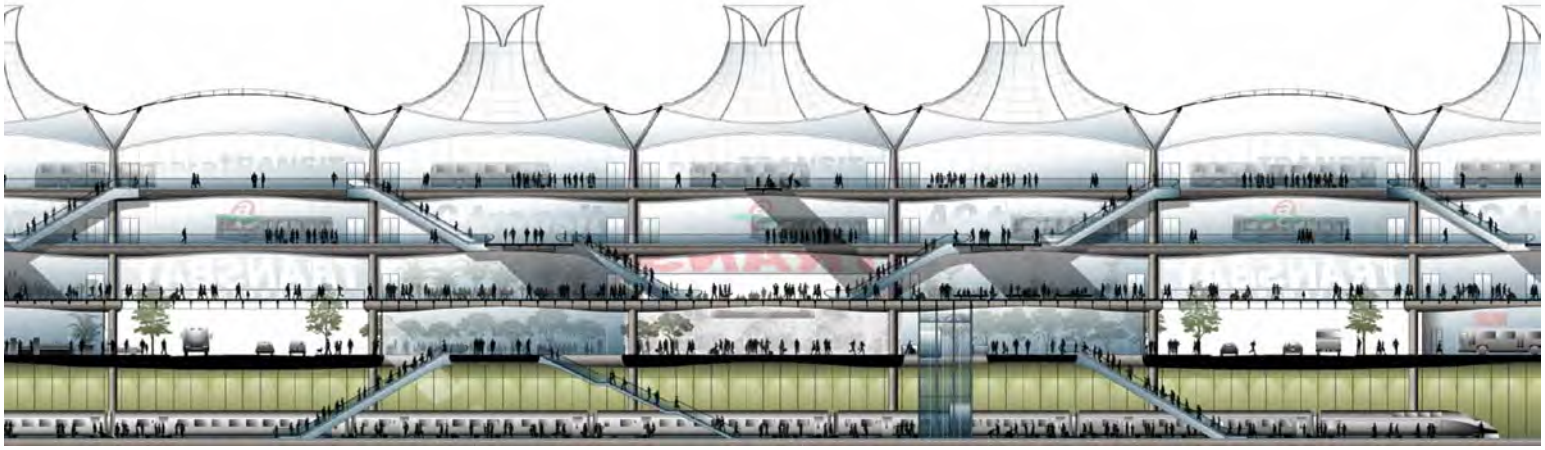
5.16.2 TRANSBAY TERMINAL

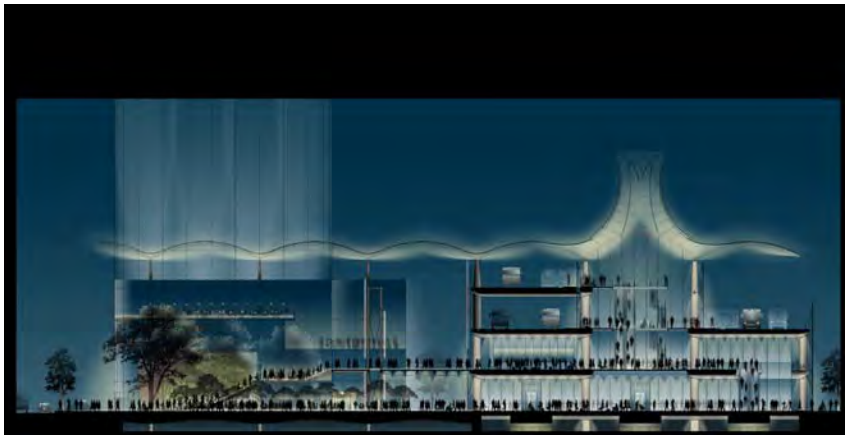
The new Transbay Terminal would be constructed on the site of the existing Terminal at First and Mission Streets. A current concept for the new Terminal would be about 109 feet tall to its roofline, with ten cone-shaped roof elements that would reach up to 156 feet above the street level. Under the Loop Ramp Alternative, the new Terminal would be about one story shorter.

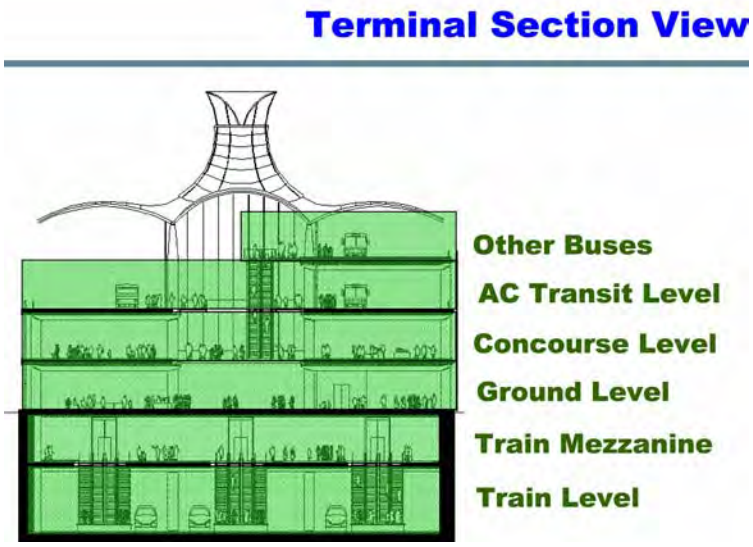
The Terminal itself would generally occupy the same building footprint as the existing Terminal structure, *but approximately 150 feet to the west.* The Terminal would span parts of the First *and* Fremont street blocks, for a maximum length of 1,300 linear feet. The building's horizontal orientation would contrast with the surrounding high-rise development, especially along its east (e.g., 100 Mission Street) and west sides (e.g. 199 Fremont Street).

The design of the proposed Transbay Terminal building would be contemporary and could become a point of visual interest in the Transbay Redevelopment Area. The current concept for design of the new Terminal is shown in Figure 5.16-1.

Figure 5.16-1: Current Design Concept for Transbay Terminal Building







The structure would be constructed out of glass and other transparent elements, with the intent of allowing natural light to penetrate the inside of the Terminal building. Due to the transparent nature of the proposed building, views of the built environment outside the new Terminal structure may be possible from within. The use of transparent building materials and the cone-shaped roof elements, along with gently curved roof-overhangs, would contribute to the visual identity of the area. A proposed plaza and landscaped pedestrian areas surrounding the Transbay Terminal to the east would visually enhance the pedestrian environment.

Under the West Ramp and Loop Ramp Alternatives, ramps leading in and out of the Terminal and to and from the Bay Bridge would be either stacked or split. *Figure 5.16-2 provides a visual simulation of the stacked ramps associated with the West Ramp Alternative.* The ramp spans would be supported by columns and abutments and contain a constant cross-section throughout to give the appearance of a relatively thin structure through strong thin edge lines and imposed shadow.



Figure 5.16-2: Visual Simulation of Stacked Ramps at Howard Street (West Ramp Alternative)

The proposed ramps would occupy considerably less area than the existing ramps, and would be split, breaking up the mass of the ramps and allowing views between the two new ramp sections. Although the new decks would be approximately 30 feet tall, they would be less visually intrusive due to their uniform appearance and minimal supporting structures.

The southern and eastern portions of the existing ramp network would be demolished under the West Ramp Alternative, eventually opening up the eastward and southward views outside of the Transbay Redevelopment Area. Removing the eastern section of the ramps would open up eastward views along Howard Street toward the Bay and the East Bay Hills. Views toward Rincon Hill, currently obstructed by the southern loop of the existing ramp network, would be opened up along Beale, Fremont, and First Streets. This segment of the ramp network would not interrupt northern views from Rincon Hill into the Transbay Redevelopment Area.

Under the Loop Ramp Alternative, such new views would not be possible, because the ramp network would be retrofitted and retained as it currently exists.

5.16.3 CALTRAIN DOWNTOWN EXTENSION

Visual/aesthetic changes would occur with either of the Caltrain Downtown Extension alternatives. A fenced and open trench with concrete retaining walls dropping to some 30 feet in depth would be constructed south of Townsend Street and to the west of Fifth Street along the northern edge of the current Fourth and Townsend Yard. The alignment would enter a tunnel portal near Fifth Street and continue below grade to the Transbay Terminal.

Construction of the cut-and-cover tunnel for the Caltrain Extension between Fifth Street and the Transbay Terminal would entail the acquisition and demolition of all existing buildings under which the alternative alignments would pass. Following construction of the underground extension, however, it is anticipated that new buildings would be constructed as vacant sites become available for resale. It is currently assumed that the new buildings would be similar or larger and higher than the buildings that are demolished on the sites. Other aesthetic effects would occur due to construction activities, and would be temporary in nature.

The buildings in the Second and Townsend Street area would not be demolished but would rather remain under the Tunneling Option for either Caltrain Extension Alternative. For more information regarding potential construction-related effects, please see Section 5.21, Construction Impacts.

5.16.4 REDEVELOPMENT

Development planned under the proposed redevelopment component would remove existing features with low visual value, including surface parking lots, and in some cases, deteriorated buildings, potentially enhancing the aesthetic quality of the Transbay Redevelopment Area. The overall character of the Transbay Redevelopment Area would continue to experience a change that has been underway for several years, from a predominately low-rise area dominated by early 20th century industrial buildings and interspersed with surface parking lots, to a more dense urban area of newer mid- and high-rise buildings over 80-foot high bases, interspersed with designated areas of open space.

Visual changes would occur under both redevelopment alternatives, in that the proposed redevelopment area would experience a relatively large increase in the number and size of buildings. Both the Full-Build and Reduced Scope alternatives would change the zoning on the former freeway parcels to allow for development at greater heights— up to a maximum building height of 400 feet on the north side of Folsom Street— 200 feet higher than is now permitted. An alternative urban design concept would produce taller and more slender structures with smaller floor plates. These structures could be on average up to fifty feet higher if developed to their full building-envelope potential. From an urban design standpoint, structures constructed under this alternative, while taller, would be less bulky and therefore would do more to preserve views.

Even under the No-Project Alternative, the former freeway parcels would ultimately be expected to be developed, as rezoning from the current P (Public) use district could occur over time. The height limit might not be raised, however, so any development could occur at a lesser scale.

With the West Ramp or Loop Ramp Alternative, development within and near the Terminal loop ramps would be expected to serve to some extent as a transition between the several office towers near Market Street and along Main and Spear Streets, and in the area south of Howard Street. This area now includes newer and renovated low- and mid-rise office, multi-media, and residential structures. Toward Market Street, there would likely be an increase in taller office towers, which would make up most of the office space anticipated in the Transbay Redevelopment Area, but whose visual effect would be lessened by the fact that these buildings would merely extend the downtown core and would not appear as a cluster of taller buildings in a low-rise environment.

Changes would be noticeable in the area inside the existing Transbay Terminal loop ramps. In particular, if a new Terminal is built at the First and Mission site under the West Ramp Alternative, the existing ramps east of Beale Street would be demolished, encouraging the replacement of many older, smaller structures with new development at a larger scale. Changes are anticipated within the existing terminal ramps, as evidenced by recently completed

construction at Fremont and Howard Street (199 Fremont Street) and the Foundry Square project development at and near First and Howard Streets, currently under construction.

Of the existing visually cohesive areas within the study area, the least change would come to the New Montgomery-Second Street Conservation District and South Park, where building height limits would remain lower than in surrounding areas and zoning controls that encourage preservation and reuse of existing buildings would remain in place. Development of surrounding blocks (north of the Bay Bridge approach), however, would be expected to bring closer the backdrop of office towers that has until recently been limited to the north end of the district.

Folsom Street would undergo the most visible change in the district. The northern side of Folsom Street, from First to Spear Streets, would be developed with a mix of uses in structures that could range in height from 350 to 400 feet.

Figure 5.16-3 shows a *visual simulation* of the possible redevelopment in this area. Provisions along Folsom Street would include widening the sidewalk and the creation of public open space along the street frontage to enhance the street-level pedestrian environment. This scenario is not an actual proposal but a representation of the types and levels of development that have been conceived for this portion of the Redevelopment Area. *The simulation is of development as envisioned in the Draft Transbay Redevelopment Project Area Design for Development Vision (D4D), released by the San Francisco Redevelopment Agency in August 2003.* Actual development proposals would be defined and evaluated and undergo individual environmental review, *if necessary,* in subsequent steps of the redevelopment process *to make sure that the individual projects were covered.*

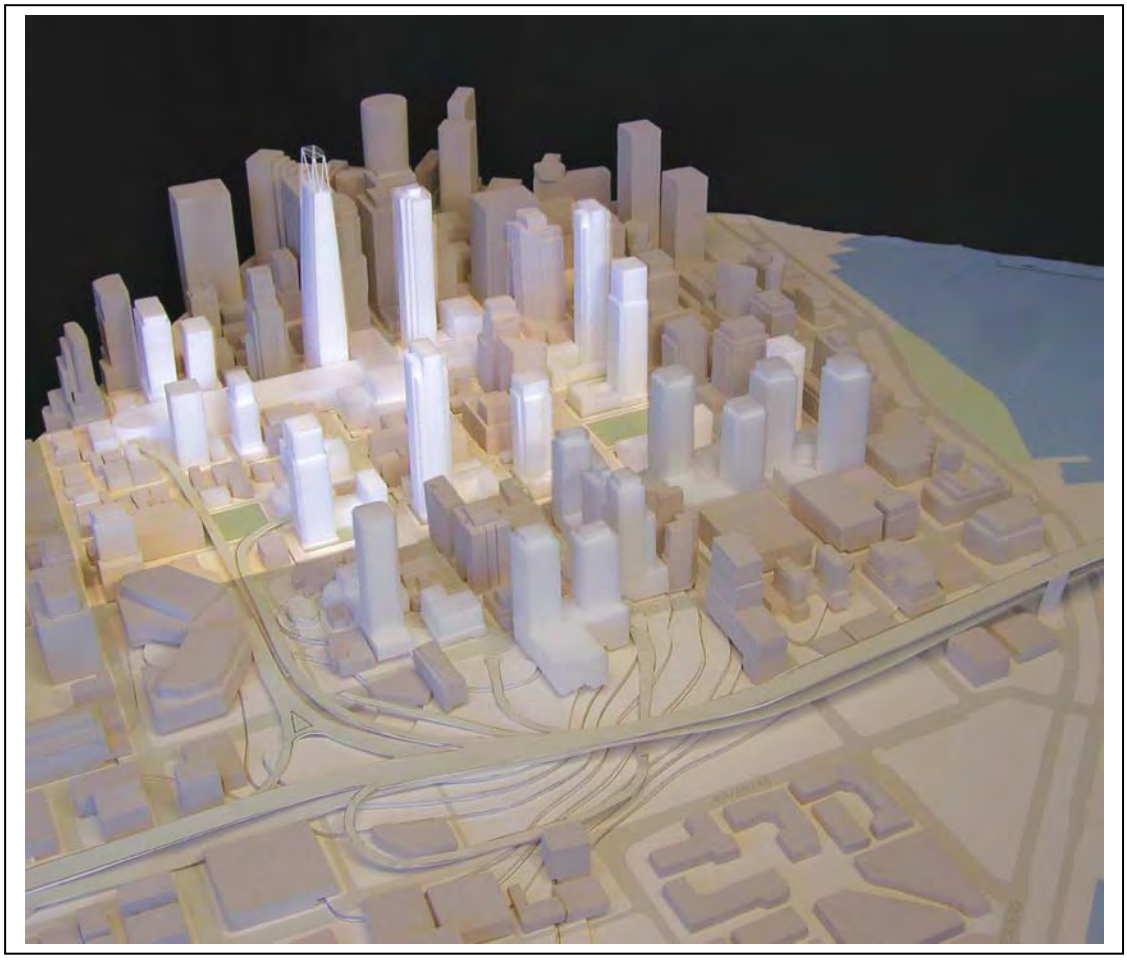
In addition to the widened north sidewalk of Folsom Street, it is anticipated that one or more large areas of open space would be provided in conjunction with the development of the Transbay Terminal and Redevelopment Area. Open space could be provided in the form of a public plaza, proposed to be located in front of the new Transbay Terminal on the western frontage of First Street, bounded by Mission Street to the north, Fremont Street to the east, and the proposed Terminal structure to the south. Other open spaces could add visual interest to mid-block areas and provide a buffer to the planned development in the Transbay Redevelopment Area.

Despite new construction, the Transbay Redevelopment Area would retain portions of its historic, smaller-scale development, notably in the New Montgomery-Second Street Conservation District. Second Street could also become a major visual pathway for pedestrian travel between downtown and the Transbay Redevelopment Area, and the adjacent neighborhoods of South Beach and China Basin.

5.16.5 CHANGES TO SCENIC VIEWS OR VISTAS

Increased development would result in the loss of some existing views, particularly across the study area, rather than along the streets. View corridors would remain, however, particularly along Folsom Street with the planned building setbacks along the north side of the street. Depending on the outcome of the Transbay Terminal component, removal of some of the existing elevated ramps could open up views from within the area now visually walled off by these elements. *The West Ramp Alternative has been identified for the Transbay Terminal component of the Locally Preferred Alternative (LPA). If the LPA is adopted as the project, this Transbay Terminal Alternative would remove the existing east loop ramp and open views to the east; new elevated ramps would be constructed in the same footprint as the existing west loop ramp.*

Figure 5.16-3 *Simulation of* Potential Redevelopment Sites and Scale



Views within and across the Transbay Redevelopment Area would generally be limited by new development. With the implementation of either the Full-Build or Reduced Scope alternative, possibilities for views across the district would be lessened. High-rises located in the Financial District north of the Transbay Redevelopment Area, which create a visual boundary between the Financial District and the generally lower-scale development south of Mission Street would gradually be developed within the Transbay Redevelopment Area. The clearly defined northern boundary of the Transbay Redevelopment Area would, over time, move southward, and the visual wall created by the existing high-rise development would become less pronounced when viewed from the Transbay Redevelopment Area.

Block sizes in the Transbay Redevelopment Area are up to four times larger than the blocks north of Market Street. Under either the Full-Build or Reduced Scope Alternative, larger footprints and taller buildings would likely define new development, with the blocks generally less densely developed than those blocks north of Mission Street. Thus, even though it is likely that land uses would be intensified, there would likely be more space between the towers than on the blocks north of Market Street. New development within the Transbay Redevelopment Area would contain mid-block pedestrian passageways to further reduce the scale of the blocks. Inner courtyards and pedestrian plazas proposed as part of both Redevelopment Alternatives would visually enhance the streetscapes along Folsom Street for pedestrians.

New development under either the Full-Build or the Reduced Scope Alternative would be required to follow urban design guidelines that the Redevelopment Agency would establish to enhance views and visual interest in the project area. New development proposed along Folsom Street would be set back 15 feet from the property line to preserve the existing view corridor (providing views of the Bay to the east) and to accommodate future landscaping, which would provide visual interest and create a green buffer against the traffic on the street. Under both alternatives, new towers would also have an 80-foot podium height, which would create an orderly and regular street wall.

Under both Redevelopment Alternatives, proposed new development along Folsom and Howard Streets would consist of dual towers above their 80-foot base. This would decrease the mass of the buildings above their base levels and provide more views of the sky and surrounding development, as well as increase solar access to lower levels. Under one urban design alternative, new towers above their 80-foot base would have an approximate diagonal dimension ranging from 160 to 190 feet. Under the optional design alternative, new towers would have a diagonal dimension ranging from 126 to 156 feet. Thus, the second alternative would create less bulky buildings with smaller floor plates, which would appear taller and more slender than the development proposed under the first. However, because both design variants would employ setbacks and create a regular street wall at the ground level, given the scale of existing development surrounding the Transbay Redevelopment Area, effects on existing views would not be considered adverse.

5.16.6 CHANGE IN THE CITYSCAPE

Potential changes to the San Francisco cityscape as a result of the proposed Redevelopment Area are shown in Figure 5.16-*3*. Views of the Transbay Redevelopment Area would become more differentiated as the stepping up of development heights towards downtown (north of Folsom Street) is realized. Assuming construction of the proposed Transbay Terminal and possible demolition of the eastern loop of the existing bus ramps, the wall that is composed of newer high-rise office construction would advance southward, with building heights decreasing towards Folsom Street. This change would be apparent from distant vantage points, such as from Dolores Park, Twin Peaks and Potrero Hill.

Changes to the height and bulk in the Transbay Redevelopment Area from their current limits (see Table 5.1-1) would generally follow the urban design policies contained in the San Francisco General Plan. The proposed height limits, with the tallest buildings located in the north of the Transbay Redevelopment Area toward Market and Mission Streets and then decreasing somewhat from their maximum heights to between 350 to 400 feet along Folsom, would become gradually shorter south of Folsom Street. Moving east toward the Bay, height limits would gradually step down from a maximum of 400 feet along Folsom to approximately 200 feet at Spear Street, then down to between 84 and 65 feet along The Embarcadero to protect views of the water.

Although the proposed new development would be expected to alter the existing aesthetic nature of the area, the visual features that would be introduced by the project are commonly accepted in urban areas and would not substantially degrade the existing visual quality or obstruct publicly accessible views. In addition, the Redevelopment Area's provision for design amenities such as open spaces and landscape features, view corridor preservation, and pedestrian enhancement suitably address the proposed growth and ensure that the resultant effects would be predominately positive. For this reason, the project would not result in a demonstrable negative aesthetic effect and as such, no mitigation measures are proposed.

5.16.7 LIGHT AND GLARE

New construction in the Transbay Redevelopment Area would generate additional night lighting in the area, but not in amounts unusual for a transportation hub in a developed urban area. As shown on Figure 5.16-1, the current concept for the Transbay Terminal entails the use of transparent building materials. This concept is intended to provide visual identity and increased security for passengers within the Terminal and in the surrounding pedestrian areas.

New buildings and vehicles would also produce additional glare. This would not be expected to result in a substantial change unless buildings were constructed with reflective glass. Although perceived as an appealing design element to some, mirrored glass is more likely to generate

glare, and to create a potential annoyance and even safety hazard when directed by the sun towards the street or sidewalk. Mirrored glass is not permitted in San Francisco outside of redevelopment areas, per City Planning Code Resolution 9212; as a result, where it is used, it creates a more noticeable visual impact. Therefore, per the Design for Development, mirrored glass would not be permitted in the Transbay Redevelopment Area.

Although the proposed new development would be expected to alter the existing aesthetic nature of the area, the visual features that would be introduced by the project are commonly accepted in urban areas and would not substantially degrade the existing visual quality, obstruct publicly accessible views or generate obtrusive light or glare. In addition, the Redevelopment Area's provision for design amenities such as open spaces and landscape features, view corridor preservation, and pedestrian enhancement suitably address the proposed growth and ensure that the resultant effects would be predominately positive. For this reason, no mitigation measures are proposed.

5.16.8 DRAFT TRANSBAY REDEVELOPMENT AREA DESIGN FOR DEVELOPMENT VISION (AUGUST 2003)

All of the visual and aesthetic effects of the Draft Transbay Redevelopment Area Design for Development Vision would be similar to and less than those of the Full Build Alternative. Similar to the Full Build Alternative, the Design for Development Vision would contain towers over podiums and would create a continuous streetwall along Folsom Street. However, compared to the Full Build Alternative, each block of the Design for Development Vision would contain a single tall tower as a part of the Folsom Street frontage instead of two. Thus, the less-dense Design for Development Vision would have a more varied height pattern than would the Full Build Alternative because of a greater mix of building heights (65 feet to 550 feet). For that reason, the visual and aesthetic effects associated with the Design for Development Vision would be similar to, but less than those under the Full Build Alternative, and its effects also would not be substantially adverse.

5.17 SAFETY AND SECURITY

Safety refers to the prevention of accidents to the riding public, employees, or others present near the Transbay Terminal, Caltrain facilities, and in the Redevelopment Area. Transit vehicle accidents may be caused by events such as fires, faulty equipment, improper boarding or alighting of the transit vehicles or conflicts between trains, buses, automobiles, pedestrians, or non-motorized vehicles. Security refers to the prevention of unlawful acts resulting in harm to persons or damage to property. In a broader sense, it also implies freedom from threats or uncertainty about the likelihood of threatening acts. In this context, the No-Project Alternative does not present potential impacts; therefore, this section focuses on the proposed Project.

5.17.1 SAFETY AND SECURITY IN STATION AREAS

The San Francisco Police and Fire Departments would be responsible for safety and security in the redevelopment area. This remaining discussion focuses on the rail and bus transit facilities.

Passengers exiting the Transbay Terminal or the Caltrain stations at Fourth and Townsend would be transferring to another form of public transit or walking to their destination. The station and Terminal areas would be lighted and have designated walkways for pedestrians.

Bus or rail passengers disembarking at the Terminal would gain access to other public transportation typically at the street level. There could also be an underground concourse connecting the Transbay Terminal and Train Station to the Embarcadero BART/Muni Metro Station at Market Street. Passengers disembarking at either station and walking to their destinations would use sidewalks and crosswalks.

The separation of the AC Transit Buses and the Caltrain from the street levels would reduce the conflicts between these transit modes and pedestrians, except at the platform and bus loading areas. Pedestrian impacts are discussed in more detail in Section 3.4.1.

Security at the Transbay Terminal would be the responsibility of the *TJPA*. Caltrain station security is currently provided by the JPB via its contract with Amtrak. Security would be increased over present levels commensurate with the increase in amount of activity at the Terminal and train station. The Terminal's bus and train loading areas and passageways would be open and clearly lighted and clear sight lines would be maintained. Public security would not be adversely affected by operation of the Transbay Terminal or the Caltrain Extension and new station.

Fire protection at the Terminal would be provided by the San Francisco Fire Department. Fire sprinklers, stand pipes, smoke/gas detectors and alarm systems would be placed throughout the Terminal and stations per City of San Francisco Fire Department requirements. Public fire safety would not be adversely affected by operation of Terminal or proposed Caltrain station. Refer to Section 5.21.17 on best construction management practices for the safety of construction workers, local residents, and employees during project construction.

5.18 ENERGY

Energy reliability and supply have become an increasing concern in California. The short-term situation has been very unstable for both price and availability of electricity and, to a lesser extent, natural gas. The Transbay Terminal/Caltrain Downtown Extension/Redevelopment

Project would require energy to construct, operate, and maintain the transit facilities and for the redevelopment land uses.

Energy for construction includes, in addition to the energy used by construction equipment and other activities at the worksite, the energy used to manufacture equipment, materials and supplied and transport them to the worksite. Energy consumed in the operation of transportation systems is primarily that used by vehicles transporting people or goods—propulsion energy—plus ongoing energy use of operating facilities. Energy for maintenance includes that for day-to-day upkeep of equipment and systems as well as the energy embedded in any replacement equipment, materials, and supplies.

Energy consumed in operation of transportation systems is typically referred to as direct energy. Energy consumed in construction and maintenance is referred to as indirect energy. Over the life of a transportation project, direct energy consumption is usually the largest component of total system energy use. Vehicle propulsion energy can amount to 60 percent of total system energy (Energy and Transportation Systems, Caltrans, Division of Engineering Services, July 1983). In the current environment, the ongoing energy requirements of new activities are of concern, including their long-term impacts on energy supplies. From an energy conservation standpoint, therefore, direct energy impacts are of more importance than indirect energy impacts. For these reasons, the energy analysis focuses on direct rather than indirect energy requirements of the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. It compares estimated energy use in the regional transportation with and without the proposed project improvements. The analysis identifies the incremental change in transportation system energy use, including all major modes of ground transportation, associated with the project.

Electricity. Caltrain trains operating over the approximately 1.2 mile rail extension would be electrically powered. A number of facilities in the tunnel segment, station, Transbay *T*erminal, and associated facilities would use electricity to power equipment. Currently the City and County of San Francisco owns and operates the Hetch Hetchy hydroelectric power generating facilities in the Tuolumne River watershed (in Yosemite National Park). These facilities supply the majority of electrical power to the city, which is delivered to users by Pacific Gas & Electric Company's (PG&E) electrical transmission and distribution system. San Francisco does not require the full generating capacity of the Hetch Hetchy facilities and has entered into long-term power supply contracts with other agencies. Depending upon seasonal power generation capacity, contract obligations to others, local demand, and other circumstances, the city may receive power through the PG&E grid from other electrical generators, including PG&E itself. Redevelopment would use these or other currently available sources of energy.

When electrified, Caltrain would receive power through the PG&E system. Whether the City and County of San Francisco would be the generator/supplier is unknown. Under deregulation, Caltrain would have the option to purchase from any generator/supplier with generating facilities in the western United States. Deregulation is intended to introduce competition into the local

supplier market to expand sources of power supply and ensure fair pricing. The structure of deregulation is open to scrutiny in California, however, as a consequence of the price and supply problems that became apparent in 2000. Although it is difficult to predict what changes may occur, it is anticipated that deregulation of the electric power market will be retained in some form. A number of power generating plants are under development in California and adjacent states by various private firms. The current supply problems and corresponding price volatility would diminish or disappear as these plants come online. Deregulation would allow Caltrain to contract with any number of generators/suppliers to ensure the long-term availability of power for operations, including operation of the Terminal/Extension Project.

Other Energy Sources. The Transbay Terminal / Caltrain Downtown Extension / *Redevelopment* Project would require energy in the form of natural gas, gasoline, diesel fuel, and possibly other forms of energy for facilities and equipment operations (e.g., heating, lighting, ventilation, and operation of non-revenue equipment). For natural gas, PG&E owns the final delivery and distribution systems. PG&E purchases natural gas from various suppliers. Natural gas produced within the state of California has decreased to below 16 percent of demand and therefore other regions and countries are now the major source of supply (California Energy Commission web site: www.energy.ca.gov). As of October 2000, there were 38 marketers/suppliers to the PG&E system. Despite some recent short-term volatility in gas prices, long-term supply is considered satisfactory. Interstate pipeline distribution systems have experienced capacity constraints; however, pipeline expansion is underway in some corridors and several applications for capacity additions are pending. Similarly for gasoline and diesel fuels, long term supply is not considered a critical issue; there are numerous suppliers. In the near term, refining capacity appears to be the major short-term constraint contributing to price volatility. Also, alternative fuel sources are emerging to provide substitute fuels for gas and diesel engines.

Impacts. The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project would increase energy consumption for new land uses, train propulsion, and for transportation facility operations. However, it would also reduce the consumption of energy by other modes as a result of diverting travel *from* auto and bus to commuter rail service.

Changes in direct energy use by the *t*ransit providers affected by the project were estimated for 2020. Changes are relative to estimated energy use under the No-Project Alternative. The analysis evaluated travel patterns for three basic transportation modes: commuter rail; other transit in the form of bus; and auto as representative of roadway traffic. Commuter rail operations would increase with the Transbay Terminal/Caltrain Downtown Extension/ Redevelopment Project. The increase was quantified and expressed in terms of the additional vehicle miles of travel generated by operating *132* revenue trains a day along the approximately 1.2 mile downtown extension. Adjustments were also made to account for increased non-revenue movements and switching movements associated with operations on the extension.

Some bus operations would be reduced somewhat because commuter rail would be extended to downtown San Francisco and provide a higher-level transit alternative. SamTrans, for example, is expected to be able to convert several express routes *in the Caltrain Corridor* to Caltrain feeders and not need to continue bus service to downtown San Francisco. San Francisco Muni may be able to reduce some existing shuttle service between downtown and Fourth and Townsend Streets. The analysis, to be conservative, assumed Muni service would be redirected and only included the more identifiable changes to SamTrans bus service. The potential reduction in bus trips was calculated by assuming express service in the immediate corridor would become Caltrain station feeders; trips were converted to vehicle miles saved by multiplying by the one-way travel distance between the proposed feeder station and downtown San Francisco. Auto travel in the corridor would also be reduced as more people diverted to commuter rail service. The reduction in auto travel was estimated by assigning a weighted average trip length for all diverted trips, assumed to be represented by the number of new riders on Caltrain with the extension in place in 2020.

Table 5.18-1 provides a summary of estimated propulsion energy effects of the Transbay Terminal and Caltrain Downtown Extension for these modes. For a common standard of comparison, energy in the form of electricity or fossil fuels consumed (or saved) is converted to British thermal units (BTUs). Energy use is expressed in terms of the direct energy content of electricity and fuels consumed (or saved) at the final source as well as the total energy content of these energy units, which accounts for generation/refining and transmission/transport losses. For instance, a kWh has a final energy content of 3,416 BTUs; but an additional approximately 7,100 BTUs of energy was required to generate, transmit and convert the kWh at its point of use. The total energy content of a kWh is estimated to be, therefore, approximately10,500 BTUs.

While the increased travel distance for commuter rail trains would require an additional *2.2* million kWhs annually, or *7.4* million direct BTUs and *22.7* million total BTUs, the savings in bus miles and auto vehicle miles no longer operated would be approximately 360 million direct BTUs and 430 million total BTUs. The net energy impact of the transit operations for the Transbay Terminal and Caltrain Extension would be an overall decrease, or savings, in propulsion energy use.

In addition to the propulsion energy effects of the Terminal/Extension transit operations, the operation of the rail station, tunnel, and Transbay *T*erminal would result in ongoing energy use, mainly in the form of electricity for lighting, ventilation, communications, escalators/elevators for people transport, and heating/cooling. A general estimate of annual electricity use by these facilities is 2.5 million kilowatts, equivalent to 8,540 million direct BTUs and 26,250 million total BTUs of energy.

There would be no offsetting reduction in energy use elsewhere; facilities energy represents a net new energy requirement. Adding the facility energy to propulsion energy requirements approximately doubles the energy consumed by the transit operations associated with the Project.

Table 5.18-1: Change in Propulsion Energy Consumption Resulting from Terminal/Extension Project (2020)

Model	Tech-nology [1]	Energy Use Per Vehicle Mile [2]	Incremental Change from No-Project (Project Minus No-Project)				
			Weekday Vehicle Miles	Annual Vehicle Miles[3]	Energy Units Consumed (Saved)	Direct Energy Consumed [4] (Saved) in Millions of BTUs	Total Energy Consumed [5] (Saved) in millions of BTUs
Commuter Rail	Electric	9.500 kWh	*785*	*228,000*	*2,166,000* kWh	*7,399.1*	*22,743.0*
Other Transit—Bus	Diesel	0.333 gal	(3,600)	(935,000)	(311,667) gal	(38,958.3)	(44,802.1)
Auto	Gasoline	0.035 gal	(260,000)	(83,200,000)	(2,912,000) gal	(321,484.8)	(385,781.8)
Total All Modes			***(262,815)***	***(83,907,000)***		***(353,044.0)***	***(407,840.9)***

[1] Actual fleets may be mixed with more than one significant propulsion technology (e.g., diesel, CNG, or hybrid buses; gasoline or hybrid autos/trucks). The technology listed is considered representative for the entire mode and provides a reasonable approximation of energy use in BTUs.

[2] Commuter rail electricity use rate is estimated consumption per passenger car mile for either electric locomotive propelled fleet or electric multiple unit (EMU) fleet. It assumes a 10 percent reduction in consumption due to regeneration, i.e., the return of electrical current to the power system by braking vehicles.

[3] Weekday forecasts of vehicle miles are annualized using the following factors: Commuter Rail = 290; Other Transit = 290; Auto = 320

[4] Direct energy is that consumed by the end user--the rail locomotives, buses, and autos. Direct energy content of energy units is as follows:

1 kWh= 3,416 BTUs (British Thermal Units)

1 gallon diesel = 125,000 BTUs

1 gallon gasoline = 110,400 BTUs

[5] Total energy includes the energy used to refine/generate and transport energy to the end user as well as the direct energy consumed, as follows:

1 kWh= 10,500 BTUs

1 gallon diesel = 143,750 BTUs

1 gallon gasoline = 132,480 BTUs

Sources: Caltrain 25kV, 60Hz, ac Electrification Program, Overview of Preliminary Engineering Operating and Maintenance Costs, Parsons, July 2001; Nelson\Nygaard Consulting Associates; Parsons Transportation Group

The combined propulsion and facilities electrical energy requirements would, however, still be more than offset by the estimated energy savings to other modes that result from the project (Table 5.18-1). New land uses under the Redevelopment portion of the Project would, however, consume additional energy.

No energy mitigation measures appear to be warranted. Moreover, current designs for the Transbay Terminal include "a wide ranging sustainable approach to the terminal building that

uses the natural wind flows in downtown San Francisco to ventilate and cool the facility, harnesses solar energy for passive hearing and cooling, and established sustainability protocols for materials, construction procedures, and long-term building operations." [28] Additional measures would be included in the design and specification of equipment to ensure energy efficiency, thereby helping to reduce the long-term energy requirements and the operating costs of the project.

5.19 TRANSIT, TRAFFIC AND PARKING

Current transportation setting and projected No-Build conditions as well as projected Caltrain ridership and travel times for the Caltrain Extension Alternative are described in Chapter 3. Transportation impacts during construction are evaluated in Section 5.21.1. All other transportation effects of extending Caltrain to the Transbay Terminal Site are presented in this section.

5.19.1 TRANSIT OPERATIONAL IMPACTS

The Terminal/Extension Project includes two possible alignments for the Caltrain downtown extension, two design options for the new Transbay Terminal, and two scenarios for a redevelopment plan. In addition, there is an option for an underground pedestrian connection between the new Terminal and *t*he Embarcadero BART station.

With regard to transit operations, only the two alternatives for the Transbay Terminal design–the West Ramp and the Loop Ramp Alternatives–would have notably different effects on transit. As a result, this analysis of operating impacts is divided into two scenarios, one for each of the Transbay Terminal alternative*s*. The intermodal connections enabled by the pedestrian connection to BART are summarized at the end of this section.

Impacts on transit operations would differ across the two terminal alternatives in terms of:

- Terminal capacity
- Bus access to the Transbay Terminal from the Bay Bridge
- Bus access to the terminal from the street
- Internal bus circulation within the Transbay Terminal
- On-street bus circulation
- Bus storage
- Operating costs

[28] Transbay Terminal Improvement Plan, MTC, 2001, pg. 18.

Major operational differences between the two alternatives are described in Table 5.19-1.

5.19.1.1 West Ramp Alternative

The West Ramp Alternative would change the current configuration of how buses enter, exit, and park at the Transbay Terminal. Instead of traveling straight through the terminal and circulating back to the Bay Bridge along an external, aboveground loop, buses would turn around within the terminal using an internal loop. With the West Ramp *A*lternative, the on- and off-ramps connecting the terminal with the bridge would both be located at the west end of the terminal. The current *operating* distance *from* the *bridge to the* terminal *back to* the bridge is 6,500 feet. Under the West Ramp Alternative, this distance would increase to approximately 7,600 feet. [29] *It should be noted that this round trip distance is slightly longer than the similar path under the Loop Ramp Alternative because the terminal is slightly longer, owing to the use of two longer platforms rather than three somewhat shorter platforms.*

Table 5.19-1: Operational Differences Between Transbay Terminal Alternatives

Operational Issues	Existing Terminal	West Ramp Alternative	Full Loop Alternative
Total Number of Bus Bays	32	*48*	51
Location of Bus Storage	On-site Ramps	Off-site storage lot	On-site ramps and off-site storage lot
Travel Distances (in Feet)			
Bay Bridge to Terminal *to Bay Bridge*	6,500	7,600	6,500
Bay Bridge to Terminal to Storage Area (1)	N/A	7,600	6,500
Storage Area to Terminal to Bay Bridge (1)	N/A	7,600	6,500
Bay Bridge to Storage Area to Terminal to Bay Bridge (2)	N/A	8,100	7,000
From Ramp to Terminal	4,500	N/A	*4,500*
Travel Times (in Seconds)			
Bay Bridge and Terminal *to Bridge*	216	317	227
Bay Bridge to Terminal to Storage Area [1]	N/A	329	243
Storage Area to Terminal to Bay Bridge [1]	N/A	334	240
Bay Bridge to Storage Area to Terminal to Bay Bridge [2]	N/A	350	255
From Ramp to Terminal	60	N/A	*60*

Notes: [1] Trip refers to deadheading. Since the existing terminal accommodates bus parking on-site, no deadheading or off-site staging is currently involved with AC Transit operations.

[2] Trip refers to off-site staging at the bus storage area. Off-site staging is greatest for the West Ramp Alternative because there are only four to five on-site staging spaces on the ramps.

Source: SMWM, Working Paper 4.1 Evaluation of Terminal Site Alternatives, January 2000. Travel times and distances were estimated by Fehr & Peers based upon preliminary terminal designs for the West Ramp and Full Loop Alternatives.

[29] SMWM Working Paper 4.1 Evaluation of Terminal Site Alternatives, (January 2000), p.37

The existing east loop ramp leading from the Bay Bridge to the Transbay Terminal is currently used for midday-storage of AC Transit vehicles. The West Ramp Alternative would relocate AC Transit bus storage to an off-site area under the replacement Bay Bridge West Approaches, between Second and Third Streets. Storage of Golden Gate Transit buses would be moved from their current off-site storage at Main and Howard to beneath the Bay Bridge approaches between Third and Fourth Streets.

AC Transit buses would operate independently of local traffic between the Bay Bridge, the storage area, and the Transbay Terminal. Direct connections would be provided on elevated ramps constructed along the Essex Street right-of-way in approximately the same location as the existing west loop ramps. With the buses entering and exiting the terminal from the west end only, the existing east loops would be permanently removed.

The new Transbay Terminal would feature:

- Three center island rail platforms supporting the six future tracks in the basement level.
- Muni and Golden Gate Transit bus operations, patron entry, ticketing, joint development and a Greyhound store front on the street level.
- Pedestrian concourse with retail/joint development that runs the full three-block length of the Terminal, one level above the street.
- Thirty AC Transit bus bays serving a central platform two levels above the street.
- A platform for Greyhound, paratransit and private operators on the top level or upper bus deck.

Terminal Capacity. The West Ramp Alternative would significantly increase the passenger capacity of the Transbay Terminal. The new terminal would accommodate 35,000 rail and bus passengers during the peak hour. This is 11,000 more passengers than the 24,000 passengers projected for peak hour demand in 2020. The current peak hour passenger flow at the existing Terminal is 10,000 passengers. [30]

The terminal would also accommodate significant increases in transit service. Currently, AC Transit's highest peak utilization is 4.5 buses per bay per hour, which corresponds to average headways of 13.3 minutes per bay. The new terminal would accommodate eight-minute average headways at each of the 30 bus bays, thereby accommodating future demand and future growth.[31] The West Ramp Alternative would increase the total number of bus bays from 32 to *48, with 30 on the AC Transit level and another 18 on the upper bus level.*

[30] Arup, Working Paper 7.0 Pre-Concept Engineering Report, (April 2001), p. 5.

[31] Arup, p. 3-4

Bus Access to the Transbay Terminal from the Bay Bridge. Bus access to the terminal would no longer have separate points for entry and exit on opposite sides of the facility. Under the West Ramp Alternative, *each of the two bus decks would have dedicated, fully grade-separated ramps leading from the Bay Bridge into* the southwestern corner of the terminal. Although bus entrances would be provided on both the upper and lower bus decks, all buses would exit the Terminal from the lower deck.

The lower level ramp entrance would have two lanes and provide AC Transit buses with an inbound and outbound connection to the Terminal's lower bus deck. The upper level ramp entrance would have one lane and provide non-AC Transit buses with inbound access only to the terminal's upper bus deck. Buses exiting from the upper deck would travel down a ramp at the east end of the structure to the AC Transit level and proceed through the AC Transit level to the bus exit.

Buses from the East Bay would gain access to the stacked entrance ramps from the Bay Bridge using an exit at Fremont Street that also serves as a mixed-flow traffic off-ramp. The exit would lead to a two-way single-level bus ramp following the same alignment as the existing ramps. Just before the terminal, the ramp would split into the two levels for entry into either the lower or upper bus levels.

Buses returning to the East Bay would use the two-way single level bus ramp upon exiting from the terminal. At the approach to the Bay Bridge the ramp would split into two levels to connect with the two-level bridge. East Bay buses would follow the eastbound bridge ramp and proceed onto the lower level of the bridge.

Although requiring some future expansion, the ramp connecting the Bay Bridge with the Transbay Terminal would be designed to accommodate the potential implementation of light rail service from the East Bay.

Bus Access to the Terminal from the Street. Like the current facility, a direct connection between the Terminal and the surface streets was determined to be unnecessary for bus operations.[32] *S*ome bus service, including paratransit operations, Greyhound, and other private tour operations, would be able *to* access the Transbay Terminal from city streets through the bus storage areas.

Bus Circulation Inside the Transbay Terminal. The West Ramp Alternative adds an additional level to the Transbay Terminal's system of bus circulation. AC Transit would board and alight passengers on the lower of the two bus decks (which include the top two levels of the terminal). Buses would circulate clockwise around a central passenger platform using either of

[32] Arup, p. 28

two lanes: one for through traffic and one for turning in and out of the bus bays. The exit for the buses is located adjacent to the terminal entrance on the southwest corner, thus avoiding crossover. The deck would accommodate 30 bays including 26 for articulated buses and 4 for standard buses. The bays would be evenly divided between the northern and southern sides of the central platform. A saw tooth configuration has been adopted in accordance with AC Transit's stated design criteria.

The upper bus deck would be reserved for other transit operators, including Muni's Line 108 to Treasure Island, paratransit services, Greyhound, and private operators. The upper bus deck would accommodate four saw tooth bays and 700 feet of straight curb on the northern side of the terminal – *equal to about 18 additional bus bays*. Buses would circulate along a single-sided passenger platform with two bus lanes: one through-lane and one turnout/parking lane. Unlike the lower level, the upper bus deck circulation is only a half loop, terminating on the east end of the terminal in a ramp that travels back down to the lower bus deck.

The only vertical circulation between the two bus decks is the downward movement from the upper to the lower bus levels on a ramp forming the eastern face of the building. Occasional access from the lower deck to the upper deck would be possible through the external vertical circulation located in the bus storage areas.

On-Street Bus Circulation Outside the Terminal. Muni lines 5, 6, 38, and 38L would no longer terminate at the Transbay Terminal's "hump" on Mission Street between First and Fremont Streets. This loading area would be relocated to a mid-block passage under the terminal between Fremont and Beale Streets. *Under this service scenario, Muni buses would operate as they currently do on Market/First and would then make a right turn onto Mission Street. All buses would alight passengers on Mission between First and Fremont Streets. Buses would then continue empty on Mission to Beale and make a right turn and enter the new loading area under the terminal, midblock between Mission and Howard.* Assuming the implementation of a diamond (bus only) lane on Beale Street *South of Mission* Street and through the terminal's designated Muni loading area, the rerouting would add about 40 seconds to the average travel time of buses.[33]

The new loading area would also provide Muni passengers with a direct link to the concourse level of the terminal. Sufficient platform and staging areas would be provided to accommodate Muni's current routes plus at least one addition route. According to a bus operations simulation analysis, there would be excess capacity in two of the four aisles in the mid-block passage. A third aisle reserved for Muni's 38 and 38L would operate near capacity. The fourth aisle, reserved for Golden Gate Transit, would also operate near capacity. Consequently, any

[33] Fehr and Peers Associates, Transbay Terminal Bus Operations Report, (September 2000), p. 10

significant expansions in Muni or GGT capacity would require the staging of buses at an alternate location.[34]

Muni's 14 line would continue to board and alight passengers at surface bus stops along Mission Street. Muni's 10 and 76 lines would continue to load passengers at curbside bus stops along First and Fremont Streets. No significant change in operations would result from the West Ramp Alternative.

Inbound Golden Gate Transit Basic Service buses, which operate on Mission Street, would continue to terminate in front of the Transbay Terminal on Mission Street. The proposed Transbay Terminal mid-block boarding area would be used as the first revenue stop by outbound GGT Basic Service buses.

Inbound Golden Gate Transit Financial District Commute Service buses would continue to serve the Transbay Terminal by the bus stop on First Street, between Market and Mission Streets. Outbound Commute Service would continue to load passengers along Fremont Street between Mission and Market and between Mission and Folsom.

Bus Storage Areas. AC Transit currently stores all of its transbay buses laying over midday in San Francisco on the existing Transbay Terminal access ramps. Under the West Ramp Alternative, minimal bus staging and bus parking would be possible on the new access ramps. Instead, an off-site storage area would be located below the west approaches to the Bay Bridge between Second and Third Streets. Access to the storage area would be by a ramp connection to the two-way Bay Bridge/Transbay Terminal ramp. The area beneath the Bay Bridge is currently used for automobile parking.

AC Transit's bus storage lot would be at-grade with sufficient area to permit parking and circulation in accordance with AC Transit's projected future needs. Depending on the layout and operation of the bus storage area, up to 54 buses could be accommodated at-grade with fully independent access provided each parked bus; another nine buses could be parked on the access ramp. According to a bus operations simulations analysis *developed for the supplemental air quality analysis*, even with assumptions of 50 percent growth in AC Transit service, there would be a maximum of *70* buses (including those circulating) in the storage facility during the *45 minute* peak *period* for bus parking and staging.[35]

Golden Gate Transit buses would be provided bus storage space under the Bay Bridge west approaches between Third and Fourth Streets. Access to the lot would be via the same ramp connection to the AC Transit storage lot and an at-grade mid-block crossing of Third Street.

[34] Fehr and Peers Associates, p. 10
[35] *Supplemental Air Quality Analysis, Terry A. Hayes Associates, LLC, 2003.*

Approximately 140 buses could be accommodated at an at-grade paved lot. It would be occupied by Golden Gate Transit weekdays only and available for other uses in the evening and on weekends.

Approximately 43,000 square feet of space at the western end of the Golden Gate Transit storage area would be available for a single deck parking structure. This would allow approximately 300 public parking spaces to be built contiguous to the storage area.

Operating Costs. The annual operating costs for AC Transit would be higher under the West Ramp Alternative than under either the existing operation or the Full Loop Alternative (see below). Table 5.19-2 shows that the estimated annual operational and maintenance costs for AC Transit would be approximately $*1.3* million under the West Ramp Alternative, assuming no growth in service. This is about *40* percent higher than the estimated $939,000 for current AC operations.

Table 5.19-2: Estimated AC Transit Annual Operating Costs

Scenario Increase (Existing)	Operating Costs	Maintenance Costs	Total Costs	%
Existing	$ 508,972	$430,285	$939,257	
West Ramp Alternative	*$774,939*	*$530,839*	*$1,305,779*	*39%*
Full Loop Alternative	*$559,002*	*$455,468*	*$1,014,469*	*8%*

The cost analysis is based upon AC Transit's 1998-99 cost model, which indicates a marginal cost of $44 per hour and $1.78 per mile.

Source: SMWM, Working Paper 4.1 Evaluation of Site Terminal Alternatives, January 2000. Analysis is based on the demand assumptions described in Table 5.19-3.

The cost analysis shown in Table 5.19-2 is based on AC Transit's 1998-99 cost model, which indicates a marginal cost of $44 per hour and $1.78 per mile. The demand assumptions used to determine costs are shown in Table 5.19-3.

Operating costs for Golden Gate Transit would be lower for both Transbay Terminal options than under the existing conditions, given that the permanent bus storage facility would be closer to the Transbay Terminal than Golden Gate Transit's existing bus storage facility at Eighth and Harrison streets.

5.19.1.2 Full Loop Ramp Alternative

The Full Loop Ramp Alternative would not significantly change existing bus access and circulation between the Transbay Terminal and the Bay Bridge. Although a new terminal facility would be constructed, the location of the new loop ramps between the terminal and the

Bay Bridge would be generally the same. Unlike the West Ramp Alternative, AC Transit bus staging and storage would continue to be on the ramps with some additional off-site parking under the Bay Bridge's western approach at Second Street.

Under the Loop Ramp Alternative, the Transbay Terminal would feature:

- Three center island rail platforms supporting the six future tracks in the basement level. The street level would support patron entry, ticketing, and joint development.
- Street level bus service for Muni and Golden Gate would be provided in the block east of Beale Street (as opposed to the mid-block crossing between Fremont and Beale as proposed in the West Loop Alternative).
- A single elevated bus deck would accommodate the entire AC Transit transbay operation and all other bus services using the direct access ramps to and from the Bay Bridge. A total of 51 bus bays would be served by three one-way bus lanes.

Terminal Capacity. The terminal would be designed to accommodate the *35,000* transit passengers expected in the terminal during the peak hour in 2020. A bus operations analysis similar to the one conducted for the West Ramp Alternative was not conducted for the Full Loop Alternative. However, the Full Loop calls for 51 bus bays compared to the West Ramp's *48* bus bays. The latter number was determined to be more than adequate for projected terminal utilization by AC Transit in the foreseeable future.

Bus Access to the Transbay Terminal from the Bay Bridge. Under the Full Loop Alternative, bus connections between the Transbay Terminal and the Bay Bridge would be the same as today. There would be no changes in the loop circulation of the existing connecting bus ramps. Westbound buses would exit the Bay Bridge onto a ramp leading directly to the Transbay Terminal, proceed through the east end of the terminal building, and follow the looping ramp above city streets back to the Bay Bridge's approach for eastbound vehicle access

Bus Access to the Terminal Area from the Street. The new bus ramps would not require any change in terminal access at street level. However, Muni service currently terminating at the Terminal's "hump" on Mission Street would be relocated to a new staging area east of Beale Street *as in the West Ramp Alternative*.

Internal Bus Circulation within the Transbay Terminal. The Transbay Terminal is currently configured with *three* lanes and buses load parallel to the curb. However, to accommodate AC Transit's preferred standard of saw tooth bus bays, the *F*ull *L*oop *A*lternative would have three one-way bus lanes serving 51 bus bays. The bus structure would be somewhat longer than the existing terminal to accommodate the increased number of bays and the reduced number of lanes.

On-Street Bus Circulation. Muni lines 5, 6, 38 and 38L would board and alight passengers at a new loading area east of Beale Street and north of Howard Street. *As with* the West Ramp Alternative, buses would need to continue two extra blocks along *Mission* Street to access the terminal area through Beale Street. There would not be substantial changes in the existing on-street circulation of Golden Gate Transit and SamTrans under the Full Loop Alternative.

Bus Storage. AC Transit buses would continue to be staged on the ramps with parking available on the east side of the ramps. Additional storage for both AC Transit and Golden Gate Transit would be available beneath the western approach of the Bay Bridge at Second Street.

Operator Costs. As shown in Table 5.19-2, operating and maintenance costs for AC Transit would not be significantly higher under the Full Loop Alternative than under the existing situation. Combined annual costs would be approximately $*1.01*million or 8 percent higher than the $939,000 required for existing operations.

Operating costs for Golden Gate Transit would be lower for both Transbay Terminal options than under the existing conditions, given that the permanent bus storage facility would be closer to the Transbay Terminal than Golden Gate Transit's existing bus storage facility at Eighth and Harrison streets.

5.19.1.3 Intermodal Connectivity

Mezzanine. The West Ramp *and* Loop Ramp Alternatives would include a below-grade mezzanine. The mezzanine would be constructed between the terminal's ground floor and the rail platforms. Its configuration would consist of a simple bridge spanning across the platforms or a large floor area. The mezzanine would allow consolidation of the vertical circulation elements down from ground level and greatly increase the flexibility of the ground floor layout.

A rail mezzanine would enable escalator access between the upper bus decks, the street-level Muni loading area, and below ground rail platforms. The mezzanine could also facilitate a direct underground connection between the western end of the Transbay Terminal and a proposed Muni Third Street light rail station. By situating this connection at an underground mezzanine instead of along raised platforms of an on-street alignment, pedestrian movements would not be disrupted on the aboveground street grid (see Section 5.21.4).[36] The mezzanine would have no adverse effects on bus operations in the terminal or at street level.

Pedestrian Tunnel between Transbay Terminal and Market Street. The option for a pedestrian tunnel to Market Street under both terminal design alternatives would create a passageway between the Terminal and the Market Street subway. For either terminal alternative, the connection would be built below Fremont Street, providing a sheltered passenger connection

[36] SMWM Working Paper 12 Terminal Design Modifications and Refinements, (March 2001), p. 40.

between AC Transit bus service, Caltrain, Greyhound and the Muni/BART underground rail lines. The pedestrian tunnel is not anticipated to affect bus operations substantially although there is the potential for street bus movements, as for street traffic, to experience fewer conflicts and delays at intersections from reduced pedestrian volumes at crosswalks.

5.19.2 IMPACTS ON CORRIDOR TRANSIT PATRONAGE

The Transbay Terminal/Caltrain Downtown Extension Project would increase linked transit trips in the region in the year 2020 by an estimated 10,000 trips per day, from about 728,000 to 738,000 trips per day. As defined for this project, a linked transit trip consists of two or more unlinked trips, i.e., transit trips that involve two or more vehicles or modes. Thus an increase in linked transit trips in the corridor indicates that more people are choosing to use Caltrain instead of non-transit modes, compared with the No-Project Alternative.

Preliminary estimates of the transit mode shares have been made. The current transit mode share for work trips between San Mateo County and San Francisco is estimated to be 15.4 percent. Between Santa Clara County and San Francisco, the transit mode is estimated to be 13.1 percent. By 2020, these transit mode shares are expected to rise to 19.7 and 22.3 percent, respectively. With the Terminal/Extension Project, these transit mode shares are projected to be 22.2 and 28.5 percent, respectively.

5.19.3 IMPACTS ON OTHER TRANSIT SERVICES

The Caltrain Extension would provide a terminus that is in downtown San Francisco and the Financial District. Current bus shuttles between these areas and the existing Caltrain terminus at Fourth and Townsend Streets would be eliminated or rerouted, with possible corresponding reductions in Muni's operating costs. With the extension, Caltrain would also provide better service to downtown San Francisco for some trip makers than would BART and SamTrans, with attendant patronage impacts on these systems. The Caltrain Extension would also have long-term impacts on transit services that currently utilize the Transbay Terminal.

5.19.3.1 BART

Ridership forecasts predict that the Transbay Terminal/Downtown Caltrain Extension Project would result in a *11* percent reduction in BART entries and exits in San Mateo County (at the Daly City, Colma, Hickey, Tanforan, SFO, and Millbrae BART stations). The analysis indicates that in 2020, there would be about 5,700 daily transfers between BART and Caltrain at the Peninsula intermodal transfer facility in Millbrae under the No-Build Alternative, and that this number would drop by about 4,400 (78 percent) if Caltrain were extended into downtown San

Francisco. An additional 700 transfers per day between BART and Caltrain is projected to occur in downtown San Francisco under the Terminal/Extension Project.

5.19.3.2 Muni

The following assumptions about Muni bus route changes with the Caltrain Extension Alternative were made:

- *Regarding the 30-Stockton and 45-Union, one of these will continue to serve Third and Fourth Streets between Market and Townsend, and will be extended into Mission Bay. The other will likely be terminated in the vicinity of Yerba Buena Center.*
- The 10 Townsend/47 Van Ness- would be rerouted to run along Harrison Street and Bryant Street between Fifth Street and Main Street.
- The 76-Marin Headlands and the 82X-Levi Plaza Express would be truncated and rerouted to serve the Transbay Terminal area.

The changes in Muni service are predicted to result in a reduction in annual revenue-hours and revenue-miles for Muni of 15,700 hours and 151,100 miles, respectively, resulting in an annual net cost savings of about $1.4 million. Muni would also reduce its peak fleet demand by four buses. In addition to re-routing existing Muni service to Caltrain's Fourth and Townsend Streets terminal, the existing Muni shuttle service (81x, 80x) to the Caltrain terminal could be eliminated saving the JPB approximately $558,000 for Muni shuttle service savings per year. Muni Metro N-Judah LRT service to Fourth and King Streets is assumed to continue to service to all stops south of the Embarcadero Station, including the reconfigured Caltrain station and the Third Street LRT extension, which is currently under construction.

Ridership forecasts predict that the Transbay Terminal/Downtown Caltrain Extension Project would result in a four percent decrease in Muni ridership.

5.19.3.3 SamTrans

The extension of Caltrain would also decrease the need for SamTrans express bus service from the Peninsula to the Transbay Terminal. SamTrans express routes including the KS, MX, NX, PX, RX, and TX would likely be eliminated. Consequently, the extension of Caltrain into downtown is projected to result in a reduction of 2,000 passengers in SamTrans daily bus ridership where a SamTrans bus was the primary mode of travel. Trips that use a SamTrans bus to gain access to a Caltrain or BART station are not included in this estimate. Additionally, local SamTrans routes would continue to serve downtown San Francisco in the Transbay Terminal area. This reduction in service would decrease SamTrans annual revenue-hours and revenue-miles by 16,500 hours and 405,200 miles, respectively. SamTrans would also require 32 fewer buses during the peak periods of operation. This would result in a $2.6 million reduction in annual operating and maintenance costs for Sam Trans.

Ridership forecasts predict that the Transbay Terminal/Downtown Caltrain Extension Project would result in a three percent reduction in SamTrans bus ridership.

5.19.3.4 AC Transit

A substantial change in AC Transit ridership was not projected by the model for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project, although some increase in ridership is predicted due to the complementary nature of the Downtown Caltrain Extension. Extending Caltrain to the Transbay Terminal would likely encourage transfers from Caltrain to AC Transit buses, thereby increasing AC Transit bus ridership *somewhat.*

5.19.3.5 Golden Gate Transit

A substantial change in ridership on Golden Gate Transit was not projected by the model for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project, although the increased proximity of the Caltrain terminal to Golden Gate Transit bus routes could increase the number of transfers from Caltrain to Golden Gate buses, thereby increasing Golden Gate bus ridership.

The proposed permanent off-site storage facility for Golden Gate Transit bus operations beneath the Western Approach of the Bay Bridge would be closer to the Transbay Terminal than Golden Gate Transit's existing bus storage facility at Eighth and Harrison streets. This will result in reduced deadheading and operating costs for Golden Gate Transit buses that layover at the storage facility between runs.

5.19.3.6 Other Transit Operators

Ridership forecasts predict that VTA ridership would decrease by two percent. However, Greyhound and other operators in the Transbay Terminal could potentially have their ridership enhanced by the closer connection with Caltrain.

5.19.4 IMPACTS ON VEHICULAR TRAFFIC

5.19.4.1 Travel Time Impacts in Caltrain Corridor

The ridership analysis projected that the Terminal/Extension Project would have a beneficial impact on traffic congestion. In every case, auto travel times in the A.M. peak period are expected to decrease under the Terminal/Extension Project. In 2020, the travel time improvements between origins in the U.S. 101 corridor and San Francisco are expected to

typically be from two to four minutes[37]. Relocating Caltrain's San Francisco terminus to the Transbay Terminal area is expected to result in a seven percent reduction in the number of person hours of vehicle travel.[38] Morning peak hour delay is expected to be reduced by 20 percent. Implementation of the Terminal/Extension Project would result in daily travel time savings of 7,200 person hours, which includes 5,700 person hours saved for Caltrain riders and 1,500 person hours for roadway travelers in the corridor. Using FTA procedures, this represents an approximate $20 million per year savings (7,200 hours/day X $11.26/hour X 250 work days/year).

5.19.4.2 Vehicle Miles Traveled (VMT) Impacts in the Caltrain Corridor

Year 2020 vehicle miles traveled (VMT) on all roadways in the corridor is projected to decrease by 0.2 percent from 145,934,000 to 145,674,000 VMT, a savings of 260,000 VMT with the Terminal/Extension Project compared with the No-Project conditions

5.19.4.3 Intersection Level of Service Impacts around the Transbay Terminal

The San Francisco County Transportation Authority (SFCTA) countywide travel demand forecasting model (SFCTA Model) was used to develop the travel forecasts for development and growth through the year 2020 in the region, as well as to determine travel demand to and from the South of Market area (area roughly bounded by The Embarcadero, Market Street, South Van Ness Avenue and King Street). This approach results in an impacts assessment for year 2020 conditions that takes into account both the future development expected in the South of Market area, as well as the expected growth in housing and employment for the remainder of San Francisco and the nine-county Bay Area. The most up-to-date version of the SFCTA Model estimates future traffic and transit travel demand for the entire nine-county Bay Area region based on land use and employment forecasts prepared by the San Francisco Planning Department for the county, plus regional growth estimates developed and adopted by the Association of Bay Area Governments (ABAG) in 1998 (Projections '98) for the remainder of the Bay Area region. Travel demand was estimated for three land use scenarios:

- **2020 No-Project**, which assumed future development and growth, consistent with the ABAG forecasts for San Francisco and the Bay Area, and incorporates projects that have recently been approved or entitled in the South of Market area.

- **2020 Project**, which included the additional development associated with the Terminal/Extension Project.

[37] Ridership Forecasting Results Report, Korve Engineering, Inc., May 29, 1996. Adjusted to 2020 conditions by PTG, September 2001.

[38] August 27, 1996 memo from Korve Engineering to ICF Kaiser Engineers.

- **2020 Cumulative**, which incorporated other plans recently proposed in the South of Market area including the Rincon Hill Rezoning and the South of Market Redevelopment Area Plan, the Mid-Market Redevelopment Area Plan, as well as the Transbay Terminal / Downtown Caltrain Extension Project. As a result, the year 2020 cumulative conditions forecasts used in the analysis exceed the ABAG forecasts for San Francisco for employment by about 2.8 percent, and household population by about 1.4 percent.

An analysis for adverse effect from the project's impact to intersections within the project area was performed for the existing plus project and cumulative conditions. Table 5.19.3 shows all intersections with an adverse effect and notes all intersections that have a level of service (LOS) of E or F under the existing plus project and cumulative conditions (see also Table 5.19-4). *Under the City and County of San Francisco criteria, an adverse effect would occur if an intersection is degraded to a LOS of E or F. For an intersection that operates at LOS E or F in the without project conditions, there may be an adverse impact depending upon the magnitude of the project's contribution to the worsening of delay. In addition, a project would have an adverse effect if it would cause major traffic hazards, or would contribute considerably to the cumulative traffic increase.* For the purpose of this project, existing conditions are assumed to be year 2020 baseline, existing plus project is the 2020 baseline plus the Transbay Terminal project, and cumulative is the cumulative that includes all of the related City and Redevelopment projects.

Table 5.19-3: Project Impact Determination for Intersections at LOS E or F Under *2020 Baseline* Plus Project and *2020* Cumulative Conditions

Intersections	*2020 Baseline* Plus Project	*2020* Cumulative
First/Market	Adverse Effect	Adverse Effect
First/Mission	Adverse Effect	Adverse Effect
First/Howard	Adverse Effect	Adverse Effect
Fremont/Howard	Adverse Effect	Adverse Effect
Beale/Howard	Adverse Effect	Adverse Effect
Second/Folsom	Adverse Effect	Adverse Effect
First/Folsom	Not an Adverse Effect	Not an Adverse Effect
The Embarcadero/Folsom	Not LOS E or F under Existing Plus Project	Not an Adverse Effect
Second/Harrison	Not an Adverse Effect	Not an Adverse Effect
Harrison/Essex	Not an Adverse Effect	Not an Adverse Effect
Harrison/First	Not an Adverse Effect	Not an Adverse Effect
Harrison/Fremont	Not an Adverse Effect	Not an Adverse Effect
Main/Harrison	Not an Adverse Effect	Not an Adverse Effect
Second/Bryant	Adverse Effect	Adverse Effect

Source: San Francisco Planning Department, January 2002.

Table 5.19-4: Intersection Level of Service -- Existing and 2020 Conditions, Weekday P.M. Peak Hour

Intersection	Existing			2020 No-Project			2020 Term./Ext. Project			2020 Cumulative		
	Delay	LOS	v/c	Delay	LOS	v/c	Delay	LOS	v/c	Delay	LOS	v/c
1. First/Market	25.9	D	–	34.9	D	–	54.9	E	1.16	>60	F	1.17
2. Fremont/Market	15.2	C	–	26.0	D	–	30.3	D	–	34.4	D	–
3. Second/Mission	10.2	B	–	16.1	C	–	21.1	C	–	31.6	D	–
4. First/Mission	27.1	D	–	58.5	E	1.13	>60	F	1.22	>60	F	1.22
5. Fremont/Mission	21.8	C	–	21.9	C	–	29.2	D	–	30.5	D	–
6. Beale/Mission	14.9	B	–	19.9	C	–	33.0	D	–	33.0	D	–
7. Main/Mission	15.6	C	–	20.3	C	–	22.6	C	–	26.6	D	–
8. Second/Howard	15.1	C	–	25.9	D	–	25.1	D	–	27.3	D	–
9. First/Howard	31.9	D	–	40.9	E	1.09	>60	F	1.21	>60	F	1.24
10. Fremont/Howard	20.1	C	–	28.7	D	–	44.3	E	1.03	42.4	E	1.03
11. Beale/Howard	16.2	C	–	28.1	D	–	>60	F	1.19	>60	F	1.21
12. Main/Howard	15.4	C	–	25.1	D	–	33.7	D	–	39.6	D	–
13. Spear/Howard	13.9	B	–	15.5	C	–	31.7	D	–	33.7	D	–
14. Second/Folsom	32.5	D	–	>60	F	1.15	>60	F	1.18	>60	F	1.24
15. First/Folsom	>60	F	1.17	>60	F	1.15	>60	F	1.21	>60	F	1.24
16. Fremont/Folsom	7.7	B	–	22.4	C	–	25.5	D	–	26.8	D	–
17. Beale/Folsom	14.5	B	–	14.7	B	–	15.8	C	–	15.8	C	–
18. Main/Folsom	12.1	B	–	15.9	C	–	34.6	D	–	34.1	D	–
19. Spear/Folsom	11.1	B	–	13.2	B	–	14.1	B	–	16.5	C	–
20. The Embarcadero/Folsom	18.2	C	–	26.5	D	–	39.0	D	–	47.5	E	0.95
21. Second/Harrison	44.9	E	1.11	>60	F	1.19	>60	F	1.26	>60	F	1.32
22. Essex/Harrison	>60	F	1.15	>60	F	1.17	>60	F	1.18	>60	F	1.19
23. First/Harrison	>60	F	1.26	>60	F	1.23	>60	F	1.29	>60	F	1.33
24. Fremont/Harrison	36.2	D	–	49.5	E	0.93	59.1	E	0.96	>60	F	0.99
25. Main/Harrison	32.0	D	–	40.9	F	0.83	56.1	F	0.89	>60	F	0.95
26. Spear/Harrison	15.4	C	–	30.4	C	–	31.9	D	–	37.0	D	–
27. Second/Bryant	>60	F	1.18	>60	F	1.23	>60	F	1.28	>60	F	1.31

Notes: Delay presented in seconds per vehicle. v/c = volume-to-capacity ratio for all intersections at LOS E or F.
Source: Wilbur Smith Associates, December 2001

***2020* Baseline Plus Project Conditions.** As shown in Table 5.19-4, the project's traffic contribution to the following intersections would be considered **not adverse** under the baseline plus project conditions:

- First/Folsom
- Second/Harrison
- Harrison/Essex
- Harrison/First
- Harrison/Fremont
- Main/Harrison

This was determined based on an examination of the traffic volumes for the traffic movements that determine overall LOS performance at these intersections. In most intersections where baseline plus project conditions were found to be not adverse, the project would add traffic movements that would continue to operate satisfactorily. In some instances, the project would add vehicles to movements at intersections that would not perform well under the 2020 baseline plus project conditions. However, in these instances, the project's contributions to these movements would be small. Finally, in one case, no adverse contribution was found because the project volumes and total volumes for the movement would be very small and would not materially affect the overall LOS performance at the affected intersection. For the intersections listed above, project traffic would also not represent a considerable contribution to the *2020* baseline plus project conditions, and the project would not have an adverse traffic impact at these intersections.

As shown in Table 5.19-4, the project's contribution to the following intersections would be considered **adverse** under the *2020* baseline plus project conditions:

- First/Market
- First/Mission
- First/Howard
- Fremont/Howard
- Beale/Howard
- Second/Folsom and
- Second/Bryant

The project would add substantial numbers of vehicles to some movements that determine overall LOS performance. Specifically, the project would add vehicles to movements that represent a considerable contribution to the baseline plus project traffic conditions and the project would have an adverse impact on these intersections.

***2020* Cumulative Condition**: As shown on Table 5.19-4, the *project's* traffic contribution to the following intersections would be considered **not adverse under *2020* cumulative conditions**.

- First/Folsom
- Second/Harrison
- Harrison/Essex
- Harrison/First
- Harrison/Fremont
- Main/Harrison

This was determined based on an examination of the traffic volumes for the traffic movements that determine overall LOS performance at these intersections. In most instances where cumulative conditions were found to be not adverse, the project would add vehicles to movements that would continue to operate satisfactorily. In some instances, the project would add vehicles to movements at intersections that would not perform well under cumulative conditions. However, in these instances, the project's contribution to these movements would be small. Finally, in one case, no adverse contribution was found because the project volumes and total volumes for the movements would be very small and would not materially affect overall LOS performance at the affected intersection. For the intersections listed above, project traffic would not represent a considerable contribution to the cumulative conditions, and the project would not have an adverse traffic impact at these intersections.

As shown in Table 5.19-4, the project's contribution to the following intersections would be considered **adverse under *2020* cumulative conditions** *(these are the same intersections that would experience adverse effects under the 2020 plus project condition)***:**

- *First/Market*
- *First/Mission*
- *First/Howard*
- *Fremont/Howard*
- *Beale/Howard*
- *Second/Folsom and*
- *Second/Bryant*

For these intersections, the project would add substantial numbers of vehicles to some movements that determine overall LOS performance. Therefore, the project would add vehicles to those movements that would represent a considerable contribution to the cumulative conditions and the project would have an adverse impact on these intersections.

The Terminal/Extension Project would result in a substantial increase in vehicle trips to and from new developments, particularly in the area bounded by Mission, Folsom, First and Main Streets. Along First and Howard Streets there is a high volume of traffic destined to the I-80/Bay Bridge on-ramp at First/Harrison and to the U.S. 101 southbound on-ramp at Fourth/Harrison (via Howard and Fourth Streets) to which the Terminal/Extension Project would contribute additional

vehicles and result in increased congestion. Similarly, the planned modifications to the I-80 westbound off-ramp at Fremont Street would add a second leg that will provide access to Folsom Street and result in an increase in vehicles on Folsom Street. The combined increase in vehicles on Folsom Street due to the modified ramp and vehicle-trips generated by the Terminal/Extension Project would result in LOS E conditions at the intersection of The Embarcadero/Folsom Street.

Mitigation: The Project would result in adverse impacts at seven intersections under both the baseline plus project and cumulative conditions. Improvements at individual intersections may *reduce* localized congestion *somewhat*, but may not mitigate operating conditions to less than adverse levels. As a result of the constraints at downstream intersections and the I-80/U.S. 101 on-ramps and mainline, mitigation measures for the seven intersections have not been proposed, and the impacts associated with the Project would be considered adverse and unmitigable.

*T*o help improve 2020 Cumulative operating conditions, the San Francisco Department of Parking and Traffic (DPT) may request sponsors of development projects in the South of Market area to contribute to the new Integrated Transportation Management System (ITMS) program. This program is a citywide real-time electronic transportation management system that would include the installation of various Intelligent Transportation System (ITS) infrastructure components to improve traffic circulation within the City. The program would monitor and manage traffic by receiving real-time information at a Traffic Management Center via closed circuit TV cameras. The South of Market area has been identified as the area within which the first phase of the system would be implemented.

The implementation of the ITMS program would improve overall traffic conditions and reduce traffic congestion in the City. Although the implementation of ITMS may not directly mitigate the adverse impacts of the Project under 2020 Terminal/Extension Project conditions or 2020 Cumulative conditions, this program would result in overall traffic improvements and lessening of congestion, and would facilitate traffic circulation in the South of Market area.

5.19.4.4 Traffic Impacts Associated with Draft Transbay Redevelopment Project Area Design for Development Vision

To account for the increased demand for pedestrian and bicycle facilities with the new Transbay Terminal and the new development throughout the Transbay Area, the San Francisco Redevelopment Agency has developed a Draft Transbay Redevelopment Project Area Design for Development Vision (August 2003) that includes proposed sidewalk widenings with corresponding reduction in the adjoining street widths (as described in Section 2.2.4.2 of the Final EIS/EIR). This section reviews the traffic impacts associated with the sidewalk widening proposals.

To accomplish this review, the results of the traffic analysis described in the previous section were reevaluated for the 2020 Cumulative conditions. For each of the analysis intersections, the weekday P.M. peak hour intersection operating conditions were examined to see if it would be possible to reduce the number of travel lanes and still maintain acceptable operating conditions

(i.e., LOS D or better). In addition, the actual configuration of the streets was investigated to identify locations where: (A), lane imbalances were present (i.e., a street with two lanes on one side of an intersection and three lanes on the other side); (B), perpendicular/diagonal parking could be converted to parallel parking; or (C), turn lanes could be converted into turn pockets. Although these changes would not result in the complete elimination of travel lanes, they would allow for wider sidewalks to be created for portions of the streets. As part of this analysis, no changes were proposed or evaluated at intersections that were projected to operate with unacceptable conditions (i.e., LOS E or F) during the weekday P.M. peak hour.

For the major vehicular corridors in the study area (such as Folsom, Howard, Fremont, First and Essex Streets), the potential to establish peak-period tow-away lanes was assessed. Since these streets accommodate substantial traffic during the morning and evening commute periods, it may be possible to eliminate travel lanes during off-peak times. As a result, the current capacity would be maintained during the weekday P.M. peak hour, and would not change the intersection operating conditions, but additional sidewalk space could be created.

In addition, the potential to extend westbound Folsom Street was assessed. Based on the projected weekday P.M. peak hour intersection operating conditions, it would be possible to extend westbound Folsom Street for two blocks (from Main Street to Fremont Street) and maintain acceptable intersection operating conditions.

Following are changes that could be made to the street network within the Transbay Area that are not anticipated to introduce new adverse traffic impacts.

***Spear Street** has two lanes southbound between Market Street and Howard Street. South of Howard Street, it widens to three lanes and continues as three lanes until Harrison Street. It would be possible eliminate a travel lane between Howard Street and Harrison Street, as long as three lanes are provided at the intersection with Harrison Street. The southbound left-turn pocket at the intersection of Spear/Harrison would need to be about 150 feet long.*

*North of Folsom Street, **Main Street** has three northbound lanes. It would be possible to narrow Main Street to two lanes at the north side of the intersection with Folsom Street, as long as three lanes were maintained at the intersection with Howard Street. The northbound left-turn pocket at the intersection of Main/Howard would need to be about 175 feet long.*

*Between Mission Street and Folsom Street, **Beale Street** has three southbound lanes. These lanes need to be maintained.*

*During the peak morning and evening commute periods, the current configuration of **Fremont and First Streets** would need to be maintained. During the off-peak hours, it would be possible to reduce the number of travel lanes on each street. As a result, peak period tow-away lanes could be established on one side of the street. A peak-period tow-away lane on Fremont Street was found not to be feasible due to the configuration of the street and the various lane requirements.*

*Between Harrison and Folsom Streets, **Essex Street** has two northbound and two southbound lanes. It would be possible to eliminate one northbound lane. In addition, it would be possible to establish a peak period tow-away lane in the southbound direction.*

*Between Main Street and The Embarcadero, **Folsom Street** has three eastbound lanes and one westbound lane. To the west of Main Street, Folsom Street has four eastbound lanes. Between Fremont Street and Main Street, it would be possible to eliminate one eastbound lane and establish a new westbound lane (an extension of the current two-way street for an additional two blocks). It should be noted that the infrastructure for this conversion to two-way traffic would be associated with the temporary terminal project.*

***Howard Street** has two lanes between Fremont Street and The Embarcadero in the eastbound direction. For this entire length, only one eastbound lane would be necessary, except at the intersection with Main Street. At this location, an eastbound left-turn pocket would need to be provided.*

5.19.5 IMPACTS ON PARKING

A portion of the existing public and private parking facilities (parking lots) in or near the existing Transbay Terminal would be eliminated as a result of the Full Build Alternative. Approximately 1,950 (14 percent of study area parking) off-street parking spaces would be eliminated, including 260 spaces within the current Transbay Terminal building. Although the Full Build Alternative would eliminate off-street parking, new land use in the Transbay Terminal Redevelopment Area would have its own parking facilities.

With the loss of parking, vehicles previously bound for the displaced parking spaces would have to park in other parking facilities nearby or the people making these trips may now chose to use transit, given the reduced availability of parking, *and enhanced accessibility of transit services.*

Based on a review of a recent parking inventory, the current study area parking supply is at approximately 85 percent capacity during the weekday-midday. As a result of the reduction in parking spaces, usage is likely to reach capacity during the weekday midday. Given the first-in first-served nature of parking, with early morning commuters able to park closer to their destination, loss of area parking would mean that vehicles arriving later would have to park f*a*rther away from their destinations or chose another mode of transportation. The permanent loss of parking could deter commuters from driving, with a probable increase in public transit use. The provision of a new multi-modal transit facility that provides improved access to locations throughout the region would serve to mitigate the adverse parking capacity impacts.

The displacement of parking spaces is not generally considered a physical environmental effect but is a social effect and an inconvenience to those who must seek other parking. The displacement of parking spaces and any resulting parking deficits are also not considered to be a permanent condition as drivers my be induced to seek and find alternative parking facilities and shift to other modes of travel.

5.19.6 NON-MOTORIZED TRAFFIC IMPACTS

This section reviews the long-term effects of Terminal/Extension Project on pedestrian and bicycle conditions in the area surrounding the Transbay Terminal. *It should be noted that the following analysis did not take into account the proposed sidewalk widenings contained in the Draft Transbay Redevelopment Project Area Design for Development Vision released by the San Francisco Redevelopment Agency in August 2003. Implementation of any or all of the proposed sidewalk widenings would result in improved pedestrian capacity and flows in the area. Thus, the following analysis reports "worst-case" conditions.*

5.19.6.1 Pedestrian Impacts

Impacts on pedestrians were evaluated by modeling peak period walk trips with and without the Terminal/Extension Project and calculating pedestrian level of service at five intersections in the vicinity of the proposed new Transbay Terminal, which is the main area of pedestrian activity associated with the project.

Baseline surveys of existing pedestrian volumes were made in spring 2001 and future (2020) volumes projected based upon the level of transit and retail/commercial/other activity anticipated in the area. Two project alternatives were considered (1) no pedestrian tunnel between the terminal and Market Street and (2) a direct underground pedestrian tunnel connecting the Caltrain platform or mezzanine area with the BART/Muni mezzanine under Market Street.

The model is the San Francisco Transportation Authority travel model, modified to include assignment of future walk trips generated by increased transit access and higher land use densities from redevelopment. The study area was divided into various analysis zones, as shown in Figure 5.19-1. The modified model predicts pedestrian trips among the analysis zones that have the potential to generate pedestrian traffic and assigns them to certain pathways along city streets and through intersections. The baseline surveys provide a measure for calibrating estimated future pedestrian volumes and movements to ensure they are reasonable.

Projected pedestrian volumes moving through a crosswalk translate to an estimate of the surface square footage available to each pedestrian and expected pedestrian flow rates (pedestrians per minute per foot). Level of service (LOS) is based upon the estimated space per pedestrian and a corresponding flow rate during the peak 15 minutes of pedestrian activity. Levels of service criteria are drawn from the Highway Capacity Manual (Transportation Research Board, Chapter 13). Similar to traffic, a pedestrian volume-to-walkway capacity relationship can be derived. A pedestrian volume to walkway capacity ratio of 0.40 to 0.28 equates to LOS C, for instance; a V/C ratio of 1.00 or higher equates to LOS F. The corresponding square footage per pedestrian under LOS F is 6 or less, and the average pedestrian flow rate is 25 or more pedestrians per minute per foot.

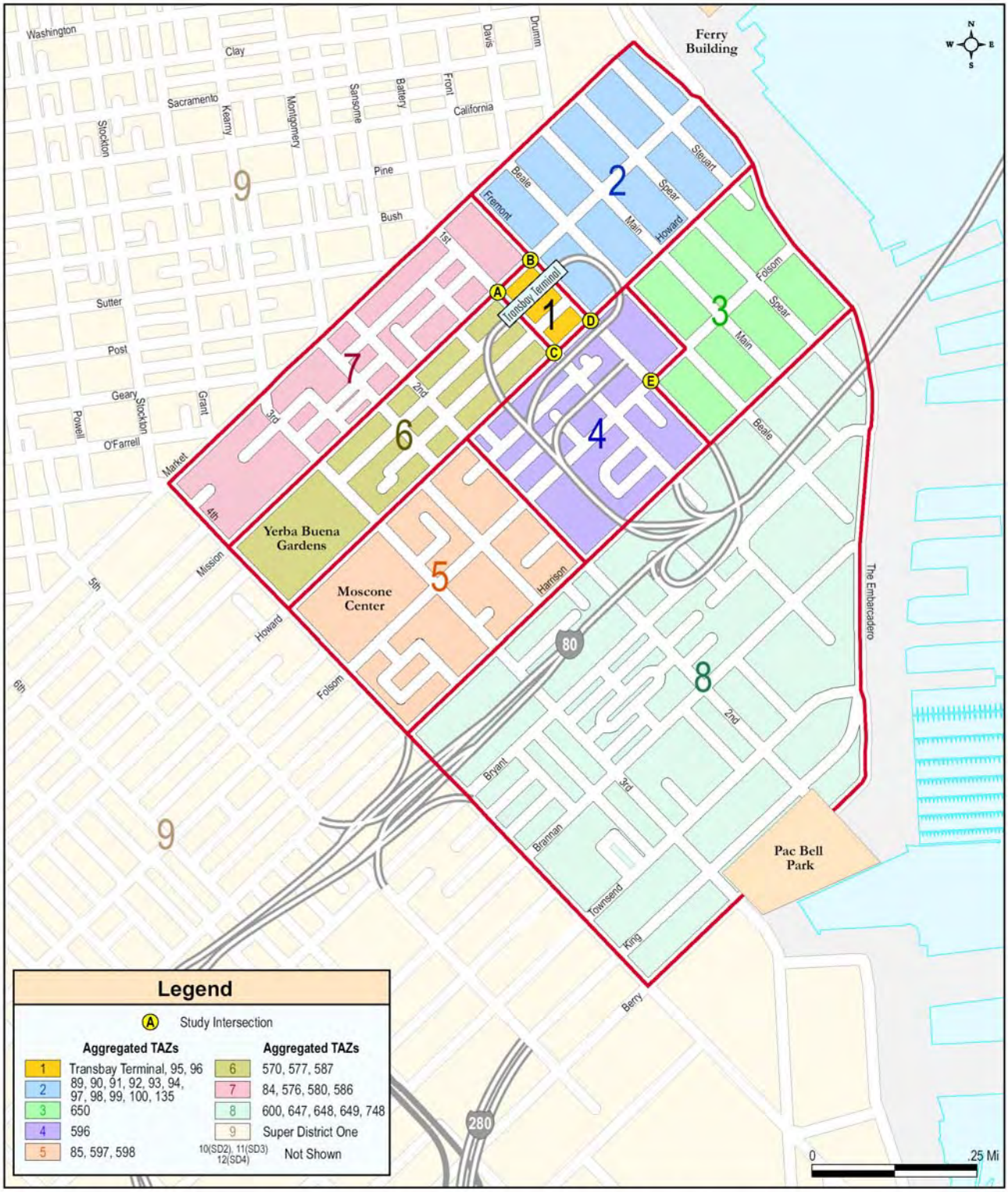


Figure 5.19-1 Aggregated TAZs used for Pedestrian/Bicycle Analysis

The five study area intersections where crosswalk LOS was evaluated are:

- Mission and First Streets
- Mission and Fremont Streets
- Howard and First Streets
- Howard and Fremont Streets
- Folsom and Beale Streets

Important parameters affecting pedestrian volumes in the study area are such items as the access mode splits for Caltrain, AC Transit and other transit riders, peak hour mode shares, increased street activity from redevelopment. Several important assumptions for the 2020 P.M. peak hour pedestrian forecasts are:

- 80 percent walk access for Caltrain riders commuting to San Francisco[39]
- 50 percent walk access for Caltrain riders reverse commuting to points south[40]
- 83 percent walk access for AC Transit riders[41]
- Substantial increases in background pedestrian traffic due to both continuing growth in the area and growth due to redevelopment.

2020 Pedestrian Volumes and LOS, Background Plus Project (Total Traffic). As a result of continuing growth in the study area and as a result of the proposed project improvements, pedestrian trips are projected to increase 59.5 percent between 2000 and 2020 in the analysis zones surrounding the Transbay Terminal. At the five individual study area intersections, where pedestrian activity or growth in activity would be concentrated, the percentage increases in pedestrian traffic during the P.M. peak hour would be substantially greater, from 300 percent to over 2000 percent, depending upon location.

All pedestrians are assumed to use surface streets to move among analysis zones, including through the five study area intersections evaluated. The total pedestrian counts for 2001 and the projected volumes under the background plus project scenario for 2020 are shown in Table 5.19-5. The volumes are for the 15-minute p.m. peak window of highest pedestrian activity.

[39] Source: Nelson\Nygaard Consulting: Based on existing mode split at the Fourth and Townsend Station (Source Parsons Transportation Group) and existing mode split at the Transbay Terminal (Source: May 2001 Transbay Terminal Patron Survey conducted by Nelson\Nygaard). Assumes that once Caltrain is extended to the Transbay Terminal, the walk split would increase from the existing condition at Fourth and Townsend to almost equal to that *of* AC Transit Transbay Terminal Patrons.

[40] Source: Based on the existing Caltrain mode splits at Fourth and Townsend Station and the assumption that the walk mode in the reverse commute direction would increase substantially if the Terminal station were moved.

[41] Source: Nelson\Nygaard Consulting, Transbay Terminal Spring 2001 patron survey.

Table 5.19-5: Pedestrian per Intersection: 2001 and 2020 Baseline Plus Project
(15-minute P.M. Peak Total Pedestrian Traffic)

Intersection	May 2001 Pedestrians	% Increase by 2020	Increase Due to Area Growth & Redevelopment	Increase Due to AC/Caltrain	2020 Total Peds/Intersection[1]
Mission & First	895	915%	8,185	454	9,534
Mission & Fremont	854	380%	3,247	141	4,243
Howard & First	228	2182%	4,967	294	5,489
Howard & Fremont	235	1765%	4,141	70	4,446
Folsom & Beale	117	839%	982	12	1,111

[1] Existing plus increase due to area growth and redevelopment and increase due to AC/Caltrain.

The percentage increases in pedestrian volumes due to area growth and redevelopment are high because they represent the change over a 20-year period. Pedestrian volumes in the area are anticipated to increase markedly with or with*out* the proposed project and additional redevelopment efforts. In addition, the current pedestrian volumes upon which the percentage change is based are quite small in many cases.

Intersection LOS. When a pedestrian arrives at a particular intersection, he or she may use a variety of combinations and crosswalks to move through the intersection. For example, at the first study intersection, Mission and First Streets, the May 2001 field survey showed that 895 pedestrians made 1,945 "movements" through the intersection. A movement is considered entering or exiting a crosswalk or turning the corner.

Pedestrian LOS accounts for all movements that pedestrians make through an intersection. Figure 5.19-2 shows pedestrian LOS associated with the pedestrian volumes and LOS summarized in Table 5.19-6. As shown, pedestrian LOS is projected to be poor, varying from LOS E to F, at four of the five intersections evaluated by 2020, with continuing growth in the area and as a result of project generated pedestrian activity.

Changes to Pedestrian LOS Due to Project Impacts Only. Not all of the increase in pedestrian activity listed in Table 5.19-6 is attributable to the Transbay Terminal/Caltrain Downtown Extension Project, including area redevelopment. A considerable increase in pedestrian movements results from area growth between 2001 and 2020.

According to output from the SFTA model, about seven percent of the increase in total pedestrian volumes by 2020 actually would be generated by the project (9,482 of 140,845 pedestrian trips among the traffic analysis zones analyzed). Following a similar methodology as that used to estimate total pedestrian trips from all sources, the impacts of just the project were estimated. Intersection pedestrian LOS was recalculated by adding Caltrain, AC Transit, and redevelopment-generated pedestrian trips to the 2001 activity level

Figure 5.19-2 Corner & Crosswalk Pedestrian Level of Service (LOS) 2020 Baseline & Project

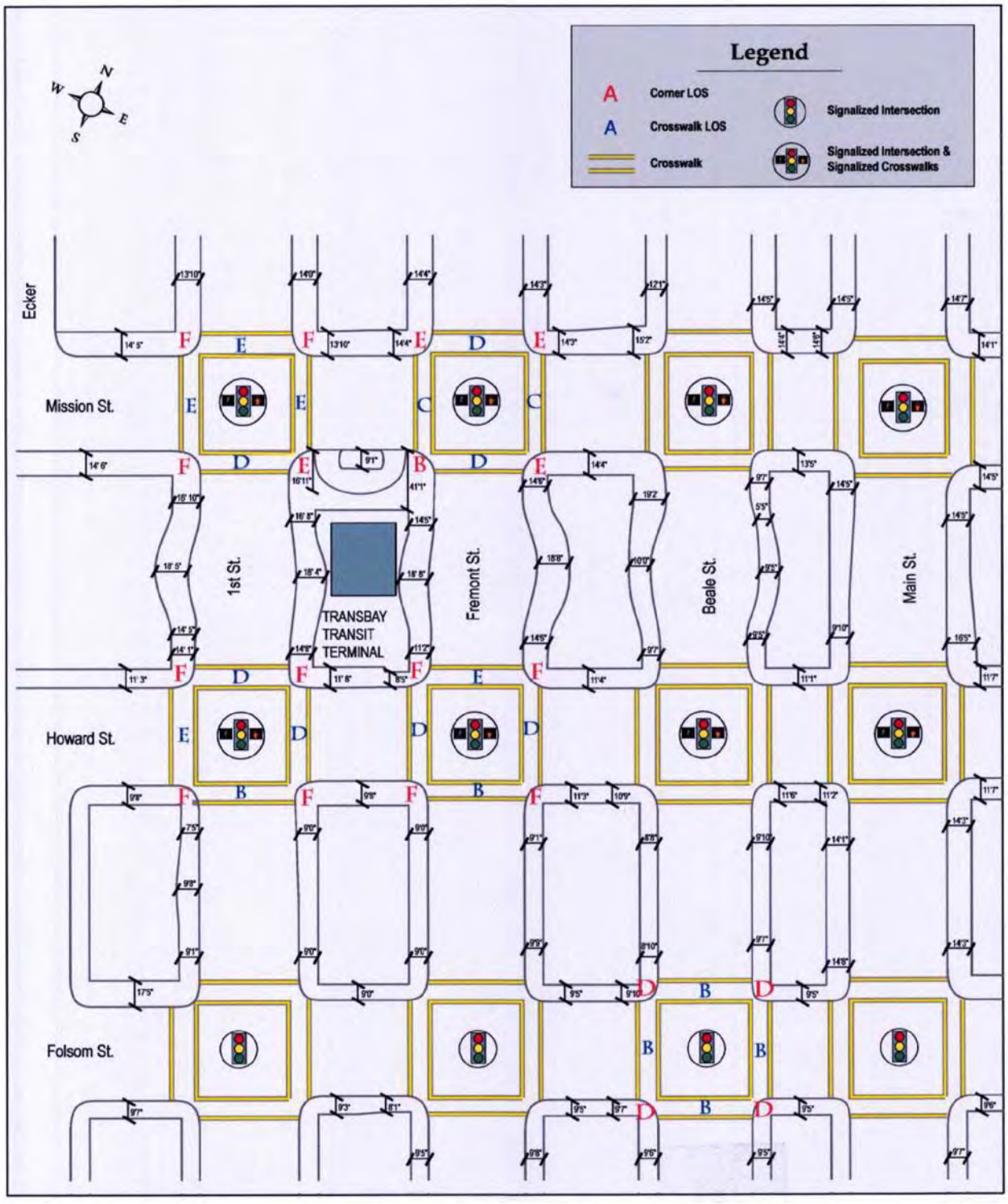


Table 5.19-6: Pedestrian LOS: P.M. Peak Conditions (Peak 15-minutes) 2020 Baseline Plus Project

Intersection	Cross-walk	Ped Space (sq ft/ped)	LOS	Surge LOS	Corner	Ped Space (sq ft/ped)	LOS
Mission & First	North	6	E	F	NW	-1.5	F
	East	12	E	E	NE	-1.2	F
	South	18	D	E	SW	4.4	F
	West	14	E	E	SE	7.9	E
Mission & Fremont	North	22	D	D	NW	6.6	E
	East	34	C	D	NE	8.7	E
	South	15	D	E	SW	42	B
	West	25	C	D	SE	8.9	E
Howard & First	North	16	D	E	NW	.47	F
	East	13	E	E	NE	4.3	F
	South	37	C	C	SW	-0.16	F
	West	13	E	E	SE	3.3	F
Howard & Fremont	North	6	E	F	NW	-2.1	F
	East	16	D	E	NE	-2.7	F
	South	43	B	C	SW	2.6	F
	West	18	D	E	SE	4.4	F
Folsom & Beale	North	73	B	B	NW	18	D
	East	114	B	B	NE	18	D
	South	49	B	B	SW	15	D
	West	53	B	B	SE	19	D

[1] Level of service (LOS) standards from Highway Capacity Manual (Chapter 13)

Design Option 1: No Pedestrian Tunnel between Transbay Terminal and Market Street. Under this design option, all pedestrians would use surface streets to move among analysis zones, including through the five study area intersections evaluated. The pedestrian volumes that would be generated by just the project, in 2020, are shown Table 5.19-7. The volumes are for the 15-minute p.m. peak window of highest pedestrian activity.

Table 5.19-7: 2020 Project Only Impacts: Increase in Pedestrian in Study Intersections (During 15-minute P.M. Peak -- No Pedestrian Tunnel)

Intersection	May 2001 Peds	% Increase Due to Project	Increase Due to Redevelopment	Increase Due to AC & Caltrain	2020 Project Peds/Intersection
Mission & First	895	118%	1,059	454	2,408
Mission & Fremont	854	74%	633	141	1,628
Howard & First	228	293%	666	294	1,188
Howard & Fremont	235	282%	662	70	967
Folsom & Beale	117	143%	168	12	297

The total number of pedestrians at each intersection in 2020 was assigned to the crosswalks and corners in proportion to existing travel patterns. Intersection LOS was calculated, as shown in Table 5.19-8 and illustrated in Figure 5.19-3.

Table 5.19-8: Pedestrian LOS: P.M. Peak Conditions (Peak 15-minutes)
2020 Project Only -- No Pedestrian Tunnel

Intersection	Cross-walk	Ped Space (sq ft/ped)	LOS	Surge LOS	Corner	Ped Space (sq ft/ped)	LOS
Mission & First	North	24	C	D	NW	12	E
	East	47	B	C	NE	9	E
	South	72	B	B	SW	34	C
	West	55	B	C	SE	36	C
Mission & Fremont	North	57	B	B	NW	24	C
	East	90	B	B	NE	30	C
	South[1]	39	**C**	**C**	SW	112	B
	West	66	B	B	SE	31	C
Howard & First	North	75	B	B	NW	19	D
	East	61	B	C	NE	34	C
	South	171	A	B	SW	16	D
	West	45	B	C	SE	27	C
Howard & Fremont	North	28	C	D	NW	14	E
	East	75	B	B	NE	17	D
	South	196	A	A	SW	50	B
	West	85	B	B	SE	31	C
Folsom & Beale	North	271	A	A	NW	81	B
	East	426	A	A	NE	81	B
	South	194	A	A	SW	62	B
	West	200	A	A	SE	86	B

[1] Under the Pedestrian Tunnel Design Option, LOS at this crosswalk would improve to LOS B. Otherwise, intersection pedestrian LOS is not anticipated to change with a pedestrian tunnel in place.

Design Option 2: Underground Pedestrian Tunnel to Market Street. The terminal and extension design alternatives allow for an optional pedestrian connection between the terminal and Muni Metro and BART, which are located one block away on Market Street. If an underground pedestrian connection to BART were included in the project, some of the *peak period* pedestrian trips in Figure 5.19-3 would be diverted *from the intersections shown in that figure. This following analysis looks at the impact of the underground tunnel on pedestrian LOS in the peak 15-minute period at the intersection of Fremont and Mission Streets.*

Assuming that many transit users of the Transbay Terminal would find the pedestrian connection underneath Fremont Street convenient just to cross Market Street away from traffic and weather, Table 5.19-9 illustrates with high and low estimates what the numbers of users might be. Those connecting to BART and Muni would make up about one-third of the total low case, or about 2,400 daily users.

Figure 5.19-3	Corner & Crosswalk Pedestrian Level of Service (LOS) 2020 Project

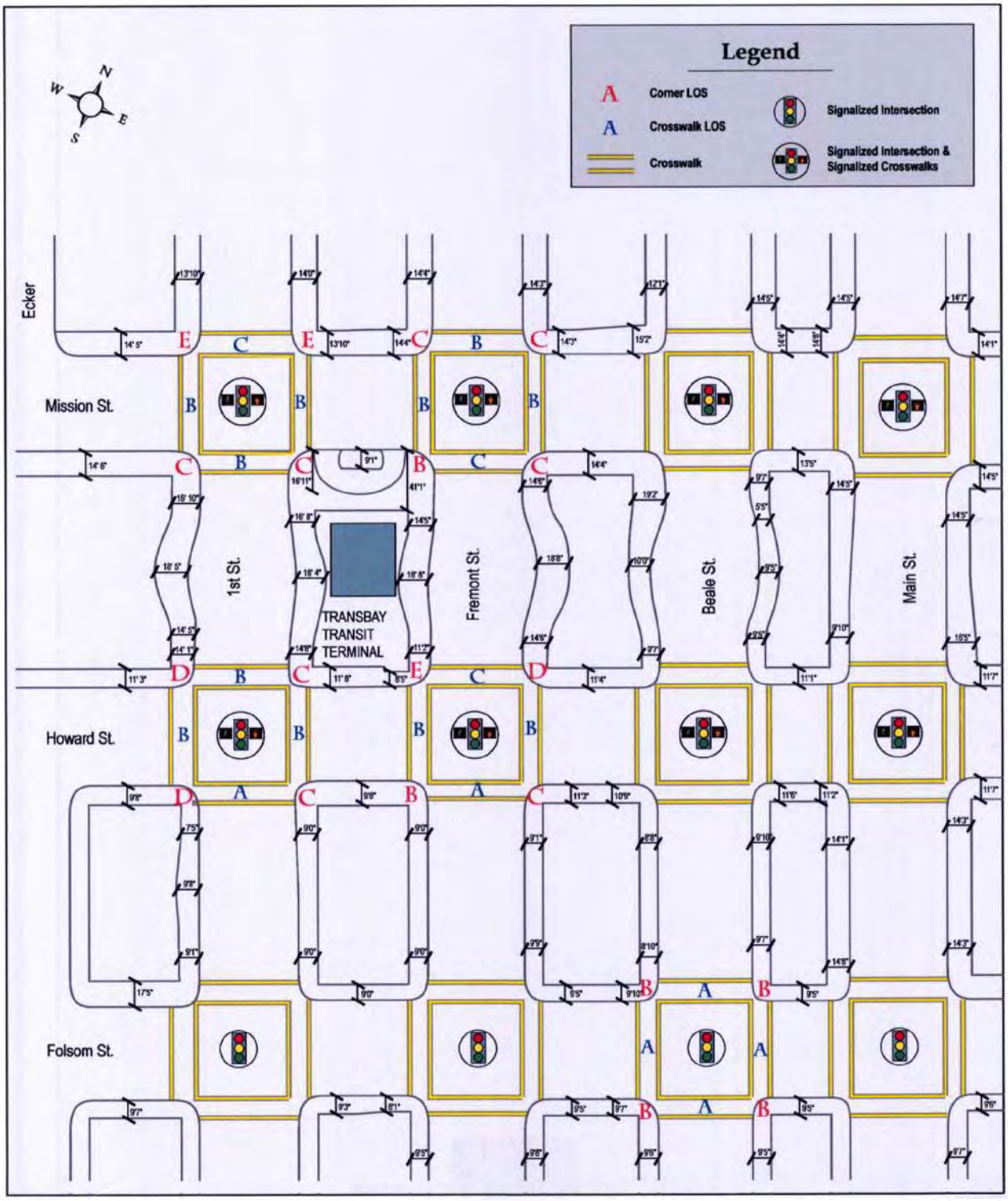


Table 5.19-9: Potential Daily Users of the Proposed Fremont Street Pedestrian Tunnel

Case	*High-Speed Rail*	*Caltrain*	*AC Transit*	*Total*
Low Estimate	*2,300*	*3,400*	*2,400*	*8,100*
High Estimate	*4,700*	*6,800*	*5,400*	*16,900*

Note: Assumes range of 10% (low) to 25% (high) of transit passengers using the tunnel to cross Market Street in addition to those connecting with BART or Muni Metro.
Source: Parsons Corporation, September 2003.

- **Pedestrian Travel Due to Redevelopment.**

Pedestrians traveling between analysis zones immediately surrounding the terminal were not anticipated to travel underground for one block of their journey. A small amount of pedestrian traffic generated by redevelopment in the Transbay Terminal area might, however, use the underground connection to grain access to BART *or* Muni Metro. The propensity for these people to use the underground connection is limited since either their origin or destination would be above ground. *As a result, in the peak 15-minute period, only one pedestrian trip is expected to be diverted from the Fremont & Mission intersection.*[42]

- **Pedestrian Travel Due to Increased AC Transit Ridership.**

AC Transit riders traveling between the Transbay Terminal and analysis zones to the north of Market Street *could use* the underground connection, *but the* propensity for these people to use the connection is limited since AC Transit buses arrive above ground and destinations are also above ground. *For AC Transit riders transferring to BART and Muni Metro, however,* it is assumed that 50 percent would use the underground connection.[43] *The combined impact of transfers and those using the underground passageway to walk between AC Transit and areas north of Market Street is estimated to divert 52 pedestrian trips from the Fremont & Mission intersection during the 15-minute peak period.*[44] The May 2001 Terminal Patron Survey showed that, of the 1,078 AC Transit patrons surveyed, 11 patrons (one percent) transferred between AC Transit and BART, and 42 (about four percent) transferred between AC Transit and Muni Metro.

[42] SFTA model projections for 2020 Baseline + Project conditions = 472 peak period pedestrian trips between the Transbay Terminal and north of Market Street. Assuming 25% travel through Fremont & Mission, and 10% use underground connection = 1 trip.

[43] Because AC Transit riders would enter the terminal above ground, it is assumed that one-half would make the connection on surface streets and one-half would use the tunnel.

[44] AC Transit projections show 5,469 peak hour AC Transit riders in 2020. Assuming 83% access the terminal as pedestrians = 1,531 ped trips in the peak 15-minute period. The SFTA model predicts 44.5% of pedestrians traveling from/to the terminal will be from/going to north of Market Street = 566 pedestrians. Assuming 25% walk through Fremont & Mission and 10% use the underground connection = 14 pedestrian trips. 1% of the peak 15-minute AC Transit trips are estimated to transfer to BART. Assuming 50% use underground walkway = 7 ped trips. 4% of the peak 15-minute AC Transit trips are estimated to transfer to BART. Assuming 50% use underground walkway = 31 ped trips.

- **Pedestrian Travel Due to Caltrain Ridership**

Those traveling between the train level at the Transbay Terminal and analysis zones to the north of Market Street might use the underground connection, given that the passageway would be on the same level as the Caltrain mezzanine. *In addition, it* is expected that two percent of Caltrain riders would transfer between Caltrain and BART in downtown San Francisco and that all transferring riders would use the underground connection. It is also expected that three percent of Caltrain riders would transfer between Caltrain and Muni Metro in downtown San Francisco and that all transferring riders would use the underground passageway. *The combined impact of transfers and those walking between Caltrain and areas north is estimated to divert 55 pedestrian trips from the Fremont & Mission intersection during the 15-minute peak period.*[45]

A total of 108 pedestrian trips are expected to be diverted from the Fremont and Mission Streets intersection *during the 15-minute peak period.* The pedestrian LOS impacts *would* not change at this intersection under any future scenario except for 2020 Project Only Impacts. The south crosswalk would improve from LOS C to LOS B.

- **Other Pedestrian Conditions**

Under the West Ramp Alternative, a street-level bus boarding area would be located between Fremont and Beale Streets. Muni bus lines 2/3, 5, 6/7, 38 and 38L and Golden *Gate* Transit basic bus service lines 20, 30, 50, 80 and 90 would use the street-level boarding area. The Muni buses listed currently board and alight on the "hump" area in front of the terminal, while the Golden Gate Transit lines currently board along Mission and Fremont Streets. As a result of the project, more pedestrians would have to cross Fremont Street to reach the street-level bus boarding area. About 100 buses would pull out of this area between approximately 5:00 p.m. and 7:00 p.m.

To facilitate transit access between the bus boarding area and Fremont Street, the Terminal/Extension Project designs include a new traffic signal on Fremont Street between Mission and Howard Streets. This signal would be located just south of the terminal and may also include a full stop phase to facilitate pedestrian flows crossing Fremont Street.

Pedestrian Mitigation Measures. Under the 2020 Baseline plus Terminal/Extension Project condition, eleven corners and two crosswalks fall to pedestrian Level of Service F. Isolating the *P*roject *O*nly impacts from the 2020 Baseline plus Project condition indicates that the project itself does not cause the level F conditions. The lowest pedestrian levels of service associated with the project occur at First and Mission Streets where two corners fall to LOS E, and at Howard and Fremont Streets where one corner falls to LOS E.

[45] 548 15-minute peak Caltrain-generated pedestrian trips. If 44.5% travel from the terminal to north of Market Street and 25% of those walk through the Fremont & Mission intersection, and if 25% of those use underground tunnel, this equals 15 ped trips. There are 785 predicted peak 15-minute total Caltrain trips. Of these, 2% (16 trips) are expected to transfer to/from BART and 3% (24 trips) are expected to transfer to/from Muni, all of which would use the underground connection.

Pedestrian mitigation measures that can be considered include:

- Preventing narrowing of sidewalks through future construction;

- Using future construction or redevelopment as opportunities to increase building set-backs thereby increasing sidewalk widths. Particular areas where such widening is most needed include:

    - The southeast corner of Fremont and Missions Streets,
    - The northeast corner of First and Missions Streets,
    - The north side of Mission Street between First and Fremont, and
    - Sidewalks south of Howard Street along Folsom, First, Fremont, and Beale that are less than 10 feet wide;

- Ensuring that Transbay Terminal design increases corner and sidewalk widths at the four intersections immediately surrounding the Transbay Terminal;

- Eliminating or reducing sidewalk street furniture on corners, such as newspaper boxes and magazine racks. For example, sidewalk furniture on the four corners of Mission and First currently reduces effective corner space, blocks pedestrian movements, and/or exacerbates space issues associated with bus queuing;

- Re-timing traffic light signalization. This could improve pedestrian levels of service at each of the intersections studies that fall into LOS F;

- Providing cross-walk count-down signals. This would be most valuable at the intersections and cross-walks immediately surrounding the terminal, especially since pedestrians are more likely to dash on a flashing hand when trying to catch a bus or train;

- Providing lights within crosswalks *to warn* when pedestrians are present in the crosswalk, such as at the cross-walk associated with the mid-block bus loading area, and

- Providing crosswalk signalization at intersections where they do not exist already, such as Folsom and Beale Streets.

5.19.6.2 Bicycle Impacts

Bicycle traffic growth with and without the project was estimated by comparing existing bicycle volumes, obtained from field surveys, with estimated volumes for the 2020 Baseline plus the Transbay Terminal/Caltrain Downtown Extension Project condition and the 2020 Project condition.

While there is no standard for determining bicycle *l*evels of *s*ervice, the increase in bicycle traffic was estimated between existing conditions, the 2020 Baseline plus Project, and the 2020 Project Only conditions. The estimate was based on the San Francisco County Transportation Authority's transportation model outputs showing bicycle traffic between the analysis zones, assuming full Transbay Terminal Project build-out and redevelopment. The bicycles added to the street due to increased AC Transit ridership and Caltrain ridership were also estimated.

The estimates show that peak bicycle traffic at the five study intersections could increase substantially over the next twenty years. It was estimated that up to 425 bicycle trips could travel through the five study intersections in the 15-minute peak window under the 2020 Baseline plus Project condition and 290 under the 2020 Project condition compared to a total of 45 counted in the Spring of 2001. It should be noted, however, that there is no standard for determining bicycle level of service.

Some Caltrain riders are projected to ride bicycles between Caltrain and their ultimate destinations. It is estimated that the new terminal will attract about 6,800 primary-direction, peak period commuters (traveling inbound to the Transbay Terminal in the a.m.) and about 3,125 reverse-direction, peak-period commuters (traveling outbound from the Transbay Terminal in the a.m.).

Existing data on bike usage of Caltrain passengers at the Fourth and Townsend Station indicates that approximately 5 percent of primary-direction, peak period commuters and 15 percent of reverse-direction, peak period commuters use a bicycle as part of their total commute trip.

Assuming these same proportions of bike trips to and from the new Transbay Terminal, it is estimated that there will be 340 primary-direction bike/Caltrain commuters and 469 reverse-direction bike/Caltrain commuters. However, not all of these commuters will require bike parking at the Transbay Terminal. Assuming that 20% of the primary-direction commuters and 35% of the reverse direction commuters require bike parking, a total of 232 bicycle storage spaces would be needed.

The San Francisco Department of Parking and Traffic is considering an extension of the Howard Street bike lane (that currently runs between Fifth and Eleventh streets) to Fremont Street and the provision of a new bike lane on Second Street. The addition of these lanes would improve the quality and comfort of bicycling in the area around the Transbay Terminal.

5.20 CONSTRUCTION STAGING AND METHODS

Project construction activities that would occur with the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project would not occur for the No-Project Alternative. Even though project construction activity would be relatively short-term and geographically limited, potential construction impacts were an important factor in the selection of the proposed alternatives considered in this DEIS/DEIR.

For example, the Tunneling Option for the Caltrain Extension was evaluated in part due to its reduced impacts on adjoining land uses during construction. Tunneling in lieu of cut-and-cover could be used for that portion of the alignment with underlying rock geologic formations. These formations occur along the alignment from approximate*ly* Station 51+00 (Townsend and Third Streets) to Station 81+00 (Second and Folsom Streets).

Since construction impacts of the project are of concern to the community, this section describes the proposed construction process and methods. Section 5.21 describes potential impacts and mitigation measures for construction.

This section divides the construction process into several steps based upon the type of construction and when it would occur. Section 5.20.1 summarizes preconstruction activities. Section 5.20.2 summarizes construction activities.

5.20.1 PRE-CONSTRUCTION ACTIVITIES

A summary of preconstruction activities is provided in Table 5.20-1 and discussed individually in the following.

Table 5.20-1: Pre-construction Activities -- Caltrain Extension

- Undertake Detailed Geotechnical Investigation
- Prepare Final Design and Construction Contracts
- Prepare Vehicular and Pedestrian Traffic Control/Detour Plans
- Undertake Building Data Survey
- Undertake Pre-Construction Business Survey
- Establish Construction-Related Community Information / Outreach Program
- Acquire Property and Easements:
    - Easements involve specific parcels along: Seventh, Townsend, Stanford, Second, Colin P. Kelly, Brannan, DeBoom, Federal Way, Bryant, Tehama, Howard, and Natoma
    - Full acquisitions include properties along Brannan, Howard, Natoma, Minna, Tehama, Beale, and the existing Transbay Terminal Site

***Preliminary Engineering*, Development of Construction Contracts, and Final Design**. During *preliminary engineering and* final design, detailed design elements of the Transbay Terminal and Caltrain Downtown Extension would be developed, reflecting, among other subjects, final geotechnical investigations. *Construction contract packaging will be determined as part of the Preliminary Engineering activities.* As part of the final design, *t*he TJPA and the JPB would work with property owners planning to build new structures adjacent to the proposed Project components to integrate construction of the Caltrain project with construction of the private structures to reduce Project construction impacts.

Vehicular and Pedestrian Traffic Plans. Construction of the Project would temporarily interfere with the normal flow of traffic, causing some lanes and streets to be closed to vehicles

for various durations. Some streets would be subject to lane and temporary closures as summarized in Table 5.20-2. During final design, street traffic control plans would be developed in cooperation with Caltrans, the City/County of San Francisco (DPT, police and fire departments, and Muni) to accommodate required pedestrian and traffic movements. To the extent practical, traffic lanes would be maintained in the appropriate directions, particularly during peak traffic hours.

Table 5.20-2: Street Closures During Construction

Townsend Street (Fifth to Clarence Place). Cut-and-cover construction would be progressed on a block by block basis, so approximately one block would be affected at a time. There would be no on-street parking during construction of a particular block. A limited *number* of complete closures to all traffic would occur during cut-and-cover construction until a temporary street deck is placed over the subway construction. A limited *number* of complete closures *are* also required for removal of the deck and reconstruction of the roadway. Cross street traffic would also be subject to limited closures. Eight business driveways would be *affected* by the closures. If tunneling construction is chosen for a portion of the alignment it would begin on Townsend Street just east of Third Street. The temporary decking installed for the cut-and-cover construction in the area of the beginning of the tunnel would remain in place until tunneling was completed. A limited number of complete closures would then be required for removal of the decking and pavement reconstruction.
Clarence Place (Between Townsend and Brannan) For both cut-and-cover and tunneling construction alternatives the south end of this block would be completely closed for limited times while construction on Townsend Street, east of Third Street, occurs.
Stanford Street (Between Townsend and Brannan) For the cut-and-cover construction alternative, the south end of this block would be completely closed during construction of the line segment for this block. During construction, access from Brannan would remain available**.** This street would not be *affected* by the tunneling alternative.
Second Street (Brannan to Howard). For the Cut-and-Cover Option, construction would be progressed on an approximate block-by-block basis, so approximately one block would be affected at a time. There would be no on-street parking during construction. A limited *number* of complete closures to all traffic would occur during cut-and-cover construction until a temporary street deck is placed over the subway construction. A limited *number* of complete closures *would* also *be* required for removal of deck and reconstruction of the roadway. Cross street traffic would also be subject to limited closures. Eight (8) business driveways and three (3) residential driveways *would be affected*. Temporary alternative access would be required to maintain access to dead end streets at De Boom, Federal, Dow Place, and Tehama. Temporary access would be provided through easements across through private property such as parking lots. For the Tunneling Option, there would be very limited impacts to streets. It is anticipated that tunneling would progress from two locations in this segment, midway between Brannan and Bryant, and just south of Folsom. At these locations vertical shafts will be constructed and temporary decking installed. A limited *number* of complete closures would be required during construction of the vertical shafts and placement of temporary decking. A limited amount of on-street parking will be lost during tunneling operations. Traffic would be maintained throughout tunnel construction. A limited *number* of complete closures would be required for removal of the temporary decks and pavement reconstruction.
Natoma Street (Between First and Second) During construction of the Transbay Terminal this street would be subject to temporary closure for this portion of its alignment.

Table 5.20-2: Street Closures During Construction
First Street (Between Howard and Mission) During construction of the Transbay Terminal this street would be subject to limited closures while temporary bridging was installed to allow for subterranean construction under the road.
Minna Street (Between First and Second) During construction of the Transbay Terminal this street would be subject to temporary closure for this portion of its alignment.
Fremont Street (Between Howard and Mission) During construction of the Transbay Terminal this street would be subject to limited closures while temporary bridging was installed to allow for subterranean construction under the road.
Beale Street (Between Howard and Mission) During construction of the Transbay Terminal the street would be subject to limited closures while temporary bridging was installed to allow for subterranean construction under the road.
Main Street (From Just South of Bryant to Howard) Construction would be progressed on an approximate block-by-block basis, so approximately one block would be affected at a time. There would be no on-street parking during construction of each block. A limited *number* of complete closures to all traffic would occur during cut-and-cover construction until a temporary street deck is placed over the subway construction. A limited n*umber* of complete closures would also be required for removal of the temporary deck and reconstruction of the roadway. Cross street traffic would also be subject to limited closures. Eight (8) business driveways would be *affected* by the closures.
Mission Street (Beale to The Embarcadero) Construction would be progressed block by block, so approximately only one block would be affected at a time. There would be no on-street parking during construction of each block. A limited *number* of complete closures to all traffic would occur during cut-and-cover construction until a temporary street deck is placed over the subway construction. A limited *number* of complete closure*s would* also *be* required for removal of *the* deck and reconstruction of the roadway. Cross street traffic would also be subject to limited closures. Four (4) business driveways would be *affected* by the closures.
First, Fremont and Beale Streets (Between Howard and Folsom) Temporary night time closures would be required for construction of the temporary and permanent access ramps to the permanent and temporary bus terminals. Some limited amount of on-street parking would be lost during construction activities.
Howard, Tehama, Clementina, Folsom and Harrison Streets (Between First and Second) Temporary night time closures would be required for construction of the permanent access ramps to the Transbay Terminal. Some limited amount of on-street parking would be lost during construction activities.
Essex (Between Folsom and Harrison) Some on-street parking would be temporarily eliminated during construction of the permanent access ramps to the Transbay Terminal.

Building Data Survey. A pre-construction structural survey would be completed to determine the integrity of existing buildings adjacent to and over the proposed extension. This survey would be used to finalize detailed construction techniques along the alignment and as the baseline for monitoring construction impacts during and following construction. During construction, the TJPA and JPB would monitor adjacent buildings for movement and, if movement is detected, take immediate action to control the movement.

Detailed Geotechnical Investigation. During final design, additional sampling (drilling and core samples) and analyses of subsurface soil/rock conditions would be used to detail and finalize the excavation and its support system to be used in the retained cut, cut-and-cover and tunnel portions of the extension. Current data, including subsurface sampling conducted in 1995 and 1996 for the 1997 Caltrain DEIS/DEIR have been used to identify the proposed construction techniques presented in the following sections, which form the basis for the impact analysis that follows in Section 5.21.

Pre-Construction Business Survey. Prior to construction, the TJPA and JPB would contact and interview individual businesses along the alignment to gather information and develop an understanding of how these businesses carry out their work. This survey would identify business usage, delivery/shipping patterns, and critical times of the day or year for business activities. The survey would assist in: (a) the identification of possible techniques during construction to maintain critical business activities, (b) the analysis of alternative access routes for customers and deliveries to these businesses, (c) the development of traffic control and detour plans, and (d) the final determination of construction practices.

Establishment of Construction Community Information/Outreach Program. A community construction coordination program would be established to provide on-going dialogue *among* the TJPA, the JPB and the affected community regarding construction impacts and possible mitigation/solutions. The program would include dedicated personnel, including an outreach office in the construction area, to deal with construction coordination. An important element of this program would be the dissemination of information in a timely manner regarding anticipated construction activities.

Land and Easement Acquisition. Properties would need to be acquired prior to construction of the project. In addition, property easements would be obtained for those properties above the proposed tunnel portion. See Section 5.2 for a complete discussion of these acquisitions, including a review of relocation assistance that would be provided.

5.20.2 CONSTRUCTION ACTIVITIES

Types, location, and lengths of construction activities that would occur for the Project are provided in Table 5.20-3 and are discussed below.

Underground Utility Relocation. To the extent possible the Caltrain extension has been located to avoid conflicts with the space occupied by major utilities. In certain instances, the positioning of the alignment, station, and ancillary facilities would require that conflicting utilities be relocated. Relocation of utilities to a new permanent location so that they would not be affected by alignment or station construction would generally be performed prior to construction of the extension. Construction equipment typically required for utility relocation and restoration includes: excavator/backhoes, trenchers, trucks, cranes and generator/compressors. Cement trucks, pavers, rollers, and power compactors are typically required for street restoration.

Table 5.20-3: Construction Activities

Construction Activities	Location	Length in Feet
Relocate Utility Lines	See Section 5.12 – Utilities	Not Applicable
Demolish Buildings	As required along Townsend, Stanford, *Second*, Howard, and Streets. Also station platforms and maintenance buildings at current Caltrain San Francisco Station and Yard.	Not Applicable
Construct Temporary Bus Terminal and Access Ramps	Needed to facilitate construction of the permanent Transbay Bus Terminal. See Chapter 2 of this EIS/EIR *for* location of proposed facilities.	Not Applicable
Construct New San Francisco Yard Support Tracks	Within the existing JPB right of way between Common Street and 16th Avenue.	1,550
Construct New Fourth and Townsend Station Tracks, Platforms *and Ancillary Facilities*	Within the existing JPB right of way and San Francisco Yard, from Seventh to Fourth Street.	3,000
Construct Retained-Cut Section	In existing San Francisco Yard between Common and Fifth Streets along Seventh and Townsend Streets.	1,850
Construct Cut-and-Cover Section *and Ancillary Facilities*	**Cut-and-Cover Option – Both Alternatives:** Along Townsend Street from between Fifth and Fourth Streets up to Second Street. Along Second Street to Howard Street. From Howard Street into the Transbay Terminal.	3,550
	Second-to-Main Alternative: From Transbay Terminal along Main Street to just south of Harrison Street.	2,050
	Second-to-Mission Alternative: From Transbay Terminal along Mission St., ending just before The Embarcadero.	1,450
Tunnel Option	Construction of tunnel *and ancillary facilities* from Townsend Street starting just east of Third Street, crossing under Stanford Street and entering Second Street at Brannan Street, continuing up Second Street to Folsom Street.	3,000
Construct New Transbay Terminal, *Ancillary Facilities*, and Permanent Access Ramps	See Chapter 2 of this EIS/EIR for description of the alternatives for the permanent Transbay Terminal and Access Ramps.	1,300
Construct Permanent Offsite Bus Storage and Access Ramps	Needed for permanent current Transbay Bus Terminal operations. See Chapter 2 of this EIS/EIR for a description of these permanent facilities.	Not Applicable.
Reconstruct Streets	**San Francisco Yard to Transbay Terminal Corridor (Cut and Cover Option):** Along Townsend St. from between Fifth and Fourth Streets up between Third and Second Streets. Along Second Street from Brannan St. to Howard St. A portion of Howard Street between Second and First Streets	5,250
	Main St. Alignment Cut and Cover Option: From Transbay Terminal along Main Street from Howard to just south of Harrison St.	1,450

Table 5.20-3: Construction Activities

Construction Activities	Location	Length in Feet
	Mission Alignment Cut and Cover Option: From Transbay Terminal along Mission St., ending just before The Embarcadero.	1,300
	San Francisco Yard to Transbay Terminal Corridor Cut-and-Cover and Tunneling Options: Tunneling a portion of the alignment would reduce the amount of street reconstruction. Tunneling would start on Townsend Street just east of Third Street, then would go under the buildings located in the block at the corner of Townsend and Second Streets. The tunnel would then extend down Second Street to Folsom Street.	3,180

Utilities, such as high-pressure water mains and gas lines, that are not to be permanently relocated away from the work site, would be temporarily removed from the construction area. For these relocations, no or very brief disruption (less than a day) could occur to utility service. The utilities would be relocated temporarily at the early stages of construction and reset in essentially their original locations during the final backfilling above the construction.

Utilities within the subsurface construction area that do not need to be relocated, either permanently or temporarily, would be uncovered during the early stages of excavation. These buried utilities, with the possible exception of sewers, are generally found within several feet of the street surface. They would be reinforced, if necessary, and supported during construction by hanging from support beams spanning across the excavation.

If tunneling is used for a portion of the alignment, utility issues would be eliminated in those areas.

Building Demolition. The Caltrain Downtown Extension alignment has been selected to minimize, to the extent possible, impacts on adjoining buildings and on the communities through which it passes. Still, for cut-and-cover construction methods, some properties would have to be acquired and the structures on these properties demolished. No building demolitions would be required in areas where the Tunneling Option is constructed.

Equipment typically involved in demolition includes: crawler cranes, crawler dozer/loaders, pavement breakers, rubber-tired loader/bob cats, trucks, excavator/backhoes, generator/ compressors, and water trucks for dust control.

Building Underpinning. Where the Tunneling Option is applied, existing buildings above the tunnel alignment would be underpinned. This underpinning would support the building in case of a partial tunnel collapse during construction. Equipment typically involved in underpinning includes: specialized pile drivers, air compressors, pneumatic tools such as jack hammers, front end loaders and dump trucks.

Surface Rail Line and Station Construction. Both Caltrain Extension Alternatives would require removal and reconstruction of the existing yard tracks at the Fourth and Townsend Station including the removal and reconstruction of station platforms and the removal of existing maintenance buildings. Track removal and reconstruction would begin just north of Sixteenth Street and end at the existing station at Fourth Street. This work would provide the required track connections and yard space for the new mainlines crossing through the existing yard as they descend into the alignment proceeding down Townsend Street. This work would occur immediately after mobilization.

Equipment used for removal of existing rail and platform and building improvements and construction of new track and station improvements include: crawler dozer/loaders, surface graders, rubber-tired loaders/bob cats, compactors, generators/compressors, rollers, small cranes, excavators/backhoes, trucks, concrete trucks, railroad track-laying equipment, welding machines, and water trucks for dust control

Retained Cut Section. Prior to entering the subterranean subway section near *Fifth* Street, the new extension main track alignments would transition from surface to subsurface in a retained cut (depressed section) portion of the alignment (Station 12+50 to 31+00). This would occur in the existing San Francisco Yard between 7th Street (near Berry Street) and Townsend Street (near *Fifth* Street). Immediately adjacent to these main track alignments, in the area bounded by the corner of *Seventh* and Townsend Streets, is a fully depressed area that will accommodate yard tracks. This depressed yard area will also be part of a retained cut section.

General Approach to Temporary and Permanent Structures. A temporary structural support system is required to retain the cut during excavation of material. After excavation this temporary system will be incorporated into the permanent retained cut structure.

Temporary Structures and Excavation. This area of the project involves soft soils, including extensive deposits of soft Bay Mud and liquefiable fills. Due to the significant lateral loads expected from these soils on the retained cut side walls, horizontal support would be required. Temporary struts and rakers would be installed at various levels as excavation proceeds.

Rigid and impermeable cut off would be used for the temporary side walls. The most economical method for building the cut-off walls is the Deep Mixing Method (DMM). This produces a wall commonly referred to as a soil cement wall. This method involves mixing of cement slurry with in-situ soil to construct a continuous and practically impermeable wall made up of individual columns. Each column is structurally reinforced with vertical steel beams that are inserted into the soil-cement mix while the mix is still fluid (i.e., before it sets and hardens). Such walls have the advantage that they are competitive economically, they minimize the risk for adverse impacts associated with ground deformations during excavation, and eliminate the need for costly dewatering.

A specialized auger (Figure 5.20-1) is used in this process. This construction technique involves some displacement of soil (25-30 percent), which bubbles out of the auger hole onto the ground. This soil, which is mixed with the cement, would be left to harden and then be removed by truck.

The soil cement walls are typically constructed to extend deep and tie into an impermeable layer below the base of the planned excavation so that under seepage into the excavation can be minimized. The soil-cement walls would be used not only for temporary excavation support but also for permanent groundwater cutoff, a critical concern in this area where high ground water levels are anticipated. Figure 5.20-2 shows the drilling of auger holes and the creation of a soil cement wall.

Equipment used for installation of soil-cement walls typically includes: a soil-mix wall rig for in situ soil mixing (see Figures 5.20-1 and 5.20-2), a soil-mix wall batch plant for grout preparation, a crane for installation of soldier piles, back hoe, rubber tired loaders and trucks.

After the cut-off walls have been constructed, excavation would proceed from top down. The walls of the depressed yard area excavation would be supported with rakers and struts. Rakers would consist of heavy steel pipes. The first level of rakers is usually installed at a shallow depth. The excavation would then progress sequentially, and would not extend more than two to three feet below the level of the next required raker support, until the rakers are in place and secure. For the depths of excavation contemplated, three to four levels of supports are anticipated in the vertical plane. The walls of the adjacent depressed mainline track corridor would be strutted near the existing ground line for the deeper cut sections with heavy steel pipes. Groundwater within the excavation would be collected in sumps and pumped to a settling basin before it is disposed in accordance with applicable regulations.

Permanent Structure Installation. After excavation is complete piles would be driven through out the bottom of the retained cut areas. These are required for the support of the permanent bottom slab. After piles are driven then the bottom slab would be constructed. The interior face of the soil cement piles would be removed to expose the flange of the steel pile. Steel shear connectors would be welded to the flange and reinforced concrete fascia wall would be cast against the steel piles to form the permanent side walls of the retained cut section. Interior support columns would be constructed next followed by permanent strut systems. A top slab would be constructed last over the depressed yard area. The strut and slab system over the depressed yard area would be used for parking or useable yard area.

Equipment typically used for permanent subway structure construction includes: cranes, concrete trucks, trucks, concrete pumps, welding machines, generator/compressors, rubber-tired loader/bobcat and fork lift.

Cut-And-Cover Construction. Cut-and-cover construction would be used from near *Fifth* Street at Station 31+00 to the west end to the Transbay Terminal at approximate*ly* Station 90+50, and from the east end of the terminal at approximate*ly* Station 104+50 to the end of the line at 122+95 (Main Street Alternative). An alternative tunneling construction method is proposed as an alternative for a portion of this alignment from Station 51+00 to 81+00. This alternative method is described below and shown in Figure 5.20-3. In addition the Transbay Terminal will be constructed using similar methods to cut and cover and this is also described below.



Figure 5.20-1: Soil Cement Wall Augers In Use

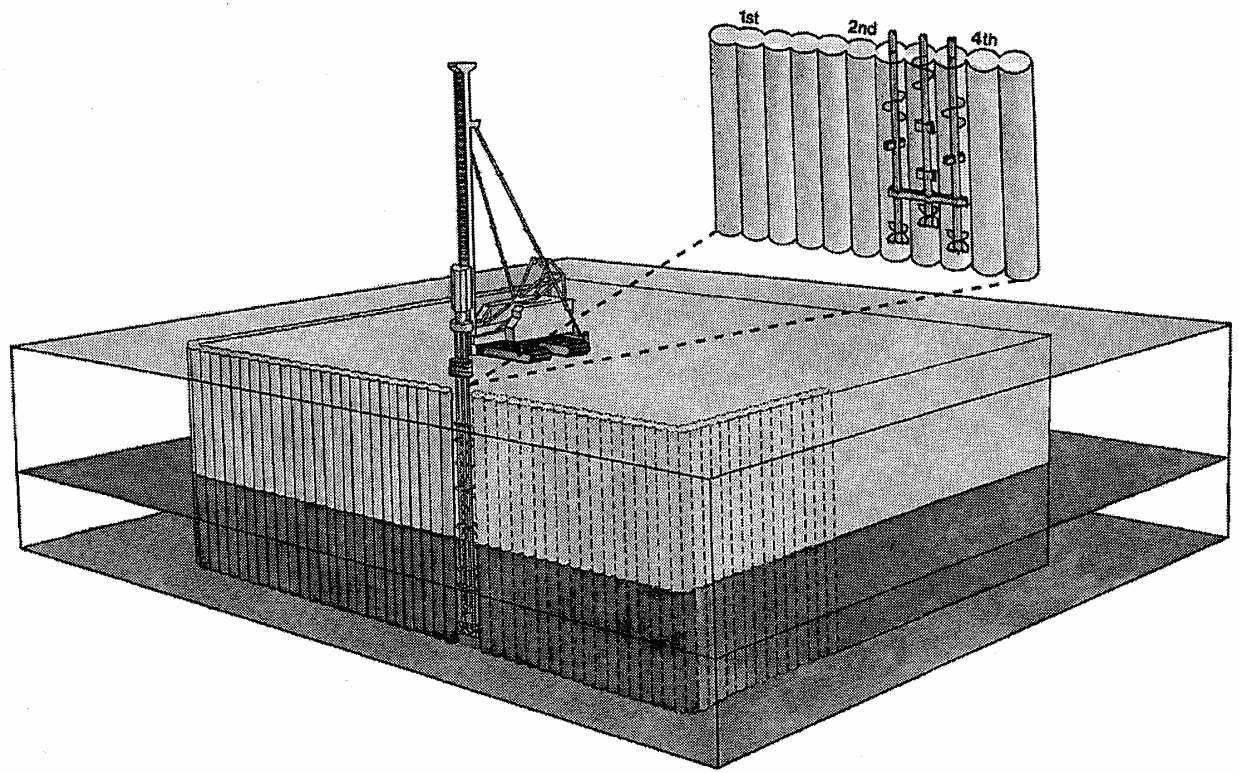


Figure 5.20-2:Column Construction for Soil Cement Walls

Support of Adjacent Structures. The first step in cut-and-cover construction is to assure support for foundations of buildings adjacent to the excavation. Underpinning of buildings adjacent to the cut-and-cover sections is not anticipated at this point. Instead, control of potential movement of adjacent structures is proposed to be accomplished by use of excavation support systems, which, in conjunction with proper excavation and bracing or tie-back procedures, can serve as protection for the adjacent structures. This is common practice for the Bay Area and was successfully used for the Muni Metro Turnaround project at the east end of Market Street.

The excavation support system currently proposed for this project is described in the following sections. During construction, adjacent buildings would be monitored for movement and, if movement is detected, take immediate action to control the movement.

General Approach to Temporary and Permanent Structures. The same approach will be followed as with retained cut construction wherein the temporary structure will be incorporated into the permanent structure. One exception will be in the area of the Transbay Terminal. The Transbay Terminal construction will construct separate temporary and permanent structures as described below.

Temporary Structures and Excavation. The methods of excavation support vary with the ground conditions. The cut and cover alignment can be divided into three segments: (1) areas where the ground consists predominantly of soft soils with high groundwater conditions (along Townsend Street east of *Fifth* Street); (2) areas where the subsurface soils consist of stiff clays and/or dense sands (all remaining areas not described in segments 1 & 3); and (3) areas where the excavation will be in rock (along *Second* Street between Brannan and Folsom and along Main Street between Folsom and Harrison). The temporary support and structure systems that would be used within each of these three areas are described below

Excavations in Soft Soils/Stiff Clays/Dense Sands – Excavation support and excavation in these soils will be the similar to that for the retained cut work in that soil cement walls would first be constructed. Prior to excavation deck beams and temporary decking would be installed at the top of the proposed excavation as described below. The deck beams and temporary deck maintain vehicular traffic during construction. After temporary decking is installed, excavation would proceed from top down. The walls of the excavation would be supported with internal struts or ground anchors (tie-backs) as excavation proceeds.

The use of tie-backs is preferred over internal struts because they provide more of an unobstructed work area for excavation. Tie-backs, however, are not suitable for use in soft soils. In soft soils internal struts would be used. Tie-backs would be used in stiff clays and dense sands.

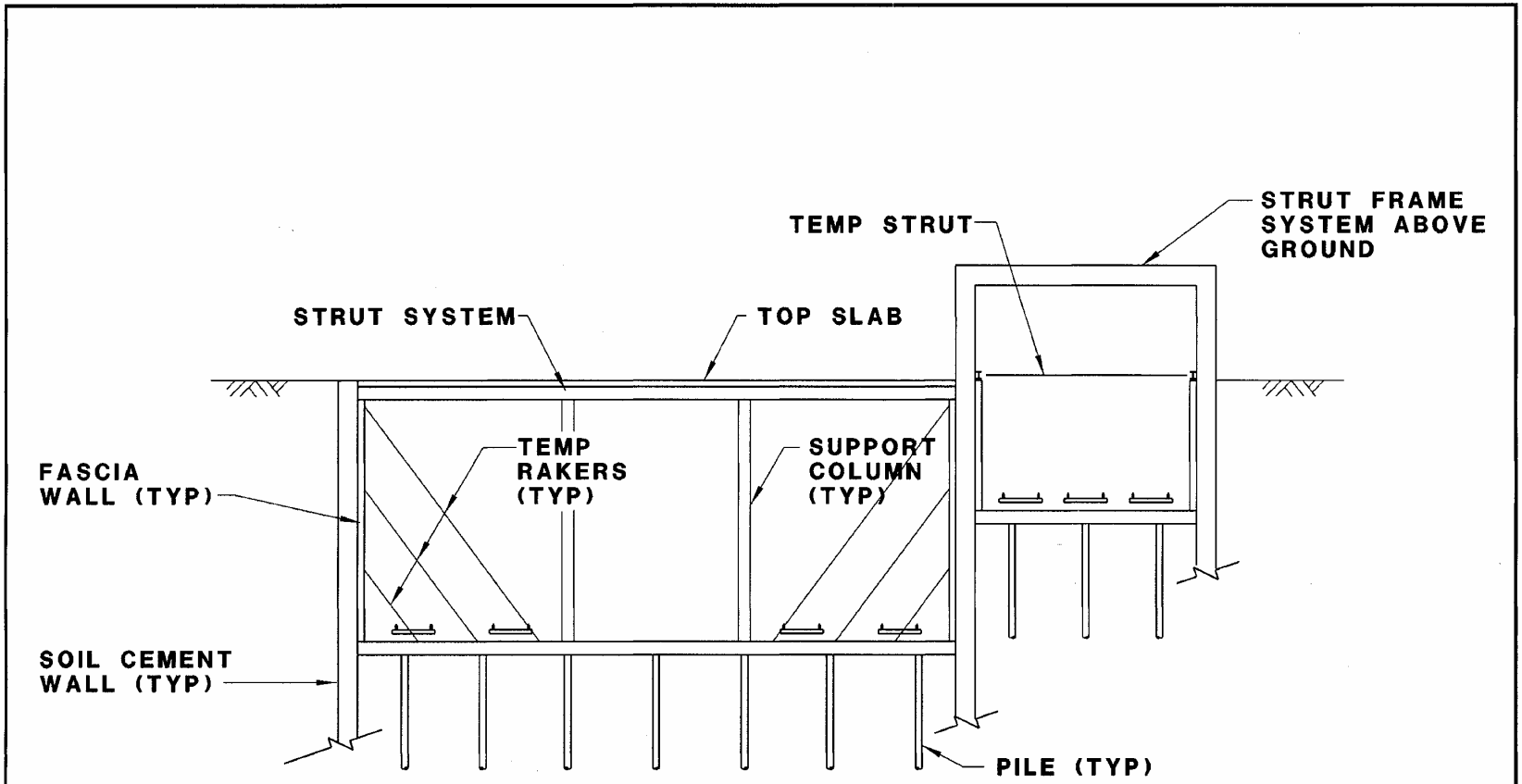


Figure 5.20-3:Retained Cut Construction

In those locations tie-backs would be drilled from inside the excavation and could extend between 50 and 75 feet back from the face of excavation. The tie-backs consist of drilling a small diameter (5 to 6 inches) hole, installing the anchorage element, and filling the hole with grout. During the drilling process, the hole would be supported with steel casing to avoid caving of the ground, which can cause undesirable settlements. After the grout ha*d* gained sufficient strength, the anchors would be stressed and secured against the excavation walls.

Because tie-backs would extend outside the excavation limits, and in many cases extend under existing structures along the project alignment, installation of tie-backs would require permission from the owners of the adjacent structures to install the temporary tie-backs under their property. This is a normal process and usually the necessary agreements between the project owner and the property can be negotiated.
Internal struts, if used, would consist of heavy steel pipes spaced every 15 to 18 feet horizontally and 10 to 12 feet vertically.

The excavation progresses sequentially, and does not extend more than two to three feet below the level of each horizontal support (tie-back or strut), until the supporting struts are in place and secure. For the depths of excavation contemplated for the downtown extension project, three to four levels of struts are anticipated. Groundwater within the excavation is collected in sumps and pumped to a settling basin before it is disposed in accordance with applicable regulations.

Excavations in Rock - The Deep Mixing Method is not suitable in areas where rock is encountered. The most likely method of excavation support is to use cast in drilled hole (CIDH) piles spaced 8 to 10 feet along the alignment. The piles are constructed by using an auger to drill a hole (approximately 36” in diameter for this project) to a depth of 5 to 10 feet below bottom of permanent subway structure. Steel columns are then set in the holes and encased in concrete. The exposed rock in the spaces between the piles is sprayed with shotcrete to hold the rock in place.

After the CIDH piles have been installed along both sides of the excavations, deck beams and temporary decking is installed as described below. Excavation then progresses in stages from top down. Lateral support for the excavation would be provided using either internal struts or rock anchors. Rock anchors are generally preferred over internal struts because they provide an unobstructed area in the excavation. This makes operation of excavation equipment much easier than if struts were present. Rock anchors would be spaced about 10 foot horizontally and 14 foot vertically.

Excavation of the rock would be carried out, most likely using heavy excavating and ripping equipment. Where hard rock is encountered, blasting may be required. However, given the condition of the rock in the study area, which is highly fractured and weathered, blasting, if required, is anticipated to be minimal.

Dewatering from inside the excavation would be required. *T*he quantities of seepage should be small enough to be manageable with interior sumps and pumps. It is anticipated that predraining using deep wells will not be effective in the Franciscan rock formation to be encountered.

The equipment required for installing excavation support and for excavation is identified in the Retained-Cut section above.

Temporary Decking Installation. Temporary roadway decking would be installed in progressive stages over the proposed cut. Prior to beginning of excavation of the cut, lateral trenches would be excavated across the alignment from one sidewall to the other to permit installation of deck beams. These trenches are generally excavated during the nighttime and covered to permit normal traffic flow during the day. When a sufficient number of deck beams have been installed, a shallow excavation of approximately eight feet in between the deck beams is made. This excavation is designed to uncover buried utilities and to provide room for continuing the excavation after the temporary decking is erected.

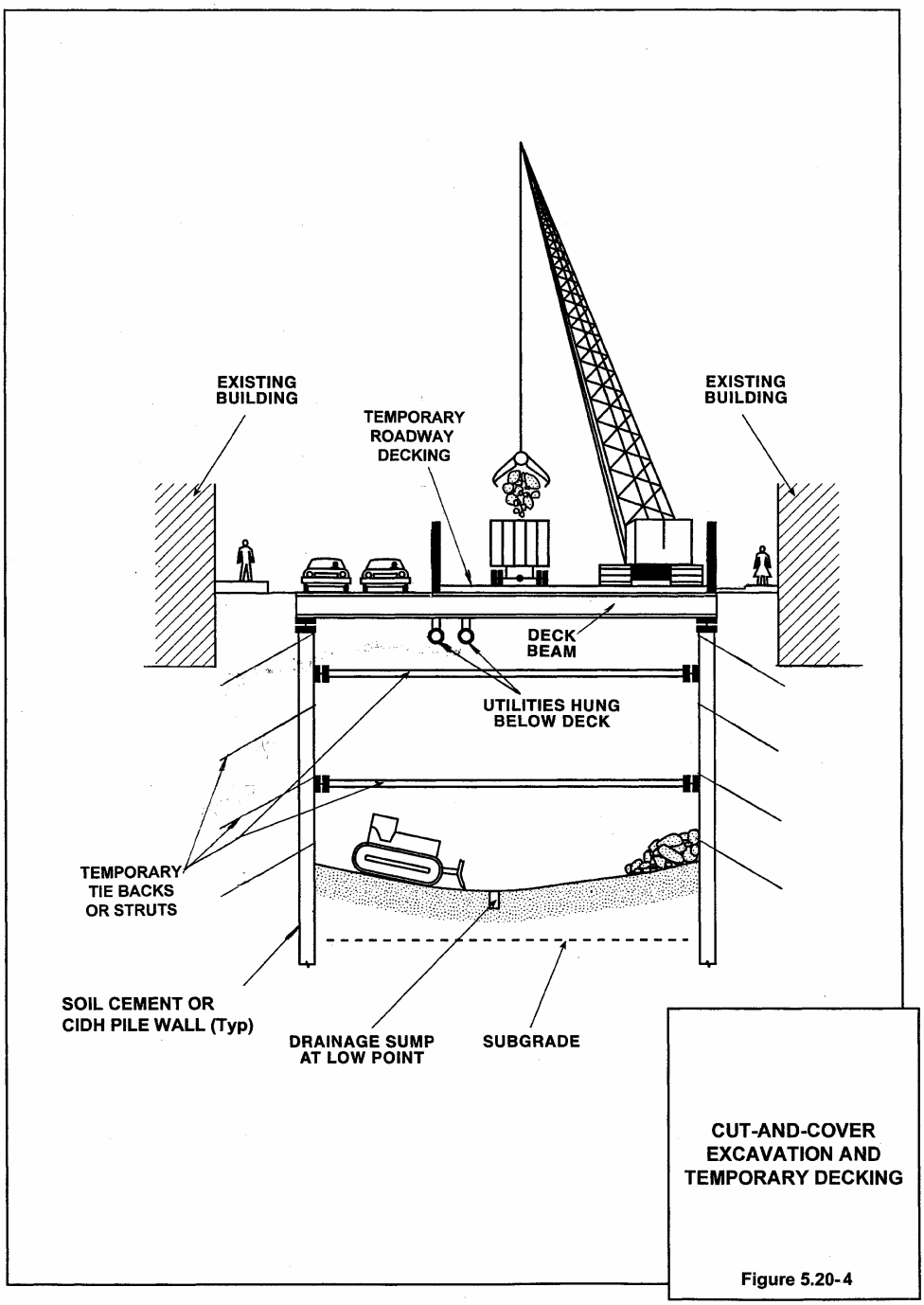
As deck beams are installed, the utilities that can remain in the trench area (e.g., telephone, traffic, electric) would be cradled, picked up, and hung from the deck beams. Sewer lines may exist at this shallow depth and likewise would be hung from the deck beams during the initial excavation stage. Utilities located deeper would be uncovered fully after additional depth of excavation had been accomplished. Sometimes heavy utilities such as large sewer pipes are supported by an auxiliary set of beams spanning between the side walls rather than hanging them from the deck beams. When utilities cannot be relocated outside the excavation or when they are being moved, there is a small chance of damage during excavation, causing a utility outage that can last for a few minutes to a few days. Most of the risk of hitting utilities is caused by actual utility locations being different from those shown on construction drawings. Utility service will be returned as quickly as possible after an outage.

Decking is then placed on top of the deck beams. It is proposed that the decking be set flush with the existing street and sidewalk levels. Roadway traffic can then be restored while excavation will proceed underneath. Figure 5.20-4 illustrates the cut-and-cover excavation and decking process. Decking at cross-streets would be installed in stages to allow at least half of the existing traffic lanes to be maintained. After installation of the deck, full cross-street traffic could be maintained for the duration of construction.

Equipment typically used for decking, excavation, and bracing includes: crawler dozer/loader, water pump, rubber-tired loader/bob cat, pavement breaker, excavator/backhoe, conveyer system, truck, crane, generator/compressor, and fork lift.

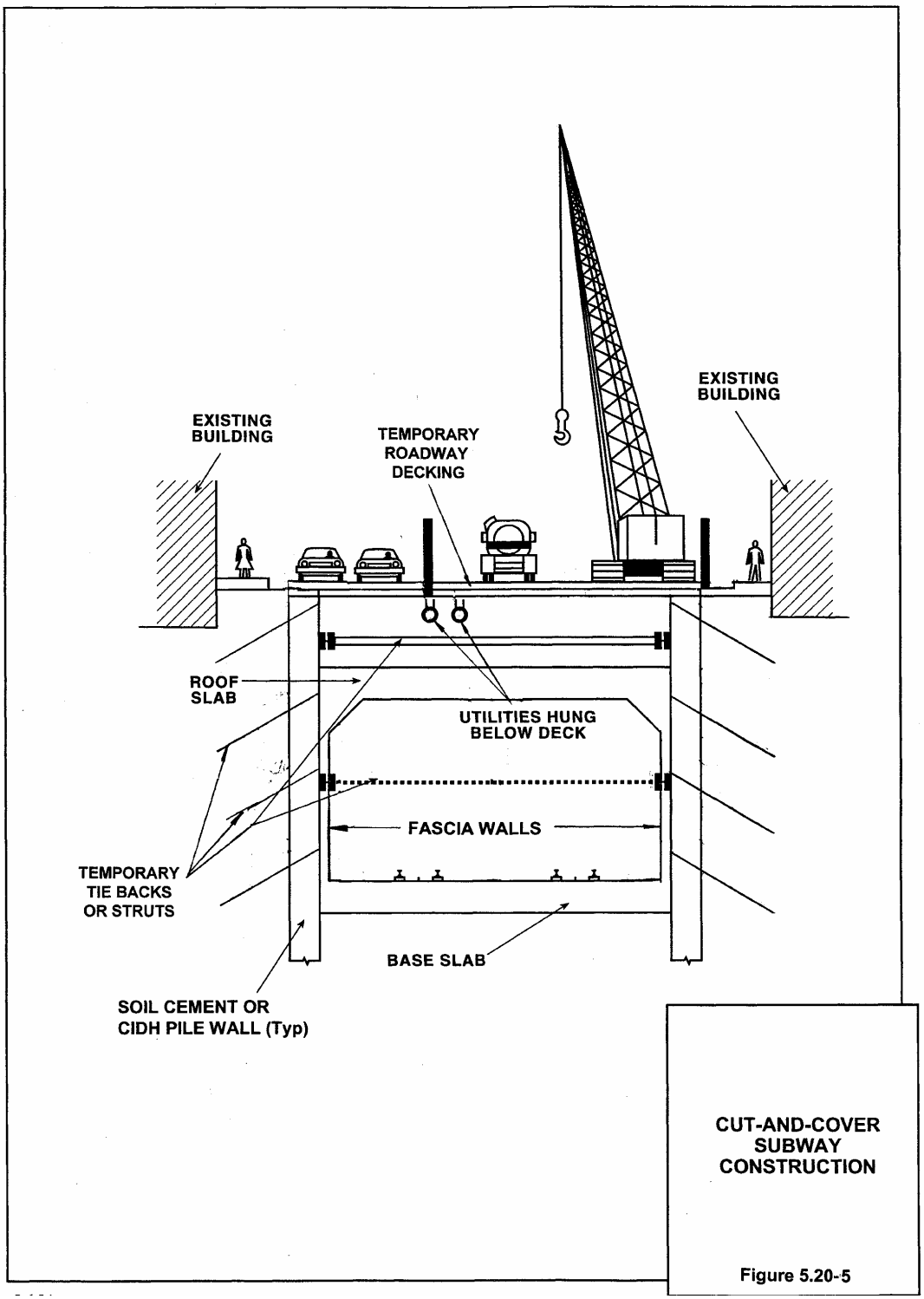
Permanent Structure Installation and Backfill. After completion of excavation the permanent subway structure would be constructed. In the areas of soft ground encountering Bay Mud, piles would be driven to support the base slab of the permanent structure, followed by construction of the base slab itself. In other locations where the soils under the base slab are more suitable, the base slab would be poured on grade. After the base slab is constructed the vertical fascia walls would be constructed starting at the bottom and proceeding up. The internal struts are removed one by one as the walls of the box structure are raised. The concrete encasement on the internal face of the CIDH piles would be removed back to the face of the steel column. Steel shear connectors would be welded to the column and a reinforced concrete fascia wall would be cast

against the steel columns to act together to form the permanent sidewalls. In the deeper cut sections intermediate level permanent struts constructed of reinforced concrete would be installed between the sidewalls to provide permanent lateral support. Also in wider cuts intermediate columns would be constructed to support the top slab. A top slab constructed of reinforced concrete would be installed last following by backfilling of 8 to 10 feet of earth fill. Road reconstruction would then occur on top of this backfill. Figure 5.20-5 illustrates installation of the permanent subway structure.



CUT-AND-COVER EXCAVATION AND TEMPORARY DECKING

Figure 5.20-4



Equipment typically used for permanent subway structure construction includes: cranes, concrete trucks, trucks, concrete pumps, welding machines, generator/compressors, rubber-tired loader/bobcat and fork lift.

Alternative Tunnel Construction. The use of tunneling methods *i*s an alternative to cut-and-cover construction in areas of rock formations. Core drillings were taken in the corridor in 1996, and the rock was identified as "fractured rock." A panel of experts[46] recommended that a "specialized tunneling" technique known as "spiling" be used in this rock. Because the proposed Caltrain Extension Alternatives Tunneling Option includes a larger tunnel (three tracks instead of two) than was proposed in 1996 and passes under historic structures, a tunneling technique known as "*stacked* drift" is now proposed. Due to the poor nature of the rock quality and the large clear spans required for the tunnel structure, this special tunneling method would be employed to minimize the risk of cave-ins during construction. The Tunneling Option is proposed for Station 51+00 (Townsend Street just east of Third Street) to Station 81+00 (Second and Folsom Streets).

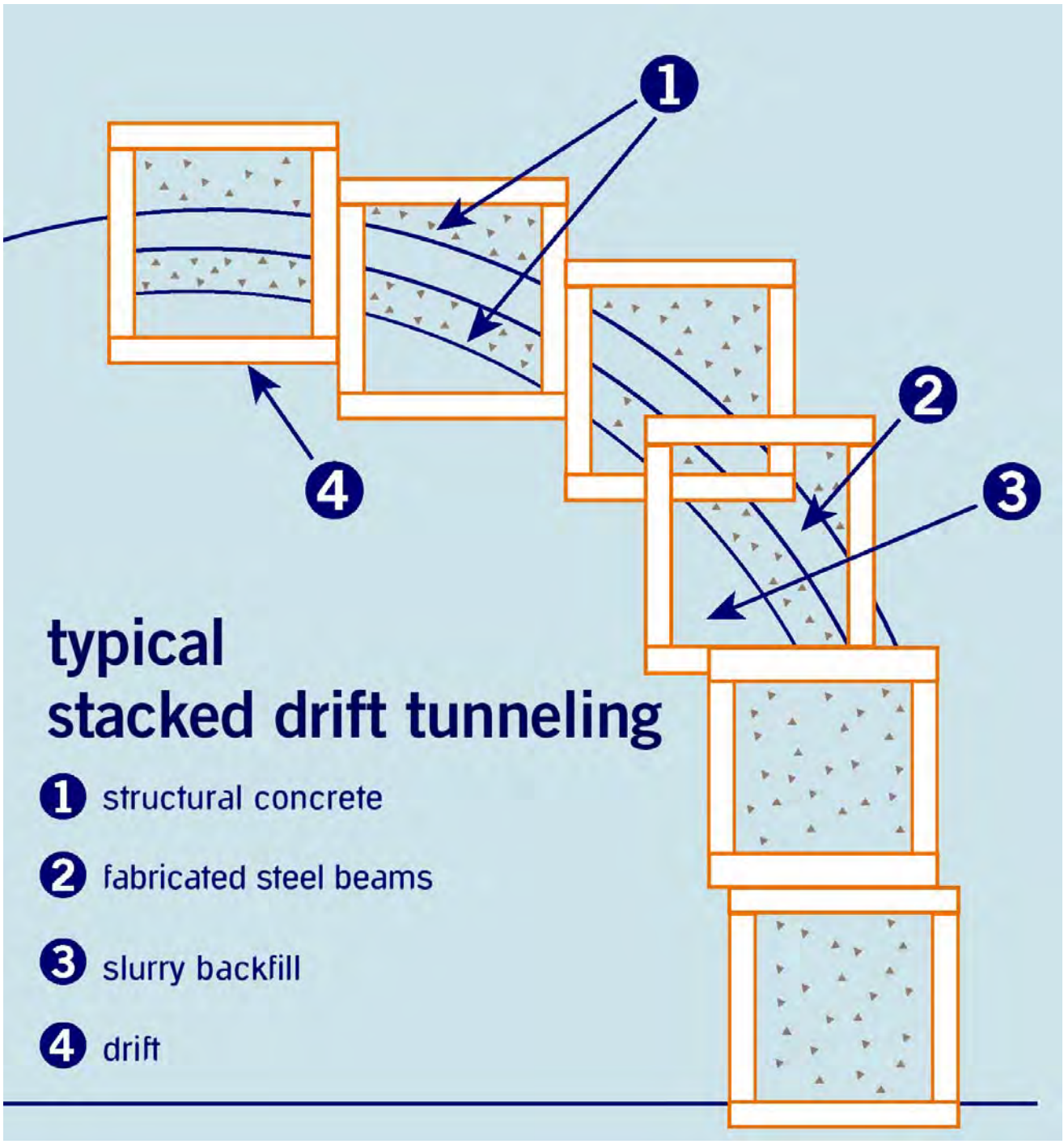
A series of contiguous drifts approximately nine feet wide and about nine feet tall would be constructed around the perimeter of the tunnel sidewalls and roof, starting from the invert and moving towards the crown of the tunnel. (See Figure 5.20-6).

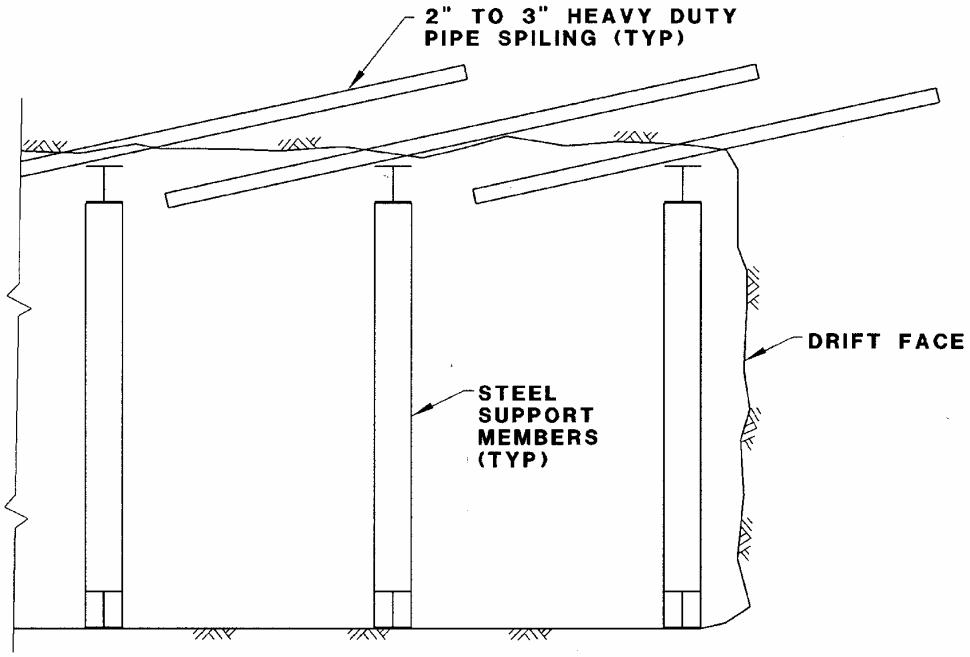
The individual drifts would be excavated by hand mining methods, using spiling as required, to maintain stability of the roof, and using steel support members in combination with timber lagging to support the walls and stabilize the tunnel (see Figure 5.20-7). Once a drift is completed, a specially fabricated segmented ring support beam would be installed in the drift and encased in concrete. Steel reinforcement would be provided to develop the necessary strength. The portion of the drift that will eventually become part of the final tunnel excavation would be filled with slurry concrete that can be easily excavated during tunnel excavation to expose the ring beam and tunnel lining.

After construction of the tunnel support system (concrete encased ring beam), the tunnel itself is excavated in stages using a top heading and a bench. Road headers and other suitable excavating equipment can be used to excavate the rock cavern within the already constructed ring beam. Because the rock is viable, some limited blasting may be required. Access to the tunnel's construction would be from either end and from a vertical access shaft near *Second and Brannan Streets.* From the midpoint access construction of the tunnel would proceed in either direction to speed construction of the tunnel to meet schedule demands. These three access points would be used for equipment and labor access and for egress of excavated material.

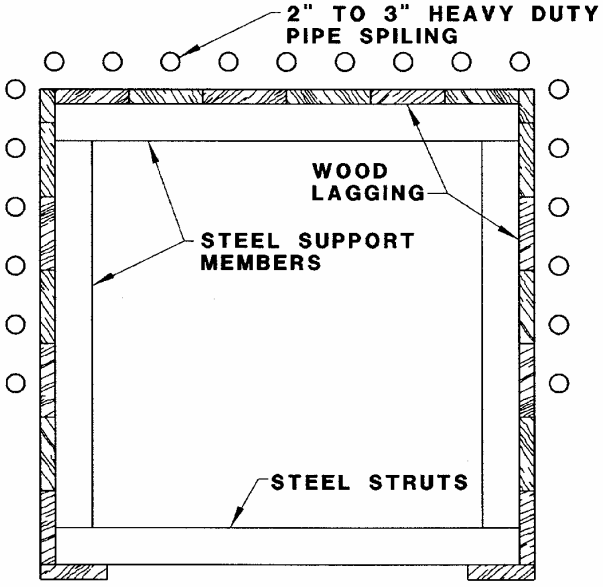
[46] The panel included *P*rofessor Thomas D. O'Rourke of Cornell University, Professor Tor L. Brekke of the University of California, Berkeley, and Mr. Norman A. Nadel, of Nadel Associates, Brewster, New York. The Panel was chaired by Demetrious Koutsoftas, URS, San Francisco, who has extensive experience with development and tunnel projects in the Project Area and a substantial knowledgeable regarding the Project area's geology.

Figure 5.20-6: Stacked Drift Tunnel Construction





ELEVATION



SECTION

Figure 5.20-7: Typical Tunnel Drift Construction

Equipment used for tunnel construction includes: rubber tired front end loader/bobcats, air compressors, generators/compressors, pneumatic tools, fork lifts, dump trucks, small rubber tired cranes.

Transbay Terminal and Related Facilities Construction. Transbay Terminal construction would be very similar to cut-and-cover and retained cut construction methods as it will also make use of soil cement walls and ground anchors. *I*t will differ in that the soil cement walls will be used *only* in the temporary condition. The permanent terminal structure will be constructed inside the soil cement walls as an independent structure. After the permanent structure is constructed the temporary soil cement walls and ground anchors are abandoned in place. After the soil cement walls are constructed then excavation would proceed from top down. Excavation would not proceed more than two to three feet below the level of the next required level of ground anchors until they were installed.

Related Temporary and Permanent Facilities. There are proposed facilities to be constructed in the general area south of the Transbay Terminal that provides for the operation of temporary and permanent bus service. These facilities include the following:

- Permanent Transbay Terminal and Access Ramps
- Temporary Transbay Terminal
- Permanent Offsite Bus Storage and Access Ramps

All bus access ramps would be aerial structures most likely constructed of reinforced concrete. In areas with shallow underlying rock, the foundations would be concrete spread footings. In softer underlying soils, pile supported foundations would be constructed. Falsework would be required to support the forms for constructing the elevated structures. Falsework would span over existing roadways to be kept them open during construction.

The temporary Transbay Terminal and permanent offsite bus storage areas are simple facilities constructed on existing grades. Existing minor improvements on these sites would be removed and the sites graded for the new improvements. New improvements would consist mainly of paving for bus storage or travel ways. In the temporary terminal pedestrian platforms and walkway areas would be constructed along with some with canopy shelters.

Equipment for construction of these facilities would include: pile drivers, trucks, dump trucks, air compressors, graders, front end loaders, excavators, backhoes, and small rubber tired cranes.

Quantity of Excavated Materials. Table 5.20-4 identifies the estimated number of cubic yards of material to be removed during construction of the track corridor alignment and Transbay Terminal. Excavation quantities for the other related projects to the Transbay Terminal can be considered as negligible in comparison to the below quantities.

Table 5.20-4: Estimated Amounts of Excavation Materials

Construction Site Location	Estimated Cubic Yards [a]
Second-to-Main Alternative (Retained Cut, Cut and Cover)	
Ex. Yard and Townsend Street	729,400
Second Street to Transbay Terminal	*999,000*
Transbay Terminal	658,100
Transbay Terminal to End	322,200
Total	***2,708,700***
Second to Mission Alternative (Retained Cut, Cut and Cover)	
Ex. Yard and Townsend Street	729,400
Second Street to Transbay Terminal	999,000
Transbay Terminal	658,100
Transbay Terminal to End	486,800
Total	**2,873,300**
Second-to-Main Alternative (Retained Cut, Cut & Cover, Tunneling)	
Ex. Yard and Townsend Street	729,400
Tunnel from Townsend to Second Street at Folsom Street	*336,000*
Second Street at Folsom Street to Transbay Terminal	301,300
Transbay Terminal	658,100
Transbay Terminal to End	322,200
Total	***2,347,000***
Second-to-Mission Alternative (Retained Cut, Cut & Cover, Tunneling)	
Ex. Yard and Townsend Street	729,400
Tunnel from Townsend to Second Street at Folsom Street	*336,000*
Second Street at Folsom Street to Transbay Terminal	301,300
Transbay Terminal	658,100
Transbay Terminal to End	486,800
Total	***2,511,600***

Note: [a] This column includes an estimated 1.15 expansion factor for soil and 1.5 expansion factor for rock and demolished concrete due to bulking upon excavation/demolition.

Street Reconstruction. To fully restore permanent street traffic, temporary decking would be removed, the remainder of cut-and-cover sections would be backfilled, permanent utility restoration would occur, and the permanent street improvements would be installed. With restoration of roadway pavement and vehicular traffic, the surface work on the project would be completed and continuing activity involving subway finishes and equipment installations (e.g., installation of tracks, power, signals, and communication systems) could continue beneath the surface with minimal disruption to street use by vehicles and pedestrians.

Equipment typically used for street reconstruction includes: rubber-tired loaders/ bobcat, roller/ compactors, dump trucks, and paving machines.

5.20.3 CONTRACTOR WORK AREAS

Contractor work areas (or construction staging areas) would be needed for the surface, retained cut, and cut-and-cover construction segments of the proposed extension. Following are the proposed contractor work areas:

1. East of Seventh Street, between Berry and Townsend Streets at the westernmost end of the existing Caltrain Yard.
2. North of Townsend Street, east of Clarence Place and west of Stanford Street, at the site of buildings that would be taken and demolished for the Caltrain Downtown Extension.
3. The Southwest quadrant of the intersection of Second and Brannan streets, at the location of buildings to be demolished for the construction of the Caltrain Downtown Extension.
4. The northeast quadrant of the Howard Street/Second Street intersection, at the site of buildings to be demolished for the construction of the Caltrain Downtown Extension.
5. The parking lot west of Main Street between Howard and Mission streets.

Contractor work areas, if alternative tunneling construction methods were used, would be as follows. There are fewer areas due to the reduction in demolition of existing buildings.

1. East of Seventh Street, between Berry and Townsend Streets at the westernmost end of the existing Caltrain Yard.
2. *North* of the intersection of Second and Brannan Streets.
3. The northeast quadrant of the Howard Street/Second Street intersection, at the site of buildings to be demolished for the construction of the Caltrain Downtown Extension.
4. The parking lot west of Main Street between Howard and Mission streets.

Activities that would occur at these sites primarily include stockpiling of materials and storage of equipment. It is expected the contractor would rent local office space for their construction office to house administrative staff. Equipment employed for cut-and-cover is typically heavy duty, high volume machinery. Such equipment requires certain amounts of space when standing still, more for turning, and additional for maneuvering.

5.20.4 ANCILLARY FACILITIES

Ventilation and emergency access shafts will be required for the tunnel portion of the Caltrain Downtown Extension. Following is a discussion of anticipated locations and impacts of these facilities. The final locations for these shafts are subject to change during final design.

Tunnel shafts and ventilation systems provide the following capabilities:

- ***Heat Removal*** *- During normal conditions, tunnel ventilation is achieved by natural ventilation consisting primarily of train piston-action induced airflows. Fans housed in shafts are provided to augment the natural ventilation provided by the train piston action during*

normal operations and, when necessary, provide the primary means of limiting the tunnel temperatures when train piston action induced airflows are no longer present.

- ***Smoke Control*** *- An "emergency" mode of operation for smoke control and discharge is provided using remote and overriding local fan controls.*
- ***Air Movement (piston action) Relief*** *- Vent shafts are typically provided at each end of underground stations to reduce excessive air movement within stations due to piston-action of trains*
- ***Emergency Egress*** *– National Fire Protection Association Standard (NFPA) 130 requires exit shafts to the surface at maximum 2,500 foot centers (reference NFPA 130 2003, paragraph 6.2.4.2). Where practical, ventilation shafts may also include emergency stairways. The portal at the Townsend station may be considered an exit since this station is proposed as an open cut section.*
- ***Air Intake/Exhaust*** *– In the case of a dead end tunnel, a means of providing an air intake and/or exhaust shaft is necessary for the ventilation system to function properly.*

Ventilation Shafts. *For the Locally Preferred Alternative, it is assumed that ventilation shafts housing fans and bypass dampers would be provided at each end of the new Transbay Terminal These shafts would house a minimum of two reversible fans and associated equipment consisting of sound attenuators and fan dampers. Bypass dampers would also be provided for additional air movement (piston-action) relief. The ventilation equipment would be located above the train tracks. The discharge of each shaft would be incorporated into the terminal structure. The foot print for these facilities would be approximately 200 square feet (10 by 20 feet).*

Air intake/exhaust shafts would also be located in the sidewalks along Main Street just north of Harrison, near the end of the proposed tail tracks. These shafts would also include emergency exits. Since the Townsend Street Station is in an open cut, ventilation shafts would not be required at this station.

Emergency Exit Shafts. *In addition to the emergency exits assumed north of Harrison Street in the Main Street sidewalks as described above, tunnel emergency exit shafts are also assumed at Second and Brannan Streets and at Second and Howard Streets. With emergency exits also assumed at both ends of the Transbay Terminal, this would result in an average distance between shafts of approximately 1,610 feet – within the requirements of NFPA 130. The shafts would be constructed as part of the cut-and-cover construction for the Second at Folsom and Main at Harrison locations and as part of the tunnel construction access shaft assumed at Second and Brannan Streets. At completion, the shafts would lead to a metal door located in and flush with the sidewalks along Second and along Main Streets. These emergency access shaft doors would be locked from the surface and would open from the underside leading from exit stairways in an emergency.*

Emergency Generator. *A diesel-powered emergency generator, to operate critical terminal functions (e.g., emergency lighting, escalators), would be installed at one end of the terminal. This facility would also need to be vented to the surface. The generator would need to be tested, typically at one month intervals, so noise mitigation would be provided.*

Environmental Impacts. *No long-term impacts (visual, noise, etc.) would be associated with the anticipated emergency exits given that they would be flush with the sidewalk surface. Construction impacts from these facilities are described below for the cut-and-cover construction that would occur at these locations.*

It is assumed that the fan located at the west end of the terminal would be operated only during emergencies. During normal operations (i.e., trains moving more or less as scheduled), piston action is typically sufficient to prevent heat build-up.

Local codes will require some means of ventilation for the tail track, which would be provided by the fan located at the east end of the terminal. It is assumed that one of the two fans serving the tail tracks would be operated during periods when the light train servicing is occurring. Both fans would operate if an emergency occurred. As an option, both fans could be operated at a reduced speed.

Walls would be located around the surface access for both fan facilities and around the emergency generator to mitigate noise and prohibit public access to the ventilation equipment for security purposes. Noise walls would be designed to assure adherence with FTA noise levels. Land uses immediately surrounding the new terminal at either end are primarily commercial/office.

The land uses immediately surrounding the vent structure and emergency exits at Main just north of Harrison are also commercial/office. This shaft would operate as an air intake/exhaust shaft to provide make-up air for the tunnel ventilation fans installed at the terminal. The shaft would be located near the far end of the tail track to allow fan induced airflow to sweep the entire length of the tail track tunnel. This shaft would terminate at the surface, under local sidewalks, with a grating. Air/intake shaft mechanical equipment would be limited to a damper that opens whenever the tunnel ventilation fans operate and closes upon fan shutdown. Given the surrounding land uses and facility operation, no environmental impacts are anticipated.

5.20.5 CONSTRUCTION PHASING

Figure 5.20-8 shows the schedule for construction of the Transbay Terminal and the Caltrain Downtown Extension.

Figure 5.20-8: Estimated Construction Phasing for Transbay Terminal and Caltrain Downtown Extension [a]

Calendar Years	2004		2005		2006		2007		2008		2009		2010		2011	
Activity / Months	1-6	7-12	13-18	19-24	25-30	31-36	37-42	43-48	49-54	55-60	61-66	67-72	73-78	79-84	85-90	91-96
Operations Analysis, Preliminary Engineering, Geotechnical Engineering																
Program Review/Value Engineering																
Final Design & Permitting – Transbay Terminal																
Final Design & Permitting – Caltrain Extension																
Acquire Property, Design, Construct Temporary Terminals (Transit and Greyhound)																
Acquire Property & Demolish Buildings along Caltrain Extension																
Design and Relocate Utility Lines along Caltrain Extension																
Construct Surface Rail & Improvements at Caltrain Fourth and Townsend Yard																
Construct Cut-and-Cover and Retained-Cut – Caltrain Extension																
Reconstruct Streets																
Construct Caltrain Tunnel																
Construct Caltrain Track & Systems Facilities																
Demolish Existing Transbay Terminal & Ramps, Construct New Terminal & Ramps																
Construct Permanent Off Site Bus Storage Facility																

[a] Assumes West Ramp, Second–to–Main, Tunnel Option

5.21 CONSTRUCTION IMPACTS

The following sections evaluate the impacts and mitigation measures for the construction scenarios described above.

5.21.1 TRANSIT OPERATIONS

This section reviews the effects of Terminal/Extension Project construction on transit operations. Construction of the Transbay Terminal and underground Caltrain Station would require the establishment of a temporary bus terminal, the rerouting of transit lines, and the reconfiguration of roadways surrounding the temporary bus terminal. Transit operations on other roadways in the project area would also likely be affected and are addressed at the end of this section.

The impacts assessment is based upon preliminary planning for the temporary terminal as described in SMWM's Working Paper 12 "Terminal Design Modifications and Refinements" and in Section 3 of Arup's Working Paper 7.0 Pre-Concept Engineering Report.

5.21.1.1 Temporary Terminal Operations

The temporary terminal would be built on the single square block defined by Main/Beale/Folsom/Howard Streets. The core of the temporary terminal would serve AC Transit's transbay operations and midday bus storage. The perimeter of the terminal would accommodate Muni drop-off, layover, and pick-ups as well as Golden Gate Transit pick-ups. Greyhound buses would board and alight passengers at a separate, adjacent terminal on the west side of Beale Street between Folsom and Howard Streets (see Figure 5.21-1).

New overhead power distribution wires would be required for the rerouting of Muni Trolley buses on Folsom Street between Beale and Main; Howard Street between Beale and Main; Main Street between Howard and Folsom, Beale Street between Mission and Folsom; and Fremont Street between Mission and Howard.

Proposed Access to/from the Temporary Terminal for AC Transit Buses

In response to public comment regarding the need to reduce overall project costs, the co-lead agencies have identified alternate AC Transit bus access to the temporary terminal to avoid the need for a temporary bus ramp between the Bay Bridge and the temporary terminal during operation of the temporary facility. Without a temporary bus ramp, the buses exiting the freeway would use local streets to gain access to the temporary terminal between Main, Beale, Folsom, and Howard Streets. AC Transit buses exiting the I-80 freeway would go north up Fremont from the Harrison Street ramp, turn east on Folsom and proceed eastbound toward the temporary terminal. For the return trips, there would be a contra-flow lane along Folsom from Main Street to Essex Street for buses exiting the terminal. Buses would then have a protected left-turn movement from Folsom onto Essex Street. Once on Essex, the buses would travel on a dedicated

bus lane toward the freeway on ramp. Figure 5.21-2 shows these access routes for buses while approaching and leaving the temporary terminal.

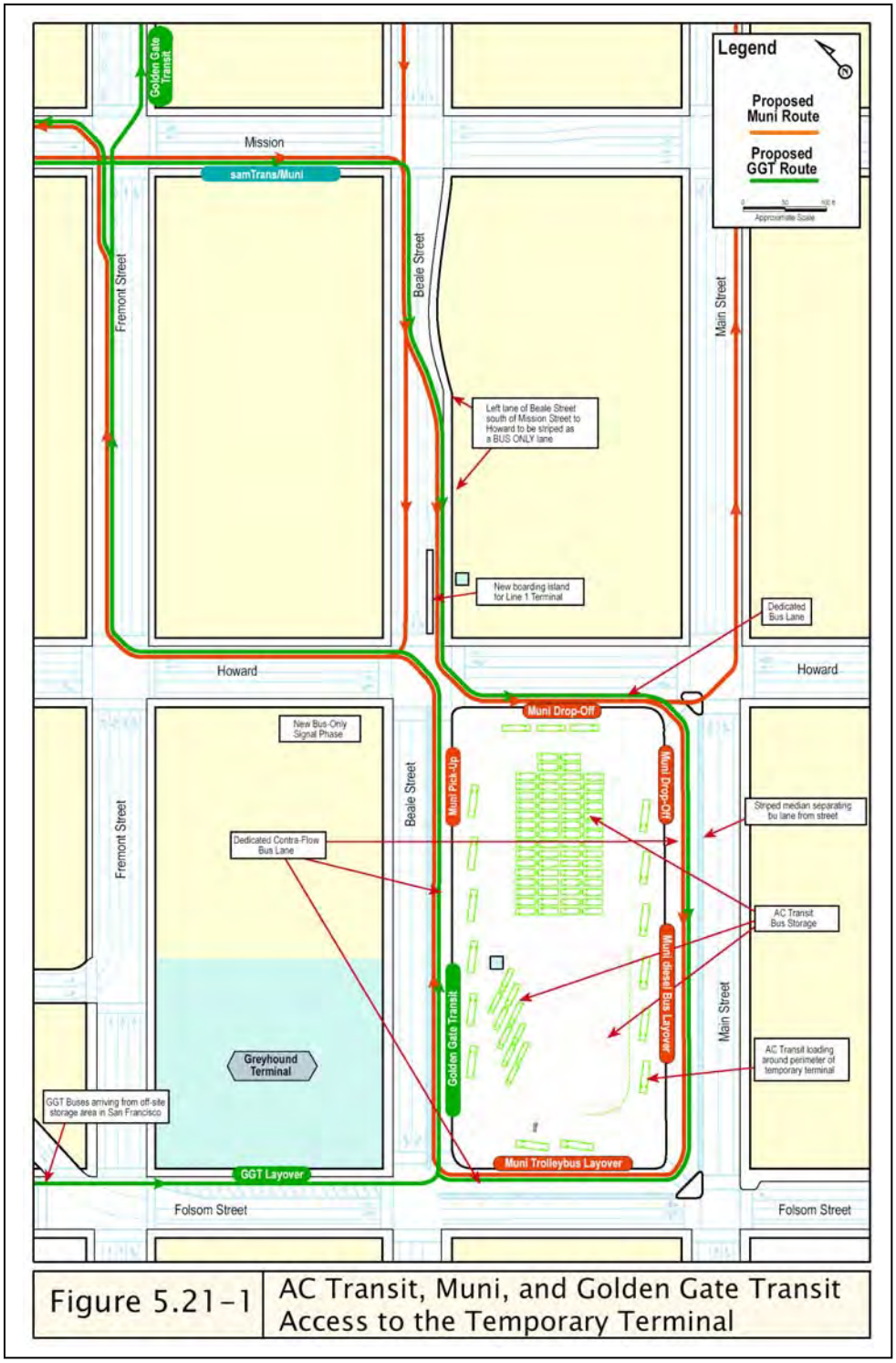


Figure 5.21-1 AC Transit, Muni, and Golden Gate Transit Access to the Temporary Terminal

Traffic turning movement data for 2000 and 2020 were obtained from an earlier study done by Wilbur Smith Associates. The traffic volumes for 2006 were determined by linear interpolation. Traffic analysis was done for the P.M. peak period – from 5:00 to 6:00 p.m. AC transit bus counts were obtained from AC Transit, through their check sheet for buses at Transbay Terminal. Golden Gate buses were assumed to add 30 buses per hour to the eastbound traffic on Folsom Street as they returned from the off-site storage in the P.M.-peak period. Using SIGNAL 94 from TEAPAC, key intersections were analyzed for the "with" and "without a temporary ramp" condition to the temporary terminal. The analysis year for all construction detour analyses was 2006 – the midpoint of the construction schedule.

Table 5.21-1 summarizes the intersection traffic and level of service data on the selected five intersections near the temporary terminal, with and without the additional buses and with contra-flow lane. For the no-ramp condition, there were no intersections that would degrade to Level of Service E or F assuming the operation of the bus lane along Folsom Street. At intersections where the contributions of the additional buses and the contra-flow lane were found to be adverse, traffic would be added to movements that would continue to operate satisfactorily.

There are two intersections in the Bay Bridge queue, however, that are projected to operate at LOS F both with and without the bus lane: First and Folsom, and Essex and Harrison. With the contra-flow lane, First and Folsom would have a slightly higher V/C ratio while Essex and Harrison would be about the same. The increase in the V/C from 1.35 to 1.38 at First and Folsom is not an adverse effect under the City and County of San Francisco criteria. It should be noted that at this intersection, the southbound traffic on First Street represents the major volumes at the intersection, thus contributing heavily toward the high V/C at the intersection. The east-west bound traffic on Folsom is much lower, and the buses, although an addition to the existing traffic during 2020, would travel on a dedicated lane, westbound on Folsom. Hence, the contribution to the traffic conditions from the buses in the dedicated lane would not be severe.

At the Essex and Harrison intersection, the northbound lanes of Essex Street that currently have very light traffic would be converted to southbound lanes. With two mixed-flow lanes and a dedicated bus lane in the southbound direction on Essex, the V/C ratio at Essex and Harrison would slightly improve from the existing condition.

As a result, the traffic generated by the additional buses and contra-flow lane would not represent a considerable contribution to the existing conditions and there would be no severe adverse traffic impacts at these intersections.

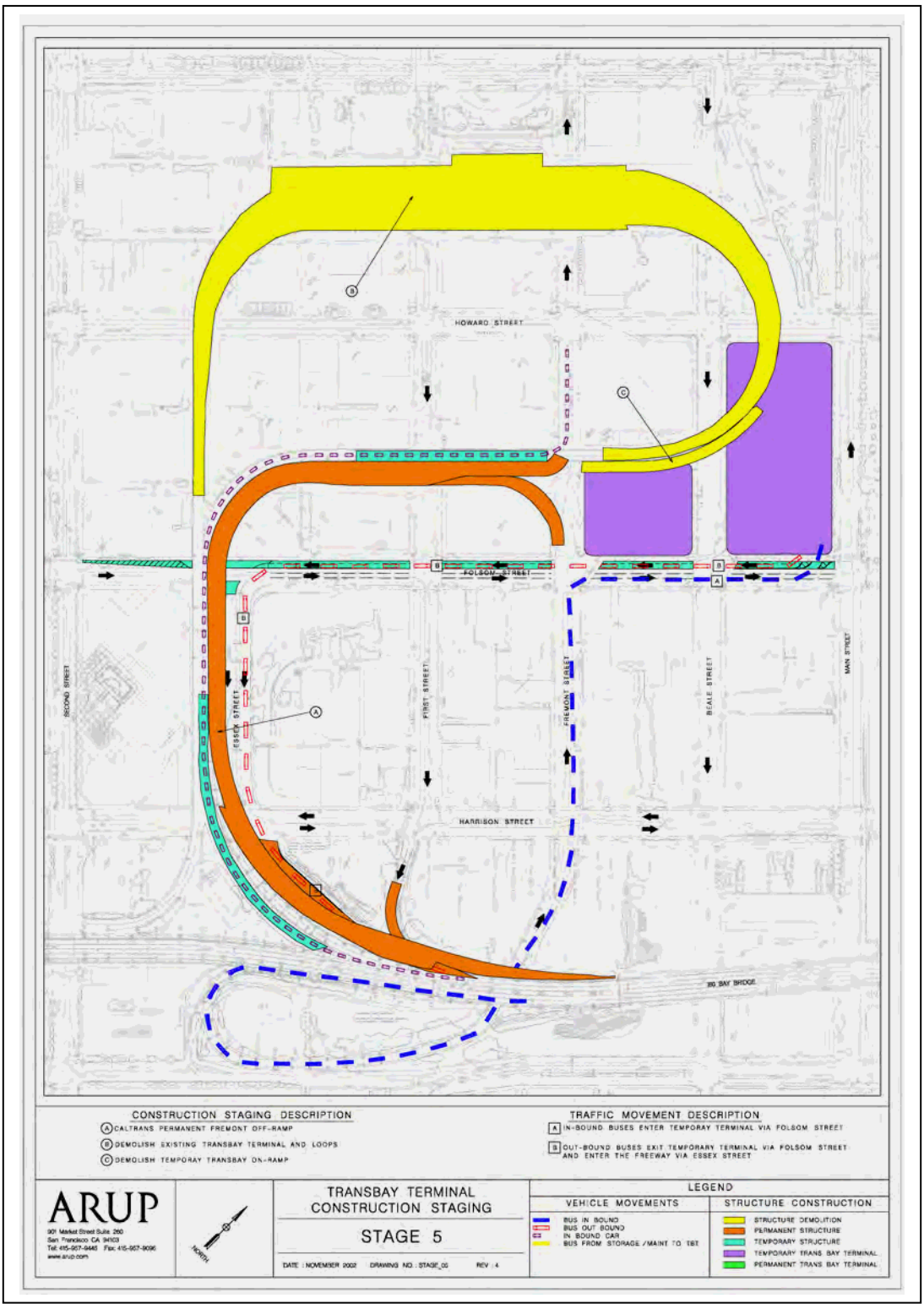


Figure 5.21-2: AC Transit Access Routes to/from the Temporary Terminal

Table 5.21-1: Level of Service Calculations for Contra-Flow Bus Lane from Temporary Bus Terminal to Bay Bridge via Folsom

	2006 Conditions with and without the Additional Buses and Contra-Flow Bus Lane					
	Without Buses			*With Buses*		
Intersection	***V/C***	***Delay***	***LOS***	***V/C***	***Delay***	***LOS***
Main and Folsom	*0.29*	*6.6*	*B*	*0.86*	*35.5*	*D*
Beale and Folsom	*0.47*	*8.4*	*B*	*0.65*	*10.4*	*B*
Fremont and Folsom	*0.34*	*7.4*	*B*	*0.43*	*6.3*	*B*
First and Folsom	*1.35*	*>60**	*F*	*1.38*	*>60**	*F*
Essex and Folsom	*Unsignalized Intersection*			*0.8*	*15.8*	*C*
Essex and Harrison with two southbound mixed flow lanes	*1.25*	*>60**	*F*	*1.22*	*>60**	*F*
Fremont and Harrison	*0.77*	*13.1*	*B*	*0.78*	*14*	*B*

**LOS is based on V/C ratios for intersections with V/C > 1.*
Source: Parsons, July 2003.

5.21.1.2 Transit Operations

The creation of a temporary Transbay Terminal would allow uninterrupted service for AC Transit, Muni, Golden Gate Transit, SamTrans, and Greyhound while the permanent facility is under construction. Each of these transit services would be required to modify operations during the operation of the temporary terminal.

AC Transit. The temporary facility is designed to fully accommodate AC Transit operations. Sufficient midday bus storage would be provided within the temporary terminal; therefore, AC Transit would not incur additional operating costs due to deadheading. AC Transit buses would circulate counterclockwise around a central bus parking lot. Surrounding the bus right of way would be 16 saw tooth bays. Passengers would board and alight from the perimeter sidewalk around the terminal and no internal crosswalks would be needed.[47]

The operation of AC Transit in the temporary terminal was analyzed using a local area network simulation model, VISSIM. The analysis determined that the temporary terminal had sufficient capacity for AC Transit to operate and store buses during afternoon peak conditions when occupancy of the terminal's center area, including the buses operating within the AC Transit storage/staging area, is highest. The study also demonstrated there would be sufficient bus bays available in the temporary facility during maximum occupancy. Maximum queues (8 buses) in the circulation area would dissipate in about one minute.[48]

[47] Arup, Working Paper 7.0 Pre-Concept Engineering Report, p. 23
[48] SMWM Working Paper 12 Terminal Design Modifications and Refinements, p. 68 -71

Muni. Muni routes currently serving the Transbay Terminal include lines 5, 6, 38, and 38L. They would be rerouted to board and alight passengers around the periphery of the temporary terminal. Muni lines 2 and 3 are also expected to serve the temporary terminal.

Terminal-bound Muni routes would be extended an extra one or two blocks on Market Street, proceed south down Beale Street, and continue along Howard Street to access the temporary facility. Buses would circulate clockwise around the terminal's perimeter, enabling passengers to load on the opposite side of the same curb/loading area used by AC Transit buses circulating counterclockwise within the terminal. Muni trolley buses would use drop-off bays along the south side of Howard Street and lay over along Folsom Street at the south end of the temporary terminal. Diesel operated buses would use two drop-off bays located along Main Street. All Muni vehicles would board passengers at the four northernmost bays along Beale Street.

Muni estimates that the additional annual operating and maintenance costs associated with the Temporary Transbay Terminal will be just under $1 million in FY 2000 dollars. These additional costs are expected to result from the rerouting of the 2,5,6, and 38/38L lines.

Simulation modeling demonstrated that there would be adequate capacity within the facility to accommodate Muni's existing service during peak periods. The maximum queue exiting the terminal at Beale and Howard Streets would be four vehicles. This assumes the addition of a bus-only left-turn phase to the intersection's existing signal.[49]

Golden Gate Transit. The temporary terminal would accommodate Golden Gate Transit staging, boarding and alighting but not midday storage. Since AC Transit is expected to use the full storage capacity of the temporary terminal, Golden Gate Transit would require an off-site storage location and likely incur additional operating costs due to deadheading between the location and the temporary terminal. The preferred location of an off-site storage area and a rerouting plan have not been identified. Golden Gate is currently evaluating alternative bus staging areas with the pending loss of its lease for the current storage site. The lease termination is not an effect of the proposed project.

Buses would access the temporary facility proceeding eastbound on Folsom Street and turning left onto Beale Street. Passengers could board at any of three bays reserved for Golden Gate along the eastern edge of Beale Street. An additional bay would be available on Beale Street for use by either Muni or Golden Gate Transit. A staging area for buses waiting to board and alight passengers would be available along the northern edge of Folsom Street between Fremont and Beale Streets. The precise access route for Golden Gate Transit to the temporary terminal will depend on the location chosen for its off-site storage area.

[49] SMWM, p.72.

Greyhound. Greyhound buses would not be accommodated within the temporary terminal but have a separate boarding area on the southern end of the block bounded by Beale/Fremont/Folsom/Howard Streets. The proximity of this location to the temporary terminal would facilitate connections between Greyhound, AC Transit, and Muni.

SamTrans. During the construction phase, SamTrans express bus service would operate via Mission, Beale, Folsom and Main Streets to an endpoint terminal on Beale between Howard and Folsom, or as an alternative, on Main between Folsom and Howard. Buses would alight passengers at all bus stops prior to the endpoint. Leaving the endpoint, buses would be in service and stop at all bus stops for passenger boarding. This operation would result in the elimination of 11 parking spaces on the south side of Mission Street between Fremont and Beale Streets.

5.21.1.3 Changes to Surrounding Road Network

In order to facilitate movements to and around the temporary transbay facility, several physical and operational improvements would be made to the surrounding roadways. These changes are shown in Figures 5.21-1 *and 5.21-2.* The effects on bus operations are described by arterial.

Beale Street. The segment of Beale Street between Howard and Folsom would be reconfigured to accommodate a northbound contra-flow dedicated bus lane and a separate lane for bus loading and staging along the curbside of the temporary Terminal. The contra-flow bus line would be used by both Muni and Golden Gate Transit. The northernmost end of the bus-loading lane would be used for Muni boarding and alighting. The southernmost end would be used by Golden Gate Transit. New overhead power distribution wires would be added to support Muni trolleybuses.

Reconfiguring Beale Street would require the elimination of two southbound traffic lanes and 12 curbside parking spaces on Beale Street. A four-foot-wide median would be built between the two remaining southbound lanes and the new bus lane. Additionally, the casual carpool lane, currently on the east side of Beale Street, would be relocated to the west side of the street.

The segment of Beale Street between Mission and Howard would also be reconfigured to accommodate a new boarding island for Muni's Line 1 and a southbound bus-only lane. New overhead wires would also be provided above this segment to accommodate Muni trolleybuses.

Folsom Street. Folsom Street between Beale and Main Streets would be reduced from four lanes eastbound to two lanes of eastbound traffic with the addition of a westbound contra-flow bus-only lane for Muni and Golden Gate Transit. The bus lane and the traffic lanes would be separated by a four-foot-wide striped median. Nine automobile parking spaces would be removed along the north curb of Folsom Street and replaced with a bus loading/staging lane. The bike lane and parking on the south side of Folsom would not be changed. New overhead wires would be added to support Muni trolleybuses.

Main Street. Main Street's three northbound traffic lanes between Howard and Folsom Streets would be changed to provide two lanes northbound and a southbound contraflow bus-only lane. All 48 motorcycle parking spaces and nine automobile spaces would be removed from the west side of Main Street and replaced with a curbside bus loading/staging lane. Overhead wires would be installed to accommodate Muni trolleybuses.

Howard Street. Existing traffic lanes on Howard Street, the northern border of the temporary terminal, would not be changed during construction of the new Transbay Terminal but on-street parking would be removed between Beale and Main Streets. The north parking lane would be converted to provide another westbound travel lane and the south parking lane would become a bus loading/unloading area for Muni.

5.21.1.4 Other Construction Impacts

Construction of the new Transbay Terminal will also affect transit operations on other roads in the study area.

Mission Street. Muni, Golden Gate Transit, and SamTrans would continue to operate along Mission Street in front of the terminal site during construction. However, construction generated traffic could potentially result in temporary delays for these operations. *The Second-to-Mission Alternative would also require block-by-block closures on Mission Street to construct the cut-and-cover subway between Beale Street and The Embarcadero. Muni's Line 14 line currently operates on Mission Street and would be rerouted or turned back temporarily in sequence with construction activity. The bus circulation via a contra-flow bus lane on Main Street for the temporary terminal would not be affected since the buses would be moved back to the new Transbay Terminal before the block between Howard and Folsom would be affected.*

Second Street. The cut-and-cover construction of the Caltrain rail tunnel would require block-by-block closures of Second Street. Muni's Line 10 line currently operates on Second Street and would be rerouted temporarily in sequence with construction activity.

Third Street. In order to accommodate construction on Second Street, Third Street may be restriped to accommodate southbound vehicular traffic. The additional traffic could affect the performance of Muni's service on Third Street, including lines 15, 30, 45 and 81x.

Main Street. *The Second-to-Main Alternative would also require block-by-block closures on Main Street to construct the cut-and-cover subway from south of Howard Street to just south of Harrison Street. Muni's 1, 80X, and 82X lines and multiple Golden Gate lines currently operates on Main Street and would be rerouted temporarily in sequence with construction activity.*

5.21.2 VEHICULAR TRAFFIC

5.21.2.1 Construction Trucks and Staging Areas

The number of construction trucks projected to be on the city streets for this analysis is based on the estimated volume of debris to be removed, the amount of materials to be brought in, the average capacity of the trucks, and the approximate time of operation. The following analysis is for the Cut-and-Cover Second-to-*Mission* Alternative, which has *2.8* million cubic yards of material to be excavated *(Table 5.20-4)*. This option represents a "worst case analysis." Fewer trucks would be required for the Second-to-Main Alternative. Moreover, substantially fewer trucks would be required for the Tunneling Option for either alternative, in that the tunneling option would have sizably less excavated material. *The Locally Preferred Alternative is the Second-to-Main Tunneling Option, which would generate about 20 percent less total excavated material than assumed in this worst case analysis.*

For the Second-to-*Mission* Cut-and-Cover Option analysis, the construction period is assumed to be two years, with an average hauling period of eight hours per day for 360 days per year less ten percent. Truck size is assumed to be 20 cubic yards. Soil is assumed to expand by 15 percent and rock by 50 percent. In general, it is assumed that spoils will be hauled by truck to the Caltrain yard adjacent to Seventh and Townsend and loaded onto trains for disposal out of the area. *Disposition of the excavated materials will be the responsibility of the contractor. Any hazardous materials will need to be disposed of according to federal and state laws and regulations governing its hauling and disposition (see Section 5.21.15.). The actual location for the use (e.g., as fill material) or disposal of non-hazardous excavated materials will depend on the demand for such materials at the time of construction and/or the ability to dispose of these materials at a site to be determined by the contractor.* Construction materials would be brought in only by truck.

The planned staging areas are the following:

- Portions of the Seventh and Townsend yard,
- Along the corners of the Second Street alignment between Brannan and Townsend,
- Northeast quadrant of Howard and Second, and
- Northwest quadrant of Howard and Main.

The volume of haul debris has been estimated based on planned dimensions of the cut and station (Table 5.21-*2*). For segment No. 1, adjacent to the yard and Townsend Street, only 40 percent of the trucks are assumed to use City streets; the remainder are assumed to stay internal to the yard in conveying material to trains for disposal. For the remaining three segments, all material is assumed to be hauled by truck to the yard. This is a conservative assumption because rail may be used to directly haul almost all of the material from segments Nos 1 and 2 instead of only 60 percent of No. 1. Trucks bringing construction materials are estimated to be ten percent of those removing excavated material.

Table 5.21-2: Projected Construction Truck Volumes

Construction Segment	Excavation Volume (cu yd)	Trucks/hr* (Round Trips)	Minutes/Truck
No. 1. Yard & Townsend St.	*292,000***	*1*	*42*
No. 2. Second St. to Terminal	*999,000*	*16*	*3.8*
No. 3. Terminal	*658,000*	*8*	*7.6*
No. 4. *To end of Mission* St.	*487,000*	*6*	*10*
Total	***2,436,000***	***31***	***1.9***

Notes:
*Also includes trucks carrying construction materials to sites.
***Reduced by 60% to account for rail hauling.*

Source: Parsons Corporation, September *2003*

Under these assumptions, it was estimated that a total of *31* construction truck round trips per hour would be required to haul the debris or bring in construction materials. But due to the phasing of the construction, with segments Nos. 1 and 4 potentially being constructed in parallel and segments Nos. 2 and 3 being constructed later, the maximum number of trucks that would be circulating would be *7* trucks/hour for Nos. 1 and 4 combined and *24* trucks/hour for Nos. 2 and 3 combined. Since the process would be a continuous cycle in which trucks would be arriving and departing, it is projected that, on the average, there would be between *14* and *48* construction truck trips on the local street network during each operating hour. These trucks would be operating on several different streets and arriving or departing from several different construction sites, as listed above. However, under the assumption that most of the excavated material would be hauled away by train, all of the haul trucks would converge at Seventh and Townsend to load the spoil onto trains.

5.21.2.2 Truck Routes

Delivery trips from the staging areas along the alignment are combined with the excavation removal. Truck routes by segment would be as follows:

1. Yard and Townsend Street—Trucks will circulate from the yard to Seventh to Brannan to Fourth, Third, or Second and back to Townsend to yard. The volume will be *1* truck/hr. This pattern combines with No. 4 to give a total of *7* trucks per hour.
2. Second to Terminal—Trucks will circulate up Seventh to Brannan to Third, cross over to Second and return down Second to Townsend to Seventh and yard. The volume will be *16* trucks/hr. It is sequential to No. 1/No. 4 and parallel No. 3 to give *24* trucks per hour.
3. Terminal—Trucks will circulate from the yard to Seventh to Bryant to Fremont to Terminal to Howard to Fourth to Townsend/Brannan to Seventh to yard. The volume will be *8* trucks/hr. This segment will be excavated at the same time as No. 2, giving a total of *24* trucks per hour.
4. Terminal down *Mission* Street—Trucks will circulate from the yard down Seventh to *Townsend to Embarcadero to Mission*, returning via *Embarcadero* to Townsend to

Seventh to yard. The volume will be 6 trucks per hour, giving a total of *7* trucks per hour when combined with No. 1.

Under this "worst case" analysis *for the cut-and-cover option, all of the trucks would travel along* Seventh Street, *departing or returning to the Caltrain Fourth and Townsend yard. B*ecause of the relatively low existing volumes on Seventh Street, *24 truck round trips per hour would not cause deterioration in the level of service on Seventh Street*. The *greatest impact under this* worst case *analysis* would be *24* trucks per hour being added to Howard Street at Third Street, but that is only one percent or less of the P.M. peak hour movement. The assumption of eight haul hours per day allows for avoidance of peak periods between 7 a.m. and 5 p.m., so the haul volumes can be scheduled outside the peak periods if necessary. *Impacts under the LPA would be lower than this worst case cut-and-cover scenario.* The next subsection analyzes the P.M. peak hour primary construction detour traffic with these haul movements superimposed.

5.21.2.3 Detour for Second Street Closures

For the Cut-and-Cover Option, Second Street would be closed to through traffic one block at a time between Townsend Street and Howard Street to facilitate construction of the cut-and-cover trench. Each block would be closed for an estimated month or two except for maintaining essential local access. See Subsection 5.21.2.5 for a discussion of access to driveways.

During these rolling closures of the five blocks on Second Street between Townsend Street and Howard Street, through traffic would be detoured onto parallel streets, primarily Third and Fourth Streets. Third Street, currently one-way northbound, would be restriped to give three lanes northbound and two lanes southbound. On-street parking would be prohibited on Third Street for the duration of the detour. The bus lane on Third Street would become a mixed flow lane for the duration of the detour, although it also functions well as a combined bus/right-turn lane where there is a substantial number of right turns, such as at Harrison or Bryant Streets.

The Third Street detour can be accomplished in two phases. During any closure of Second Street south of Harrison Street, the two-way portion of Third Street would be from Harrison Street to King Street. In this phase, Third Street could remain one-way northbound north of Harrison Street. During any closure of Second Street north of Harrison Street, the two-way portion of Third Street will be from Howard Street to King Street. It is anticipated that the cut-and-cover trench on Second Street would be constructed from south to north, starting at Townsend Street and going to Howard Street.

During the closure of a block on Second Street, the two-way portion of Third Street would facilitate detouring traffic around the closed block. Because some of the cross streets are one way, through traffic would often be diverted for two blocks or more instead of around just one block. It is expected that much of the I-80 and I-280 traffic on Second Street would shift over to Fourth Street for the southbound portion of the detour and to Third Street for the northbound portion of the detour. *The LPA would use cut-and-cover construction only between Folsom and*

Howard streets, and the two-way portion of Third Street would be limited to just the portion between Folsom and Howard streets to accommodate the southbound traffic in the closed block. Northbound traffic would have to be detoured two blocks on Third Street, from Harrison Street to Howard Street, but would use the existing northbound lanes on Third Street.

5.21.2.4 Intersection Analysis

Key intersections for detour traffic conflicts include Third/Howard, Third/Harrison, and Fourth/Harrison. Table 5.21-3 summarizes LOS calculations under detour and truck haul conditions for each closed block compared with baseline conditions in 2005, the expected midpoint of construction.

Table 5.21-3: Intersection Delay and LOS for Third Street Detour -- 2005 Conditions

		Intersection*			
		Third/Howard			
Block Closed of Second Street		**Base**	**Mitigated**	**Third/Harrison**	**Fourth/Harrison**
None	LOS	B		B	B
	Delay	14.5		10	11.4
Howard/Folsom**	LOS	E	D	D	B
	Delay	42.4	39.9	28.7	11.3
Folsom/Harrison	LOS	E	D	D	B
	Delay	42.4	39.9	30	11.3
Harrison/Bryant	LOS	B		D+	B
	Delay	14.5		26.4	11.7
Bryant/Brannan	LOS	B		D+	B
	Delay	14.5		26.4	11.7
Brannan/Townsend	LOS	B		D+	B
	Delay	14.5		26.4	11.7

*Delay and level of service are based on 1994 Highway Capacity Manual (SIGNAL94). Delay is in seconds.
**NB lanes consist of two through lanes and one RT/bus lane

The intersection affected with the most diverted turning movements, Third/Howard, dropped from LOS B to E with a lane configuration of two northbound mixed flow lanes and one bus lane. Elimination of the bus lane to give three northbound mixed flow lanes and the addition of a left turn lane on Howard resulted in the projected LOS reaching LOS D. None of the other key intersections affected by the detour were projected to have impacts from the detour.

5.21.2.5 Other Detour Routes

Construction methods for the cut-and-cover tail track section of the Second-to-Mission Alternative would require that Mission Street be closed except for one lane in each direction with no parking for up to two years. As part of the construction phasing, Mission Street would have to be completely closed for an additional one to three months at both the start and finish of

construction to put on a temporary deck and to restore the street surface. Cross streets of Beale, Main, and Stuart would also require closure to through traffic at staggered periods of one to three months.

Similarly, construction methods for the cut-and-cover tail track section of the Second-to-Main Alternative would require that two lanes on Main Street be closed for up to two years. As part of the construction phasing, Main Street would have to be completely closed for an additional one to three months at both the start and finish of construction to put on a temporary deck and to restore the street surface. Cross streets of Folsom and Harrison would also require closure to through traffic at staggered periods of one to three months.

The detours in street traffic for either of these alternatives would result in adverse effects on intersection operations at several intersections in the downtown area. The detours would last two years and would add vehicular traffic to already congested movements and/or create new demand for movements that conflict with other high demand movements. Affected intersections for the Second-to-Mission Alternative would include:

- *Beale/Howard*
- *Main/Howard*
- *Stuart/Howard*
- *Howard/Embarcadero*
- *Beale/Folsom*
- *Main/Folsom*
- *Folsom/Embarcadero*

Affected intersections for the Second-to-Main Alternative would include:

- *Embarcadero/Mission*
- *Embarcadero/Howard*
- *Embarcadero/Folsom*
- *Embarcadero/Harrison*

5.21.2.6 Coordination with Third Street Light Rail/Central Subway

Potential exists for conflict between the traffic detour plans of the Central Subway project and the Caltrain extension alternatives. Both the Cut-and-Cover Option and the Tunnel Option would close portions of Second Street to through traffic while Third Street would be designated as a primary detour route. In contrast, the Central Subway project would close portions of Third Street to through traffic and would designate Second Street as a primary detour route. The schedules for the two projects, however, show that the Caltrain LPA would largely, if not entirely, avoid this conflict. Based on the current schedule for construction of the LPA, Second Street would be closed between Folsom Street and Howard Street for about two years, reopening in mid 2009. The proposed detour for this closure is discussed at the end of Subsection 5.21.2.3

above. The Central Subway project is currently scheduled to begin cur-and-cover station construction on Third Street between Folsom Street and Howard Street in mid 2009, avoiding the period when the LPA would use Third Street as a detour and when Second Street would not be available for the Central Subway detour. The Central Subway would have utility relocation activities that would precede the station construction, but the LPA schedule has potential to be accelerated to avoid conflict with those activities. The ISCOT Committee, an interdepartmental staff committee on Traffic and Transportation in the City and County of San Francisco, will be utilized to minimize or avoid the traffic detour conflicts between these two projects.

5.21.2.7 Driveway Access

The Second Street segment of the Second-to-Main and Second-to-Mission alternatives has the highest number of driveways that would be affected by cut-and-cover construction, and the following analysis represents a "worst-case" evaluation. The Tunneling Option for either Caltrain Downtown Extension alternative would have substantially fewer effects on driveways. Between Brannan and Howard Streets, there are 13 locations (i.e., parking lots, businesses, residents, etc.). In addition to these locations, four dead end streets cross Second Street at De Boom and Federal Streets, Dow Place, and Tehama Streets. These dead end streets provide access to numerous private parking lots, loading docks, and public parking. Easements would be required to maintain access at Tehama Street and Dow Place. Temporary alternative access would be acquired through private property between Federal and De Boom Streets. A list of driveways that would be affected by construction on Townsend, Second, Main, and Mission Streets is included in Table 5.21-4.

Table 5.21-4: Driveways and Streets Temporary Blocked By Construction

Street Segment	Address	Land Use	Description
Townsend Street (Both Caltrain Extension Alternatives – (Cut-and-Cover or Tunnel Option)			
Fifth to Fourth Street	310 Townsend	Office	Garage Entrance/Exit
	306 Townsend	Office	Garage Entrance/Exit
Fourth to Third Street	292, 294, 296 Townsend	Retail	Parking entrance for numerous businesses.
	290 Townsend	Retail	Loading Dock.
	On southern side of Townsend	Vacant/Under Construction	Driveways to new mixed use development.
Third Street to Clarence Place (Cut-and-Cover Option only)	701 Third	Food	Townsend Street drive thru entrance and exit.
	179 Third	Office	Garage and parking lot entrance and exit.
	178 Third	Parking	Parking Garage Entrance.
Second Street			
Brannan To Bryant (Cut-and-Cover Option only)	Brannan @ Second (northwest side)	Vacant/Under Construction	Delivery Entrance.
	South Park @ Second (southwest side)	Vacant/Under Construction	Delivery/Driveway Entrance.

Table 5.21-4: Driveways and Streets Temporary Blocked By Construction

Street Segment	Address	Land Use	Description
	577 Second	Retail	Driveway Entrance.
	522 and 524 Second	Light Industrial	Driveway Entrance.
Bryant To Harrison (Cut-and-Cover Option only)	461 Second	Residential	*Driveway* Entrance.
	Underneath I-80 Freeway	Parking	Parking Lot Entrance/Exit.
	425 Second	Residential	Delivery Entrance/Exit.
	Not Available	Parking	Parking Lot Entrance/Exit.
	Second @ Harrison (southeast corner)	Parking	Parking Lot Entrance/Exit.
Harrison To Folsom (Cut-and-cover Option only)	On west side of Second	Parking	Parking Lot Entrance/Exit.
Folsom To Howard (Cut-and-Cover or Tunneling Option)	Folsom @ Second (northeast corner)	Hotel	Driveway of New Building.
	246 Second	Residential	Driveway Entrance/Exit.
	Howard @ Second (southeast corner)	Parking	Parking Lot Entrance/Exit.
Second-to-Main Alternative Only (Cut-and-Cover or Tunnel Option)			
Main Street			
Harrison To Folsom	365 Main	Vacant/Under Construction	Shipping/Receiving Driveways
	390 Main	Public Services	Parking Lot Entrance/Exit.
	Folsom @ Main (southeast corner)	Parking	Parking Lot Entrance/Exit.
Folsom To Howard			
	160 Folsom	Retail	Driveway Entrance on Main Street.
	On east side of Main	Parking	Parking Lot Entrance/Exit.
	250 Main	Transportation	Three Parking Lot Entrances.
	272 and 276 Main	Office	Parking Lot Entrance/Exit.
	221 Main	Office	Underground Parking Lot Entrance/Exit.
Second-to-Mission Alternative (Cut-and-Cover or Tunnel Option)			
Mission Street			
Main To Spear	77 Beale	Office	Driveway Exit.
	110 Mission	Office	Parking Lot Entrance/Exit.
At The Embarcadero	On north side of Mission	Parking	Muni/Public Parking Entrance/Exit.
Transbay Terminal Impacts	500 Mission	Office	Four Loading Docks on Minna Street.

Loss of access to any property would be minimized via prompt construction of the roadway decks, first on one side and then the other. The construction contractor or construction representative would work with and notify property owners, businesses, and residents regarding the temporary loss of access.

Prior to initiating construction of each segment, outreach efforts would be performed to inform residents, businesses, and property owners of the proposed construction program. A community construction coordination program would be established to encourage communication between

the affected community, both residential and business, and the TJPA and JPB regarding construction impacts and possible mitigation and solutions.

Prior to and during construction, the TJPA and JPB staff would contact and interview individual businesses and property owners potentially affected by construction activities. Interviews with commercial establishments would provide knowledge and understanding of how these businesses carry out their work, and identify business usage, delivery and shipping patterns and critical times of the day and year for business activities. Data gathered from these interviews would assist the JPTA and JPB as they work with the DPT to develop the worksite traffic control plans. Among other elements, these plans will identify alternate access routes to maintain critical business activities.

The mitigation measures described in the following sections would be implemented by a combination of construction contract specifications, drawings, and provisions, as well as public affairs programs. TJPA and JPB staff would be assigned to work directly with the public to provide project information and to resolve construction-related problems. The TJPA and JPB will work with community residents, elected officials, local businesses, and community organizations to tailor the mitigation program to best meet community needs. Contractors will be monitored to assure that mitigation measures contained in the Final EIS/EIR are met.

The TJPA and JPB would inform the public of its progress in implementing the measures selected through a quarterly program of auditing, monitoring, and reporting. A quarterly status report would be made available to the public.

Site and Field Offices. During construction of the Terminal/Extension Project, TJPA and JPB staff would establish an information field office located along the alignment. The field office staff in conjunction with other staff would serve multiple purposes:

- Provide the community and businesses with a physical location where information pertaining to construction can be exchanged,
- Enable TJPA and JPB to better understand community/business needs during the construction period,
- Allow TJPA and JPB to participate in local events in an effort to promote public awareness of the project,
- Manage construction-related matters pertaining to the public,
- Notify property owners, residences, and businesses of major construction activities (e.g., utility relocation/disruption and milestones, re-routing of delivery trucks),
- Provide literature to the public and press,
- Promote and provide presentations on the project via a Speakers Bureau,
- Respond to phone inquires,
- Coordinate business outreach programs,
- Schedule promotional displays, and
- Participate in community committees.

The information office would be open various days of the work week for the duration of the construction period. A schedule will be developed before construction begins.

Information Line. A telephone information line would be available to provide community members and businesses the opportunity to express their views regarding construction. Calls received would be reviewed by TJPA and JPB staff and would, as appropriate, be forwarded to the necessary party for action (e.g., utility company, fire department, the Resident Engineer in charge of construction operations). Information available from the telephone line would include current project schedule, dates for upcoming community meetings, notice of construction impacts, individual problem solving, construction complaints and general information. During construction of the project, phone service would be provided in English, Cantonese, and Spanish and would be operated on a 24-hour basis.

Signage. The TJPA and JPB would work with establishments affected by construction activities. Appropriate signage would be developed and displayed to direct both pedestrian and vehicular traffic to businesses via alternate routes.

Traffic Management Plans. Traffic management plans to maintain access to all businesses would be prepared for areas affected by surface or cut-and-cover construction. In addition, daily cleaning of work areas would be performed by contractors for the duration of the construction period. Provisions would be contained in construction contracts to require the maintenance of driveway access to businesses to the extent feasible.

Deck Level. Decking at the under-street cut-and-cover sections would be installed flush with the existing street or sidewalk levels.

Sidewalk Design and Maintenance. Wherever feasible, sidewalks would be maintained at the existing width during construction. Where a sidewalk must be temporarily narrowed during construction (e.g., deck installation), it would be restored to its original width during the majority of construction period. In some places this may require placing the temporary sidewalk actually on the deck. Each sidewalk design should be of good quality and approved by the Resident Engineer prior to construction. Handicapped access would be maintained during construction where feasible.

Construction Site Fencing. Construction site fencing should be of good quality, capable of supporting the accidental application of the weight of an adult without collapse or major deformation. Fence designs or examples would be submitted to the Resident Engineer for approval prior to installation. Where covered walkways or other solid surface fencing is installed, a program will be implemented to allow for art work (e.g., by local students) on the surface(s).

5.21.3 PARKING

On-street parking would be temporarily removed along specific streets for a set amount of time during construction. Under the Cut-and-Cover Option, parking on Second Street would be closed and re-opened on a block-by-block basis due to construction. To mitigate the closure of Second Street, traffic would need to detour to Third Street. When Second Street is closed south of Harrison, no parking would be allowed on Third between Harrison and King Streets. When Second Street is closed north of Harrison, no parking would be allowed on Third between Howard and King Streets. See Section 5.21.2.3 for details of the Second Street detour. The contractor would post dates and times of parking closures and openings. Loss of parking could affect local businesses, as discussed in Section 5.21.2.5. Table 5.21-*5* includes segments where on-street parking would be temporarily removed during construction and the number of temporarily removed parking spaces removed is also shown.

The Caltrain ridership forecast did not assume parking capacity expansion at any stations that had reached parking capacity under the 2020 No-Project conditions. Therefore, there are no long-term adverse impacts to parking projected for Caltrain stations as a result of the Terminal/Extension Project.

Table 5.21-5: On-Street Parking Removed During Construction

Second-to-Main and Second-to-Mission Alternatives	Direction of On-Street Parking	
Townsend Street	**Eastbound**	**Westbound**
Fifth to Fourth Street	Diagonal parking	Perpendicular parking
Fourth to Third Street	No parking (construction zone)	Parallel parking
Third Street to Clarence Place	Parallel parking	Parallel parking
Second Street	**Northbound**	**Southbound**
Brannan to Bryant	Parallel parking, 11 auto spaces	Parallel parking, 10 auto spaces
Bryant to Harrison	Parallel parking, 9 auto spaces	Parallel parking, 10 auto spaces
Harrison to Folsom	Parallel parking, 17 auto and 4 motorcycle spaces	Parallel parking, 15 auto spaces
Folsom to Howard	Parallel parking, 12 auto spaces	Parallel parking, 11 auto spaces
Third Street	**Northbound**	**Southbound**
King to Townsend	Parallel parking, 13 auto spaces	Parallel parking, 13 auto spaces
Townsend to Brannan	Parallel parking, 21 auto spaces	Parallel parking, 23 auto spaces
Brannan to Bryant	Parallel parking, 3 auto spaces	Parallel parking, 23 auto spaces
Bryant to Harrison	Parallel parking, 11 auto spaces	Parallel parking, 11 auto spaces
Harrison to Folsom	Parallel parking, 18 auto spaces	Parallel parking, 25 auto spaces
Folsom to Howard	No parking	No parking
Second-to-Main Alternative	**Northbound**	**Southbound**
Midway from Bryant to Howard	Parallel parking	Parallel parking
Second-to-Mission Alternative	**Eastbound**	**Westbound**
Main to Spear	Parallel parking	Parallel parking
Spear to Steuart	Parallel parking	Parallel parking
Steuart to The Embarcadero	Parallel parking	No parking

5.21.4 PEDESTRIANS

Before construction of the Transbay Terminal/Extension Project begins, two one-story temporary terminals would be built. A terminal for AC Transit buses would be located on the block bounded by Beale/Howard/Main/Folsom Streets, and a terminal for Greyhound buses would be located on Folsom Street between Fremont and Beale Streets. Temporary bus terminals would be located contiguous to the P.M. casual carpool queuing area. Because the temporary terminals would disrupt this queue activity, the casual carpool queues would be moved to the west side of Beale Street.

The temporary AC Transit terminal would be located two blocks east and one block south of the existing terminal, while the Greyhound terminal would be located one block east and one block south of the existing Transbay Terminal. The existing (2000) pedestrian travel patterns to and from the Transbay Terminal as determined by the SFTA model indicate that 70 percent of pedestrians going to and from the terminal would have up to a four block longer walk than under the existing situation. An additional 22 percent would have to walk up to three additional blocks to reach the terminal, while 4 percent would have to walk about one additional block to reach the terminal. About four percent of pedestrian walk distances would not be affected or would be shorter. For those with up to a four block additional walk, this represents about 800 additional feet of travel distance. At a pedestrian pace of 200 feet per minute, the additional 4-block walk is estimated to take four minutes.

5.21.5 BICYCLES

The temporary relocation of the Transbay Terminal during construction would increase bike travel distance to the terminal for the majority of bicyclists. The distance would increase by up to four blocks, which would add about two additional minutes of bicycle travel time. No mitigation measures are proposed other than that bicycles would be allowed to use temporary street improvements made for transit.

5.21.6 NEIGHBORHOODS AND BUSINESSES

In general, business and residential impacts would include changes in traffic circulation attributable to street closures, some loss of on-street parking, increased truck as well as auto traffic on designated haul routes and detours, increased noise in the vicinity of surface construction, and views obstructed or worsened by construction activity.

The most substantial construction-phase effects on neighborhoods and businesses would occur on the four streets affected by the Cut-and-cover Option of both Caltrain Downtown Extension Alternatives. The disruption of residents and businesses during construction is an important

concern of the TJPA and JPB. Measures would be incorporated in the construction program to minimize impacts to residents and businesses.

Impacts to Residential Areas. Although most land uses along affected streets are commercial uses, there are some live/work lofts along Townsend Street and additional residential uses along Second Street, including live/work units at the Clock Tower Building, a residential building near Tehama Street, and the Courtyard Marriott hotel. During construction the residential uses would be subject to reduced vehicular access, increased traffic congestion, increased noise and construction-related dust.

Impacts to Businesses. Most of the land uses along the Caltrain Downtown Extension Alternative alignments are commercial, and the majority of these commercial establishments consist of office uses. There are also retail uses, particularly on the ground floors of buildings along each of the affected streets, and there are warehouse and light-industrial uses on Second and Townsend Streets. Cut-and-cover construction effects on businesses would include reduced vehicular access and increased traffic congestion, increased noise and debris, and decreased visibility of operating businesses. These disruptions would most likely have the greatest impact on the retail establishments, many of which rely more heavily on walk-in traffic and street visibility for sales activity than office uses and warehouse businesses also located in these areas. There is a potential reduction in the ability of large trucks to access warehouse and storage facilities.

The Muni Metro Turnback Project in downtown San Francisco serves as a meaningful case study from which to predict how businesses would be affected by project construction. During construction of the Muni Metro Project, businesses located along The Embarcadero – fronting the cut-and-cover construction of the project – experienced partial or complete loss of visibility and access. Where possible, these businesses reoriented themselves to Steuart Street. Several hotel and restaurant owners whose businesses were affected by severe noise and debris were successful in negotiating to cease all construction activity between 12:30 and 1:30 p.m. daily, in order to allow for more comfortable lunch hour operations. One small delicatessen, which lost all visibility due to construction fences that were assembled around the project, was offered reduced rent by the building owner for the duration of construction to offset sales losses.

The loss of on-street parking spaces also raises issues related to economic impacts. Several blocks of unmetered parallel parking spaces would be temporarily lost along Townsend Street during construction of the Townsend alignment, potentially exacerbating difficult conditions for local business owners, particularly the small retailers.

Prior to initiating construction on major elements of the Terminal/Extension Project, outreach efforts would be performed to inform residents, businesses, and property owners of the proposed construction program. A community construction coordination program as described above in Section 5.21.2.5 would be established to encourage communication between the affected community, both residential and business, and the TJPA and JPB regarding construction impacts and possible mitigation and solutions.

5.21.7 COMMUNITY FACILITIES AND SERVICES

None of the community facilities identified in Section 4.3 would be affected by construction activities, except to the extent that traffic delays caused by temporary detours and congestion may inconvenience persons gaining access to these facilities.

Safety and security services during construction would be provided by the San Francisco Police Department and other security personnel identified in Sections 4.3 and 5.17. The San Francisco Police Department would likely assign officers to monitor traffic congestion and detours along surface streets during construction. It is likely that existing officers would be assigned to this task, and at this time no additional costs to the Department are anticipated. While emergency access would potentially be affected by any change in traffic conditions in the area, the traffic impacts of the project would be very minor and should not affect emergency response times.

The Fire Department would review project plans at time of permitting to ensure that adequate life safety measures and emergency access are provided during construction of the Terminal/Extension Project. To reduce the potential for impacts to occur a life safety plan would be developed and implemented, as described in Section 5.4.

The City's Solid Waste Management Program has indicated that the amount of construction debris generated and disposed of could be adequately accommodated by existing landfills (Kevin Drew, Solid Waste Management Program Associate, responses to questionnaire, June 13, 2001). Mitigation measures are identified in Section 5.21.6.2, however, in order to help San Francisco achieve the 50 percent reduction goal specified in the California Integrated Solid Waste Management Act of 1989 (AB 939). In addition, the Terminal/Extension Project would comply with all City and County ordinances regarding the minimization of waste though recycling.

To reduce the short-term solid waste impacts associated with construction, the construction specifications will require the use recycled construction materials where feasible, and will include specification regarding the recycling of construction and demolition materials.

5.21.8 PARKLANDS, SCHOOLS, AND CHURCHES

None of the parks, schools, or churches identified in Section 4.4 would be affected by construction activities, except to the extent that traffic delays caused by temporary detours and congestion may inconvenience persons gaining access to these facilities.

5.21.9 AIR QUALITY

Construction activities can cause pollutant emissions in a number of ways, including emissions of nitrogen oxides, carbon monoxide, and sulfur oxides from diesel-powered construction equipment; carbon monoxide emissions from worker vehicles; dust or PM_{10} emissions from vehicles traveling on unpaved surfaces and/or grading and other earthmoving activities; and reactive organic gas emissions from asphalt placement and architectural coatings. There are no quantitative emissions thresholds for construction activities, which are by their nature temporary and occur over a large area, potentially affecting different receptors at different times. The Bay Area Air Quality Management District's (BAAQMD) approach to the analysis of construction impacts is to emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions.

Specific construction practices can minimize or control certain emissions, and the following mitigation measures, which are derived from the "basic control measures" and the "enhanced control measures" recommended by the BAAQMD, are proposed as part of the project.

As part of the contract provisions, the project contractor would be required to implement the following measures at all project construction sites:

- Water all active construction areas at least twice daily. Ordinance 175-91, passed by the San Francisco Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities; therefore the project contractor would be required to obtain reclaimed water from the City's Clean Water Program or other appropriate sources.
- Cover all trucks hauling soil, sand, and other loose materials *or* require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

- *Minimize use of on-site diesel construction equipment, particularly unnecessary idling.*
- *Shut off construction equipment to reduce idling when not in direct use.*
- *Where feasible, replace diesel equipment with electrically powered machinery.*
- *Locate diesel engines, motors, or equipment as far away as possible from existing residential areas.*
- *Properly tune and maintain all diesel power equipment.*
- *Suspend grading operations during first and second stage smog alerts, and during high winds, i.e., greater than 25 miles per hour.*

Additionally, upon completion of the construction phase, buildings with visible signs of dirt and debris from the construction site shall be power washed and/or painted (given that permission is obtained from the property owner to gain access to and wash the property with no fee charged by the owner).

5.21.10 CONSTRUCTION NOISE AND VIBRATION

5.21.10.1 Impacts

Temporary intrusion from noise and vibration is associated with most large construction projects. Because of the short-term nature of the intrusion, construction noise and vibration are not usually considered impacts unless, as is the case for this project, the construction will last for an extended period of time.

Construction noise varies greatly depending on the construction process, type and condition of equipment used, and layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, which makes it difficult to accurately estimate levels of construction noise. The noise impact assessment for a construction site is based on:

- An estimate of the type of equipment that will be used during each phase of the construction and the average daily duty cycle for each category of equipment,
- Typical noise emission levels for each category of equipment, and
- Estimates of noise attenuation as a function of distance from the construction site.

Although the lack of specific information at the time of the environmental assessment makes estimates of construction noise approximate, the projections do provide a good picture of where noise impacts are likely to occur and the general types of noise mitigation that will be required to mitigate the impacts.

Table 5.21-*6* summarizes some of the available data on noise emissions of construction equipment from the FTA Guidance Manual. Shown are the average of the L_{max} values at a distance of 50 feet. Although the noise levels in the table represent typical values, there can be wide fluctuations in the noise emissions of similar equipment. In fact, several of the cited noise levels would exceed the limit in the San Francisco noise regulation that is discussed below.

Table 5.21-6: Construction Equipment Noise Emission Levels

Equipment Type	Typical Sound Level at 50 ft (dBA)
Backhoe	80
Bulldozer	85
Compactor	82
Compressor	81
Concrete Mixer	85
Concrete Pump	82
Crane, Derrick	88
Crane, Mobile	83
Generator	81
Loader	85
Pavement Breaker	88
Paver	89
Pile Driver, Impact	101
Pump	76
Roller	74
Shovel	82
Truck	88

Source: Harris Miller Miller and Hanson, September 2001

Construction noise at a given noise-sensitive location depends on the magnitude of noise during each construction phase, the duration of the noise, and the distance from the construction activities. Projecting construction noise requires a construction scenario of the equipment likely to be used and the average utilization factors or duty cycles (i.e., the percentage of time during operating hours that the equipment operates under full power during each phase). Using the typical sound emission characteristics, as given in Table 5.21-*6*, it is then possible to estimate L_{eq} or L_{dn} at various distances from the construction site.

Table 5.21-*7* is an example of the noise projections for equipment that is often used during cut-and-cover subway construction. For the calculations it is assumed that all the equipment is located at the geometric center of the construction work site. Based on this scenario, a 12-hour L_{eq} of 88 dBA should be expected at a distance of 50 feet from the geometric center of the work site. This is equivalent to an L_{eq} of approximately 76 dBA at a distance of 200 feet from the construction site, significantly higher than the normal daytime L_{eq} in the project area even in locations where ambient noise exposure is relatively high because of traffic on I-80. On cut-and-cover construction, once roadway decking is in place over the excavated trench, most of the construction activities will be shielded by the decking material, resulting in substantially lower noise levels for buildings adjacent to the construction site.

Table 5.21-7: Typical Equipment List, Subway Excavation

Equipment Item	Typical Sound Level at 50 ft (dBA)	Equipment Utilization Factor (%)	L_{eq} (dBA)
Air Compressor	81	50%	78
Backhoe	80	40%	76
Crane, Derrick	88	10%	78
Dozer	85	40%	81
Generator	81	80%	80
Loader	85	40%	81
Pavement Breaker	88	4%	74
Shovel	82	40%	78
Dump Truck	88	16%	80
Total workday L_{eq} at 50 feet (12-hour workday)			89

Source: Harris Miller Miller and Hanson, September 2001

The construction phases of this project and the potential for noise and vibration impacts are summarized below:

Utility Relocation: Relocating the utilities that conflict with the construction would not have much potential for noise impact. The equipment used is typical of normal street work. This construction would not normally warrant nighttime construction except in areas where the relocation efforts would cause unacceptable interference with traffic.

Demolition: A number of buildings along the corridor would be demolished in preparation for cut-and-cover construction. No residential receptors are located near any of the buildings likely to be removed on Townsend Street. During the demolition of the Transbay Terminal, noise from impact equipment such as jackhammers, pavement breakers, and hoe rams could be disturbing to occupants of buildings near the Transbay Terminal. The land uses closest to the Transbay Terminal are primarily commercial and office space. Impacts on these spaces would be temporary and would not disrupt normal use of the buildings.

The other major demolition effort would be removing the existing bus ramps leading from the current western exit of the Transbay Terminal. Again, the impact equipment used in the demolition is the most likely to cause intrusive noise. The land uses closest to the ramps are primarily commercial and office space. Impacts on these spaces would be temporary, typically a month or two while the nearest ramp is being demolished, and would not disrupt normal use of the buildings.

Surface Rail Line and Station Construction: Surface rail line and station construction would primarily affect buildings along Townsend Street from Seventh Street to the subway portal. Existing land uses are primarily commercial, industrial or office space with some mixed-use residential buildings along Townsend Street west of Fourth Street. Noise from daytime construction, particularly pile driving, may be intrusive on an intermittent basis, however, compliance with the limits of the San Francisco noise regulations would avoid significant noise

impacts. Nighttime construction could result in noise impacts to mixed-use residential buildings within a block of Townsend Street.

Retained Cut/Portal Construction: The construction of the retained cut and the portal would include drilling a number of auger holes to build the soil-cement walls, excavation between the walls, and construction of the track bed and track. The land uses most affected by the construction would be along Townsend Street, which is primarily commercial and industrial with some office space. Some nighttime construction might be advantageous to avoid disruptions during normal business hours, but could result in noise impacts to mixed-use residential buildings within the blocks of Townsend Street to the west of Fourth Street.

Tunnel Construction and Street Reconstruction: This section addresses noise and vibration impacts of subway construction. The subway track sections between Townsend Street and the Transbay Terminal and on down Main Street or Mission Street would be constructed using cut-and-cover construction, or a combination of cut-and-cover and stacked-drift construction methods (to tunnel the portion of the alignment from Townsend Street to Folsom Street). It is anticipated that subway construction would last for a total period of approximately three and a half to four years, with up to 36 months required for the stacked-drift tunnel portion.

Cut-and-Cover Construction. The noisiest phases of cut-and-cover construction are the initial construction of the support walls and installation of the roadway decking. To minimize traffic disruption during installation of decking where the alignment passes under Beale Street, First Street and Fremont Street, some construction would be done during nighttime hours with trenches covered to allow normal traffic flow during the daytime. This nighttime construction would not cause noise impacts since there are no residential land uses in these areas. Once the decking is in place for cut-and-cover construction, excavation and construction would continue under the decking. During the excavation and bracing phases, above-ground activities would consist primarily of cranes removing excavated material and trucks hauling the excavated material away. Surface activities would not be a major factor for the remainder of cut-and-cover construction with the exception of street reconstruction at the very end of the project.

Vibration impacts from cut-and-cover construction methods would result primarily from the use of impact equipment such as hoe-rams. These impacts would be expected to produce some short-term annoyance exceeding frequent event criterion levels of 72 VdB throughout the duration of the cut-and-cover construction; mitigation measures are proposed. Impacts exceeding the damage criterion level are not anticipated.

Stacked-drift Tunneling. Construction machinery used for the stacked-drift tunneling method would include tracked vehicles, excavation equipment, and vibratory compactors. No noise impacts of stacked-drift tunneling are anticipated because land uses at the surface would be shielded from construction activities. The vibration produced by tunneling equipment would, however, be of sufficient magnitude to be perceptible and annoying at times for the occupants of residences closest to the construction. Exceedences of the frequent event criterion of 72VdB are

expected to be even greater than with cut-and-cover construction. Mitigation measures are identified.

Vibration Effects on Historic Buildings. Because vibration from construction activities and equipment can be of sufficient magnitude to damage fragile historic buildings, a special study was done to determine whether vibration impacts of the project would exceed criteria levels for such sensitive land uses. These criteria are listed in Table 5.21-*8*.

Table 5.21-8: Construction Vibration Impact Criteria

Level of Impact	Land Use	Vibration Criterion, PPV (in.sec)
Threshold of Potential (Cosmetic) Damage	Fragile, Historic Structures	0.5
Threshold of Minor Structural Damage	Fragile, Historic Structures	0.3
Threshold of Potential (Cosmetic) Damage	Non-Fragile Structures	0.2
Threshold of Minor Structural Damage	Non-Fragile Structures	0.12

Source: FTA

Based on the study, no damage from construction vibration is anticipated at any of the buildings in this area from typical construction methods. Comparing the highest anticipated construction vibration levels to these criteria confirms that anticipated construction activities would not be sufficient to cause structural damage, even to the most fragile historic structures.

Controlled Detonation. Controlled detonation may be required during tunnel construction through rock for both the cut-and-cover and stacked-drift construction methods, subject to additional geotechnical investigations and other considerations that would be determined during the final design and construction phases of the project. Any use of controlled detonation would be closely controlled and monitored to avoid damage to existing structures. Specific limits, practices, and monitoring and reporting procedures would be included within the contract documents to ensure that such construction methods, if used, would not exceed safety criteria.

Contractor Work Areas: The specific construction activities that would occur at these sites would vary, depending on their location, however, there would be a considerable amount of heavy equipment operations at the sites. These sites would be the proposed locations for removal of much of the excavated material from retained cut, cut-and-cover, and stacked-drift tunnel construction. Activities would include temporary muck storage, muck removal, trucks transporting material to the construction site, cranes lowering and lifting materials from the access shafts, heavy equipment such as front end loaders, ready-mix trucks delivering concrete to the job, and tunnel ventilation equipment. The six contractor staging/work areas being considered for cut-and-cover construction are:

1. East of Seventh Street, between Berry and Townsend Streets. This site is sufficiently removed from noise-sensitive receptors that the contractor would not have problems complying with the San Francisco noise regulations.

2. North of Townsend Street, between Clarence Place and Stanford Street. This would be the staging area for the demolition of buildings at the southern end of the cut-and-cover tunnel section. There are no noise-sensitive locations near this area.

3. Southwest corner of the intersection of Second and Brannan Streets. This site is located within 600 feet of multiple residences, however, several large buildings stand between the staging area and sensitive receptors. These buildings would provide adequate shielding between this staging area and nearby noise sensitive sites.

4. Northeast corner of the intersection at Howard Street and Second Street. This site is located within 500 feet of the apartment building at 246 Second Street and the Marriott Hotel along Second Street. Based on preliminary calculations, the Leq over an 8-hour shift would be approximately 69 dBA at the apartment building. An L_{eq} of 57 dBA was measured at these residences for a one-hour period during the evening commute period. It is estimated that the 24-hour noise exposure is about 60 dBA.

   Depending on the layout of the construction site and the specific equipment used during nighttime hours, meeting the nighttime noise limit in the San Francisco noise regulations of ambient plus 5 dBA is likely to require 7 to 10 dBA of noise reduction. Because of the elevation of the high-rise apartments, a sound wall around the perimeter of the site would provide mitigation only for residents on the lower floors. It is expected that the contractor will work with the San Francisco Department of Public Works (DPW) to avoid noise impacts to the closest residences.

5. Parking lot on Main Street between Howard Street and Mission Street. There are no noise-sensitive land uses near this area.

6. The parking lot west of Main Street between Howard and Mission Streets. This site is sufficiently removed from noise-sensitive receptors that the contractor would not have problems complying with the San Francisco noise regulations.

Haul Routes: Deliveries to the construction sites and excavated material from the project will be moved along pre-selected haul routes. Most of the routes are along relatively busy streets with primarily commercial and industrial land uses. There are some intermixed office space and residential land uses along several of the planned haul routes. Because of the *relatively high volumes of existing traffic on the haul routes during the daytime, the addition of construction trucks would not increase total traffic volumes to the extent that they would increase overall noise to levels that would create noise impacts at sensitive receptors along the routes. At nighttime, when existing traffic volumes are lower than during the day, the addition of construction trucks could influence traffic volumes to the extent that noise impacts would occur*

in the following areas: Fourth Street, one block on Howard Street, and Brannan Street near Fourth Street.

5.21.10.2 Mitigation Measures

Noise: The following mitigation measures are proposed to reduce construction noise impacts:

1. Comply with the San Francisco Noise Ordinance. The noise ordinance includes specific limits on noise from construction. The basic requirements are:

   - Maximum noise level from any piece of powered construction equipment is limited to 80 dBA at 100 ft. This translates to 86 dBA at 50 feet.
   - Impact tools are exempted, although such equipment must be equipped with effective mufflers and shields. The noise control equipment on impact tools must be as recommended by the manufacturer and approved by the Director of Public Works.
   - Construction activity is prohibited between 8 p.m. and 7 a.m. if it causes noise that exceeds the ambient noise plus 5 dBA.

   The noise ordinance is enforced by the San Francisco DPW, which may waive some of the noise requirements to expedite the project or minimize traffic impacts. For example, along Townsend Street where much of the land use is commercial, business owners may prefer nighttime construction since it would reduce disruption during normal business hours. The DPW waivers usually allow most construction processes to continue until 2 a.m., although construction processes that involve impacts are rarely allowed to extend beyond 10 p.m. This category would include equipment used in demolition such as jackhammers and hoe rams, and pile driving.

   It is not anticipated that the construction documents would have specific limits on nighttime construction. There may be times when nighttime construction is desirable (e.g., in commercial districts where nighttime construction would be less disruptive to businesses in the area) or necessary to avoid unacceptable traffic disruptions. Since the construction would be subject to the requirements of the San Francisco noise regulations, in these cases, the contractor would need to work with the DPW to come up with an acceptable approach balancing interruption of the business and residential community, traffic disruptions, and reducing the total duration of the construction.

2. Conduct Noise Monitoring. The purpose of monitoring is to ensure that contractors take all reasonable steps to minimize noise.

3. Conduct Inspections and Noise Testing of Equipment. This measure will ensure that all equipment on the site is in good condition and effectively muffled

4. Implement an Active Community Liaison Program. This program would keep residents informed about construction plans so they can plan around periods of particularly high

noise levels and would provide a conduit for residents to express any concerns or complaints about noise.

5. Minimize the Use of Vehicle Backup Alarms. A particular concern is for backup alarms on construction vehicles operating during nighttime hours. Because backup alarms are designed to get people's attention, the sound can be very noticeable even when their sound level does not exceed the ambient, and it is common for backup alarms at construction sites to be major sources of noise complaints. A common approach to minimizing the use of backup alarms is to design the construction site with a circular flow pattern that minimizes backing up of trucks and other heavy equipment. Another approach to reducing the intrusion of backup alarms is to require all equipment on the site to be equipped with ambient sensitive alarms. With this type of alarm, the alarm sound is automatically adjusted based on the ambient noise. In nighttime hours when ambient noise is low, the backup alarm is adjusted down.

6. Include Noise Control Requirements in Construction Specifications. These should require the contractor to:
   - Perform all construction in a manner to minimize noise. The contractor should be required to select construction processes and techniques that create the lowest noise levels. Examples are using predrilled piles instead of impact pile driving, mixing concrete offsite instead of onsite, and using hydraulic tools instead of pneumatic impact tools.
   - Use equipment with effective mufflers. Diesel motors are often the major noise source on construction sites. Contractors should be required to employ equipment fitted with the most effective commercially available mufflers.
   - Perform construction in a manner to maintain noise levels at noise sensitive land uses below specific limits.
   - Perform noise monitoring to demonstrate compliance with the noise limits. Independent noise monitoring should be performed to check compliance in particularly sensitive areas.
   - Minimize construction activities during evening, nighttime, weekend and holiday periods. Permits would be required before construction can be performed in noise sensitive areas during these periods.
   - Select haul routes that minimize intrusion to residential areas. This is particularly important for the trench alternatives that will require hauling large quantities of excavation material to disposal sites.

7. Controlling noise in contractor work areas during nighttime hours is likely to require some mixture of the following approaches:
   - Restrictions on noise producing activities during nighttime hours.

- Laying out the site to keep noise producing activities as far as possible from residences, to minimize the use of backup alarms, and to minimize truck activity and truck queuing near the residential areas.
- Use of procedures and equipment that produce lower noise levels than normal. For example, some manufacturers of construction equipment can supply special noise control kits with highly effective mufflers and other materials that substantially reduce noise emissions of equipment such as generators, tunnel ventilation equipment, and heavy diesel power equipment including mobile cranes and front-end loaders.
- Use of temporary barriers near noisy activities. By locating the barriers close enough to the noise source, it is possible to obtain substantial noise attenuation with barriers 10 to 12 feet high even though the residences are 30 to 40 feet higher than the construction site.
- Use of partial enclosures around noisy activities. It is sometimes necessary to construct shed-like structures or complete buildings to contain the noise from nighttime activities.

Vibration: The following procedures will be used to minimize the potential for annoyance or damage from construction vibration:

1. Limit or prohibit use of construction techniques that create high vibration levels. At a minimum, processes such as pile driving would be prohibited at distances less than 250 feet from residences.

2. Restrict procedures that contractors can use in vibration sensitive areas. It is often possible to employ alternative techniques that create lower vibration levels. For example, unrestricted pile driving is one activity that has considerable potential for causing annoying vibration. Using the cast-in-drilled-hole piling method instead will eliminate most potential for vibration impact from the piling.

3. Require vibration monitoring during vibration intensive activities.

4. Restrict the hours of vibration intensive activities such as pile driving to weekdays during daytime hours.

5. If resident annoyance from vibration becomes a problem, alternative construction methods and practices would be investigated in coordination with the construction contractor to reduce the impacts.

6. Include specific limits, practices and monitoring and reporting procedures for the use of controlled detonation, if this construction technique is determined to be necessary.

5.21.11 WATER RESOURCES

Construction grading, tunneling, and utility excavations would increase the sediment load to storm sewers during rainfall events. Sediment sources created during construction include soil stockpiles; soil tracked across construction areas, staging areas, and public roads; and soil transported to these areas by wind. Because stormwater in the study area discharges to the City's combined storm/sanitary sewer system, sediment transported by stormwater would not affect surface water bodies in the project area (China Basin and San Francisco Bay). However, wind-transported soils could contain contaminants that would affect nearby surface waters.

Construction dewatering would locally result in the temporary lowering of the water table and could promote the downward migration of contaminants from the uppermost groundwater zone to deeper groundwater zones. If dewatering lowers the water table in areas where free-phase petroleum hydrocarbons are floating on the water table, the resulting decrease in the water-table elevation would smear the hydrocarbons across soils that otherwise may be only minimally affected. The impacts associated with handling and disposal of contaminated dewatering effluent are further discussed in Section 5.21.14.

Construction excavation spoils will be appropriately managed so as to minimize wind dispersion of potentially contaminated soil particles. Spoils management practices are to include covering stockpiles with plastic sheeting, periodically spraying water on exposed soil areas to suppress dust generation, and decontamination of vehicles prior to departure from construction and staging areas.

As discussed in Section 5.21.15, construction dewatering would be performed in stages in order to minimize downward migration of contaminants in shallow groundwater. Dewatering effluent will be discharged to the sanitary sewer and, therefore, would not affect nearby surface waters.

Chemical test results for groundwater samples along the alignment would be used to obtain a batch discharge permit from the San Francisco Department of Public Works and to evaluate requirements for treatment prior to discharge to the sanitary sewer. Effluent produced during the dewatering of excavations would be collected in onsite storage tanks and periodically screened for potential contamination to confirm the need for treatment prior to discharge. If necessary, treatment may include:

I. Allowing sediment to settle out of the effluent in order to reduce elevated metals concentrations that can result from high quantities of suspended sediment; and/or

II. Carbon filtering to remove fuel hydrocarbons and PAHs.

5.21.12 UTILITIES

Impacts to utilities for the overall project are discussed in Section 5.12. If necessary, disruptions to service during construction would be short-term and carefully scheduled with advance notice given to affected customers.

5.21.13 ELECTROMAGNETIC FIELDS

There would be no electromagnetic field impacts associated with construction of the Terminal/Extension Project.

5.21.14 HISTORICAL AND CULTURAL RESOURCES

5.21.14.1 Archaeological Resources

Long-term impacts to archaeological resources that may exist within the project Area of Effects (APE) – including measures to be taken in the event of unanticipated discoveries during construction – are discussed in Section 5.14, Historic and Cultural Resources.

If buried cultural materials are unearthed during construction, work in the vicinity of the find would be halted until a qualified archaeologist can assess their significance. If human remains are encountered during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.88. In either instance, TJPA, JPB, the City and County of San Francisco, and the Redevelopment Agency would be immediately notified. *Please see Section 5.14.2 for a more detailed discussion of archaeology mitigation measures.*

5.21.14.2 Historical Architectural Resources

Project impacts on historical architectural resources within the project APE are described in Section 5.14, Historic and Cultural Resources. Section 5.14 also describes suggested mitigation measures for long-term impacts to these resources; actual mitigation measures will be determined in consultation with the State Historic Preservation Officer and the Advisory Council on Historic Preservation and reported in the Final EIS/EIR.

A construction easement will be required into the southeast corner of the 166-178 Townsend Street property, which is a contributor to the significance of the Rincon Point / South Beach Historic Warehouse – Industrial District. To avoid impacts to the building during and following construction of the subway, it is proposed to underpin the building prior to initiation of construction activities.

5.21.15 CONSTRUCTION HAZARDOUS MATERIALS IMPACTS

Two main types of hazardous materials/wastes may cause construction impacts: those used in the construction process and those that would be encountered or generated during construction.

Some hazardous materials, primarily fuels and motor oils, would be used during construction. Construction of aboveground facilities would also use paints and other cleaners or degreasers. While these are commonly used materials, they are considered hazardous materials (fuels, for example, are flammable) based on their physical properties, and improper handling could potentially endanger workers and the public and also could result in contamination of soil and/or water.

Contact with contaminants in the study area could potentially have adverse effects on worker, public, and environmental health and safety. During project construction, workers could be exposed to soil and/or groundwater containing hazardous substances via direct contact (ingestion or dermal contact) with contaminated soil and groundwater or via airborne pathways (inhalation of vapors). The public and environment could be exposed to contaminants transported offsite during construction. The degree of hazard associated with these impacts on human or environmental receptors would be a function of the chemical properties, concentrations and volume of contaminants, nature and duration of construction activities, and contaminant migration pathways. However, the largest degree of potential exposure risk is with the construction worker.

Construction activities such as excavation, installation of deep foundations, or site dewatering within existing contaminated areas could potentially increase the spread of contaminants to surface water and other groundwater zones along the proposed alignment. Disposal of contaminated soil would transport contaminants out of the study area as well.

As noted in Section 4.17, a total of 37 regulatory agency lists were searched to identify listed facilities within the project area. For purposes of this analysis, the 41 identified hazardous materials sites in the study area have been classified into three categories:

- Locations that would be directly affected by construction along the proposed extension alignments;
- Locations adjacent to or near the proposed project alignments that could be affected by project construction or that could provide sources of contaminants to the construction areas; and,
- Properties with essentially no anticipated adverse impacts due to the distance from the proposed construction areas and nature of contamination.

Table 5.21-*9* presents a breakdown of the identified sites into these categories.

Storage Yard Area. Most of the identified hazardous materials sites located near the proposed storage yard are included on agency lists due to releases from underground storage tanks (USTs). According to the agencies' information, the types of petroleum hydrocarbons that have been released from USTs near the proposed storage yards and surface tracks include diesel fuel, gasoline, motor oil, and various fuel oils.

Construction of the storage yard and trenching for the alignment would result in disturbance of surface soils. None of the excavations are expected to be deep enough to encounter groundwater. Therefore, impacts to construction of the storage yard from UST releases would be limited to spoils handling and worker health and safety precautions for hydrocarbon-contaminated soil.

Because of their close proximity to the planned alignment, the following sites have the greatest likelihood to affect storage yard and track construction:

- Southern Pacific Transportation, 329 Townsend Street, Site 30
- Flair Electro Sales, 516 Townsend Street, Site 34

Properties that are listed by the agencies to have remediation completed or deemed unnecessary are listed under the non-hazardous category. In addition to UST-related hydrocarbons, other potentially hazardous constituents that may affect yard and surface track construction include metals (primarily lead), PAHs, and VOCs (mainly solvents). PAHs and elevated concentrations of lead were detected during Embarcadero roadway-related investigations and construction along King Street (Site 32). Additionally, lead contamination is prevalent in fill material in the South of Market area (SOMA) and is likely to be encountered in fill disturbed by yard and track construction. Although coal tar has not been specifically identified in the storage yard and surface track area, PAHs associated with coal tar residues and other past land uses may be encountered in the fill.

Townsend Street Cut-and-Cover Area. Two identified sites, Sun Chemical Corporation No. 1 (Site 24) and the San Francisco Iron Foundry (Site 26), lie in or adjacent to the Townsend Street cut-and-cover subway segment. The Sun Chemical Corporation site is listed as requiring no further action by the California Department of Toxic Substances Control (DTSC). No information was available in the agencies' databases regarding the nature of contamination at the San Francisco Iron Foundry site. However, based on the type of industry implied by the site name, it is reasonable to expect that soils at that site may contain elevated metals concentrations.

Table 5.21-9: Classification of Potential Hazards Associated with Hazardous Materials Sites

Site No[1]	Site Name and Location	Potential Construction-Related Hazard		
		None [2]	Indirect [3]	Direct [4]
1	Federal Reserve Bank, SE Corner of Mission and Main Streets		X	
2	Talco Inc., 621 First Street		X	
3	San Francisco Gas & Light Co., 401 Howard Street		X**[5]**	
4	Caltrans (Transbay Terminal), 150 First Street			X
5	San Francisco Gas Light Co., 166 Fremont Street, 498 Howard Street			X
6	U.S. Marine Corps – Supply Depot, 160 Harrison Street		X	
7	524 Howard Street HOA	X		
8	Transportation the Department, 434 Main St	X		
9	Caltrans, 120 Richards Street		X	
10	Dahl Beck Electric Co., 580 Howard Street		X	
11	141 New Montgomery, 171 New Montgomery Street	X		
12	Oriental Warehouse		X	
13	Unspecified Site, Second and Townsend Streets	X		
14	Pacific Bell, 611 Folsom Street			X
15	600 Harrison Street		X	
16	Photosynthesis LTD Chromeworks, 425 Bryant Street	X		
17	George Lithograph CO, 650 Second Street		X	
18	San Francisco Fire Dept., 698 Second Street		X	
19	Commercial Building, 35 Stanford Street	X		
20	Commercial Building, 101 Townsend Street	X		
21	San Francisco Gas & Electric Co., 120 King Street		X	
22	Pacific Gas Improvement Co., 169 Townsend Street		X	
23	McDonalds Corp., 701 Third Street		X	
24	Sun Chemical Corporation No. 1, 252 Townsend Street			X
25	Unspecified (Embarcadero Roadway Project)		X	
26	San Francisco Iron Foundry, 260 Townsend Street			X
27	Heublin, Inc., 601 Fourth Street		X	
28	San Pacific Imports, 530 Brannan Street		X	
29	Commercial Building, 542 Brannan Street		X	
30	Southern Pacific Transportation, 329 Townsend Street			X
31	SF Newspaper Agency, 590 Brannan Street		X	
32	Unspecified (Embarcadero Roadway Project)		X	
33	California Poultry Company, 777 Brannan Street		X	
34	Flair Electro Sales, 516 Townsend Street,		X	
35	Independent Electric Supply, 550 Townsend Street			X
36	Baker/ Hamilton Building, 638 King Street		X	
37	Baker/ Hamilton Properties, LLC, 650 King Street		X	
38	Golden Gate Disposal Co., 900 7th Street		X	
39	Former Southern Pacific Co., 415 Channel Street		X	
40	Greyhound, Hooper/ Seventh Street		X	
41	The Glidden Company, 1400 Seventh Street		X	

Notes:
[1] Site numbers correspond to site location numbers shown on Figure 4.17-1.
[2] Sources of potential contamination are judged to be sufficiently far from proposed construction activities that environmental impacts are not anticipated.
[3] Properties adjacent to proposed construction areas or properties where the presence of potential sources is not well defined relative to planned construction.
[4] Properties where proposed construction may pass directly through areas of known contamination.
[5] Contamination may extend beyond site boundaries into areas that would be directly affected by construction.

Source: Dames & Moore, 1996

No other identified hazardous materials sites located near the Townsend Street cut-and-cover tunnel section are expected to have affected soil that would be disturbed during construction of the Townsend Street segment.

Several identified UST release locations (Sites 16, 27, 28, 29, and 31) may be located hydrogeologically upgradient of the cut-and-cover tunnel section; therefore, groundwater affected by fuel hydrocarbons may be encountered during construction dewatering.

The most substantial UST release site near the proposed Fourth and Townsend Street subsurface station is SF Newspaper Agency (Site 31), which reportedly has gasoline product floating on the water table. Depending on the lateral extent of the floating product, dissolved-phase gasoline constituents, and groundwater flow direction, gasoline hydrocarbons from this site could affect construction dewatering and worker health and safety.

Townsend Street. The subway portion of Townsend Street potentially intersects an additional three identified hazardous materials sites (Sites 30 and 34). Potential impacts associated with Sites 30 and 34 are similar to those discussed above for the storage yard and surface tracks, with the following exceptions:

- Soil disposal costs may be increased due to the large quantity of soils that would be excavated during cut-and-cover construction; and
- The subway excavation would require dewatering of groundwater potentially contaminated by fuel hydrocarbon constituents.

Construction of the cut-and-cover subway would require disturbance of fill that potentially contains lead and PAHs in addition to fuel hydrocarbons, as is the case with other components of the surface track, storage yard, and Townsend Street alignments.

The Tunnel Option would extend through bedrock and would be below the current groundwater table throughout the entire alignment. Because fuel hydrocarbons associated with UST sites have a tendency to float on the groundwater table, it is unlikely that hydrocarbon-affected bedrock would be encountered. Therefore, impacts from potential UST release sites would be limited to contaminated groundwater or floating product that could enter the tunnel excavation or require special disposal when intercepted by the tunnel dewatering system. Entry of dissolved-phase or free-phase fuel hydrocarbons into the tunnel could create explosion or inhalation hazards. If present in the dewatering system effluent, fuel hydrocarbons may prevent direct discharge of the effluent to the sanitary sewer without appropriate treatment.

Identified UST release sites near the tunnel section (Sites 15, 17, 18, 20, and 27), are either unconfirmed releases or listed as requiring no further remedial action. Sites 12, 13, 14, 16, 19, and 21 do not have a current status listed in the agency reports. Floating product was reportedly present at an unspecified commercial building at 101 Townsend Street (Site 20), however the agency reports a current status of “remediation completed or deemed unnecessary.”

Metals and PAHs have been detected at sites in the Townsend Street vicinity (Sites 12, 13, and 25). These contaminants are encountered in fill material and, to a limited extent, may extend down into underlying native soils but are not expected to be present in bedrock. In addition, low concentrations of metals and PAHs may be present in groundwater intercepted by the tunnel dewatering system. Contamination in soil would not likely affect this section of the tunnel. Soils overlying bedrock may contain metals, PAHs, and/or fuel hydrocarbons at sufficient concentrations to require worker health and safety precautions and special handling and disposal of excavated soil.

Folsom to Transbay Terminal Segment

Three of the identified hazardous materials sites are located near the cut-and-cover subway segment north of Folsom Street to the proposed underground terminal. The first site, Pacific Bell (Site 14), is shown as the site of a release of diesel into surrounding soil. It is also listed as a small quantity generator of hazardous wastes. The second site is located at 171 New Montgomery Street (Site 11) and is listed with a status of "remediation completed or deemed unnecessary." Dahl Beck Electric Company (Site 10) is reported as having a gasoline release to soil with a status of "remediation completed or deemed unnecessary."

This cut-and-cover section is located outside of known areas of coal tar residues, but may still have been affected by low concentrations of PAHs. Similarly, this subway section is not included within the Article 22A[50] zone but may encounter fill soils that contain elevated concentrations of lead or other metals.

Transbay Terminal. UST release sites located near this cut-and cover section include sites 1, 2, 4, 6, 7, and 8. All of these sites are listed as either unconfirmed, "case closed," or "remediation completed or deemed unnecessary." There are known coal tar deposits in this area from the former San Francisco Gas Light Co. (Sites 3 and 5). The identified UST release sites include the Federal Reserve Bank (Site 1), Talco Inc. (Site 2), the Caltrans-Transbay Terminal site (Site 4), the former U.S. Marine Corps Supply Depot (Site 6), 524 Howard Street HOA (Site 7), and the Transportation Department (Site 8). Details regarding the nature of contamination at these sites are discussed below, with contamination from UST releases for all three sites discussed first, followed by specifics related to the presence of asbestos at the Transbay Terminal itself.

Construction of the new Caltrain underground terminal would require excavating potentially contaminated soils and dewatering of groundwater that may include hazardous contaminants. A portion of the underground terminal is located within the Article 22A zone, indicating that soils encountered during construction are likely to have elevated concentrations of lead and other metals and possibly PAHs. In addition, coal tar deposits are likely to be encountered in the eastern half of the terminal excavation while surrounding soils are expected to contain PAHs associated with coal tar residues. The underground terminal would be located adjacent to a former coal gas plant, the San Francisco Gas Light Company (Sites 3 and 5). Elevated levels of

[50] Article 22A of the San Francisco Public Health Code (Maher Ordinance).

PAHs in soil have been detected at several nearby sites, including the Oriental Warehouse (Site 12) and an unspecified site at Second and Townsend Streets (Site 13), as well as several other sites along Howard Street between Fremont and Main Streets. In addition to soil contamination, groundwater contamination associated with the coal tar residues has also been detected in these areas and may potentially affect dewatering operations.

In addition, there is one UST site near the proposed underground terminal that has the potential to affect construction of the station. The Federal Reserve Bank (Site 1) is located approximately 400 feet from the proposed underground terminal and is reported to have had an unconfirmed release of gasoline that affected groundwater.

Based on the presence of UST releases at and near the proposed terminal, and on the probability that other unreported UST releases have occurred in the area, it is likely that some soils encountered during construction would have detectable concentrations of fuel hydrocarbons. Depending on the lateral extent of dissolved-phase constituents and groundwater flow direction during dewatering, gasoline hydrocarbons from past UST releases and groundwater contamination associated with coal tar residues could affect construction dewatering and worker health and safety. If present in the dewatering system effluent, fuel hydrocarbons may prevent direct discharge of the effluent to the sanitary sewer without appropriate treatment.

Asbestos-Containing Building Materials at the Transbay Terminal Building. Caltrans performed an asbestos survey of the Transbay Terminal in 1986 that identified asbestos-containing building materials (ACM) including domestic water and heating pipe insulation, mechanical equipment insulation, and floor tiles. As part of its 1993 renovation of the terminal building, Caltrans removed asbestos-containing thermal systems insulation, vinyl floor tile and mastic, and transite ducting from various areas of the terminal. Also in 1993, the reinforced concrete roof of the terminal was replaced with a lightweight metal roof. This replacement included the removal of approximately 100,000 square feet of built-up asphalt and gravel roofing, vent pipes, and cold joint fillers, all of which were reported to contain asbestos.

Based on this information, some or all of the identified ACM has been removed from the Transbay Terminal. The presence of additional ACM cannot be ruled out without additional survey. Demolition of the terminal without prior abatement of ACM could result in exposure of construction workers and the general public to asbestos fibers.

Mitigation Measures. Handling and storage of fuels and other flammable materials during construction would follow California OSHA and local standards for fire protection and prevention. These measures include appropriate storage of flammable liquids and prohibition of open flames within 50 feet of flammable storage areas.

Prior to construction, the potential presence of contaminants in soil and groundwater would be investigated using conventional drilling, sampling, and chemical testing methods. Based on the chemical test results, a mitigation plan would be developed to establish guidelines for the disposal of contaminated soil and discharge of contaminated dewatering effluent, and to generate

data to address potential human health and safety issues that may arise as a result of contact with contaminated soil or groundwater during construction. The investigation and mitigation plan would follow the requirements of Article 22A in the appropriate areas along the alignment.

With construction projects of this nature and magnitude, there are typically two different management strategies that can be employed to address contaminated soil handling and disposal issues. Contaminated soil can be excavated and stockpiled at a centralized location and subsequently sampled and analyzed for disposal profiling purposes in accordance with the requirements of the candidate disposal landfill. Alternatively, soil profiling for disposal purposes can be done in-situ so when soil is excavated it is loaded directly on to trucks and hauled to the appropriate landfill facility for disposal based on the in-situ profiling results. A project of this nature could also combine both strategies.

Soils removed during excavation and grading activities that remain at a centralized location for an extended period of time would be covered with plastic sheeting to prevent the generation of fugitive dust emissions that migrate offsite. Additionally, dust control measures would be implemented during construction grading and excavation as necessary to minimize offsite migration of contaminants. Soil for disposal at a landfill or recycling facility would be transported by a licensed waste hauler, under appropriate manifests or bill of lading procedures, as required.

Chemical test results for groundwater samples along the alignment would be used to obtain a Batch Discharge Permit under Article 4.1 of the San Francisco Department of Public Works as well as to evaluate requirements for pretreatment prior to discharge to the sanitary sewer. Effluent produced during the dewatering of excavations would be collected in onsite storage tanks and periodically tested, as required under discharge permit requirements, for potential contamination to confirm the need for any treatment prior to discharge. If required, treatment may include:

- Settling to allow particulate matter (total suspended solids) to settle out of the effluent in order to reduce the sediment load as well as reduce elevated metal and other contaminant concentrations that may be associated with suspended sediments; and/or
- Construction of a small-scale batch waste water treatment system to remove dissolved contaminants (mainly organic constituents such as petroleum hydrocarbons (gas, diesel, and oils), BTEX, and VOCs) from the dewatering effluent prior to discharge to the sanitary sewer. A treatment system would also likely employ the use of filtration to remove suspended solids.

A detailed mitigation plan for the handling of potentially contaminated soil and groundwater will be developed prior to starting project construction.

Dewatering systems would be designed to minimize downward migration of contaminants that can result from lowering the water table if necessary based on environmental conditions. As necessary, shallow soils with detected contamination would be dewatered first using wells

screened only in those soils. Dewatering of deeper soils would then be performed using wells screened only in the zone to be dewatered. Dewatering wells would be installed using drilling methods that prohibit shallow contaminated soils from being carried deeper into the boreholes.

Workers performing activities on site that may involve contact with contaminated soil or groundwater would be required to have appropriate health and safety training in accordance with 29 CFR 1910.120. A Worker Health and Safety Plan (HSP) would be developed for the project and monitored for the implementation of the plan on a day-to-day basis by a Certified Industrial Hygienist (CIH). The HSP would include provisions for:

- Conducting preliminary site investigations and analysis of potential job hazards;
- Personnel protective equipment;
- Safe work practices;
- Site control;
- Exposure monitoring;
- Decontamination procedures; and
- Emergency response actions.

The HSP would specify mitigation of potential worker and public exposure to airborne contaminant migration by incorporating dust suppression techniques in construction procedures. The plan would also specify mitigation of worker and environmental exposure to contaminant migration via surface water runoff pathways by implementation of comprehensive measures to control drainage from excavations and saturated materials excavated during construction.

Mitigation measures for ACM would include identification of all available asbestos survey and abatement reports and supplemental asbestos surveys, as warranted. Identified ACM would require abatement prior to building demolition. Removal and disposal of ACM would be performed in accordance with applicable local, state, and federal regulations. In addition to ACM, lead-based paint may also require abatement prior to building demolition. A lead-based paint survey would be required to determine areas where lead-based paint is present and the possible need for abatement prior to demolition.

5.21.16 AESTHETICS & VISUAL IMPACTS

As described in Section 5.20, project construction for all three components would be multi-phased and would occur in different locations at different times. Wherever and whenever construction occurs, construction equipment and supplies would be visible, and evidence of construction activity would be noticeable to area residents, employees, and visitors. Short-term visual changes as a result of construction activities are a common and accepted feature of the urban environment, and generally mitigation is not required. Nonetheless, the TJPA and JPB would require the project contractors to ensure that construction crews working at night direct any artificial lighting onto the work site in order to minimize "spill over" light or glare effects on

adjacent areas. The TJPA and JPB, through its on-site field office, would make all efforts possible to minimize specific aesthetic and visual effects of construction identified by neighborhood businesses and residents.

5.21.17 GEOLOGIC IMPACTS ON PROJECT CONSTRUCTION

The primary geologic units that could adversely affect construction activities of the Terminal/Extension Project include artificial fill and bedrock. Impacts associated with these units are discussed in the following sections.

Fill. Fill soils possess adverse characteristics such as rubble, heterogeneity of composition and depth, and locally high permeability. Because of localized areas of high permeability, fill soils may be difficult to dewater during construction of tunnels and building foundations. Dewatering requirements affect the cost of constructing tunnels and the underground station by increasing the cost to (1) install and operate dewatering systems for the tunnel and station excavations, and (2) discharge the dewatering effluent if the water contains contaminants such as metals or petroleum hydrocarbons. The impacts associated with handling and disposal of contaminated dewatering effluent are further discussed in Section 5.21.14.

Bedrock. Impacts to the Terminal/Extension Project from poor quality bedrock would be limited to the cut-and-cover section under Second Street from Brannan Street to Folsom Street. Cut-and-cover construction in this area will make use of special shoring techniques discussed in Section 5.20.

5.21.18 SAFETY AND SECURITY

Evaluation of long-term project impacts on public safety and security is presented in Section 5.17. This section focuses only on the short-term safety and security impacts of construction activities.

Best construction management practices would be required to be in place to ensure the safety of construction workers, local residents, and employees during project construction. Fencing and lighting of construction and staging areas, and recognized safety practice requirements for the use of heavy equipment and the movement of construction materials would be implemented to avoid accidents. During construction, the Construction Manager would be responsible for job site safety and security. Emergency response personnel within San Francisco would be available for immediate response on an as-needed basis.

5.22 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The No-Project Alternative would not directly involve the use of resources, except insofar as it assumes implementation of planned and programmed capital improvements, which require money, materials, and labor to construct. This would include electrification of the entire Caltrain line from Gilroy to the Fourth and Townsend Streets Station in San Francisco and the need to upgrade or retrofit the existing Transbay Terminal to meet current seismic safety requirements. The Transbay Terminal / Caltrain Downtown Extension / Redevelopment project would involve major capital improvements, which would require money, materials, and labor, as shown in Tables 2.2-1, 2.2-2 and 2.2-3. Total project costs for the Locally Preferred Alternative are estimated to be $2.083 billion year-of-expenditure costs, including all project components.

Because the Transbay Terminal and Caltrain Downtown Extension Alternatives would reduce vehicle miles of travel within the region when compared to the No-Project Alternative, it would also reduce the level of vehicular fossil fuel consumption. Further reductions could occur because local transit operators (Muni and SamTrans) would no longer have to serve the Fourth and Townsend Streets terminal.

Operation of trains on the 1.3-mile extension would require the use of electricity for power, and would have greater propulsion energy requirements than the No-Project Alternative, although the energy requirements per passenger trip would be similar or less.

Operation of the new terminal would require the use of energy for lighting, heating, cooling, but the terminal would be designed to incorporate the latest sustainable features that would allow the building to use site-specific wind, daylight, and shading to reduce the building's energy needs. The design of the roof and exterior walls would facilitate natural ventilation and natural lighting of the interior. Use of mechanical cooling would be limited to enclosed office areas and data equipment rooms. Photovoltaic panels are proposed on the roof structure to capture solar energy. Rainwater would be collected and used for maintenance and irrigation of landscaping.

The new development proposed in the surrounding vicinity would also use energy for lighting, heating, and cooling, but this use would be somewhat offset by a reduction in the use of vehicular fuel, since these new residential, commercial, and retail spaces would be very close to a regional multi-modal transit hub. Automobile use should be less than it would be were the same level of development to be constructed in other, non-transit-oriented locations.

5.23 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The Transbay Terminal / Caltrain Downtown Extension / Redevelopment Alternatives would involve short-term uses of the environment during the construction period through the use of fuel and construction materials, through increases in noise levels and air pollutants, and through increases in traffic congestion and detours around construction sites. These short-term effects and uses of resources would result in long-term benefits such as improved access to downtown San Francisco from the Peninsula, improved connectivity between and among Caltrain and other regional transit systems, and a more vital mix of transit-oriented land uses in the Transbay Terminal vicinity, including housing. These improvements, when combined with the decrease in vehicle miles of travel on the regional highway network, improved air quality, and greater efficiency in energy consumption, would contribute to the long-term livability, and therefore productivity, of the region.

The current Transbay Terminal concept includes "a wide ranging sustainable approach to the terminal building that uses the natural wind flows in downtown San Francisco to ventilate and cool the facility, harnesses solar energy for passive hearing and cooling, and established sustainability protocols for materials, construction procedures, and long-term building operations."[51] Additional measures would be included in the design and specification of equipment to ensure energy efficiency, thereby helping to reduce the long-term energy requirements and the operating costs of the project.

[51] Transbay Terminal Improvement Plan, MTC, 2001, pg. 18.

CHAPTER 6: FINANCIAL ANALYSIS

This chapter presents the proposed financial plan for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. The analysis is not required for environmental review but is presented for informational purposes. A financial plan, or program, is an important element of the project approval process. For a project to receive regional funds in the subsequent phases of design and construction, it must be included in a financially constrained Regional Transportation Plan (RTP). Likewise, eligibility for state funds requires inclusion in the State Transportation Improvement Plan (STIP). If the project is to receive federal funds or is subject to federally required actions, such as review for its impact on air quality, it must also be included in the federally required Transportation Improvement Program (TIP). *The 2003 Transportation Improvement Plan (TIP) was federally approved in February 2003. The proposed Project is included in the 2003 TIP for Preliminary Engineering and design.*

6.1 PROJECT DESCRIPTION

The proposed project has three major components:

- A new, multi-modal Transbay Terminal on the site of the present Transbay Terminal;
- Extension of Caltrain commuter rail service from its current San Francisco terminus at Fourth and Townsend Streets to a new underground terminus underneath the proposed new Transbay Terminal; and
- Establishment of a Redevelopment Area Plan with related development projects, including transit-oriented development in the vicinity of the new multi-modal Transbay Terminal.

Other subordinate components of the project include a temporary bus terminal facility to be used during construction of the new Transbay Terminal, a new, permanent off-site bus storage/layover facility, reconstructed bus ramps leading to the new Transbay Terminal, and a redesigned Caltrain storage yard. Figure 1.2-1 (in Chapter 1) shows the project location.

6.2 ESTIMATED CAPITAL COSTS

The Draft EIS/DEIR reported that a rebuilt Transbay Terminal and the underground Caltrain Extension would cost between $1.898 and $2.141 billion in 2003 dollars. Since the publication of the Draft EIS/DEIR, the Transbay Joint Powers Authority has selected a Locally Preferred Alternative (LPA) consisting of the West Ramp option for the Transbay Terminal and tunnel construction along the Second-to-Main alignment for the Caltrain Downtown Extension. Subsequently, cost estimates have been refined and a value engineering exercise has been undertaken for this LPA. The resulting cost estimate is $1.754 billion in 2003 dollars, approximately $143.7 million less than the original cost estimate for this alternative.

Tables 6.2-1 and 6.2-2 provide more details of the capital costs of the proposed Project's components. Cost estimates include net land acquisition costs and all agency costs for project oversight as well as general project contingency and reserve. The costs exclude any potential savings from value engineering. For more detail on capital costs of the project components, see Chapter 2.

Table 6.2-1: Transbay Terminal Capital Cost Estimate
West Ramp Alternative (LPA)
(Millions of Dollars – Year of Expenditure)

Activity	***Cost Estimate***
Operations Analysis, Preliminary Engineering, Geotechnical Engineering), Program Review/Value Engineering, Final Design & Permitting, Owner Costs	*$107.87*
Acquire Property, Design, Construct Temporary Terminals (Transit and Greyhound)	*$28.29*
Acquire Property & Demolish Buildings to Build Terminal	*$36.54*
Demolish Existing Terminal & Ramps, Construct New Terminal & Ramps	*$909.22*
Construct Permanent Off Site Bus Storage Facility	*$24.45*
TOTAL COST ESTIMATE	***$1,106.37***

Notes:

- *Costs escalated to year of anticipated expenditure between 2004 and 2011.*
- *Costs are for West Ramp Alternative*
- *Other qualifications and assumptions apply, including coordination with Caltrans during the retrofit of the Western Approach and bus ramp retrofit projects.*
- *Total assumes high end of 2001 real estate estimate escalated to year of expenditure.*
- *Construction costs include a 25% construction contingency, 8% for construction management, and 10% project reserve. Owner costs are factored into each category.*

Source: *MTC, SMWM, Oppenheim/Lewis, Sedway Group, Parsons, 2003*

As the relative value of money changes over time due to inflation and other factors, the financial plan has been formed to address costs and revenues in Year of Expenditure (YOE) dollars. Project cost estimates are originally prepared in current-year dollar amounts (such as 2003 dollars), and then spread over the construction schedule. In the financial analysis, these costs are escalated by an assumed inflation rate to calculate what the future project costs are likely to be in the year that the construction activities will occur. The resulting costs are thus expressed in Year of Expenditure dollars.

Soft costs assumed in the Final EIS/EIR are now consistent between the line items and reflect the following breakdown: 25 percent construction cost contingency; 10 percent project reserve; and a 25 percent contingency that includes 10 percent for design costs, eight percent for construction management, and seven percent for owner costs.

Table 6.2-2: Capital Cost Estimate for Caltrain Downtown Extension Second-to-Main Street Tunneling Option – Locally Preferred Alternative
(Millions of Dollars – Year of Expenditure)

Activity	*Cost Estimate*
Operations Analysis, Preliminary Engineering, Geotechnical Engineering, Program Review/ Value Engineering, Final Design & Permitting, Owner Costs	*$76.83*
Acquire Property & Demolish Buildings along Extension	
Acquisition/Relocation for Train Subway	*$82.85*
Demolition	*$1.24*
Resale Proceeds	*($31.12)*
Subtotal	*$52.97*
Design and Relocate Utility Lines along Extension	*$52.90*
Construct Surface Rail & Improvements at Train Yard	*$13.37*
Construct Cut-and-Cover and Retained-Cut – Caltrain Extension	*$427.13*
Reconstruct Streets	*$7.09*
Construct Train Tunnel	*$287.70*
Construct Track & Systems Facilities	*$58.54*
TOTAL COST ESTIMATE – Caltrain Downtown Extension	***$976.53***

Notes:

- *Costs escalated to year of anticipated expenditure between 2004 and 2011.*
- *Costs are for Second-to-Main Tunneling Alternative, the Locally Preferred Alternative.*
- *Total assumes high end of 2001 real estate estimate escalated to year of expenditure.*
- *Construction costs include a 25% construction contingency, 8% for construction management, and 10% project reserve. Owner costs are factored into each category.*
- *The optional underground pedestrian connection from the train mezzanine to The Embarcadero Muni Metro/BART Station is estimated to cost $45.3 million.*
- *An additional $235 million could need to be added to the Project costs for purchase of dual mode locomotives if the Caltrain corridor is not electrified.*

Source: *Parsons, 2003*

6.3 ESTIMATED OPERATING COSTS AND OPERATING REVENUES

6.3.1 OPERATING AND MAINTENANCE COSTS

Anticipated ongoing operating and maintenance costs are discussed separately below for the Transbay Terminal and Caltrain Extension components. Labor and equipment would be the main costs for ongoing operation of the Caltrain extension. Moving the terminal from Fourth and Townsend to the Transbay Terminal, a distance of 1.3 miles, would have a modest effect on the total annual operating costs of Caltrain service. That cost, assuming 132 daily trains, is

estimated at roughly *$7.5* million per year in constant *2003* dollars. The necessary rolling stock is assumed to be in operation at the time the Caltrain Extension begins operation.

The new terminal building would feature a number of design features to reduce maintenance requirements and operating costs, including an open design to optimize natural ventilation by prevailing winds and maximize natural light, and a system to collect rainwater for maintenance and irrigation. Operating costs for the new facility are estimated to be about *$17.8* million per year in constant *2003* dollars.

6.3.2 OPERATING REVENUES

With respect to Caltrain operations, the projected *$7.5* million per year increase in train operating costs due to the additional length of operations on the extension into the Transbay Terminal is expected to be funded by fare revenues from increased Caltrain ridership. With respect to the Transbay Terminal operations, long- term, ongoing operating revenues are anticipated from commercial leases in the Transbay Terminal. MTC Resolution No. 3434 includes a commitment of $62 million in bridge toll funds provided by BATA to be used as operating assistance for this new Transbay Terminal over a 25-year period. The Transbay Terminal is expected to have a positive cash flow on the order of *$4 to $5* million per year *in constant 2003 dollars*. The project would not divert any operating funds from existing bus services. Table 6.3-1 shows a conceptual operating plan for 10 years of revenue service beginning in 2010.

6.4 PROJECT'S INCLUSION IN REGIONAL TRANSPORTATION PLAN

The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project is included as one of the top funding priorities in the financially constrained portion (called "Track 1") of MTC Resolution 3434.[1] MTC Resolution 3434 is the transit expansion element of the 2001 Regional Transportation Plan (RTP). The amended 2001 RTP was adopted by MTC on March 15, 2002.

6.5 ADDITIONAL FACTORS CONTRIBUTING TO FUNDING FEASIBILITY

The funding plan for the Transbay Terminal/Downtown Caltrain Extension/Redevelopment Project, presented in Section 6.6, is based on the application submitted by the San Francisco County Transportation Authority to MTC for inclusion of the Project in Resolution 3434 and the RTP.

[1] The Project is identified as the "Caltrain Downtown Extension/Rebuilt Transbay Terminal" in Resolution 3434 and the RTP.

Table 6.3-1: Transbay Terminal and Caltrain Downtown Extension Conceptual Operating Plan – Cost and Revenue Estimates
(Thousands of 2003 Dollars)

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Caltrain Downtown Extension										
Operating Expenses [1]	*$7,929*	*$7,929*	*$7,929*	*$7,929*	*$7,929*	*$7,929*	*$7,929*	*$7,929*	*$7,929*	*$7,929*
Operating Revenues [2]	*$9,142*	*$9,593*	*$9,680*	*$9,767*	*$9,855*	*$9,943*	*$10,033*	*$10,123*	*$10,214*	*$10,306*
Net Loss/ Surplus [3]	*$1,213*	*$1,664*	*$1,751*	*$1,838*	*$1,926*	*$2,014*	*$2,104*	*$2,194*	*$2,285*	*$2,377*
Transbay Terminal										
Operating Expense [4]	*$17,849*	*$17,849*	*$17,849*	*$17,849*	*$17,849*	*$17,849*	*$17,849*	*$17,849*	*$17,849*	*$17,849*
Operating Revenues [5]	*$22,388*	*$22,388*	*$22,388*	*$22,388*	*$22,388*	*$23,241*	*$23,241*	*$23,241*	*$23,241*	*$23,241*
Net Loss/ Surplus	*$4,539*	*$4,539*	*$4,539*	*$4,539*	*$4,539*	*$5,392*	*$5,392*	*$5,392*	*$5,392*	*$5,392*

Notes:

[1] From Manuel Padron *Final O&M Cost Results Report for Caltrain Downtown Extension Project*, 11/8/96, escalated to *2003* and adjusted for number of trains.

[2] Assumes average of $2.76 per ticket for 13,500 new riders attributable to the extension in 2020, with an annualization factor of 268.

[3] Use of excess revenues to be determined by the JPB.

[4] Based on Jones, Lang LaSalle Report (February 13, 2001) and July 2002 *and September 2003* revisions, and Nancy Whelan Associates, *September 2003*.

[5] Based on Jones, Lang LaSalle Report (February 13, 2001) and July 2002 *and September 2003* revisions, and Nancy Whelan Associates, *September 2003*. Includes $3 million in annual BATA bridge toll operating support per MTC Resolution 3434 (start date of 2010).

Source: Parsons Transportation Group, Nancy Whelan Consulting. *September 2003*.

MTC's process for selecting projects for inclusion in Resolution 3434 portion of the RTP included consideration by MTC of a number of criteria and factors intended to ensure the ability to deliver and to maximize performance of the region's investments in transit expansion. The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project measured well against all criteria; hence MTC's decision to include it among the top priorities in the region. The following describe some of those factors and are included to further illustrate the value and importance of the Project to the regional transportation network.

Subsequent to MTC's approval of Resolution 3434 and to preparation of the Draft EIS/DEIR, the project costs and revenues have been refined. The financial plan presented in Section 6.6 is consistent with Resolution 3434.

6.5.1 SUPPORTIVE LAND USE POLICIES

The Caltrain Downtown extension to the new Transbay Terminal would connect the South Bay with the region's largest and densest concentration of employment – San Francisco's financial district. The proposed extension is consistent with the findings of MTC's *Blueprint* evaluation, which found that rail extensions capture significantly more ridership in the densely settled urban core of the region.

Even though much of downtown San Francisco is substantially built out, there are opportunities for additional development that would further increase Caltrain and bus ridership growth, thereby improving the project's cost effectiveness. *Within the limits of the Full Build Alternative analyzed in this Final EIS/EIR, the Redevelopment Agency's Draft Design for Development Plan (August 2003)for the Project Area* includes over *5.6* million square feet (sq. ft.) of residential/office/retail/hotel development, including approximately *4.1* million sq. ft. of residential development (nearly *3,400* residential units including *approximately 1,200* affordable *units*), nearly *1* million sq. ft. of office development, 475,000 sq. ft. of hotel development, and *neighborhood-serving* retail development.

The redevelopment of the parcels being transferred from the State to the Transbay Joint Power Authority and the Redevelopment Agency would contribute funds directly to the Transbay Terminal / Caltrain Downtown Extension construction projects. This includes more than 5.0 million square feet (sq. ft.) of residential/office/retail/hotel development, including approximately 2,900 residential units (including more than 900 affordable units), nearly 1 million sq. ft. of office development, 475,000 sq. ft. of hotel development, and neighborhood-serving retail development, according to the Redevelopment Agency's Draft Design for Development Plan.

Not only would transit-oriented development around the Transbay Terminal provide needed funding (through tax-increments), it would also increase the density of employment and residential units in the South of Market area. This would improve transit's ability to attract a larger mode share of persons commuting to jobs in the region. In addition, an unprecedented amount of development is projected in the southeastern part of San Francisco over the next 20

years. The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project would provide another attractive transportation option to new residents and workers in that area.

San Francisco's General Plan and Planning Code have for several decades included policies and requirements to ensure transit-oriented, pedestrian-oriented, and mixed-use development (e.g. Transit First policy, transit impact development fees applied to the downtown commercial land uses, parking restrictions and disincentives, and other measures). These existing policies would contribute to the long-term success of the Terminal/Extension Project.

6.5.2 SYSTEM CONNECTIVITY

Caltrain now terminates more than a mile away from the major employment concentrations of San Francisco's downtown office district, and far from the BART and Muni Metro stations on Market Street and from the existing Transbay Terminal. By extending the Caltrain terminus to the Transbay Terminal, the Project would act as a critical gap closure, improving inter-county travel via Caltrain, BART, Muni Metro, Golden Gate Transit, SamTrans, and AC Transit. One centrally located terminal would allow intermodal connections for direct access to seven Bay Area counties from one terminal. In addition, the extension is being designed to accommodate a possible future connection to the East Bay and the Capital Corridor service, which extends from San Jose to Sacramento and points north. The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project has considerable potential to improve interregional travel by allowing centrally located connections to Greyhound, the Amtrak bus bridge to the East Bay, and a future statewide high-speed rail system.

Caltrain service levels have increased over the recent years to 80 trains per day. The Transportation Congestion Relief Program (TCRP) funding has been *allocated* to implement express service (designated "baby bullet" service). Improvements recommended in Caltrain's Rapid Rail Plan, including the construction of passing tracks, are being implemented at a rapid pace. Furthermore, the programmed electrification of the Caltrain would further increase service improvement options.

6.5.3 TRANSIT SYSTEM ACCESS

The Caltrain Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project would offer exceptional multi-modal system access, more than any other rail extension project in the region. Many of the essential, complementary elements contributing to a high level of system access are already in place.

By terminating at the Transbay Terminal, Caltrain would facilitate seamless transfers among various local, intercity, and interregional bus and rail transit services, including AC Transit, Golden Gate Transit, Muni, Greyhound, Amtrak, SamTrans and future high-speed rail. The extension would be designed to allow additional transit, including rail, extensions to the East Bay

and Capital Corridor service. A new Transbay Terminal would provide pedestrian access to BART and Muni Metro on Market Street.

Under the Project, the Caltrain commuter rail terminus would be located in San Francisco's downtown office district, which has the highest volume of pedestrian traffic in the region. The area is characterized by high density, mixed land uses and a pedestrian-friendly urban environment featuring wide sidewalks, abundant ground floor retail, and narrow streets, among other features. San Francisco also has the highest volume of bicycle traffic in the region. Official bicycle routes (shared roadway) adjacent to the terminal include Second and Howard Streets. Nearby Market Street is an integral component of the city's bicycle network. Folsom Street, one block south of the terminal, has a bike lane. An attended bike station would operate at the Caltrain terminus station. Caltrain's handling of bicycles onboard trains is considered one of the best programs in the U.S. Caltrain now accommodates more than 2,000 bikes per day, a number that is growing rapidly.

The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project would also offer travel time benefits for commuters along the entire Caltrain Corridor, including residents of San Francisco who would be offered five Caltrain station stops within the city. For example, the extension to the Transbay Terminal would reduce the travel time from the southern portions of San Francisco (e.g., Visitation Valley and Bayview), with the highest concentration of low-income population in San Francisco, to the downtown. In addition, the Transbay Terminal's centralized connections to the South Bay (via Caltrain and SamTrans), and East Bay (via AC Transit) would help to improve mobility for many low-income populations throughout the Region.

6.6 PROPOSED FUNDING BY SOURCE

Table 6.6-1 presents *a funding plan for the LPA that was adopted by the TJPA Board and* described in Chapter 2). These funding options are based on the funding plan developed jointly by the City and County of San Francisco, the San Francisco County Transportation Authority, the JPB, and MTC as part of MTC Resolution 3434. The financial plan in this *Final EIS/EIR* is based on financial projections and governmental actions that are not finalized.

As noted in Section 6.2, the original capital cost estimate for the West Ramp, Second-to-Main, tunnel construction option has been refined based on value engineering. The resulting cost estimate is $1.754 billion in 2003 dollars, approximately $143.7 million less than the original cost estimate for this alternative.

Table 6.6-1: Project Estimated Capital Costs and Funding Sources (Millions of YOE Dollars)

Transbay Terminal	**West Ramp**
Caltrain Extension Alternative	**Second-to-Main Tunnel Option**
Capital Costs and TIFIA Debt Service	
Total Capital	$2,082.9
Debt Service	$1,857.2
Total Cost	$3,940.1
Funding Source	
Local/State	
Regional Measure 1	$53.0
RTIP [1]	$23.0
San Mateo Sales Tax [2]	$27.0
San Francisco Sales Tax Reauthorization [3]	$295.0
AB1171 [*4*]	$150.0
Land Sales [*5*]	$287.9
Tax Increment [*6*]	$534.2
Net Operating Revenues [*7*]	$140.2
Bridge Toll Increase (SB 916) [*8*]	$150.0
High Speed Rail Bonds [*9*]	$475.0
Other [*10*]	$*182.5*
PFC [*11*]	$873.0
Leveraged Lease Transaction [*12*]	$50.2
Federal	
TIFIA Loan	$689.7
Section 1601 [*13*]	$9.4
Total Funds	**$3,940.1**

Notes:

[1] Per MTC's RTP, which assumes $23 million in RTIP (Regional Transportation Improvement Program), STP (Surface Transportation Program), and CMAQ (Congestion Mitigation and Air Quality Improvement Program) funds.

[2] San Mateo County contribution (per MTC's RTP).

[3] San Francisco County contribution per Expenditure Plan for the Reauthorization of the Local Sales Tax for Transportation, approved June 17, 2003, escalated to YOE $s. Approved by voters November 2003.

[*4*] Per MTC's RTP. New Source of discretionary funds to MTC, pursuant to State law passed in October 2001 to complete the seismic retrofit of Bay Area bridges and related projects, consistent with Regional Measure 1.

[*5*] Per *valuation by CB Richard Ellis for San Francisco Redevelopment Agency, August 2003, escalated to year of expenditure.*

[*6*] Tax Increment amounts from Seifel Consulting, *August 8, 2003 for San Francisco Redevelopment Agency.*

[*7*] Per Jones, Lang LaSalle and Nancy Whelan Consulting, *September 2003*. Includes $3 million in annual BATA bridge toll operating support per MTC Resolution 3434 *and SB 916 (proposed).*

[8] Regional Measure 2, which includes $150 million for the Project, was passed by the voters in Bay Area counties on March 2, 2004.

[*9*] *Per SB 1856, funding for the Caltrain Downtown Extension may be provided as a part of the High Speed Rail bond initiative. The bond may be approved by the voters in November 2004.*

[*10*] Other includes potential funding from the following sources: Proposition 42, *federal earmarks* and *additional local sales tax.*

[*11*] A Passenger Facility Charge (PFC) is assumed for Caltrain, AC Transit *and High Speed Rail* passengers. The PCF would be *$0.75 for Caltrain passengers, $0.25 for AC Transit passengers and $3 for High Speed Rail passengers.*

[*12*] The Terminal Facility's value is assumed to be $1.003 or $1.163 billion and the net benefit rate to be 5%. Leveraged lease transactions are encouraged by the FTA as innovative financing mechanism.

[*13*] Per MTC's RTP, which assumes $9.37 million in Section 1601 design grant.

Sources: San Francisco County Transportation Authority, Seifel Consulting, Jones, Lang LaSalle, Openheim/Lewis, Peninsula Corridor Joint Powers Board, Sedway Group, Nancy Whelan Consulting, Parsons Transportation Group, 2001, 2002, *2003, and 2004.*

As the relative value of money changes over time due to inflation and other factors, the financial plan has been formed to address costs and revenues in Year of Expenditure (YOE) dollars. Project cost estimates are originally prepared in current-year dollar amounts (such as 2003 dollars), and then spread over the construction schedule. In the financial analysis, these costs are escalated by an assumed inflation rate to calculate what the future project costs are likely to be in the year that the construction activities will occur. The resulting Year of Expenditure cost for this alternative is $2.083 billion (YOE).

Table 6.6-1 identifies revenue sources to fund the expected financing cost of the project. The other funding options have also been developed using Resolution 3434 funding plan as the point of departure, with adjustments as necessary within the framework of project eligibility and assumed overall availability of the different funding sources.

While additional consideration could be given to the relative contribution of various funding sources to the project, to avoid speculation regarding the funding sources to be used and the viability of the financially constrained plan, the variations on the funding plan shown in Table 6.6-1 are based on existing funding sources. There are, however, prospects for additional funding from new sources, as discussed in Section 6.6.3 below. Various funding sources are discussed in the following sections.

6.6.1 FEDERAL FUNDS

The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project received an earmark of $9.375 million under Section 1601 of the Transportation Equity Act for the 21st Century (TEA-21). MTC has included the $9.375 million earmark in the 2002 Transportation Improvement Program (TIP). Consistent with MTC Resolution 3434, the funding plan does not include any "new starts" funding (see Table 6.2-1), and it assumes a relatively small contribution of local discretionary RTIP/STP/CMAQ (Regional Transportation Improvement Program/ Surface Transportation Program/Congestion Mitigation and Air Quality Improvement Program) funds.

The funding plan assumes receipt of a loan from the Transportation Finance and Innovation Act (TIFIA), which provides low interest, subordinated government loans and loan guarantees. All improvements to the Transbay Terminal/Extension project could be classified as Transportation Improvements under Title 23 and are therefore eligible for a subordinated loan from the federal government as a part of USDOT's TIFIA program, which was authorized in TEA-21. This program may provide various forms of credit support for large transportation projects for up to one-third of a project's total cost. A direct subordinated loan under this program will be very important in the financing plan for the Transbay Terminal/Caltrain Downtown Extension Project in providing maximum leverage of scarce project revenue dollars.

Revenues that could be pledged to such a loan include:

- Toll funds,
- Lease income on retail space within the terminal,
- Lease of properties transferred to the Transbay Joint Powers Authority,
- Tax Increment Revenues on project areas created by the San Francisco Redevelopment Agency, and
- Passenger facility fees.

6.6.2 STATE FUNDS

In October 2001, Governor Davis directed the State Transportation Department (Caltrans) to initiate the administrative transfer of state-owned land parcels in San Francisco. *This process is nearing completion.* The land, worth approximately *$288* million to the project, will be transferred to the Transbay Joint Powers Authority and to the City and/or the San Francisco Redevelopment Agency. The entire assessed fair market value at the time the property is transferred from Caltrans will be applied to the construction of the proposed Transbay Terminal/Downtown Extension.

6.6.3 REGIONAL AND LOCAL FUNDS

In addition to the proceeds from the sale of the land, the project is projected to receive $53 million in Regional Measure 1 funds, and tax increment revenues, passenger facility fees, surplus operating revenues *(including BATA bridge toll revenues)*, and other revenues, for a total of about $3.2 billion in local and state funding.

High revenue potential from the property tax increments of redevelopment in the vicinity of the Transbay Terminal is possible because of intensity of land uses in a city such as San Francisco and the prime location of the terminal. Commercial leases in the Terminal are also assumed to generate substantial revenues, given that retail space is included in the current conceptual designs for the terminal, that this space is included in the estimated capital costs, and that the retail space is anticipated to provide services to a substantial number of transit patrons and other downtown workers.

MTC Resolution 3434 includes $150 million in AB 1171 funds for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. This source results from the adoption of AB 1171 by the California Legislature for a plan to fund the costs of seismic retrofit of Bay Area toll bridges. The project is eligible for these funds, which are discretionary to MTC, under a provision that makes the money available to projects consistent with the purposes of the voter-approved Regional Measure 1 program, which includes congestion relief in the corridors served by the proposed project, particularly the Transbay corridor.

The project enjoys solid local support in San Francisco as evidenced by the passage of Proposition H in 1999 by a 69.1 percent of the voters. Proposition H makes construction of the Caltrain Extension Project the official policy of the City and County of San Francisco. Although not necessary to establish a strong local funding share for the project, the regional nature of the project would warrant the allocation of regional funds to help defray construction costs. The City and County of San Francisco and the San Francisco County Transportation Authority *have included $270 million in 2003 dollars for the project in the New Transportation Expenditure Plan for San Francisco adopted on July 22, 2003 and approved by the voters in November 2003. The passage of Proposition K, the San Francisco sales tax reauthorization, in November resulted in the elimination of Interregional Transportation Improvement Program (ITIP) funds from the financial plan. As stated in MTC's Resolution 3434, Attachment D, "The ITIP commitment to the project will be reduced by $59 million if a rollover of San Francisco's sales tax is approved."*

A terminal use fee or passenger facility charge (PFC) is also assumed to be applied to all passengers using the Transbay Terminal. *A fee of $0.75 and $0.25* would be applied to Caltrain and AC Transit riders using the terminal*, respectively*. *A PFC of $2.00 would be applied to high-speed rail passengers.* This fee is estimated to generate revenues of about *$2.5 billion* over *35* years*, assuming that the fees are escalated to keep pace with inflation*.

The financial plan assumes that the California High Speed Rail Authority will include funding for the Transbay Terminal and Caltrain Downtown Extension project in its upcoming bond measure. While the actual commitment has yet to be determined, this financial plan assumes a contribution of $475 million from the $9.95 billion bond measure planned for the November 2004 ballot.

Options to reduce project costs, e.g., application of design-build, will be pursued, as will innovative financing mechanisms such as a leveraged lease transaction. Leveraged lease transactions are encouraged by the FTA as an innovative financing mechanism. For the West Ramp Alternative options, the value of a leveraged lease transaction would be about $50 million.

Should the above funding sources prove inadequate for financing the project, additional funding sources will be pursued. At the state level, these additional sources could include new transportation infrastructure funding at the State level*s and* additional State sales tax revenues. Legislative approval would be required for these additional sources. *Given the current status of the State budget, Prop. 42 revenues to this project may not materialize. Accordingly, the revised project funding plan does not rely on Prop. 42 revenues.*

At the federal level, multimodal facility funding under the reauthorization of TEA-21 could be pursued as well as potential federal high-speed rail funding *and earmarks*. Multiple high-speed rail bills are currently pending before Congress.

CHAPTER 7: CEQA TOPICS AND FINDINGS OF SIGNIFICANCE

This chapter describes those potential environmental effects identified in Chapter 5 that would be considered significant under the California Environmental Quality Act (CEQA). Potential cumulative impacts are also described, and the potential for the project to stimulate unplanned growth is considered.

While CEQA requires that a determination of significant impacts be stated in an EIS/EIR, the National Environmental Policy Act (NEPA) does not. Under NEPA, significance is used to determine whether an EIS or some other level of documentation is required, and once a decision to prepare an EIS is made, the magnitude of the impact is evaluated and no further judgment of its significance is required. For this reason, the CEQA significance criteria and the determination of significant impacts have not been included in other sections of this combined NEPA/CEQA EIS/EIR. Instead, those criteria and determinations have been grouped in this chapter, titled “CEQA Findings of Significance.”

It should be noted that although the presence of mitigation under CEQA creates a presumption of significant impacts, NEPA anticipates that an EIS will identify means to mitigate the adverse impacts of a project if such measures are not already included in the proposed action or alternatives. For this reason, some mitigation measures described in this document and in this section are wholly appropriate under NEPA, although the impacts they address may not be considered significant under CEQA.

7.1 SIGNIFICANCE CRITERIA

CEQA requires that an EIR identify the significant environmental effects of the project (CEQA Guidelines Section 15126), but does not provide thresholds for significance. Instead, CEQA Guidelines Section 15064(b) states that "the determination . . . calls for careful judgment on the part of the public agency involved . . . " and that "an ironclad definition of significant effect is not possible because the significance of an activity may vary with the setting." In the current analysis, the City and County of San Francisco and the Joint Powers Board have given careful consideration to the issue of significance. As a result, the significance criteria shown in Table 7.1-1 have been used to evaluate the environmental impact categories indicated.

Table 7.1-1: CEQA Significance Thresholds For Selected Environmental Impact Categories

DEIS/ DEIR Sec. No	IMPACT CATEGORY	EXPLANATION OF CEQA SIGNIFICANCE THRESHOLD	SOURCE(S)
5.1.1	Land Use	A significant impact would occur if the project would substantially disrupt or divide the physical arrangement of an established community; or have a substantial adverse impact upon the existing character of the vicinity.	State CEQA Guidelines Appendix G
5.1.2	Wind	The project would have a significant impact if it would cause the City of San Francisco's wind hazard criterion (26 miles per hour) for more than one full hour per year.	San Francisco Planning Code Section 148
5.1.3	Shadow	A project would have a significant effect if it would result in substantial new shadow on public open space under the jurisdiction of the Recreation and Park Commission during the period from one hour after sunrise to one hour before sunset, at any time of the year.	San Francisco Planning Code Section 295
5.2	Residential/ Business Displacement	A significant impact would occur if the project would displace substantial numbers of people requiring the construction of replacement housing elsewhere.	State CEQA Guidelines, Appendix G
5.4, 5.5	Community Facilities & Services; Parklands, Schools & Churches	A significant impact would occur if the project would: (a) conflict with established recreational, educational or religious uses; (b) conflict with adopted plans and goals of the community; (c) create additional demand for public service facilities, the expansion of which would result in environmental impact.	Derived from State CEQA Guidelines Appendix G
5.7	Air Quality	A significant impact would occur if the project would violate any ambient air quality standard (NAAQS or CAAQS), increase the number or frequency of violations, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations.	State CEQA Guidelines, Appendix G; US EPA; BAAQMD
5.8	Noise	A significant impact would occur if the project would substantially increase the ambient noise levels for adjoining areas. A noise increase of 10 db is perceived as a doubling of noise, and is generally considered substantial. (See Section 5.8 for a discussion of the FTA Noise Criteria, which determine "impact" and "severe impact" under NEPA).	Derived from State CEQA Guidelines, Appendix G

Table 7.1-1: CEQA Significance Thresholds For Selected Environmental Impact Categories

DEIS/ DEIR Sec. No	IMPACT CATEGORY	EXPLANATION OF CEQA SIGNIFICANCE THRESHOLD	SOURCE(S)
5.8	Vibration	A significant impact would occur if the project would create intrusive vibration substantially affecting adjacent land uses. Vibration of 75 VdB is generally considered intrusive for residential land uses. (See Section 5.8 for a discussion of the FTA Vibration Criteria).	Derived from State CEQA Guidelines, Appendix G
5.9	Geology/ Seismicity	A significant impact would occur if the project would expose people or structures to major geologic hazards.	State CEQA Guidelines, Appendix G
5.10, 5.11	Water Resources	A significant impact would occur if the project would cause substantial flooding, erosion, or siltation, or would substantially degrade water quality, or would substantially degrade or deplete ground water resources.	State CEQA Guidelines, Appendix G
5.14	Cultural & Historic Resources	A project is normally found to have a significant impact on the environment if the project would have a substantial adverse change to an historic resource – either an archaeological site, an historic architectural structure, or an historic district. A "historic resource" is defined as a resource that is listed in or determined eligible for listing in the California Register of Historic Resources; listed in or determined eligible for listing in the National Register of Historic Places; one that is included as significant in a locally adopted register such as Article 10 and 11 of the San Francisco Planning Code; or one determined by the lead agency to be historically significant. A resource that is deemed significant due to its identification in a historic resource survey that meets the criteria of Public Resources Code Section 5024.1(g) would be presumed an historic resource unless a preponderance of evidence demonstrates otherwise. A "substantial adverse change" is defined as demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired (a major change to the defining elements of historic character).	Derived from State CEQA Guidelines (Sec. 15064.5 and 15065(a); Appendix G; CEQA Sec. 21084.1, and City and County of San Francisco Planning Department.

Table 7.1-1: CEQA Significance Thresholds For Selected Environmental Impact Categories

DEIS/ DEIR Sec. No	IMPACT CATEGORY	EXPLANATION OF CEQA SIGNIFICANCE THRESHOLD	SOURCE(S)
5.15	Hazardous Waste	A significant impact would occur if the project would create a potential public health hazard involving the use, production, or disposal of materials which pose a hazard to people or animal or plant populations in the area affected. (Quantitative hazardous waste criteria exist for specific materials and constituents.)	Derived from State CEQA Guidelines, Appendix G
5.16	Visual Changes	The project would have a significant effect on the environment if it would have a substantial effect on a scenic vista, substantially degrade or obstruct publicly accessible views; substantially degrade the existing visual character or the quality of the area, or result in a substantial, demonstrable negative aesthetic effect; or generate obtrusive light or glare that would adversely affect views or substantially affect other properties.	Derived from State CEQA Guidelines, Appendix G
5.18	Energy	A significant impact would occur if the project would encourage activities which result in the use of large amounts of fuel, water or energy; or use fuel, water, or energy in a wasteful manner.	State CEQA Guidelines, Appendix G
5.19	Transit Services & Accessibility	A significant impact would occur if a project would cause a substantial project-specific or cumulative increase in transit demand that cannot be accommodated by existing or proposed transit capacity resulting in unacceptable levels of transit service. When considering cumulative development in the area, an adverse impact would also be created if the project contributed substantially to the deterioration of transit service or caused a substantial conflict with transit operations.	San Francisco Planning Department

Table 7.1-1: CEQA Significance Thresholds For Selected Environmental Impact Categories

DEIS/ DEIR Sec. No	IMPACT CATEGORY	EXPLANATION OF CEQA SIGNIFICANCE THRESHOLD	SOURCE(S)
5.19	Traffic Congestion	In San Francisco, the threshold for a significant adverse impact on traffic has been established as the deterioration in the level-of-service (LOS) at a signalized intersection to LOS E or F (i.e., a deterioration from LOS D or better to LOS E or F), or if an intersection at LOS E deteriorates to LOS F. An intersection that is at LOS E or F in the existing condition may be a significant adverse impact depending on the magnitude of the project's contribution to worsening of delay. In addition, a project would have a significant adverse effect if it would cause major traffic hazards, or would contribute considerably to cumulative traffic increases that would cause deterioration in levels of service to unacceptable levels. (See Sections 3.2 for a definition of LOS and a quantification of associated delay.)	San Francisco Planning Department
5.19	Traffic Circulation	A significant impact would occur if the project would substantially change traffic circulation patterns, creating an unusual safety hazard, or eliminating access to surrounding areas.	Derived from State CEQA Guidelines Section 15382.
5.19	Parking Displacement	The displacement of parking spaces is not generally considered a significant physical environmental effect but is a social effect and an inconvenience to those who must seek other parking. The displacement of parking spaces and any resulting parking deficits are also not considered to be a permanent condition as drivers may be induced to seek and find alternative parking facilities and shift to other modes of travel. Therefore, parking shortages are considered to be social effects rather than impacts on the physical environment.	San Francisco Planning Department
5.21	Temporary Construction Period Effects	Construction impacts on traffic, transit, noise, air quality, and the visual environment would generally not be considered significant since construction-related changes are by their nature temporary. A significant impact would occur only if temporary effects substantially affected accessibility to an area for a long period of time, or posed a severe health or safety threat.	Derived from State CEQA Guidelines, Section 15382

Source: Parsons Transportation Group and other sources as noted, September 2001.

Some impact categories lend themselves to scientific or mathematical analysis, and therefore to quantification. For other impact categories that are more qualitative or are entirely dependent on the immediate setting, a hard-and-fast threshold is not generally feasible. In these cases, the definition of significant effects from the CEQA Guidelines (Section 15382) has been applied as the significance criterion: "a substantial adverse change in physical conditions." Where a potential impact category is not relevant to the current project (potential impact on floodplains is a good example), no significance criterion is presented. Also, unlike NEPA, CEQA does not require a discussion of socioeconomic effects, except where they would result in physical changes, and states that social or economic effects shall not be treated as significant effects (see CEQA Guidelines Sections 15064(f) and 15131). For this reason, socioeconomic impact categories are not included in Table 7.1-1.

7.2 UNAVOIDABLE SIGNIFICANT ADVERSE EFFECTS UNDER CEQA

7.2.1 *EFFECTS ON HISTORIC RESOURCES*

Construction of a new Transbay Terminal and the Caltrain Downtown Extension would require demolition of properties listed in the National Register of Historic Places (NRHP), *or properties that are individually eligible for listing or that are contributors to multi-component properties or districts that are or appear eligible for listing. These properties are described in Section 5.14.* The existing Transbay Terminal and associated bus ramps *and approach structures would be demolished to construct the new Transbay Terminal component of the Project. These demolitions would constitute significant adverse effects under CEQA.*

Under either Caltrain Downtown Extension alternative, the Cut-and-Cover Option would result in the demolition of an additional *13* properties *that are individually eligible or that are contributors to a district that is or appears* eligible for listing in the NRHP. *Also, three buildings that are contributors to the Second and Howard Historic District / New Montgomery – Second Street Conservation District that would not be demolished would be isolated from the remainder of the district; this would constitute a substantial adverse change to the district.*

The Tunneling Option for *the Townsend Street to Folsom Street segment of* either of the Caltrain Downtown Extension alternatives would result in the demolition of ten *fewer* buildings than under the Cut-and-Cover Option, *but three buildings that are either individually eligible or that are contributors to a historic district that is eligible would still be demolished, and three other contributory buildings would still be isolated from the remainder of the district, as described in the preceding paragraph. These effects would constitute a substantial adverse change.* In general, projects that result in the substantial alteration or demolition of a recognized historic resource would be considered to have a significant effect on the environment.

7.2.2 *EFFECTS ON TRAFFIC AND CIRCULATION*

Although the project would result in a reduction in regional vehicle miles traveled (VMT), there would be unavoidable significant traffic impacts at the following seven intersections in the vicinity of the Transbay Terminal. These significant effects would occur under both the 2020 baseline plus the project and the 2020 cumulative conditions plus the project.

- First/Market
- First/Mission
- First/Howard
- Fremont/Howard
- Beale/Howard
- Second/Folsom and
- Second/Bryant

The predicted levels of service (LOS) at these intersections (identified in Table 5.19-4 in Section 5.19) would exceed the San Francisco CEQA thresholds of significance.

7.3 CUMULATIVE EFFECTS

CEQA defines cumulative impacts as "two or more individual effects which, when considered together are considerable," and suggests that cumulative impacts may "result from individually minor but collectively significant projects taking place over a period of time" (State CEQA Guidelines Section 15355). CEQA documents are required to include a discussion of potential cumulative effects *when those effects are significant* and the State CEQA Guidelines suggest two possible methods for assessing potential cumulative effects (State CEQA Guidelines Section 15130). The first method is a list-based approach, which considers a list of past, present, and reasonably foreseeable future projects producing related or cumulative impacts. The second method is projections-based, and uses a summary of projections contained in an adopted general plan or related planning document that is designed to evaluate regional or areawide conditions. The projections-based method is generally used by San Francisco in evaluating projects within its jurisdiction.

While the use of regional projections is one possible method of analyzing cumulative effects under CEQA, it is the required method under NEPA. FTA guidelines require that regional growth projections from the metropolitan planning organization (MTC in this case) be used as input for the assumed future year conditions.

The San Francisco County Transportation Authority (SFCTA) countywide travel demand forecasting model (SFCTA Model) was used to develop the travel forecasts for development and growth through the year 2020 in the region, as well as to determine travel demand to and from the South of Market area (area roughly bounded by The Embarcadero, Market Street, South Van Ness Avenue and King Street). This approach results in an impacts assessment for year 2020

conditions that takes into account both the future development expected in the South of Market area, as well as the expected growth in housing and employment for the remainder of San Francisco and the nine-county Bay Area.

The most up-to-date version of the SFCTA Model estimates future traffic and transit travel demand for the entire nine-county Bay Area region based on land use and employment forecasts prepared by the San Francisco Planning Department for the county, plus regional growth estimates developed and adopted by the Association of Bay Area Governments (ABAG) in 1998 (Projections '98) for the remainder of the Bay Area region. Travel demand was estimated for three land use scenarios:

- **2020 No Project,** which assumed future development and growth, consistent with the ABAG forecasts for San Francisco and the Bay Area, and incorporates projects that have recently been approved or entitled in the South of Market area.
- **2020 Project,** which included the additional development associated with the Terminal/Extension Project.
- **2020 Cumulative,** which incorporated other plans recently proposed in the South of Market area including the Rincon Hill Rezoning and the South of Market Redevelopment Area Plan, the Mid-Market Redevelopment Area Plan, and the Terminal/Extension Project. As a result, the year 2020 cumulative conditions forecasts used in the analysis exceed the ABAG forecasts for San Francisco for employment by about 2.8 percent, and household population by about 1.4 percent.

7.3.1 REGIONAL CONTEXT

Because this document is based on accepted, regional land use forecasts for 2020, and assumes transportation improvements programmed within the same time frame, effects evaluated with the project include the cumulative effects of development within the region. Thus, additional analysis of potential cumulative effects related to specific development and transportation improvement projects within the region is not necessary. Impact categories for which the project effects presented in Chapter 5 already present cumulative conditions include the following: land use, transportation (including traffic and transit), air quality, and noise.

7.3.2 LOCAL CONTEXT

Potential cumulative effects are not always regional in scope, and the current project was analyzed to determine whether less than significant environmental effects that would be experienced locally could become significant when considered with other reasonably foreseeable future projects in the project area. Reasonably foreseeable future projects are here defined as the projects assumed in the 2020 No-Project Alternative and described in Section 2.1, other plans recently proposed in the local South of Market area including, the Rincon Hill Rezoning and the

South of Market Redevelopment Area Plan, the Mid-Market Redevelopment Area Plan, and the Terminal/Extension Project. As noted above the inclusion of these local plans results in a 2020 cumulative scenario that exceeds the ABAG forecasts for San Francisco for employment by about 2.8 percent, and household population by about 1.4 percent.

To assess the effects of the vehicle-trips generated by the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project on 2020 Cumulative local traffic conditions, the contribution of the Project (Assuming the Full Build Redevelopment Alternative) to the 2020 Cumulative traffic volumes was determined. Results of the traffic analyses for these land use scenarios are provided in Section 5.19.4

7.3.3 CUMULATIVE VISUAL IMPACTS

The determination of visual effect is by its very nature is subjective. Potential changes to the San Francisco greater downtown cityscape are shown in Figure 5.16-3. This graphic from the Redevelopment Agency's Draft Design for Development Vision shows a possible urban form resulting from proposed changes to the height and bulk in the Transbay Redevelopment Area. The reasonably foreseeable proposed projects within the Rincon Hill area are also shown. In addition to these projects, the Rincon Hill Mixed Use District is currently undergoing environmental review for proposed changes to zoning with increased height allowances and revised bulk requirements that would allow additional tall towers to be developed. This Rincon Hill Mixed Use District development along with Transbay Redevelopment Plan and other development in the area would result in loss of some existing views, both short- and long-range, from such citywide open spaces as Dolores Park, Twin Peaks, and Potrero Hill. From these sites, the downtown core area would appear larger as it would be extended southward toward the Bay Bridge. This would be a distinct visual change from existing conditions with lower-rise structures to an intensive view of urbanization. A similar change to a more intensive urban view would be expected from viewpoints on Treasure Island.

Likewise from the Bay Bridge, there would be a segment of the Bridge where the views both short- and long-range would change with the full implementation of the Transbay and Rincon plans. With implementation of the Transbay cumulatively with the Rincon Mixed Use district, the more urban downtown core would be closer to the Bridge, changing the views from vehicles traveling along the segment of the highway adjacent to Rincon Hill. These changed visual features are commonly accepted in urban areas and would not substantially degrade existing visual quality or obstruct publicly accessible views; however, the types of views would change to a more intensive urban visual character. However, while changing views, the project would not result in a demonstrative cumulative adverse aesthetic effect.

7.4 GROWTH INDUCEMENT

This section considers whether the Caltrain Extension to the Transbay Terminal Site Alternative would encourage development in excess of amounts expected and provided for in the region

and/or San Francisco. Growth inducement would occur if the amount of population or employment growth projected to occur as a result of the project would exceed planned levels. Increased development and growth in an area are dependent on a variety of factors, including employment and other opportunities, availability of developable land, and availability of infrastructure, water, and power resources.

Transportation projects are potentially growth inducing when they extend service to the edge of an urban area, reducing travel times and improving access between employment opportunities and vacant or underdeveloped land to the extent that the travel time savings and enhanced accessibility outweigh other factors affecting locational decisions.

The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project is being designed to facilitate planned growth on under-utilized properties in the heart of downtown San Francisco. An important goal of the project is to promote a vibrant new mixed-use neighborhood in an urban center, and enhance public transit access in this area. The redevelopment component of the project would provide a mix of residential and commercial development in a pedestrian-oriented neighborhood, which is consistent with the existing urban character of the Transbay Terminal area. The proposed Transbay Terminal would also provide a hub, bringing a large, transit-user population into a confined area, focusing opportunities for economic/joint development on the site, and potentially stimulating economic activity in the general vicinity.

Transit travel times with the Downtown Extension alternatives are projected to decrease by as much as 15 minutes. These time savings, while sufficient to attract additional riders to Caltrain, are not expected to induce unwanted or unplanned growth, both because they are not great enough to offset other locational factors, and because the project would extend an existing rail corridor, within a region that is already developed.

Modest growth is expected in the region by 2020, and San Francisco population is expected to grow approximately 11.7 percent from 723,959 in 1990 to 808,798 by 2020. At the same time, jobs are expected to grow 19.4 percent from about 566,648 in 1990 to about 731,664 in 2020, with some shift in downtown jobs to the South of Market Area. The primary factors causing the magnitude of this growth, such as the regional economy, availability of services, and so on, are independent of the proposed project.

In the context of downtown San Francisco, opportunities created by the Transbay Terminal/Caltrain Downtown Extension/ Redevelopment Project would not be expected to stimulate unplanned growth, but would rather facilitate the distribution of projected growth to available sites, and facilitate development activities consistent with the *San Francisco General Plan*.

CHAPTER 8: *FINAL SECTION* 4(f) EVALUATION

8.1 INTRODUCTION

This final Section 4(f) evaluation is an update and refinement of the Draft Section 4(f) Evaluation that was circulated for public comment as part of the Draft EIS/EIR from October 4 to December 20, 2002. Three public hearings and an open house were held on November 12, November 13 (including the open house), and November 26, and public comments were taken at all four meetings. The public comment period on the Draft EIS/EIR ended on December 20, 2002.

A Locally Preferred Alternative has been identified after consideration of the information presented in the Draft EIS/EIR, public and agency input from the circulation of the Draft EIS/EIR, meetings among affected stakeholders, community meetings and workshops, and the public hearings. The Locally Preferred Alternative consists of the following project components: the Transbay Terminal West Ramp Alternative with its associated bus ramps, circulation, and off-site storage; the Caltrain Downtown Extension with the "stacked drift" tunneling option for the segment between Townsend Street and Folsom Street and the Second –to-Main Alternative alignment north of there; and the Transbay Redevelopment Plan Area "full build" development alternative.

This discussion complies with the federal requirements found in 49 USC, Section 303, commonly referred to as Section 4(f). These requirements pertain to all actions or projects undertaken by agencies within the U.S. Department of Transportation, including the Federal Transit Administration (FTA). The essence of *Section* 4(f) requirements is that special efforts are to be made to protect public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The law states that the Secretary of Transportation shall approve a project which requires the use of land from a significant publicly-owned park, recreation area, wildlife or waterfowl refuge, or historic site of significance only if (1) there is no prudent and feasible alternative to the use of that land and (2) the project includes all possible planning to minimize harm to the resource being affected by that use.

As defined under Section 4(f), use occurs when protected land is permanently acquired for a transportation facility, when a temporary use is considered adverse, or when there is "constructive use" of the resource. Constructive use occurs when indirect impacts are so severe that the activities, features, or attributes that qualify the resource for protection are substantially impaired.

The Locally Preferred Alternative will use Section 4(f) resources through direct acquisition and temporary occupancy, but it does not involve any constructive use. Pursuant to DOT Rules and Regulations, Part 771 Section 771.135 (p) (5) (I), constructive use of an historic property does not occur when "compliance with the requirements of Section 106 of the National Historic Preservation Act and 36 CFR Part 800 for proximity impacts of the proposed action . . . results in an agreement of … no adverse effect.'" Because the proximity impacts of the project *on historic properties (other than those that would be directly used)* have been determined to result in "no adverse effect" *under*

Section 106 regulation, these *proximity* impacts would not result in a constructive use of the *historic resources in question.*

Section 4(f) applies to the present project because both Transbay Terminal alternatives would require the use of land from the site of the Transbay Terminal, demolition *and removal* of the Transbay Terminal building, and demolition and removal of the terminal loop ramp *structures* that connect the terminal to the San Francisco-Oakland Bay Bridge. The terminal loop ramp *structures* and the terminal are contribut*ing* elements of the Bay Bridge, which is *listed on the National Register of Historic Places (NRHP).*

In addition, either Caltrain Downtown Extension Alternative using cut-and-cover construction would require demolition and removal of 13 other buildings that are contributors to a historic district that is, by *consensus of the Section 106 consulting parties,* eligible for the NRHP. Either Caltrain Downtown Extension Alternative constructed using the tunneling *option for the segment between Townsend Street and Folsom Street* (*which option is part of the locally preferred alternative)* would require demolition and removal of three such contributory buildings. Ten of the 13 buildings are contributors to the Rincon Point / South Beach Industrial Warehouse Historic District, which was identified as appearing eligible for the NRHP in 1983. The other three buildings are contributors to the Second and Howard Streets Historic District, which was determined eligible for the NRHP in 1999.

Pursuant to DOT Rules and Regulations Part 771.135 (g) (2), Section 4(f) does not apply to archaeological sites where the FTA, after consultation with the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP), determines that the archaeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place, and data recovery is undertaken. On the basis of this qualification, Section 4(f) does not apply to any of the archaeological resources identified *in the project area. The Section 106 Historic Preservation Agreement in Appendix G details the actions that will be taken to recover the archaeological data present in the identified resources. Furthermore, the Agreement establishes procedures that will be followed during construction if an unanticipated discovery of archaeological resources occurs.*

8.2 PROJECT PURPOSE AND NEED

The *Transbay Joint Powers Authority,* City and County of San Francisco, Peninsula Corridor Joint Powers Board (JPB), and San Francisco Redevelopment Agency propose to construct a new multi-modal Transbay Terminal on the site of the present Transbay Terminal, extend Caltrain commuter rail service from its present northern terminus at Fourth and Townsend Streets in San Francisco to an underground terminus in the basement of a new Transbay Terminal, and establish a redevelopment area plan and related development projects, including transit-oriented development on publicly-owned land in the vicinity of the new terminal. The primary purposes of the project are to improve public access to bus and rail services, modernize the Transbay Terminal and improve its service, reduce non-transit vehicle usage, and revitalize the Transbay Terminal area. The project will also

address a number of related needs. It will improve Caltrain commute service by providing direct access to downtown San Francisco and enhance connectivity between Caltrain and other major transit systems. It will accommodate future intercity or high-speed rail services. The project is also expected to serve future travel demand in the San Jose - San Francisco corridor and alleviate traffic congestion on US Highway 101 and I-280 between San Jose and San Francisco as well as other routes; improve regional air quality; enhance accessibility to employment, retail and entertainment opportunities; and support local economic and land use development goals. More detailed discussion of the project purpose and need is provided in Chapter 1, Purpose of and Need for the Project.

8.3 PROJECT DESCRIPTION

The proposed project has three major components, as follows:

- A new, multi-modal Transbay Terminal on the site of the present Transbay Terminal;
- Extension of Caltrain commuter rail service from its current San Francisco terminus at Fourth and Townsend Streets to a new underground terminus underneath the proposed new Transbay Terminal; and
- Establishment of a Redevelopment Area Plan with related development projects, including transit-oriented development on publicly owned land in the vicinity of the new multi-modal Transbay Terminal.

Of various alternatives considered, two Transbay Terminal Alternatives, two Caltrain Downtown Extension Alternatives, and two Redevelopment Alternatives were carried forward into conceptual engineering and environmental studies. Both of the Caltrain Downtown Extension Alternatives includ*ed* design options. A brief description of these alternatives and options is provided in the following paragraphs; Chapter 2, Description of the Project Alternatives, describes these alternatives and options in detail.

8.3.1 TRANSBAY TERMINAL ALTERNATIVES

Two alternatives *were* studied for a new Transbay Terminal. Under either alternative, a new multi-modal terminal would be located at the site of the existing Transbay Terminal. Bus ramps would connect directly from the new terminal to the San Francisco-Oakland Bay Bridge, while a rail facility in the basement of the new terminal would provide space for the terminus of the Caltrain Downtown extension and for potential future East Bay commuter rail and California's high-speed intercity rail. The new terminal would provide facilities for AC Transit, Golden Gate Transit, Greyhound, and Muni buses and trolley coaches, paratransit, and for Greyhound Package Express and private taxi services. It would also include space for retail and cultural uses. It would incorporate sustainable design features to conserve energy and water resources.

8.3.1.1 Transbay Terminal West Ramp Alternative *(Included in Locally Preferred Alternative)*

The Transbay Terminal West Ramp Alternative proposes to construct a terminal one block (165 feet) wide by three blocks (1,300 feet) long on the site of the existing Transbay Terminal, requiring demolition of the existing terminal and its loop ramp. The new Terminal would include six levels, with four levels above ground and two below, comprising an underground train level with a direct connection to the train platforms from the Transbay Terminal; an underground train mezzanine; a street level for bus services; an above-ground pedestrian concourse including 150,000 to 225,000 square feet of retail, entertainment, conference, educational, and cultural uses; and two above-ground bus decks. Elevators and escalators would provide for pedestrian circulation between levels. *This Transbay Terminal alternative has been identified for the terminal component of the Locally Preferred Alternative.*

Under this alternative, new direct bus ramps between the terminal and the Bay Bridge would be constructed on the west side of the terminal building in generally the same location as the existing ramps paralleling Essex Street. The existing loop ramp would be demolished and would not be rebuilt. Midday bus storage would be provided off-site under the west Bay Bridge approaches between Second and Fourth streets. Please see Section 2.2.1.1, Transbay Terminal West Ramp Alternative, for a detailed description of this alternative.

8.3.1.2 Transbay Terminal Loop Ramp Alternative

The Transbay Terminal Loop Ramp Alternative proposes to construct a terminal one block (165 feet) wide and three blocks (1,300 feet) long on the site of the existing Transbay Terminal, requiring demolition of the existing terminal and its loop ramp. It would include five levels: an underground train level; an underground train mezzanine; a street level for bus services; an above-ground pedestrian concourse including entertainment, conference, educational, and cultural uses; and an above-ground bus level. Vertical pedestrian circulation would be provided as in the West Ramp Alternative.

The Loop Ramp Alternative would reconstruct both the west and east bus ramp structures, providing for a full one-way loop of bus circulation through the new Transbay Terminal, with direct connections to the Bay Bridge on both the east and west sides of the terminal building. The Loop Ramp Alternative would allow for some midday bus storage on the ramps, with the remaining storage off-site under the west Bay Bridge approaches. Please see Section 2.2.1.2, Transbay Terminal Loop Ramp Alternative, for a more detailed description of this alternative.

8.3.2 CALTRAIN DOWNTOWN EXTENSION ALTERNATIVES

The Caltrain Downtown Extension component of the project consists of an underground extension of Caltrain from its present San Francisco terminus at Fourth and Townsend Streets to a new

underground terminal at the site of the present Transbay Terminal at First and Mission Streets. The extension would consist of two to four tracks branching to several additional tracks into the basement of the proposed new Transbay Terminal. The extension would include new mainline tracks as they pass the Caltrain Fourth and Townsend storage yard, with a new subsurface station/platform near Fourth Street adjoining Townsend Street.

The extension alignment would enter a portal south of Townsend near Fifth Street, pass the new subsurface Fourth and Townsend platform, and continue eastward below grade under Townsend Street in a cut-and-cover tunnel configuration. It would then curve northward just east of Third Street in a cut-and-cover configuration to Second and Brannan Streets. The alignment would then continue in a cut-and-cover configuration under Second Street for about 2,055 feet.

8.3.2.1 Caltrain Extension Tunneling Option *(Included in Locally Preferred Alternative)*

Use of tunneling rather than cut-and-cover is an option for the portion of the underground Caltrain Extension between Townsend Street and Folsom Street. A highly specialized tunneling technique known as the "stacked drift" approach is suitable to the fractured rock geology of this portion of the alignment. It involves very little risk of collapse and was evaluated specifically as an alternative to preserve many of the buildings under which the tunnel alignment would pass. Please see Sections 2.2.2.3 and 5.20 for more detail on this tunneling option, *which has been identified as the preferred option for tunneling this Caltrain Downtown Extension segment in the Locally Preferred Alternative.*

Two Caltrain Extension alignment alternatives are under consideration from Howard Street northward, both of which would be in a cut-and-cover configuration, as described in the following sections.

8.3.2.2 Second-to-Main Caltrain Extension Alternative *(Included in Locally Preferred Alternative)*

As the Second-to-Main Caltrain Extension Alternative approaches Howard Street along Second Street, it would curve 90 degrees northeasterly, into the basement of the proposed new Transbay Terminal. It would have six tracks and three platforms within the Terminal building and would include approximately 2,000 feet of additional tracks in a cut-and-cover configuration from the east end of the new Terminal, curving 90 degrees south to Main Street, and continuing underneath Main Street to south of Folsom Street. This track could be used for temporary train storage and could be extended for a San Francisco-to-Oakland cross-bay alignment as a separate project. This alternative would include an option for an 800-foot-long pedestrian connection underneath Fremont Street to the BART Embarcadero Station. *The Second-to-Main Alternative has been identified as the Caltrain Extension component of the Locally Preferred Alternative.*

8.3.2.3 Second-to-Mission Caltrain Extension Alternative

The Second-to-Mission Alternative would follow the same alignment as the Second-to-Main Alternative up Second Street to about Howard Street. As the alignment approaches Howard Street, rather than entering the terminal from the west and parallel to the axis of the terminal, it would curve northeasterly at about Tehama Street, cutting diagonally under what is known as the "hump" area in front of the present Transbay Terminal and would exit out Mission Street towards The Embarcadero. Two tracks would continue under Mission Street in a cut-and-cover configuration; these could be used for temporary train storage and could be extended for a San Francisco-to-Oakland cross-bay alignment as a separate project.

Please see Section 2.2.2, Caltrain Downtown Extension Alternative, for a more detailed description of this project component.

8.3.3 REDEVELOPMENT ALTERNATIVES

The third component of the project consists of establishment of a Redevelopment Plan Area and related development projects, including transit-oriented development on publicly owned land in the vicinity of the proposed new multi-modal Transbay Terminal. There are two alternatives to this component: a "full build" development scenario and a "reduced scope" development scenario.

8.3.3.1 Full Build Development Scenario *(Included in Locally Preferred Alternative)*

The Full Build Alternative includes about 7.6 million square feet (sq. ft.) of new residential / office / retail / hotel development, including approximately 5.6 million sq. ft. (74 percent of the total development) of residential development (4,700 residential units including affordable housing); 1.2 million sq. ft. of office development; 475,000 sq. ft. of hotel development; and 355,000 sq. ft. of retail development. *This scenario has been identified for the redevelopment component of the Locally Preferred Alternative.*

8.3.3.2 Reduced Scope Development Scenario

The Reduced Scope Alternative assumes a lesser amount of commercial and retail development and is weighted more toward housing. It assumes approximately 5.4 million sq. ft. of residential / office / retail / hotel development, including 4.7 million sq. ft. (87 percent of the total development) of residential development (3,900 dwelling units); 350,000 sq. ft. of hotel development; and 200,000 sq. ft. each of office and retail development.

8.3.4 THE NO-PROJECT ALTERNATIVE

The No-Project Alternative represents existing and committed (that is, funded) transportation services and facilities in the project corridor. The No-Project Alternative consists of existing

Caltrain service plus funded improvements and other committed bus, rail, and roadway improvements to the 2020 horizon year and a BART extension to the San Francisco International Airport.

8.3.5 ALTERNATIVES CONSIDERED AND WITHDRAWN

Other alternatives considered for the Transbay Terminal and Caltrain Extension project elements were withdrawn from further study because they would not accomplish the purpose and need for the project; would severely constrain railroad or bus operations; would constrain pedestrian circulation; would have severe community impacts; had extemely poor constructability; or would have involved extraordinary costs or substantial risk. These alternatives and the reasons why they were withdrawn from further consideration are described in Section 2.3, Alternatives Considered and Withdrawn. *None of these alternatives offered a feasible and prudent alternative for avoiding the use of Section 4(f)-protected resources.*

8.4 *DESCRIPTION OF* SECTION 4(F) PROPERTIES

Both Transbay Terminal alternatives and both Caltrain Downtown Extension alternatives would require the use of land from the Transbay Terminal property and demolition *and removal* of the Transbay Terminal building, which is eligible for the NRHP and is a contributing element to the San Francisco-Oakland Bay Bridge, *which is listed on the NRHP*. Both TransbayTerminal alternatives would also require demolition and removal of the existing terminal loop ramp *structures*, which *are* also contributing element*s* to the Bay Bridge.

Cut-and-cover tunnel construction for either Caltrain Downtown Extension alternative would require the use of land from and demolition of 13 buildings that are *either individually eligible or* eligible for listing in the NRHP as contributory elements to a district that is or appears eligible for listing. *These demolitions would result in the use of individual buildings in the district.*

The Tunnel Option for the Caltrain Downtown Extension alternatives would require the use of land from and demolition of three buildings that are eligible for listing in the NRHP as contributors to a district that is eligible for listing. *Demolition of these three buildings would also result in the use of individual buildings in the district.*

Both alternatives would also require a construction easement through the corner of a fourteenth property that is a contributor to an eligible district. This building would not be demolished, and the construction easement would not result in *its use under Section 4(f).*
The following sections discuss each of these 4(f) properties. Maps showing their locations are provided in Figures 8.4-1 and 8.4.2 The Redevelopment Area component would not require the use of *Section* 4(f) property.

8.4.1 THE TRANSBAY TERMINAL

The Transbay Terminal at 425 Mission Street occupies land extending from Mission Street on the north to Natoma Street on the south; the terminal building crosses Fremont Street on the east and First Street on the west *(Figure 8.4-1 #1)*. It was designed by Timothy Pfleuger, Arthur Brown, Jr., and John J. Donovan, consulting architects. Built in 1939, the Transbay Terminal was the "functional successor to the Ferry Building. When electric trains began arriving over the Bay Bridge, use of the Ferry Building dropped to almost nothing overnight, and the Transbay Terminal took over as the primary gateway to the city." (Caltrans, 1983) The Terminal has been determined eligible for listing in the NRHP by consensus of the SHPO and a federal agency (FHWA) and is considered as a contributory element to the historic significance of the Bay Bridge. The present owner of the Transbay Terminal is Caltrans. Its current use is for commuter and inter- and intra-regional bus transportation.

8.4.2 THE TRANSBAY TERMINAL LOOP RAMP

The Transbay Terminal Loop Ramp *(Figure 8.4-1 #2)*, which leads from the Bay Bridge approaches to the Transbay Terminal, would be demolished to construct the new Transbay Terminal component of the project.

The Transbay Terminal loop ramp structure constitutes two of the six approach spans that remain from the original Bay Bridge project. *The loop ramp and approach spans are* contributing element*s* of the Bay Bridge. Originally designed to carry trolley trains from the bridge to the terminal, the ramp's tracks were removed when electrified trains gave way to buses in the late 1950s. The terminal loop ramp currently serves bus traffic exclusively and is used for midday storage of transit buses.

8.4.3 THE SAN FRANCISCO – OAKLAND BAY BRIDGE

The Bay Bridge *(Figure 8.4-1 #3)* is an eight and one-half mile long series of connecting structures carrying two levels of traffic between San Francisco and Oakland. Opened to service in 1936, in its original design, the bridge upper level carried two-way auto traffic while the lower level carried truck and trolley traffic. Structurally, the bridge is distinctive in its use of a variety of bridge-building technologies, the length of its 1,400-foot cantilever channel span on the east (Oakland) side, and the length of the two 2,320-foot suspension spans on the west (San Francisco) side.

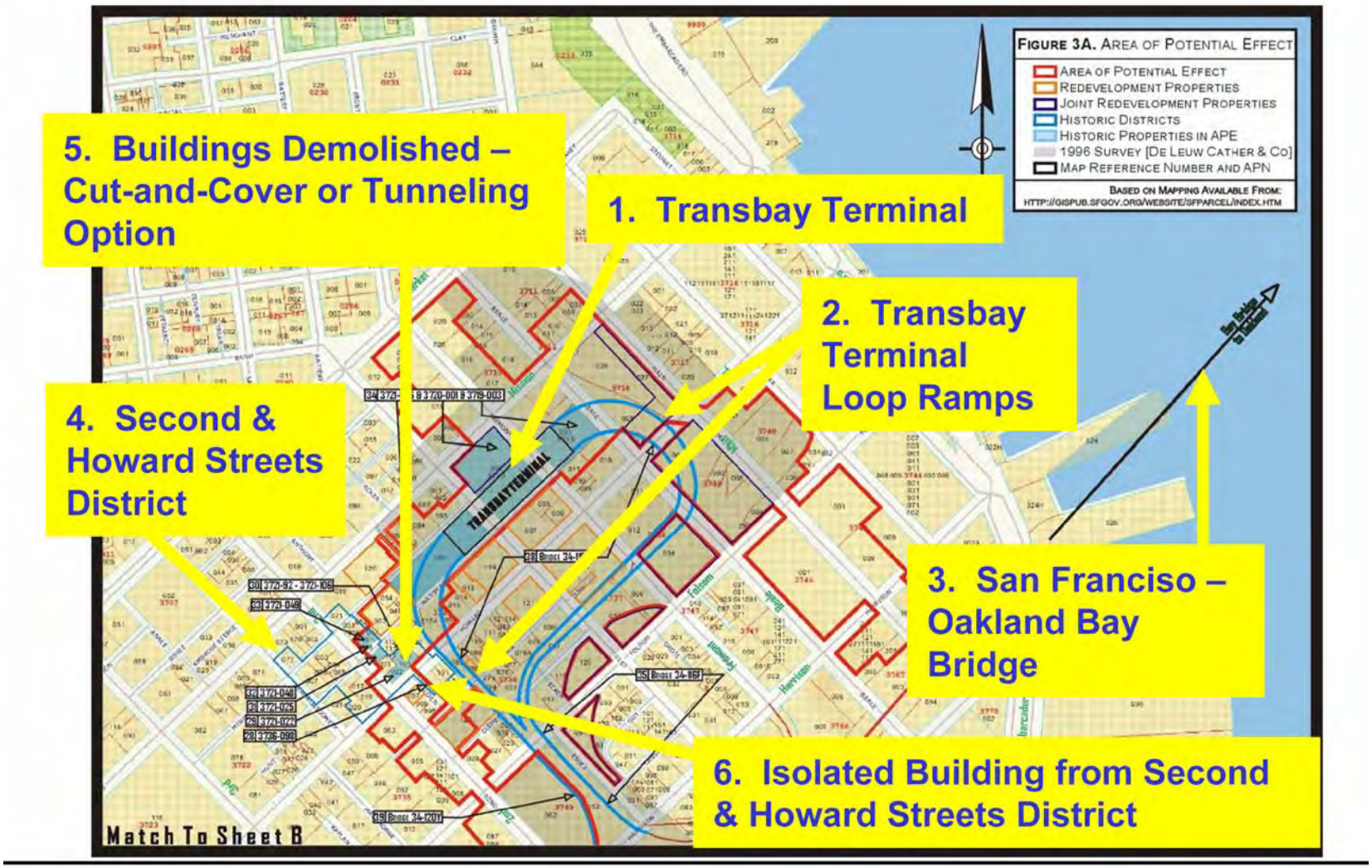


Figure 8.4-1: Section 4(f) Properties – Northern Portion

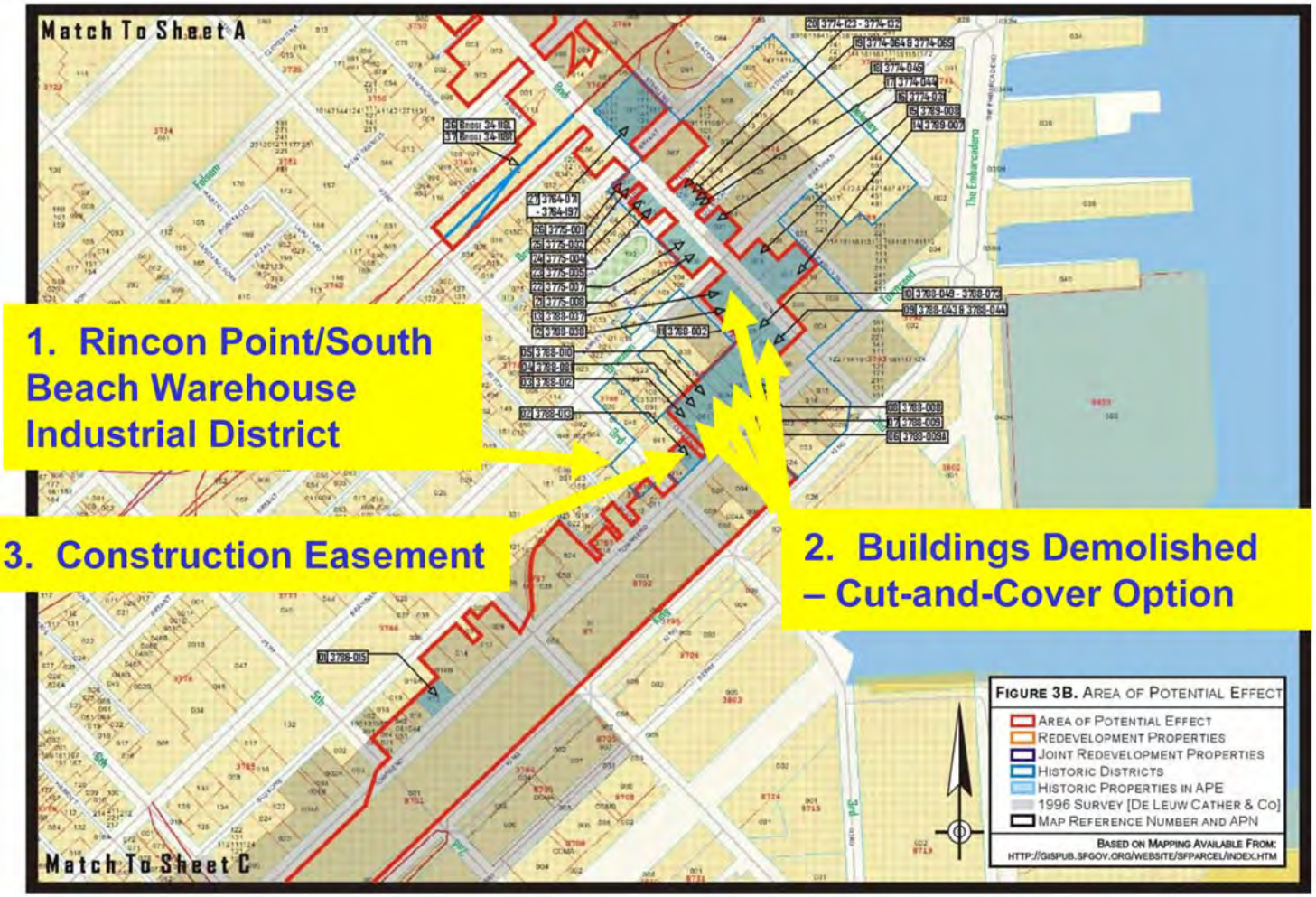


Figure 8.4-2: Section 4(f) Properties – Southern Portion

The outstanding engineering feature is the center pier between the two suspension spans of the western half of the bridge. The tunnel connections between the east and west spans on Yerba Buena Island was the first double-decked highway tunnel in the United States. Notable individuals connected wth the project were Charles H. Purcell, Chief Engineer; Charles E. Andrew, Bridge Engineer; Glenn B. Woodruff, Design Engineer; and T. L. Pfleuger, Arthur Brown, Jr., and John J. Donovan, consulting architects. The Bay Bridge was evaluated by Caltrans in 1983 as meeting National Register eligibility criteria A, B, and C at the national level; it was determined eligible for listing in 1985. *It was listed on the NRHP as a multi-component property on August 31, 2001.*

8.4.4 RINCON POINT / SOUTH BEACH HISTORIC WAREHOUSE-INDUSTRIAL DISTRICT

The Rincon Point / South Beach Historic Warehouse-Industrial District *(Figure 8.4-2 #1)* was identified and designated in the 1983 survey by Caltrans. It was developed beginning in the 1850s and 1860s, when landfill efforts and warehouse construction changed the physical appearance of the "point" and "beach" forever. This district contains the greatest concentration of architectural resources within the project vicinity. The district was identifed as appearing eligible for the NRHP in 1983, based on research completed by Caltrans historians for the I-280 Transfer Concept Project, but it was never determined eligible by the SHPO. That research found that the district appeared eligible under all four National Register criteria. About 60 buildings within the district have been identified as contributing to the district's significance. Approximately eight of these buildings date from before the 1906 San Francisco earthquake, with several from the mid-1800s.

The Rincon Point / South Beach Historic Warehouse Industrial District has also been designated locally significant and is eligible for listing in the California Register of Historic Places.

In 1985, the San Francisco Planning Department proposed the "South End Historic District," and the San Francisco Planning Commission designated this district under its landmarks program in February 1990. The South End Historic District has nearly identical boundaries and is nearly the same size as the Rincon Point District identified by Caltrans. The National Register status of the properties within the district, whether recognized as part of the South End district or Rincon Point / South Beach district, is the same. Please see Section 4.16.6, Historic Architectural Resources, for more detailed descriptions of both the NRHP and City of San Francisco districts.

8.4.5 SECOND AND HOWARD STREETS DISTRICT

The Second and Howard Streets District *(Figure 8.4-1 #4)* was determined eligible for the NRHP in 1999. This small district consists of 19 contributing properties and three non-contributors (two heavily-altered buildings and a vacant lot) with addresses on Second, Howard, Natoma and Montgomery streets. The contributing buildings date from 1906 to 1912; the primary original uses of these buildings were wholesaling, light manufacturing, and printing. The area was built for services to the construction industry. The permit for the first building to be erected in the District was

approved on July 5, 1906, just two and a half months following the 1906 earthquake and fire. The Second and Howard Streets District is partially surrounded by a locally recognized district known as the "New Montgomery – Second Street Conservation District." The San Francisco Planning Commission uses the conservation district designation to recognize parts of the city that have substantial concentrations of "special architectural and aesthetic importance." Please see Section 4.16.6, Historical Architectural Resources, for more detailed descriptions of both the NRHP and City of San Francisco districts.

As many as *eighteen* historic buildings, including ten contributors to the Rincon Point / South Beach Industrial Warehouse District and *seven* contributors to the Second and Howard Streets District would be affected by the project. *The Locally Preferred Alternative including the Tunnel Option for the segment of the Caltrain Extension Alternative between Townsend Street and Folsom Street would affect seven contributors to the Second and Howard Streets District. The Locally Preferred Alternative would also require a construction easement through the corner of another property (the eighteenth property previously mentioned) that is a contributor to the Rincon Point / South Beach Industrial Warehouse District. This building would not be demolished, and the construction easement would not result in use of the building under Section 4(f).* The Transbay Terminal and ramps, which are contributors to the San Francisco-Oakland Bay Bridge, would be *demolished and removed*. Descriptions of each affected property are provided in Section 5.14, Historic and Cultural Resources.

Table 8.4-1 summarizes the impacts to the *Section* 4(f) properties that would be affected by the project, grouped in terms of the primary resources or districts to which they contribute.

8.5 USE OF SECTION 4(f) RESOURCES

Both *the* Transbay Terminal *West Ramp* Alternative *(the Locally Preferred Alternative) and the Transbay Terminal Loop Ramp Alternative* would require the *demolition and* removal of the Transbay Terminal *(Figure 8.4-1 #1),* an NRHP-eligible resource and contributory element to the *San Francisco-Oakland* Bay Bridge, *a multi-component NRHP-listed property, and* of its existing ramp and bridge approaches, which are also contributing elements to the Bay Bridge. [1]

1 In accordance with California Public Resources Code Section 5027, the Transbay Terminal and terminal loop ramp, as NRHP-eligible structures that would be transferred from state (Caltrans) ownership to another public agency (the Transbay Joint Powers Authority) may not be demolished without the prior approval of the California Legislature. The California Legislature has considered the importance of proceeding with the Transbay Transit Terminal project and has granted a specific exemption to State Law prohibiting the demolition of historic structures with the following language: "the Legislature hereby approves demolition of the Transbay Terminal building at First and Mission Streets in the City and County of San Francisco, including its associated ramps, for construction of a new terminal at the same location, designed to serve Caltrain in addition to local, regional, and intercity bus lines, and designed to accommodate high-speed passenger rail service." (AB 812, 2003)

Table 8.4-1: *Section* 4(f) Properties That Would be *Used* by the Transbay Terminal and Caltrain Downtown Extension Component Alternatives

Property Descriptor	NRHP Status	Use	
		Cut-and-Cover Trench	***Stacked Drift Tunneling [1]***
San Francisco-Oakland Bay Bridge, a multi-component property listed on the NRHP			
Transbay Terminal, 425 Mission Street	Individually eligible & contributor	Demolition	Demolition
Bay Bridge Approaches	Contributor	Demolition	Demolition
Bus Ramps	Contributor	Demolition	Demolition
Second and Howard Streets District[2]			
165-173 Second Street	Contributor	Demolition	Demolition
191 Second Street	Contributor	Demolition	Demolition
580-586 Howard Street	Contributor	Demolition	Demolition
163 Second Street	*Contributor*	*Adverse effect due to loss of nearby contributing building*	*Adverse effect due to loss of nearby contributing building*
577-79 Howard Street	*Contributor*	*Isolated from District*	*Isolated from District*
583-87 Howard Street	*Contributor*	*Isolated from District*	*Isolated from District*
589-591 Howard Street	*Contributor*	*Isolated from District*	*Isolated from District*
Entire District Second and Howard Street District	*Eligible*	*Use of District*	*Use of District*
Rincon Point/South Beach Industrial Warehouse District			
35 Stanford Street	Contributor	Demolition	No use
640 Second Street	Contributor	Demolition	No use
650 Second Street	Contributor	Demolition	No use
670-680 Second Street	Contributor	Demolition	No use
301-327 Brannan Street	Contributor	Demolition	No use
130 Townsend Street	Contributor	Demolition	No use
136 Townsend Street	Contributor	Demolition	No use
144-46 Townsend Street	Contributor	Demolition	No use
148-54 Townsend Street	Contributor	Demolition	No use
162-164 Townsend Street	Contributor	Demolition	No use
166-78 Townsend Street	Contributor	Construction Easement/ Temporary Occupancy/ No use	Construction Easement/ Temporary Occupancy/ No use
Entire Rincon Point/South Beach Industrial Warehouse District	*Eligible*	*Use of District*	*No Use of District*

[1] The tunneling option has been identified as the Caltrain Extension component of the Locally Preferred Alternative (LPA).

[2] *The buildings at 577-79 Howard Street and 583-87 Howard Street are outside the APE but are contributing elements to the National Register District.*

The Tunneling Option *(identified for the Caltrain Extension component of the Locally Preferred Alternative)* would require the removal of three historic buildings *(Figure 8.4-1 #5) and result in the isolation from the remainder of the district of three other buildings (Figure 8.4.1 #6),* all of which are contributors to the Second and Howard Historic District. These impacts would result in *a use of these individual buildings and the District* under Section 4(f). Under this tunneling option, the 10 buildings that are contributors to the Rincon Point / South Beach District would be retained and would be underpinned to protect them from harm during construction. There would thus be *no use of* these properties *or the District* with this construction option. The stacked drift tunneling method has an extremely low likelihood of collapse or tunnel failure. *Reducing impacts to historic properties was a primary factor in the identification of the tunneling option for the Townsend Street to Folsom Street segment of the Caltrain Extension component of the Locally Preferred Alternative.*

A construction easement through an *eighteenth* property (affecting the southeast corner of the 166-178 Townsend property, *Figure 8.4-2 #3*) would also be required to construct the subway for the Caltrain Downtown Extension under either construction option. The California Electric Light Company building would not be removed and would be underpinned to protect it from harm during construction. The easement would not constitute use under Section 4(f) pursuant to 23 CFR 771.135 (7). The occupancy of land from the affected *Section* 4(f) property would be temporary, and less than the time needed for construction of the project. The encroachment would be for a construction easement only; there would be no change in ownership of the land. The scope of the work would be minor and there would be no changes to the nature or magnitude of the *Section* 4(f) resource; the building would be unchanged. Not only would there be no adverse physical impact, but there would be no interference with the purposes of the *Section* 4(f) resource, which would remain in place during construction. The resource would remain a contributor to its historic district. Following construction of the tunnel, the property would be returned to its original condition.

The demolitions of the Transbay Terminal and ramp structures, demolition of three historic buildings that are contributors to a historic district, and isolation of three other buildings from the remainder of the district that would occur under the Locally Preferred Alternative would constitute a use of these historic buildings and the Second and Howard District under Section 4(f). The construction easement required for the building at 166-178 Townsend will not result in a use under Section 4(f).

8.6 AVOIDANCE ALTERNATIVES

Two alternatives were evaluated for each project component to achieve the project purpose and need. Also, the Caltrain Extension component has two construction Options. There are differences in effects on *Section* 4(f)-protected resources among these Alternatives and Options, as discussed in the following section, which is organized by project component. The No-Project Alternative is also briefly discussed.

8.6.1 TRANSBAY TERMINAL COMPONENT

There are no Transbay Terminal alternatives that are either reasonable, or feasible and prudent, and that avoid *Section* 4(f)-protected resources, as shown in the following paragraphs.

8.6.1.1 Transbay Terminal Alternatives Considered in the Present Document

The purpose and need for the Project includes the extension of Caltrain to the site of the existing Transbay Terminal in the Financial/South of Market downtown area (as required by Proposition H), as well as the ability to accommodate a California high-speed system (as also required by Proposition H). This Project's purpose and need could not be achieved by rehabilitation of the present Transbay Terminal.

Bringing the Caltrain/high speed rail tracks into the upper levels of the present terminal would displace portion of the current AC Transit operations, would require retrofitting the terminal, (substantially reducing its ability to function effectively), and would disrupt current transit operations. It would also require new elevated train tracks leading to the terminal, thus reducing the ability of redevelopment planning efforts to revitalize the area around the terminal.

Additionally, such retrofit would require bringing the remainder of the present facility up to building codes and ADA requirements, adding additional cost and disruption to the present terminal operation; and terminal retrofit would require continued use of the eastern bus ramp (which would not occur under the selected Locally Preferred Alternative West Ramp Alternative), thus reducing the ability of the proposed redevelopment planning to revitalize the area surrounding the terminal. Bringing the Caltrain extension and high speed rail tracks into the basement of the present terminal is not practicable.

Finally, it should be noted that the Metropolitan Transportation Commission's Transbay Terminal Study generated a regional consensus among the participating agencies (Caltrans, AC Transit, Golden Gate Transit District, Muni, the City and County of San Francisco, the Peninsula Corridor Joint Power Board, and SamTrans) for a new terminal on the site of the current Transbay Terminal.

To meet the purpose and need of the Project, it would be necessary to demolish the existing Transbay Terminal and the terminal loop ramp, both of which are *Section* 4(f)-protected resources.

8.6.1.2 Transbay Terminal at Main/Beale

The New Bus Terminal at the Main/Beale Site that was considered in the 1997 Draft EIS/EIR for the Caltrain Downtown Extension would not have constructed a new terminal at the site of the present Transbay Terminal but it would not have avoided removal of the existing Transbay Terminal and terminal loop ramp. Although this option would have placed bus operations at the Main/Beale site, the Caltrain Downtown Extension was still proposed to terminate underground at the site of the present Transbay Terminal, which required demolition and removal of the terminal and terminal loop ramp. Note that this bus terminal alternative had been endorsed by the San Francisco Board of

Supervisors but was ultimately found not to be feasible because the Main/Beale site could not provide for the needed level of AC Transit service. Withdrawal of the Main/Beale site was also consistent with the provisions of Proposition H (passed by the voters of San Francisco in November, 1998), which called for a multi-modal facility on the site of the current Transbay Terminal.

8.6.2 CALTRAIN DOWNTOWN EXTENSION COMPONENT

Two Alternatives with different horizontal and vertical alignment geometrics and two construction approaches (cut-and-cover *trenching* and tunneling) were evaluated to meet the project purpose and need for the Caltrain Downtown Extension. There would be no difference in effects to *Section* 4(f)-protected resources between the Second–to-Mission Street and Second-to-Main Street Alternatives if constructed using the cut-and-cover trenching technique, however, construction of these alternatives using the Tunneling Option would affect fewer Section 4(f) protected properties, *as discussed in the following paragraphs*. *There was no feasible and prudent Caltrain Downtown Extension Alternative that would avoid all historic properties.*

8.6.2.1 Cut-and-Cover Tunneling Option

The Cut-and-Cover Option would require the removal of all 13 historic buildings described in Section 8.4, Potentially Affected Section 4(f) Properties. Ten of these buildings are contributors to the Rincon Point / South Beach Industrial Warehouse District and three are contributors to the Second and Howard Historic District. *Removal of ten buildings from the Rincon Point / South Beach Industrial Warehouse District would result in a use of that district under Section 4(f) Removal of the three contributors to the Second and Howard Historic District would result in a use of the Second and Howard District through isolation of three other buildings from the remainder of the district.* T*he* Cut-and-Cover Option would also require *a* construction easement through the southeast corner of the 166-178 Townsend property, which is a contributor to the Rincon Point historic district; *this easement would be temporary and would not require alteration or demolition of the building, and therefore would not constitute a use of the property.*

8.6.2.2 Stacked Drift Tunneling Option

The Tunneling Option would avoid removal of 10 historic buildings that are contributors to the Rincon Point / South Beach Industrial Warehouse District, but would require removal of three buildings that are contributors to the Second and Howard Historic District, *resulting in a use of those buildings under Section 4(f). Removal of these three buildings would also result in the isolation of three other buildings from the remainder of the district, resulting in a use of that District. The Tunneling Option constitutes an avoidance alternative for the 10 historic buildings that are contributors to the Rincon Point District. Reducing impacts to historic buildings and districts consistent with the requirements of Section 4(f) was a primary factor in the identification of the Tunneling Option for the Caltrain Downtown Extension component of the Locally Preferred Alternative.*

The inability to successfully tunnel under the three historic structures in the Second and Howard District is due to ground conditions and the necessary Project facilities for this immediate area. A large number of closely spaced tracks are required for the segment leading from Folsom Street into the new Terminal. This is the areas where the tracks leading north on Second Street would need to brand into six tracks leading into the basement of the terminal. Soils near Second and Howard Streets are exceptionally soft and weak, and the excavations required for the multiple, closely spaced tracks would be wide. While it may be technically feasible to construct a single tunnel or perhaps twin bores under a given building, it is not considered practicable in the soft soils to open so many tunnels so close to each to accommodate the multiple tracks.

The Tunneling Option would also require *the same* construction easement through the southeast corner of the 166-178 Townsend property, which is a contributor to the Rincon Point historic district*, but this easement would be temporary and would not require alteration or demolition of the building, and therefore would not constitute a use of the property.*

8.6.2.3 Caltrain Downtown Extension – Essex Street Stub-End Alignment Alternative

In response to the curve radii problems associated with the 1997 Caltrain Downtown Extension alignment, an alternate subway alignment was reviewed that did not curve into the basement of the proposed new Transbay Terminal, but included a train terminal oriented perpendicular to and west of the existing Terminal. Therefore, it did not require demolition of the existing Transbay Terminal. Also, it would have been possible to construct this alignment using the stacked drift technique. This would have avoided demolition of all of the historic buildings in and around the Rincon Point / South Beach Industrial Warehouse District, while the alignment would not have encroached into the Second and Howard Historic District.

This alternative was included in the Notice of Preparation and Notice of Intent to Prepare this EIS/EIR, but was found not to be feasible. During the scoping process, the public noted several shortcomings of this alignment, and these public comments and shortcomings contributed to the withdrawal of this alternative alignment from further consideration. Because the train platforms would not have been directly under the new multi-modal transit facility, internal passenger circulation and transfers between modes would have been substantially compromised. Also, the stub-end orientation meant that trains would not be able to enter one end of the station and exit at the other. In the stub-end configuration, trains would pull into the station and would need to reverse direction to exit. This would substantially impair operating efficiency and would not meet the project purpose to improve Caltrain service to downtown San Francisco.

While it would have been possible to construct the Essex Street Stub-End Alignment of the Caltrain Downtown Extension without demolishing and erecting a new Transbay Terminal, this action would not have been a reasonable undertaking. Leaving the existing Transbay Terminal in place would have done nothing to improve space utilization, passenger circulation, signage, safety or operating efficiency within the existing Transbay Terminal. There would have been very limited potential for revenue-generating joint development within the terminal or its environs. The existing terminal footprint includes numerous structures crossing city streets, a condition that has contributed to the

continued deterioration and underutilization of land in the surrounding area. None of these conditions would have been improved without demolition of the terminal under this alternative.

In summary, therefore, this alternative alignment was found not to be feasible or reasonable and it was withdrawn from further consideration. It therefore does not constitute an avoidance alternative under Section 4(f).

8.6.3 NO-PROJECT ALTERNATIVE

The No-Project Alternative would not use the Transbay Terminal or the existing loop ramp *approach structures*, but this alternative would not address the Project's purpose and need. Note, however, that Caltrans is currently completing seismic retrofit of the loop ramp, and Caltrans' plans include demolition and removal of the east ramps and reconstruction of the west ramps. Further, the existing Transbay Terminal building also requires substantial and costly retrofit and reconstruction to meet current seismic and other building codes. Interim retrofit measures have been taken, but the full reconstruction (to be undertaken by others) may be so extensive as to result in the use of the resource under Section 4(f). Given the high costs of retrofitting the existing terminal, the City of San Francisco requested Caltrans cooperation in considering replacement alternatives that would meet the project purposes identified for the present study.

8.6.4 OTHER ALTERNATIVES

Other alternatives and alignment variations considered for the 1997 Draft EIS/EIR for the Caltrain Downtown Extension were not feasible or prudent for the present study. Geometrics for these alignment alternatives did not meet curve radius minimums required to accommodate high-speed steel-wheel-on-rail equipment currently in use in Europe and under consideration by the California High-Speed Rail Authority for implementation in California, including a station in downtown San Francisco. Constructing a new Caltrain alignment that precluded future use by high-speed rail equipment was not prudent, and these alternatives were withdrawn from further consideration.

Figures 2.2-1, 2.2-5 through 2.2-7, and 2.2-9 though 21 show the project alternatives. Figure 2.3-1 shows all of the alternatives for the terminal and extension components that were considered in the present study and the 1997 Draft EIS/EIR but found not to be viable.

8.7 MEASURES TO MINIMIZE HARM

There are no remaining *feasible and prudent* alternatives that avoid *Section* 4(f)-protected properties. The *Locally Preferred Alternative comprising the Transbay Terminal West Ramp, Caltrain Downtown Extension with Tunneling Option for the Townsend Street to Folsom Street segment /*

Second-to-Main Alignment Alternative and Full Build Development Scenario would include all possible planning to minimize harm to the properties.

Measures to minimize harm are included in a Memorandum of Agreement (MOA). Signatory parties to the MOA include FTA and SHPO. The City and County of San Francisco, the Transbay Terminal Joint Powers Authority (TJPA), the Peninsula Corridor Joint Powers Board (JPB), and Caltrans are invited concurring parties to the MOA. The MOA is included in Appendix G of this Final EIS/EIR. The Measures are summarized below.

1. ***Professional Standards**: All activities regarding history, historic preservation, historical archaeology and prehistoric archaeology that are carried out will be carried out by or under the direct supervision of persons meeting, at a minimum, the Secretary of the Interior's professional qualifications standards (48 FR 44738-9) in these disciplines.*

2. ***Mitigation of Effects on Components of the San Francisco-Oakland Bay Bridge (Bay Bridge)***

   A. ***Permanent Interpretive Exhibit at the Terminal**: TJPA will direct the design and engineering team for the Undertaking to integrate into the design of the new terminal a dedicated space for a permanent interpretive exhibit. TJPA will also consult with the City of Oakland about its interest in having a similar interpretive exhibit in the East Bay.*

   B. ***Salvage:** TJPA, in consultation with the State Department of Transportation (Department), will identify elements of the existing Transbay Transit Terminal that are suitable for salvage and interpretive use in the exhibit in the new Terminal or in museums.*

   C. ***Oakland Museum of California Exhibit:** TJPA will consult with Department and the Oakland Museum about contributing to Department's exhibit at the Oakland Museum relating to the history and engineering of the major historic state bridges of the San Francisco Bay Area.*

   D. ***Documentation:** TJPA will consult with the California SHPO to ensure that the Transbay Transit Terminal has been adequately recorded by past efforts. TJPA will ensure that these records are accepted by SHPO prior to demolition of the Transbay Transit Terminal.*

   E. ***Reevaluation of the Bay Bridge** by the TJPA will occur within 180 days after FTA determines that the Undertaking has been completed.*

3. ***Mitigation of Effects on Second and Howard Streets Historic District and Protective Measures for Rincon Point/South Beach Historic Warehouse Industrial District***

A. ***Protective Measures:*** *TJPA, in consultation with the owners of historic properties immediately adjoining the construction sites, will develop and implement measures to protect the contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District from damage by any aspect of the Undertaking.*

B. ***HABS/HAER Documentation:*** *TJPA will assure that the three historic properties in the Second and Howard District to be demolished will be recorded in accordance with HABS/HAER standards, as appropriate.*

C. ***Repair of Inadvertent Damage:*** *TJPA will ensure that any damage to contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District resulting from the Undertaking will be repaired in accordance with the Secretary of the Interior's Standards for Rehabilitation.*

D. ***Reevaluation of the Second and Howard Streets Historic District by the TJPA*** *will occur within 180 days after FTA determines that the Undertaking has been completed,*

4. ***As described in Chapter 5 of this Final EIS/EIR, directly relevant mitigation measures include:***

- *Provision of signage during construction.*
- *Installation of a level deck for cut-and-cover construction*
- *Provision of efficient sidewalk design and maintenance.*
- *Underpinning of existing buildings, where deemed necessary, to protect existing structures from potential damage that could result from excessive ground movements during construction. Other alternatives, in lieu of underpinning, involve strengthening of the rock between the building and the crown of the tunnel. Grouting in combination with inclined pin piles can be used not only to strengthen the rock but to make the rock mass over the tunnel act as a rigid beam, which would allow construction of the tunnels with no adverse effects on the buildings that are supported on shallow foundations over the tunnel.*
- *Proper design and construction of pile supported foundations for structures to control potential settlement of the surface.*
- *Upon completion of the construction phase, power wash and/or paint buildings with visible signs of dirt and debris from the construction site (given that permission is obtained from the property owner to gain access to and wash the property with no fee charged by the owner).*
- *Limit or prohibit use of construction techniques that create high vibration levels.*

- *Restrict procedures that contractors can use in vibration sensitive areas.*
- *Require vibration monitoring during vibration intensive activities.*
- *Restrict the hours of vibration intensive activities such as pile driving to weekdays during daytime hours.*
- *Investigate alternative construction methods and practices to reduce the impacts in coordination with the construction contractor if resident annoyance from vibration becomes a problem.*
- *Include specific limits, practices and monitoring and reporting procedures for the use of controlled detonation.*
- *Use high-resilience track fasteners or a resiliently supported tie system for the Caltrain downtown extension for areas projected to exceed vibration criteria.*
- *Require the project contractors to ensure that construction crews working at night direct any artificial lighting onto the work site in order to minimize "spill over" light or glare effects on adjacent areas.*
- *Ensure that any damage to contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District resulting from the Undertaking will be repaired in accordance with the Secretary of the Interior's Standards for Rehabilitation.*

8.8 COORDINATION WITH DEPARTMENT OF INTERIOR

The United States Department of Interior (DOI) provided the following comments regarding Section 4(f) matters related to the proposed Project in a letter from Willie R. Taylor, Director, Office of Environmental Policy and Compliance, Office of the Secretary, DOI, to Leslie Rogers, Region IX Administrator, FTA. (The DOI letter dated March 9, 2004 is contained in Appendix D.) The DOI comments and responses to those comments are provided in Table 8.8-1.

Table 8.8-1: Responses to the Department of Interior (National Park Service) Comments	
Department of Interior Comment	***Response to Comment***
Based on the information provided in the EIS/Report, it is apparent that no public parkland, refuge, or similar site would be affected by either of the action alternatives. Therefore, there are no Section 4(f) considerations with regard to recreational sites.	*Section 4.4 of this Final EIS/EIR, Volume I shows that there would be no impacts to public parklands, refuges, or similar sites.*
The National Park Service's Pacific West Regional Office has reviewed this administrative draft document identifying and analyzing a "no action" alternative as well as "action" alternatives for individual components of the proposed project. A locally preferred Stacked Drift Tunneling West Ramp alternative is also deemed to be the environmentally superior alternative.	*The DOI reviewed the administrative draft Final EIS/EIR that identified the Locally Preferred Alternative (LPA) as the Stacked Drift Tunneling West Ramp alternative. This LPA is described in Section 2.2 of this Final EIS/EIR, Volume I.*
In regard to cultural resources, each of the "action" alternatives entails demolition of historic buildings. The locally preferred alternative would have significantly less impact on other listed historic structures in comparison with the Cut and Cover Trench/West Ramp alternative.	*As described in Sections 5.14 and 8.6.2 of this Final EIS/EIR, Volume I, the LPA would have significantly less impact on listed historic structures.*
Several options were withdrawn from full analysis because they would fall short of meeting the expressed purpose and need for action. None of the withdrawn options offered a feasible and prudent alternative for avoiding the identified effects on cultural resources.	*Alternative considered and withdrawn from consideration and reasons for their withdrawal are described in Sections 2.3 and Section 8.6 of this Final EIS/EIR, Volume I.*
The locally preferred Stacked Drift alternative slates six historic structures for demolition. Three of the resources slated for demolition – Transbay Terminal (425 Mission Street), Bay Bridge Approaches, and Bus Ramps – have been designated contributing resources to the San Francisco-Oakland Bay Bridge, a multi-	*These impacts associated with the LPA are described in Sections 5.14, 8.5 and 8.6 of this Final EIS/EIR, Volume I. The MOA for this Project is contained in Appendix G of this Final EIS/EIR, Volume I.*

Table 8.8-1: Responses to the Department of Interior (National Park Service) Comments

Department of Interior Comment	***Response to Comment***
component property listed on the National Register of Historic Places (NRHP). According to the draft Memorandum of Agreement (MOA) included in the EIS/Report, the California Legislature has granted a specific exemption to State law prohibiting the demolition of historic structures as follows: *"The Legislature thereby approves demolition of the Transbay Terminal building at First & Mission Streets in the City and County of San Francisco, including the associated ramps, for construction of a new terminal at the same location…" (AB 812, 2003).*	
Our concerns are twofold. First, three of the structures slated for demolition (and not addressed by AB 812) – 165-173 Second Street, 191 Second Street, 580-586 Howard Street – have been designated as contributing resources in the Second & Howard Streets District. Demolition of these three structures in the Second & Howard Streets District also result in isolation of four additional contributing resources in the District, adding to the adverse impact of the undertaking on the integrity of the District. While it is clear that the proposed undertaking will adversely affect all six properties, not enough information has been provided in the EIS/Report materials to determine the overall effect of the proposed demolition on the integrity of the Second & Howard Streets District or the Bay Bridge District (as listed on the NRHP). *Second, the MOA Section III (F) stipulates that a reevaluation of the Bay Bridge District shall occur within 180 days of completion of the undertaking to determine whether the nomination should be amended or whether the bridge no longer qualifies for listing and should*	*In response to DOI's request, the MOA (Appendix G) now includes a reevaluation clause not only for the Bay Bridge (MOA, Section III.E) but also for the Second and Howard Street District (MOA, Section IV.D.). Additional information has been added to Section 5.14 of the administrative draft Final EIS/EIR (shown as underlined and italics on pages 5-90, 5-91, 5-103, and 5-104 of this Final EIS/EIR) stating that it is not anticipated that the Undertaking would result in a delisting from the NRHP of the remaining elements for either of these resources. Underlying reasons are provided.* *The number of isolated buildings shown in the* ***administrative draft*** *Final EIS/EIR (as reviewed by the DOI) has been changed from four to three for this Final EIS/EIR. Specifically, 163 Second Street would not be isolated but rather would be adversely affected due to loss of a nearby contributing building.*

Table 8.8-1: Responses to the Department of Interior (National Park Service) Comments	
Department of Interior Comment	***Response to Comment***
be removed from the NRHP. The MOA states that the Transbay Joint Powers Administration will conduct the evaluation in consultation with the SHPO. A similar clause is not included for the Second & Howard Street Historic District in the Mitigation Section IV of the MOA. From the information provided, it is unclear whether an evaluation was completed to assess the potential impact of the proposed undertaking on the Second & Howard Street Historic District, or if not, what was the basis for this result. If an evaluation has not been done, our recommendation would be to complete this process for the Second & Howard Street District.	
The Department of the Interior has no objection to Section 4(f) approval of this project, provided the measures to minimize harm mentioned above are included in the project plans and implementation. *Because this Department has a continuing interest in this project, we are willing to cooperate and coordinate with you on a technical assistance basis in further project evaluation and assessment.*	*As shown above, the requested measures to minimize harm in the DOI letter are included in the Project plans and implementation. Given DOI's letter stating no objection with these measures in place, FTA has determined that there is no feasible and prudent alternative to the use of land from the national register properties required for the LPA and that implementation of the proposed LPA includes all possible planning to minimize harm resulting from such use (see Section 8.9 below).*

8.9 SECTION 4(f) FINDING

It is determined that there is no feasible and prudent alternative to the use of land from the national register properties required for the Locally Preferred Alternative (LPA) and that implementation of the proposed LPA includes all possible planning to minimize harm resulting from such use.

Underlying reasons for these findings include:

- *The regional designation of the Transbay Terminal site as the appropriate site for a new regional multi-modal terminal,*
- *The requirement for and advantages of providing new bus ramps to the new terminal (i.e., elimination of the east loop, stacking of the west ramps),*
- *The need to provide commuter and high-speed train service into the basement of this new facility to enhance regional transit connectivity,*
- *The major advantages (i.e., reduced community impacts and project costs) of using public rights-of-way (Townsend and Second Streets) for the underground train extension, and the minimum curve radii required for high speed trains,*
- *The soft ground conditions and multiple, closely-spaced tunnel requirements in the Second and Howard Streets area,*
- *The selection of a Locally Preferred alternative minimizing the number of 4(f) resources used, and*
- *The agreement to document and preserve elements of the 4(f) resources via recordation, displays in the new terminal and at local museums, financial participation in the production in educational videos, and the salvage of appropriate elements in the terminal.*

APPENDIX A: FINAL EIS/EIR DISTRIBUTION LIST

Agencies/Businesses/Associations/Individual Receiving Volumes I and II of the Final EIS/EIR

Federal Agencies

Advisory Council on Historic Preservation
Department of Commerce, National Oceanic and Atmospheric Administration
Department of Health and Human Services
Department of Housing and Urban Development
Environmental Protection Agency
Federal Emergency Management Agency
Federal Railroad Administration
Surface Transportation Board
U.S. Fish and Wildlife Service
U.S. Department of Energy
U.S. Department of Interior, Office of Environmental Policy & Compliance
U.S. Department of Interior, National Park Service

State Agencies

Business, Transportation & Housing Agency
California Air Resources Board
California Department of Fish & Game
California Department of Toxic Substances Control
California Department of Transportation (Caltrans) District 4
California High-Speed Rail Authority
California Integrated Waste Management Board
California Public Utilities Commission
California Transportation Commission
Native American Heritage Commission
Northwestern Information Center
Office of Historic Preservation, California Department of Parks & Recreation
Regional Water Quality Control Board, San Francisco Bay Region
San Francisco Bay Conservation & Development
State Clearinghouse, State Office of Intergovernmental Management
State Department of Housing & Community Development
State Resources Agency

Elected Officials

San Francisco State Assembly Members
San Francisco State Senate Members
San Francisco Mayor
San Francisco Board of Supervisors
U.S. Senator Dianne Feinstein
U.S. Senator Barbara Boxer
U.S. Congressmember Nancy Pelosi

Regional Agencies

Association of Bay Area Governments
Bay Area Air Quality Management District
Metropolitan Transportation Commission

County Agencies

City/County Association of Governments – San Mateo County

City and County of San Francisco Agencies

San Francisco Planning Commission
San Francisco Municipal Railway
San Francisco Department of Parking and Traffic

San Francisco Planning Department
San Francisco County Transportation Authority

Public Libraries

City of Berkeley Central Library, 2090 Kittredge Street (at Shattuck)
Main libraries, Cities along Caltrain Corridor
San Francisco Central Library, 100 Larkin Street (at Grove)

Public Transit Operators

AC Transit
Bay Area Rapid Transit District
Golden Gate Bridge, Highway, and Transportation District
San Mateo County Transit District
Santa Clara Valley Transit Authority

Media

San Francisco Chronicle
San Francisco Bay Guardian
San Francisco Business Times

Community Groups and Organizations

BayRail Alliance
League of Women Voters of the Bay Area
League of Women Voters of San Francisco
Regional Alliance for Transit
Rescue Muni
San Franciscans for Reasonable Growth
San Francisco Architectural Heritage
San Francisco Bicycle Coalition (SFBC)
San Francisco Planning and Urban Research
San Francisco Tomorrow
Transbay Alliance
Train Rider's Association of California
Transportation Solutions Defense & Education Fund (TRANSDEF)

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Potentially Affected Property Owners

171 Second Street LLC @ Union Property Capital Inc.
Abbassi 1988 Living Trust % Michael & Kathryn Abbassi
Bank of America NA % Eric Forsberg
Beck William U Revoc Trust % Willam U Beck
Birmingham Robert @ 201 Second Street LLC
Byer Allan G & Marian-Bam P
Peter F.Byrne
Peggy J. Field Survivors Trust % Custom Paper Products
Fritzi, Realty-Owner
Howard Historic Properties % Patrick McNerney
Jaron Partners
John L. & Carol Gasparini
Adolph & Marion V Gasser Rev
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Bureau of Fire Prevention & Investigation
City Attorney's Office
Department of Building Inspection
Landmarks Preservation Advisory Board
Mayor's Office of Community Development
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Port of San Francisco
San Francisco Department of Public Works
San Francisco Public Utilities Commission
San Francisco Real Estate Department
San Francisco Community College District
San Francisco Fire Dept - Planning & Research
San Francisco Police Dept - Planning Division
San Francisco Public Utilities Commission
San Francisco Recreation & Parks
San Francisco Unified School District

Community Groups and Organizations

AIA - San Francisco Chapter
Bay Area Council
Chinatown Resource Center
Mission Creek Harbor Association
Natoma / SOMA Neighborhood Association
Pedestrian Safety Task Force
PODER
Portside Homeowners Association
Protrero Boosters Neighborhood Association
San Francisco Beautiful
San Francisco Chamber of Commerce
San Francisco Labor Council
SELT
Sierra Club - San Francisco Group
SOMPAC Land Use Committee Chair
South of Market Cultural Center (SAMAR)
The People on the Bus
Yerba Buena Alliance
Coalition for San Francisco Neighborhoods
South of Market Neighborhood Association
South of Market Problem Solving
South of Market Project Action Committee
South of Market Senior Community Action Group
South Park Improvement Association
South Waterfront Alliance
Tenants & Owners Development Corp.

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Catellus Development Corporation
Chicago Title
Coldwell Banker
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EDAW
EIP Associates
Ellman Burke Hoffman & Johnson
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Gensler and Associates
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Higgins Development Partners
Howard Rice Associates
Jon Twichell Associates
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John Bumanis, P.E., Chief Mechanical Engineer. B.S., Mechanical Engineering. More than 20 years of experience in planning and designing heating, ventilating, and air conditioning systems for subway facilities.

Luisito V. Delacruz, Senior Catenary Engineer. B.S., Mechanical and Electrical Engineering. Over 24 years experience in the design of Overhead Contact System for Light Rail Transit projects, Trolley Coach Transit system and Heavy Rail Line electrification projects.

Pat M. Gelb, Planning Manager. M.A. Over 28 years experience in environmental and transportation planning.

Jeanne Hazemoto, Supervisor of Word Processing and Office Support. Document preparation and production. Fourteen years experience in production word processing.

David Johnson, Principal Planner. B.A., Geography. 13 years experience in environmental and transportation planning.

Michael N. Lewis, C.E., P.E., Catenary Systems Resource Center Manager. H.N.D., Mechanical Engineering (U.K.). Comprehensive 37-year background in railroad, commuter rail and rapid transit systems design and installation.

Dave Mansen, Transportation Project Manager. M.S., Urban Planning. Over 27 years experience in environmental and transportation planning.

Richard Shonn Mills, P.E., Senior Bridge Engineer. B.S., Civil Engineering. Over eight years of experience in design, analysis and preparations of plans, specifications and cost estimate (PS&E) documents for infrastructure projects.

Karla J. Nicholas, Senior Planner. 21 years experience in environmental and transportation planning.

Ljubica B. Osgood, Graphics Designer. B.F.A., over 31 years of experience in the supervision and design of graphics and presentation materials for engineering, environmental and transportation planning projects.

Laura J. Prickett, Principal Planner. A.I.C.P., M.C.P and B.A., International Relations. Eight years experience conducting environmental, transportation and land use planning analyses.

Shelley M. Randolph, EIT, Transportation Planner. B.S., Civil Engineering. Six years of professional experience including environmental and transportation planning.

Elia Rouzier, Supervisor of Word Processing. Document preparation and production.

Gui Shearin, Principal Transportation Planner. Ph.D, Transportation Planning. 23 years experience in evaluating travel demand, traffic forecasting, and land use/socioeconomic studies.

James L. Tennyson, Senior Track Engineer. More than 30 years of railroad engineering experience in railroad track, yard, industrial and commercial facilities and public works projects.

Chukwuma Umolu, P.E., Principal Civil Engineer. M.S., 15 years of experience in civil engineering.

David Wemmer, P.E., Transportation/Rail Transit Manager. B.S., Civil Engineering. More than 18 years experience in the railroad industry (freight, commuter and light rail), encompassing a broad range of expertise in railroad and municipal engineering.

Sonoma State University

Adrian Praetzellis, Director – Anthropological Study Center. Ph.D., R.P.A. 30 years experience in archaeology and cultural resources management.

Mary Praetzellis, Administrative Manager – Anthropological Study Center. M.A., R.P.A. 30 years experience in historic, archaeological and cultural resources management.

Earth Tech

R. David Minister, P.E., Project Manager. M.S., Civil Engineering. 30 years experience in railroad and transit planning and engineering.

ESA

Charles Bennett, Project Co-Manager. B.S., Mechanical Engineering. Over 35 years of experience in applied environmental studies and environmental project management.

Dan Cohen, Reviewer. M.C.P.; B.A., History and Political Economy. Ten years of experience specializing in the management of EIRs for mid-size and large urban development projects. Technical expertise in the areas of historic architectural resources, urban design/visual quality, and land use.

Michael Jacinto, Deputy Project Manager/Planner. B.A., Urban Studies/German Language and Literature. Three years of experience in technical analyses for numerous planning and environmental projects related to commercial, residential and mixed-use projects.

Alison Malkin, Planner. B.S., Environmental Studies/Geography and Environmental Science. Three years of experience in preparing technical analyses for numerous planning and environmental projects related to commercial, office and mixed-use projects.

Diane Wong, Project Co-Manager. B.S., Architecture. Over 12 years of experience in the field of urban and environmental planning, including project management of environmental documents.

Harris Miller Miller & Hanson

Hugh J. Saurenman, Principal Consultant/Vice President. Ph.D., Mechanical Engineering. 25 years of experience in urban transit projects. Authored several key reference documents used throughout the transit industry. Has developed state-of-the-art ground-borne vibration prediction methodologies.

Herb L. Singleton, Senior Consultant. S.B., Mechanical Engineering. Five years of experience in various environmental noise and vibration control projects for rail and other modes of surface transportation. Particularly in the areas of field survey measurements, environmental assessments, and computer modeling of noise and vibration propagation.

JRP Historical Consulting Services

Meta Bunse, Project Manager. M.A., Public History. 11 years experience in historic resource inventory and evaluation surveys.

Rand Herbert, Principal. M.A.T., History. 22 years experience in historic resource inventory and evaluation surveys.

Bryan Larson, Staff Historian. M.A. candidate, Public History. Three years experience in historic resource inventory and evaluation surveys.

Moore Iacofano Goltsman

Daniel Iacofano, Principal-in-Charge. Ph.D., A.I.C.P. 24 years experience in environmental planning, public participation, inter-agency collaboration and facilitation.

Andy Pendoley, Project Manager. B.A., Sociology. Four years experience in supporting major public participation processes with project management, facilitation, graphic recording, and writing services.

Joyce Vollmer, Communications Manager. M.A., English. Over 20 years experience in marketing, employee communications and public relations.

Nelson\Nygaard Consulting Associates

Kevin Dwarka, Project Manager. M.S., Urban and Regional Planning. Over five years of experience in transit planning and multimodal planning and operations.

Barb Laurenson, Senior Associate. M.S., Urban Planning. Over five years experience in transportation demand management, pedestrian and bicycle impact analysis.

Bonnie Weinstein Nelson, Senior Partner. M.S., Civil Engineering. Over 20 years experience in transit planning and operations, including extensive experience in assessing the transportation impacts of major projects.

Sedway Group

Amy L. Herman, Managing Director. B.A., Urban Policy Studies; M.C.P. 19 years experience in urban economic and real estate consulting.

Benjamin Levine, Real Estate Analyst. B.A., Economics. Over two years experience in real estate research and analysis.

Mary Smitheram-Sheldon, Managing Director. B.S., Business Administration. 13 years experience in real estate consulting, strategy, and valuation.

Terry A. Hayes Associates

Keith Cooper, Assistant Planner. M.A. candidate, three years experience in urban planning.

Terry A. Hayes, Principal. M.C.P., 27 years of experience in city planning, specializing in air quality.

Teresa Li, Assistant Planner. B.A., two years experience in urban studies and planning.

Kevin Maggay, Assistant Planner. M.A. candidate, Geography. B.A., two years experience in environmental studies with an emphasis in Business.

Bob Stark, Senior Planner. M.C.P., five years experience in city and regional planning.

URS

Demetrious Koutsoftas, Lead Consultant. M.S., P.E., G.E. Over 27 years experience in complex projects specializing in geotechnical analysis and engineering in the area of difficult ground conditions.

Erik Skov, Senior Geologist. B.S., Geology. Over 13 years experience in providing hazardous waste management services, including subsurface investigations.

Wilbur Smith Associates

Tim Erney, Project Manager. M.S., four years of experience in city regional and transportation planning.

Luba C. Wyznyckyj, Associate-in-Charge. M.S., 13 years of experience in urban planning.

Heller-Manus Architects

APPENDIX C: GLOSSARY / ACRONYMS

Definitions and Abbreviations

ACA4 - Assembly Constitutional Amendment 4

acre - A unit of measurement of area equivalent to 43,560 square feet.

alluvium - Deposits resulting from the operations of water including floodplains, lakes, rivers and fans at the foot of mountain slopes.

candidate species - Any species of fish, wildlife or plant which has been determined to be a candidate for listing under Section 4 of the Endangered Species Act of 1973 (amended).

Corps of Engineers - (COE) U.S. Army Corps of Engineers. Federal agency with jurisdiction over wetlands and waters of the U.S.

cultural resources - Archaeological and historic resources that could potentially be affected by a given project. Cultural resources include buildings, sites, districts, structures or objects having historical, architectural, archaeological, cultural or scientific importance.

cumulative impact - The impact on the environment that results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions.

dBA - A sound level in decibels, measured with a sound level meter having metering characteristics and frequency weighting specified in American National Standard Specifications for sound level meters ANSIS1.4-1971. It is common to refer to numerical units of an A-weighted sound level as "dBA."

DEIS/EIR - Draft Environmental Impact Statement/Report. A report that identifies and analyzes potential environmental effects of a preferred project alternative.

Electromagnetic field (EMF) – electromagnetic fields associated with electromagnetic radiation.

Electromagnetic interference (EMI) – Electromagnetic interference may include the interruption, obstruction, or other degradation in the effective performance of

EPA - U.S. Environmental Protection Agency. The federal agency responsible for maintaining environmental quality including air quality, noise and hazardous waste management.

FEIS/EIR - Final Environmental Impact Statement/Report. A report that identifies and analyzes potential environmental effects of a preferred project alternative and responds to comments received on the DEIS/R.

fill - Earth used to create embankments or to raise low-lying areas in order to bring them to grade.

floodplain - The part of the ground surface inundated with water on a recurring basis, usually associated with the one percent recurrence interval (100-year) flow.

g - horizontal ground acceleration

gram - Unit of measurement of mass, metric system.

ha - hectare (10,000 square meters)

HOV - High Occupancy Vehicle. A "carpool," or vehicle occupied by two or more persons.

HOV Lane - High Occupancy Vehicle lane. A system of exclusive lanes signed and striped for use by vehicles with multiple occupants (two or more persons) or ridership. HOV lanes are designed on roadways to reduce traffic congestion, improve safety, and reduce fuel consumption and to improve air quality.

Kilo - Prefix used in metric measurement, 1000.

kiss-and-ride - A passenger loading area where vehicles can pick up and drop off passengers.

km - Kilometer.

kmph - Kilometer per hour.

KV - Kilovolt.

Ldn - Day-Night Equivalent Sound Level. A 24-hour equivalent sound level with a 10 dB penalty assessed to noise events occurring at night (10 p.m. to 7 a.m.).

Leq - Equivalent Sound Level. A measure of sound energy over a period of time, or a sound level which, in a stated period of time, would contain the same acoustical energy as the time-varying sound during the same period.

liter - Unit of measurement of volume (metric system).

LOS (Level of Service) - The operating level of an intersection or roadway segment can be described using the term Level of Service. Level of Service is a qualitative description of operation based on delay and maneuverability. It can range from "A," representing free flow conditions, to "F" representing gridlock.

m - Meter.

mG - MilliGauss.

mitigation - Measures taken to minimize adverse environmental impacts. Mitigation could reduce the magnitude and extent of an impact from a level of significance to a level of insignificance.

mph - Miles per hour.

mT - MicroTesla.

National Historic Preservation Act of 1966 - The primary federal law pertaining to protection of cultural resources.

National Register of Historic Places - A federal listing of historic resources protected under the National Historic Preservation Act of 1966.

NEPA - National Environmental Policy Act. The United States' basic national charter for protection of the environment. It establishes policy, sets goals and provides means for carrying out the policy.

nonpoint source - Pertains to the discharge of pollutants into waters or air where the pollutant sources come from an area rather than a single source that can be pinpointed.

NO_X - Nitrogen Oxide.

National Register-eligible - Cultural resources determined eligible for inclusion on the National Register of Historic Places.

O_3 - Ozone.

ozone - A major component of photochemical smog, which is formed in the atmosphere by the chemical reaction between nitrogen dioxide and organic gases in the presence of sunlight. Excessive levels of ozone can cause eye irritation, reduced visibility, vegetation damage and aggravation of respiratory conditions. The biggest source of these gases is the automobile.

park-and-ride - A parking area intended for transit riders who arrive at transit stations by car.

Pb - Lead.

$PM_{2.5}$ - Particulate matter less than 2.5 microns in diameter, considered to be fine particulate matter. (One micron is equal to one-millionth of a meter.)

PM_{10} - Particulate matter less than 10 microns in diameter. (One micron is equal to one-millionth of a meter.)

ppm - parts per million.

PPV - Peak particle velocity. The maximum instantaneous peak in the velocity of an object's vibratory motion. The PPV is used to define thresholds of potential building damage from vibration.

right-of-way - Land dedicated to the transportation facility.

RMS - Root-mean-square amplitude. The average energy of vibrating measured over a short time interval, usually one second. RMS vibration velocity is considered the best available measure of potential human annoyance from ground-borne vibration.

Section 106 - Section 106 of the National Historic Preservation Act of 1966.

SO_2 - Sulphur Dioxide.

SIP - State Implementation Plan – a plan for attaining national ambient air quality standards required by the Clean Air Act.

USFWS - U.S. Fish and Wildlife Service. The federal agency that administers the federal Endangered Species Act and is involved in protection of fish and wildlife habitat including wetland areas.

Vdb - Decibels of vibration velocity. An expression of ground-borne vibrations.

watershed - That part of the earth's surface from which storm water runoff flows to a single point.

wetlands - According to the U.S. Army Corps of Engineers, wetlands are areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, under normal conditions, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes and similar areas, and are subject to protection under Executive Order 11990 and Section 404 of the Clean Water Act (CWA).

Glossary of Acronyms

AB	Assembly Bill
ABAG	Association of Bay Area Governments
AC	Alternating current
AC Transit	Alameda Contra Costa Transit District
ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
APE	Area of Potential Effects
APTA	American Public Transit Association
ATS	Automated Train Stop
AWSS	Auxiliary Water Supply System
BAAB	Bay Area Air Basin
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BATA	Bay Area toll Authority
BTU -	British Thermal Unit.
BCDC	Bay Conservation and Development Commission
CAA	Clean Air Act of 1970
CAAQS	California Ambient Air Quality Standards
CAC	Community Advisory Committee
CALINE4	Computer model used to predict carbon monoxide levels
CALTRANS	California Department of Transportation
CARB	California Air Resources Board
CBD	Central Business District
CCAA	California Clean Air Act
CCSF	City and County of San Francisco
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response Compensation & Liability Act
CERCLIS	Comprehensive Environmental Response Compensation Information System
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CLUP	Comprehensive Land Use Plan
CM	Construction Management
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CO	Carbon Monoxide
COE	Army Corps of Engineers
CTC -	California Transportation Commission or Centralized Train Control
CPUC	California Public Utilities Commission

CY	Cubic yards.
DC -	Direct current.
CFR	Codified Federal Regulations
CZMA	Coastal Zone Management Act
DEIS/EIR	Draft Environmental Impact Statement/Environmental Impact Report
DPT	Department of Parking and Traffic
DPW	Department of Public Works
DWR	Department of Water Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMU	Electrical Multiple Unit
EPA	Environmental Protection Agency
FEIS/EIR	Final Environmental Impact Statement/Report
FHWA	Federal Highway Administration
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
FVM	Fare Vending Machine
FY	Fiscal Year
GGBHT	Golden Gate Bridge, Highway and Transportation District
HASR	Historical Architectural Survey Report
HPSR	Historic Property Survey Report
HOV	High Occupancy Vehicle
Hz	Hertz.
I-280	Interstate 280
ISP	Iron/Steel Pipe
ISTEA	Intermodal Surface Transportation Act of 1991
ITIP	Interregional Transportation Improvement Program
JPA	Joint Exercise of Powers Agency
JPB	Peninsula Corridor Joint Powers Board
LOS	Level of Service
LPA	Locally Preferred Alternative
LUST	Leaking Underground Storage Tank
MOA	Memorandum of agreement
MGP	Manufactured Gas Plant
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
Muni	San Francisco Municipal Railway
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NOI	Notice of Intent
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Properties
O&M	Operating and Maintenance
OCS	Overhead Control System

OSHA	Occupational Safety and Health Administration
PAH	Polyaromatic Hydrocarbons
PPA	Pollution Prevention Act
RIP	Regional Improvement Program
ROD	Record of Decision
RTP	Regional Transportation Plan
RTIP	Regional Transportation Improvement Program
RWQCB	Regional Water Quality Board
SAA	Streambed Alteration Agreement
SAMTRANS	San Mateo County Transportation
SFAH	San Francisco Architectural Heritage
SFBRWQB	San Francisco Bay Regional Water Quality Control Board
SFIA	San Francisco Institute of Architecture
SFRA	San Francisco Redevelopment Agency
SHPO	State Historic Preservation Office or Officer
SIP	State Implementation Plan
SOMA	South of Market Area
SP	Southern Pacific (Railroad)
SPR	Southern Pacific Railroad
SRTP	Short Range Transit Plan
STA	State Transit Assistance program.
STP	State Transportation Program
STIP	State Transportation Improvement Program
SWPPP	Storm Water Pollution Prevention Plan
TAC	Technical Advisory Committee
TAZ	Traffic Analysis Zone
TCM	Transportation Control Measure
TCRP	Transportation Congestion Relief Program
TDM	Transportation Demand Management
TEA-21	Transportation Equity Act for the 21st Century
TIP	Transportation Improvement Program
TIFIA	Transportation Infrastructure Financing and Innovation Act
TJPA	Transbay Joint Powers Authority
TRP	Trip Reduction Program
TSM	Transportation Systems Management
US 101	US Highway 101
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
UST	Underground Storage Tank
VC	Volume-to-Capacity Ratio
VCP	Vitrified Clay Pipe
VHT	Vehicle Hours of Travel
VMT	Vehicle Miles of Travel

APPENDIX D: AGENCY LETTERS

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

IN REPLY REFER TO:
1-1-01-SP-2843

August 10, 2001

Ms. Laura J. Prickett
Principal Planner
Parsons Transportation Group
120 Howard Street
Suite 850
San Francisco, California 94105

Subject: Species List for San Francisco Transbay Terminal/Caltrain Downtown Extension Project, San Francisco County, California

Dear Ms. Prickett:

We are sending the enclosed list in response to your August, 6, 2001, request for information about endangered and threatened species (Enclosure A). The list covers the following U.S. Geological Survey 7½ minute quad or quads: San Francisco North Quad.

Please read *Important Information About Your Species List* (enclosed). It explains how we made the list and describes your responsibilities under the Endangered Species Act. Please contact Harry Mossman, Biological Technician, at (916) 414-6674, if you have any questions about the attached list or your responsibilities under the Endangered Species Act. For the fastest response to species list requests, address them to the attention of Mr. Mossman at this address. You may fax requests to him at 414-6712 or 6713.

Sincerely,

Mick Stevenson
for Jan C. Knight
Chief, Endangered Species Division

Enclosures

RECEIVED
AUG 13 2001
Parsons Transportation Group
San Francisco

Important Information
About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute *quads*. The United States is divided into these quads, which are about the size of San Francisco. If you requested your list by quad name or number, that is what we used. Otherwise, we used the information you sent us to determine which quad or quads to use.

Animals

The animals on your species list are ones that occur within, *or may be affected by projects within*, the quads covered by the list. Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.

Plants

Any plants on your list are ones *that have actually been observed* in the quad or quads covered by the list. We have also included either a county species list or a list of species in nearby quads. We recommend that you check your project area for these plants. Plants may exist in an area without ever having been detected there.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. For plant surveys, we recommend using the enclosed *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Species*. The results of your surveys should be published in any environmental documents prepared for your project.

State-Listed Species

If a species has been listed as threatened or endangered by the State of California, but not by us nor by the National Marine Fisheries Service, it will appear on your list as a Species of Concern. *However you should contact the California Department of Fish and Game for official information about these species.* Call (916) 322-2493 or write Marketing Manager, California Department of Fish and Game, Natural Diversity Data Base, 1416 Ninth Street, Sacramento, California 95814.

Your Responsibilities Under the Endangered Species Act

All plants and animals identified as *listed* on Enclosure A are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the *take* of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal. Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

> If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a *formal consultation* with the Service. Such consultation would result in a *biological opinion* addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.
>
> If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an *incidental take permit*. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project. Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that mitigates for the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the mitigation plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as *critical habitat*. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Maps and boundary descriptions of the critical habitat may be found in the *Federal Register*. The information is also reprinted in the *Code of Federal Regulations* (50 **CFR** 17.95).

Candidate Species

We recommend that you address impacts to *candidate* species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Your list may contain a section called *Species of Concern.* This term includes former *category 2 candidate species* and other plants and animals of concern to the Service and other Federal, State and private conservation agencies and organizations. Some of these species may become candidate species in the future.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. We also continually strive to make our information as accurate as possible. Sometimes we learn that a particular species has a different range than we thought. This should not be a problem if you consider the species on the county or surrounding-quad lists that we have enclosed. If you have a long-term project or if your project is delayed, please feel free to contact us about getting a current list. You can also find out the current status of a species by going to the Service's Internet page: *www.fws.gov*

GUIDELINES FOR CONDUCTING AND REPORTING BOTANICAL INVENTORIES FOR FEDERALLY LISTED, PROPOSED AND CANDIDATE PLANTS
(September 23, 1996)

These guidelines describe protocols for conducting botanical inventories for federally listed, proposed and candidate plants, and describe minimum standards for reporting results. The Service will use, in part, the information outlined below in determining whether the project under consideration may affect any listed, proposed or candidate plants, and in determining the direct, indirect, and cumulative effects.

Field inventories should be conducted in a manner that will locate listed, proposed, or candidate species (target species) that may be present. The entire project area requires a botanical inventory, except developed agricultural lands. The field investigator(s) should:

1. Conduct inventories at the appropriate times of year when target species are present and identifiable. Inventories will include all potential habitats. Multiple site visits during a field season may be necessary to make observations during the appropriate phenological stage of all target species.

2. If available, use a regional or local reference population to obtain a visual image of the target species and associated habitat(s). If access to reference populations is not available, investigators should study specimens from local herbaria.

3. List every species observed and compile a comprehensive list of vascular plants for the entire project site. Vascular plants need to be identified to a taxonomic level which allows rarity to be determined.

4. Report results of botanical field inventories that include:

    a. a description of the biological setting, including plant community, topography, soils, potential habitat of target species, and an evaluation of environmental conditions, such as timing or quantity of rainfall, which may influence the performance and expression of target species.

    b. a map of project location showing scale, orientation, project boundaries, parcel size, and map quadrangle name.

    c. survey dates and survey methodology(ies).

    d. if a reference population is available, provide a written narrative describing the target species reference population(s) used, and date(s) when observations were made.

    e. a comprehensive list of all vascular plants occurring on the project site for each habitat type.

    f. current and historic land uses of the habitat(s) and degree of site alteration.

g. presence of target species off-site on adjacent parcels, if known.

h. an assessment of the biological significance or ecological quality of the project site in a local and regional context.

5. If target species is(are) found, report results that additionally include:

a. a map showing federally listed, proposed and candidate species distribution as they relate to the proposed project.

b. if target species is (are) associated with wetlands, a description of the direction and integrity of flow of surface hydrology. If target species is (are) affected by adjacent off-site hydrological influences, describe these factors.

c. the target species phenology and microhabitat, an estimate of the number of individuals of each target species per unit area; identify areas of high, medium and low density of target species over the project site, and provide acres of occupied habitat of target species. Investigators could provide color slides, photos or color copies of photos of target species or representative habitats to support information or descriptions contained in reports.

d. the degree of impact(s), if any, of the proposed project as it relates to the potential unoccupied habitat of target habitat.

6. Document findings of target species by completing California Native Species Field Survey Form(s) and submit form(s) to the Natural Diversity Data Base. Documentation of determinations and/or voucher specimens may be useful in cases of taxonomic ambiguities, habitat or range extensions.

7. Report as an addendum to the original survey, any change in abundance and distribution of target plants in subsequent years. Project sites with inventories older than three years from the current date of project proposal submission will likely need additional survey. Investigators need to assess whether an additional survey(s) is (are) needed.

8. Adverse conditions may prevent investigator(s) from determining presence or identifying some target species in potential habitat(s) of target species. Disease, drought, predation, or herbivory may preclude the presence or identification of target species in any year. An additional botanical inventory(ies) in a subsequent year(s) may be required if adverse conditions occur in a potential habitat(s). Investigator(s) may need to discuss such conditions.

9. Guidance from California Department of Fish and Game (CDFG) regarding plant and plant community surveys can be found in Guidelines for Assessing the Effects of Proposed Developments on Rare and Endangered Plants and Plant Communities, 1984. Please contact the CDFG Regional Office for questions regarding the CDFG guidelines and for assistance in determining any applicable State regulatory requirements.

ENCLOSURE A

Endangered and Threatened Species that May Occur in or be Affected by

PROJECTS IN SAN FRANCISCO COUNTY

Reference File No. 1-1-01-SP-2843

August 10, 2001

Listed Species

Mammals

sei whale, *Balaenoptera borealis* (E)

blue whale, *Balaenoptera musculus* (E)

finback (=fin) whale, *Balaenoptera physalus* (E)

right whale, *Eubalaena glacialis* (E)

humpback whale, *Megaptera novaeangliae* (E)

sperm whale, *Physeter catodon (=macrocephalus)* (E)

salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

Guadalupe fur seal, *Arctocephalus townsendi* (T)

Critical Habitat, Steller (=northern) sea-lion, *Eumetopias jubatus* (T)

Steller (=northern) sea-lion, *Eumetopias jubatus* (T)

Birds

California brown pelican, *Pelecanus occidentalis californicus* (E)

California clapper rail, *Rallus longirostris obsoletus* (E)

western snowy plover, *Charadrius alexandrinus nivosus* (T)

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

leatherback turtle, *Dermochelys coriacea* (E)

loggerhead turtle, *Caretta caretta* (T)

green turtle, *Chelonia mydas (incl. agassizi)* (T)

olive (=Pacific) ridley sea turtle, *Lepidochelys olivacea* (T)

Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Critical habitat, Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

tidewater goby, *Eucyclogobius newberryi* (E)

Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central California Coastal steelhead, *Oncorhynchus mykiss* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

delta smelt, *Hypomesus transpacificus* (T) *

Invertebrates

white abalone, *Haliotes sorenseni* (E)
mission blue butterfly, *Icaricia icarioides missionensis* (E)
San Bruno elfin butterfly, *Incisalia mossii bayensis* (E)

Plants

Presidio (=Raven's) manzanita, *Arctostaphylos hookeri ssp. ravenii* (E)
Presidio clarkia, *Clarkia franciscana* (E)
San Francisco lessingia, *Lessingia germanorum* (E)
Marin dwarf-flax, *Hesperolinon congestum* (T)
marsh sandwort, *Arenaria paludicola* (E) *
beach layia, *Layia carnosa* (E) *

Proposed Species

Birds

short-tailed albatross, *Diomedea albatrus* (PE)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Invertebrates

black abalone, *Haliotes cracherodii* (C)

Species of Concern

Mammals

gray whale, *Eschrichtius robustus* (D)
Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)
greater western mastiff-bat, *Eumops perotis californicus* (SC)
long-eared myotis bat, *Myotis evotis* (SC)
fringed myotis bat, *Myotis thysanodes* (SC)
long-legged myotis bat, *Myotis volans* (SC)
Yuma myotis bat, *Myotis yumanensis* (SC)
San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)
salt marsh vagrant shrew, *Sorex vagrans halicoetes* (SC)

Birds

little willow flycatcher, *Empidonax traillii brewsteri* (CA)
black rail, *Laterallus jamaicensis coturniculus* (CA)
bank swallow, *Riparia riparia* (CA)
American peregrine falcon, *Falco peregrinus anatum* (D)
Snowy Egret, *Egretta thula* (MB)
tricolored blackbird, *Agelaius tricolor* (SC)
grasshopper sparrow, *Ammodramus savannarum* (SC)

Bell's sage sparrow, *Amphispiza belli belli* (SC)
American bittern, *Botaurus lentiginosus* (SC)
ferruginous hawk, *Buteo regalis* (SC)
Vaux's swift, *Chaetura vauxi* (SC)
lark sparrow, *Chondestes grammacus* (SC)
olive-sided flycatcher, *Contopus cooperi* (SC)
hermit warbler, *Dendroica occidentalis* (SC)
white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
Pacific-slope flycatcher, *Empidonax difficilis* (SC)
common loon, *Gavia immer* (SC)
saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)
loggerhead shrike, *Lanius ludovicianus* (SC)
Alameda (South Bay) song sparrow, *Melospiza melodia pusillula* (SC)
long-billed curlew, *Numenius americanus* (SC)
ashy storm-petrel, *Oceanodroma homochroa* (SC)
rufous hummingbird, *Selasphorus rufus* (SC)
Allen's hummingbird, *Selasphorus sasin* (SC)
red-breasted sapsucker, *Sphyrapicus ruber* (SC)
elegant tern, *Sterna elegans* (SC)
Xantus' murrelet, *Synthliboramphus hypoleucus* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
southwestern pond turtle, *Clemmys marmorata pallida* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylii* (SC)

Fish

green sturgeon, *Acipenser medirostris* (SC)
river lamprey, *Lampetra ayresi* (SC)
Pacific lamprey, *Lampetra tridentata* (SC)
longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

Opler's longhorn moth, *Adela oplerella* (SC)
sandy beach tiger beetle, *Cicindela hirticollis gravida* (SC)
globose dune beetle, *Coelus globosus* (SC)
Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)
bumblebee scarab beetle, *Lichnanthe ursina* (SC)

Plants

salt marsh owl's clover (=johnny-nip), *Castilleja ambigua ssp. ambigua* (SC)

San Francisco Bay spineflower, *Chorizanthe cuspidata var. cuspidata* (SC)
San Francisco wallflower, *Erysimum franciscanum* (SC)
fragrant fritillary, *Fritillaria liliacea* (SC)
San Francisco gumplant, *Grindelia hirsutula var. maritima* (SC)
Marin checkermallow, *Sidalcea hickmanii ssp. viridis* (SC)
Mission Delores campion, *Silene verecunda ssp. verecunda* (SC)
Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)
San Francisco owl's-clover, *Triphysaria floribunda* (SC)
San Francisco popcornflower, *Plagiobothrys diffusus* (CA) *
alkali milk-vetch, *Astragalus tener var. tener* (SC) *
compact cobweb thistle, *Cirsium occidentale var. compactum* (SC) *
Diablo helianthella (=rock-rose), *Helianthella castanea* (SC) *
Kellogg's (wedge-leaved) horkelia, *Horkelia cuneata ssp. sericea* (SC) *
adobe sanicle, *Sanicula maritima* (SC) *
San Francisco manzanita, *Arctostaphylos hookeri ssp. franciscana* (SC) **
coast lily, *Lilium maritimum* (SC) ?*

KEY:

(E)	*Endangered*	Listed (in the Federal Register) as being in danger of extinction.
(T)	*Threatened*	Listed as likely to become endangered within the foreseeable future.
(P)	*Proposed*	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX)	*Proposed Critical Habitat*	Proposed as an area essential to the conservation of the species.
(C)	*Candidate*	Candidate to become a *proposed* species.
(SC)	*Species of Concern*	Other species of concern to the Service.
(D)	*Delisted*	Delisted. Status to be monitored for 5 years.
(CA)	*State-Listed*	Listed as threatened or endangered by the State of California.
*	*Extirpated*	Possibly extirpated from the area.
**	*Extinct*	Possibly extinct
	Critical Habitat	Area essential to the conservation of a species.

Invertebrates

white abalone, *Haliotes sorenseni* (E)

mission blue butterfly, *Icaricia icarioides missionensis* (E)

San Bruno elfin butterfly, *Incisalia mossii bayensis* (E)

Plants

Presidio (=Raven's) manzanita, *Arctostaphylos hookeri ssp. ravenii* (E)

marsh sandwort, *Arenaria paludicola* (E) *

Presidio clarkia, *Clarkia franciscana* (E)

Marin dwarf-flax, *Hesperolinon congestum* (T)

beach layia, *Layia carnosa* (E) *

San Francisco lessingia, *Lessingia germanorum* (E)

Proposed Species

Birds

short-tailed albatross, *Diomedea albatrus* (PE)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Invertebrates

black abalone, *Haliotes cracherodii* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

gray whale, *Eschrichtius robustus* (D)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

fringed myotis bat, *Myotis thysanodes* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)

Point Reyes jumping mouse, *Zapus trinotatus orarius* (SC)

ENCLOSURE A

Endangered and Threatened Species that May Occur in
or be Affected by Projects in the Selected Quads Listed Below
Reference File No. 1-1-01-SP-2843
August 10, 2001

QUAD : 466C SAN FRANCISCO NORTH

Listed Species

Mammals

Guadalupe fur seal, *Arctocephalus townsendi* (T)

sei whale, *Balaenoptera borealis* (E)

blue whale, *Balaenoptera musculus* (E)

finback (=fin) whale, *Balaenoptera physalus* (E)

right whale, *Eubalaena glacialis* (E)

Critical Habitat, Steller (=northern) sea-lion, *Eumetopias jubatus* (T)

Steller (=northern) sea-lion, *Eumetopias jubatus* (T)

sperm whale, *Physeter catodon (=macrocephalus)* (E)

salt marsh harvest mouse, *Reithrodontomys raviventris* (E) *

Birds

western snowy plover, *Charadrius alexandrinus nivosus* (T)

bald eagle, *Haliaeetus leucocephalus* (T)

California brown pelican, *Pelecanus occidentalis californicus* (E)

California clapper rail, *Rallus longirostris obsoletus* (E) *

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

tidewater goby, *Eucyclogobius newberryi* (E)

delta smelt, *Hypomesus transpacificus* (T)

Critical habitat, coho salmon - central CA coast, *Oncorhynchus kisutch* (T)

coho salmon - central CA coast, *Oncorhynchus kisutch* (T)

Central California Coastal steelhead, *Oncorhynchus mykiss* (T)

Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Birds

tricolored blackbird, *Agelaius tricolor* (SC)

grasshopper sparrow, *Ammodramus savannarum* (SC)

Bell's sage sparrow, *Amphispiza belli belli* (SC)

short-eared owl, *Asio flammeus* (SC)

ferruginous hawk, *Buteo regalis* (SC)

white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)

little willow flycatcher, *Empidonax traillii brewsteri* (CA)

American peregrine falcon, *Falco peregrinus anatum* (D)

saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)

black rail, *Laterallus jamaicensis coturniculus* (CA)

ashy storm-petrel, *Oceanodroma homochroa* (SC)

rufous hummingbird, *Selasphorus rufus* (SC)

Allen's hummingbird, *Selasphorus sasin* (SC)

elegant tern, *Sterna elegans* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

southwestern pond turtle, *Clemmys marmorata pallida* (SC)

California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylii* (SC)

Fish

longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

Opler's longhorn moth, *Adela oplerella* (SC)

sandy beach tiger beetle, *Cicindela hirticollis gravida* (SC)

globose dune beetle, *Coelus globosus* (SC)

Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)

bumblebee scarab beetle, *Lichnanthe ursina* (SC)

Plants

San Francisco manzanita, *Arctostaphylos hookeri ssp. franciscana* (SC) **

alkali milk-vetch, *Astragalus tener var. tener* (SC) *

San Francisco Bay spineflower, *Chorizanthe cuspidata var. cuspidata* (SC)

San Francisco gumplant, *Grindelia hirsutula var. maritima* (SC)

Kellogg's (wedge-leaved) horkelia, *Horkelia cuneata ssp. sericea* (SC) *

San Francisco popcornflower, *Plagiobothrys diffusus* (CA) *

adobe sanicle, *Sanicula maritima* (SC) *

Marin checkermallow, *Sidalcea hickmanii ssp. viridis* (SC)

Mission Delores campion, *Silene verecunda ssp. verecunda* (SC)

Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)

San Francisco owl's-clover, *Triphysaria floribunda* (SC)

KEY:

(E)	*Endangered*	Listed (in the Federal Register) as being in danger of extinction.
(T)	*Threatened*	Listed as likely to become endangered within the foreseeable future.
(P)	*Proposed*	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX)	*Proposed Critical Habitat*	Proposed as an area essential to the conservation of the species.
(C)	*Candidate*	Candidate to become a *proposed* species.
(SC)	*Species of Concern*	May be endangered or threatened. Not enough biological information has been gathered to support listing at this time.
(MB)	*Migratory Bird*	Migratory bird
(D)	*Delisted*	Delisted. Status to be monitored for 5 years.
(CA)	*State-Listed*	Listed as threatened or endangered by the State of California.
(*)	*Extirpated*	Possibly extirpated from this quad.
(**)	*Extinct*	Possibly extinct.
	Critical Habitat	Area essential to the conservation of a species.

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
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Flex your power!
Be energy efficient!

November 9, 2001

Steve Heminger
Executive Director
Metropolitan Transportation Commission
101 Eighth Street
Oakland, CA 94607

Dear Mr. Heminger:

I am writing in response to your inquiring regarding the transfer of State-owned property for the proposed new Transbay Transit Terminal project in San Francisco.

As you know, Assembly Bill 1419 (Aroner), vetoed by Governor Davis, would have transferred to the City and County of San Francisco certain State-owned property for the purpose of construction and financing of the new Transbay Terminal. Although Governor Davis vetoed the bill, he indicated his support for the project and has directed the Department to initiate negotiations with the City to administratively transfer the property in such a manner as to protect the cost and timely delivery of the Department's west approach seismic safety projects and to ensure that appropriate terms and conditions would apply to any transfers.

The Department is proceeding in accordance with the Governor's direction, and we will meet with City and other appropriate officials in the next few weeks to discuss the mechanics and terms of the transfer, with the goal of moving forward as expeditiously as possible.

If the Department can provide any additional information or clarification, please contact Mr. Brent Felker, Chief Engineer, at (916) 654-6490.

Sincerely,

JEFF MORALES
Director

c: Jose Luis Moscovich

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Parsons Transportation Group
San Francisco

STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, *Governor*

OFFICE OF HISTORIC PRESERVATION
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May 23, 2002

REPLY TO: FTA011108A

Leslie T Rogers, Regional Administrator
Federal Transit Administration
Region IX
201 Mission Street, Suite 2210
SAN FRANCISCO CA 94105-1839

Re: Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project, San Francisco, San Francisco County.

Dear Mr. Rogers:

Thank you for submitting to our office your May 17, 2002 letter and Historic Property Survey Report (HPSR), Historic Architectural Survey Report (HASR), and Archeological Impact Assessment (AIA), regarding the proposed Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project in the City and County of San Francisco. The proposed project will involve three distinct components:

- A new Transbay terminal that will serve as a multi-modal transit/transportation facility at the site of the current Transbay Terminal at First and Mission Streets in downtown San Francisco. Two alternatives for this component are under consideration:

  1. The Full Loop Alternative would require demolition of the existing bus ramps that connect the existing Transbay Terminal with the San Francisco-Oakland Bay Bridge. New loops would be created in the same locations as the existing ramps thus creating a full loop.

  2. The West Ramp Alternative would remove the existing bus ramps to the Bay Bridge and replace them with a single ramp structure on the west side of the terminal. This alternative would open up for development land that is currently occupied by the bus ramp on the east side of the terminal.

- The Caltrain Downtown Extension would allow commuter rail service to be extended from its current San Francisco terminus at Fourth and Townsend Streets to a new underground terminus underneath the proposed new Transbay Terminal. This would be accomplished by:

  1. Running the Caltrain tracks through a tunnel at the existing Fourth and Townsend rail yard and continuing below grade under Townsend Street before curving at Clarence Place in a cut-and-cover configuration. The alignment would then continue as a cut-and-cover section under Second Street for approximately 2,055 feet. Tunneling

options are being considered for the portion of the alignment between Townsend and Folsom Streets.

2. Two alternatives are being considered for the proposed alignment from Second Street to the Transbay Terminal:

   a. The Second-to-Main Alternative would curve 90 degrees northeast as the alignment approaches Howard Street and continue to the basement of the new Transbay terminal. It would extend east of the new terminal curving south to Main Street to terminate south of Folsom Street. This entire alignment would be a cut-and-cover section

   b. The Second-to-Mission Alternative would curve northeasterly off of Second Street before the intersection with Howard Street. It would then cut diagonally and enter the basement of the new terminal. Two tracks would exit out under Mission Street headed towards The Embarcadero. This entire alignment would be a cut-and-cover section.

- The Redevelopment plan involves the construction of transit-oriented development on publicly-owned land in the vicinity of the new Transbay terminal. The two alternatives under consideration are:

  1. The Full Build Alternative which would provide a total of 7.6 million square feet of floor area.

  2. Th Reduced Scope Alternative which would provide 4.8 million square feet of floor area.

A full description of all of the aforementioned project alternatives is contained in the HPSR. The architectural and archeological Areas of Potential Effects (APEs) for the various project alternatives, as described in the described in the HASR the archeological documentation, appear adequate and meet the definitions set forth in 36 CFR 800.16(d). The AIA prepared by Dr. Adrian Praetzellis of the Anthropological Studies Center at Sonoma State University (November 2001) has concluded that 24 known historic and prehistoric archeological sites are located in and within one mile of the project area. Although the AIA notes that the heavy urbanization of the area makes surface location of these properties impossible to determine without extensive field work, it also notes that some general statements can be made about the relative sensitivity of the properties in relation to the proposed project elements. The AIA recommends using the Department of the Interior's *Archeology and Historic Preservation: The Secretary of the Interior's Standards and Guidelines* (48FR44716-42)(National Park Service, 1983) as a model for identifying, evaluating, and treating important archeological resources that is applicable to the proposed project. The model would consist of the following steps:

- Focused historical and geoarcheological research carried out to establish the context of the investigations.

- The preparation of a research design and treatment plan to guide field investigations and evaluations of potentially important archeological properties.

- The recordation of the technical results of the investigation in a professional report that is distributed to the project principals and the general public.

Persons who meet the Secretary of the Interior's *Professional Qualifications Standards* (48FR44738-9) would conduct all work. We do not object to the aforementioned approach to the identification, evaluation, and treatment of potential archeological properties for this undertaking.

The Federal Transit Administration (FTA) is seeking our comments on its determination of the eligibility of twelve (12) pre-1955 architectural properties located within the project APE for inclusion on the National Register of Historic Places (NRHP) in accordance with 36 CFR 800, regulations implementing Section 106 of the National Historic Preservation Act. The HPSR has identified 46 pre-1955 architectural properties within the APE that are listed in or have been determined, by consensus, to be eligible for inclusion on the NRHP. The HPSR has also identified 27 pre-1955 architectural properties within the APE that have been determined, by consensus, to be ineligible for inclusion on the NRHP. Our review of the submitted documentation leads us to concur with FTA's determination that none of the 12 pre-1955 properties evaluated for this study are eligible for inclusion on the NRHP under any of the criteria established by 36 CFR 60.4. The properties have no strong associations with significant historical events or persons, are not examples of outstanding architectural design or function, and, in some cases, have lost considerable integrity of the historic architectural design and materials associated with their historic periods of significance (1906 – 1955).

Thank you again for seeking our comments on your project. We anticipate receiving from FTA, for our review and comment, a Finding of Effects (FOE) document that will outline the specific effects of a preferred project alternative on historic properties in the project APE. If you have any questions, please contact staff historian Clarence Caesar at (916) 653-8902.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, Governor

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
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www.ohp.parks.ca.gov

RECEIVED
FEB 1 9 2002

February 14, 2002

Reply To: FTA011108A

Leslie T. Rogers, Regional Administrator
U.S. Department of Transportation
Federal Transit Administration
201 Mission Street
Suite 2210
San Francisco, CA 94105-1839

Re: Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project APE

Dear Ms. Rogers:

You have provided me with a description of the proposed Area of Potential Effect (APE) for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project in downtown San Francisco as per 36 CFR 800.4(a) and 800.16(d). The details of the APE and your proposed redevelopment efforts are cited in your letter of October 29, 2001.

The proposed APE appears to be adequate to address both direct and indirect effects created by the project and it's various components and alternatives.

Thank you for considering historic properties during project planning. If you should have any questions, please contact Dana Supernowicz at (916) 653-4533 or dsupe@ohp.parks.ca.gov.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

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STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
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calshpo@mail2.quiknet.com

September 29, 2003

REPLY TO: FTA011108A

Leslie T. Rogers, Regional Administrator
Federal Transit Administration, Region IX
201 Mission Street, Suite 2210
SAN FRANCISCO CA 94105-1839

Re: Finding of Effects, Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project, City and County of San Francisco.

Dear Mr. Leslie:

Thank you for submitting to our office your August 29, 2003 letter and Finding of Effect (FOE) documentation regarding the proposed Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project in the City and County of San Francisco. The enclosed FOE addresses the Locally Preferred Alternative (LPA) for the proposed project. The LPA consists of three distinct components. In summary, these components include the following elements:

- **Transbay Terminal** - The existing Transbay Terminal will be demolished and a new Transbay Terminal will be constructed to serve as a multi-modal transit/transportation facility at the site of the existing Transbay Terminal at First and Mission Streets. The West Ramp Alternative component of the LPA would remove the existing bus ramps to the Bay Bridge and replace them with a single ramp structure on the west side of the terminal. This structure would support double-stacked ramps, for buses traveling to and from the bridge. The West Ramp Alternative would open up for development land that is currently occupied by the bus ramp on the east side of the terminal.

- **Caltrain Downtown Extension** - Caltrain commuter rail service would be extended from its current San Francisco terminus a 4th and Townsend to a new underground terminus underneath or near the proposed rebuilt Transbay Terminal. Caltrain tracks would enter a tunnel at the existing 4th and Townsend railyard, and would continue below grade under Townsend Street in a cut-and-cover tunnel configuration. The tunnel would run east beneath Townsend Street, then begin to curve northward at Clarence Place (just east of Third Street). From Townsend Street north, the LPA Caltrain Extension component would be in a tunnel configuration, curving under 2nd Street. Cut-and-cover construction would occur on 2nd Street north of Folsom into the basement of the new Transbay Terminal. The Second-to-Main component of the LPA would extend east of the new terminal, in a cut-and-cover configuration - curving south to Main Street to terminate south of Folsom Street.

- Redevelopment - The LPA includes a redevelopment plan and related development projects, including transit-oriented development, on publicly owned land in the vicinity of the new Transbay Terminal. The plan and elated development are intended to assist in financing of the transportation improvements. The redevelopment component of the LPA would include up to 7.6 million square feet of transit-oriented development around the new terminal.

In my letter of May 23, 2003, I concurred with the Federal Transit Administration's (FTA) determination regarding the National Register of Historic Places (NRHP) eligibility of structures evaluated in its Historic Property Survey Report (HPSR). Of those properties evaluated at that time, eighty-five (85) are located within the Area of Potential Effects (APE) for this LPA. Of these properties, 39 buildings or structures have been determined, by consensus, to be eligible for inclusion on the NRHP. There are two historic districts and one City of San Francisco conservation district intersected by the APE: 1) the South End Historic District; 2) the 2nd and Howard Streets Historic District; and 3) the New Montgomery-2nd Street Conservation District. The latter two districts overlap. The proposed project APE, as delineated for the built environment, appears adequate and meets the definition set forth in 36 CFR 800.16(d).

Nineteen known or potential historic-era archeological sites have been identified within or immediately adjacent to the LPA alignments. Details on the types of identified resources that may be present are contained on page 67 of the FOE documentation. FTA is proposing to prepare an archeological Research Design and Treatment Plan that will govern the testing, evaluation, and assessment of project impacts on these resources. If buried materials are unearthed during construction, work in the vicinity of the find would be halted until a qualified archeologist can assess their significance. I would propose that we consult further about the manner in which the undertaking should take into account prospective effects on historic era archeological properties that might be eligible for inclusion on the NRHP.

FTA is seeking my comments on its determination of the effects the proposed project will have on historic properties in accordance with 36 CFR 800, regulations implementing Section 106 of the National Historic Preservation Act. My review of the FOE documentation leads me to make the following comments on the proposed project:

- I concur with FTA's determination that the following properties would be adversely affected by the proposed undertaking due to the demolition of said properties or the removal of structures adjacent to said properties during implementation of the undertaking:
    - 191 2nd Street, San Francisco.
    - 580-586 Howard Street, San Francisco.
    - 165-173 2nd Street, San Francisco.
    - 163 2nd Street, San Francisco.
    - The following contributing elements of the San Francisco-Oakland Bay Bridge
        - 425 Mission Transbay Transit Terminal

- Bridge #34-116F - Upper Deck San Francisco Approaches or North Connector.
- Bridge #34-118L - Upper Deck San Francisco Approaches or Center Ramps.
- Bridge #34-118R - San Francisco Approaches or Lower Deck On-Ramp.
- Bridge #34-119Y - Transbay Terminal Loop
- Bridge #34-120Y - Harrison Street Overcrossing

Although I can concur that the proposed undertaking, as described, will adversely affect the aforementioned properties it remains unclear how extensive the project's effects are to the entirety of the San Francisco-Oakland Bay Bridge, the two historic districts and the conservation district noted above. Is there evidence that either of these districts or the Bay Bridge (as listed in the National Register) are compromised by the removal of contributing properties to the extent that they may no longer retain sufficient integrity to qualify for inclusion on the NRHP? Please provide me, at your earliest possible convenience, any documentation that would clarify the NRHP eligibility status of these district properties once the proposed project is implemented.

Regarding FTA's finding of no adverse effect for the remaining NRHP-eligible properties located within the project APE, I cannot provide comments on this determination. The finding may be of little if any relevance given the overall context of the project's effects on historic properties and does not appear to have sufficient support in the FOE documentation.

I look forward to further consultation focused on a consideration of ways in which any adverse effects of the undertaking on historic properties could be avoided, minimized and mitigated.

Thank you for seeking my comments on your project. I look forward to further consultation with FTA regarding the effects of this undertaking on historic properties. If you have any questions, please contact staff historian Clarence Caesar by phone at (916) 653-8902, or by e-mail at ccaes@ohp.parks.ca.gov.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, Governor

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November 25, 2003

REPLY TO: FTA011108A

RECEIVED
DEC - 2 2003

Leslie T. Rogers, Regional Administrator
Federal Transit Administration
Region IX
201 Mission Street, Suite 2210
SAN FRANSICO CA 94105-1839

Re: Finding of Effect, Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project, City and County of San Francisco.

Dear Mr. Rogers:

Thank you for submitting to our office your November 14, 2003 letter in response to my September 29, 2003 letter regarding the Federal Transit Administration's (FTA) Finding of Effect (FOE) for the proposed Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project in the City and County of San Francisco. In my September 29, 2003 letter I concurred with FTA's determination that:

- Four (4) architectural properties that were contributing elements to the Second and Howard Streets Historic District would be adversely affected by the proposed project.
- The Transbay Transit Terminal would be adversely affected by the proposed project.
- Five bridge structures (#34-116F, #34-118L, #34-118R, #34-119Y, and #34-120Y) associated with the Upper and Lower Approaches of the San Francisco-Oakland Bay Bridge will be adversely affected by the proposed project.

FTA has noted the absence in my letter of one property, 589-591 Howard Street, from the list of National Register-eligible properties that were noted in the FOE as being adversely affected by the proposed project. Due to this oversight, I have re-examined the FOE documentation and can now concur with FTA's determination that the property located at 589-591 Howard Street will be adversely affected by the proposed project.

In my letter I also raised questions regarding the extent of the project's effects on the entire National Register of Historic Places (NRHP) eligible San Francisco-Oakland Bay Bridge (Bay Bridge) and the aforementioned historic district. Specifically, I raised questions regarding any evidence whether the historic district or the Bay Bridge was compromised by removal of contributing properties to the extent that they may no longer retain sufficient

integrity to qualify for inclusion on the NRHP. FTA has responded to these questions with the following comments:

- It is FTA's opinion that despite the San Francisco-Oakland Bay Bridge East Span Seismic Project and the proposed removal of the aforementioned bridge approaches outlined in this project, the Bay Bridge will retain sufficient integrity to continue to be eligible for the NRHP. What is not clear is whether FTA will support or contest the findings of the Federal Highway Administration's (FHWA) re-evaluation of the Bay Bridge as required under Stipulation III (F)(3) of the 2000 Memorandum of Agreement for the San Francisco-Oakland Bay Bridge East Span Seismic Retrofit Project if that study finds the structure no longer eligible for inclusion on the NRHP. I am pleased to note that FTA is prepared to insert a similar stipulation into a draft MOA addressing the re-examination of the integrity of individual and/or collective historic properties that are adversely affected by this undertaking.

  Regarding the reference in my letter to FTA needing to provide additional information regarding its finding of no adverse effect for 28 of the 39 historic properties (the Rincon Point/South Beach Historic Warehouse Industrial District) located within the project Area of Potential Effects (APE), a re-reading of the FOE documentation leaves me to conclude that FTA did provide sufficient documentation to demonstrate the following regarding its effects findings:

  - 350-360 Townsend and the contributing structures comprising the Rincon Point/South Beach Historic Warehouse Industrial District will not be adversely affected by the introduction of visual or audible elements that would diminish the integrity of the district's significant historic features. This finding will have additional merit if FTA implements its plan to provide for the underpinnings of buildings, where needed, to prevent structural damage during construction of the underground elements of the project. I agree with FTA that the proposed placement of the underground tunnel through this district is such that it will not introduce elements that will adversely affect the property's integrity of design, materials, setting, and association. As a result of this re-examination of the FOE documentation, FTA is not required to provide additional information on its findings.

I am pleased to note that FTA has forwarded a copy of its draft MOA for my review and comment. I will provide comments on its content in a timely manner.

Thank you again for seeking my comments on your project. If you have any questions, please contact staff historian Clarence Caesar by phone at (916) 653-8902, or by e-mail at ccaes@ohp.parks.ca.gov.

Sincerely,

[signature] for

Dr. Knox Mellon
State Historic Preservation Officer

OPTIONAL FORM 99 (7-90)
FAX TRANSMITTAL # of pages ▸ 2
To M. Pang From Wiggins
Dept./Agency JPB Phone # 415-744-2819
Fax # 100-508-7938 Fax # 415-744-2726
GENERAL SERVICES ADMINISTRATION
NSN 7540-01-317-7368 5099-101

United States Department of the Interior
OFFICE OF THE SECRETARY
Washington, DC 20240

TAKE PRIDE IN AMERICA

MAR 9 2004

ER 02/986

Mr. Leslie Rogers
Regional Administrator
Federal Transit Administration
201 Mission Street
San Francisco, California 94105

Dear Mr. Rogers:

This is in response to a request for the Department of the Interior's (Department) review and comment on the administrative draft version of the Final Environmental Impact Statement/Report (EIS/Report) and Section 4(f) Evaluation for the **Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project**, City and County of San Francisco, California. The Department offers the following comments and recommendations for your consideration.

SECTION 4(f) COMMENTS

Based on the information provided in the EIS/Report, it is apparent that no public parkland, refuge, or similar site would be affected by either of the action alternatives. Therefore, there are no Section 4(f) considerations with regard to recreational sites.

The National Park Service's Pacific West Regional Office has reviewed this administrative draft document identifying and analyzing a "no action" alternative as well as "action" alternatives for individual components of the proposed project. A locally preferred Stacked Drift Tunneling/West Ramp alternative is also deemed to be the environmentally superior alternative.

In regard to cultural resources, each of the "action" alternatives entails demolition of historic buildings. The locally preferred alternative would have significantly less impact on other listed historic structures in comparison with the Cut and Cover Trench/West Ramp alternative.

Several options were withdrawn from full analysis because they would fall short of meeting the expressed purpose and need for action. None of the withdrawn options offered a feasible and prudent alternative for avoiding the identified effects on cultural resources.

The locally preferred Stacked Drift alternative slates six historic structures for demolition. Three of the resources slated for demolition - Transbay Terminal (425 Mission Street), Bay Bridge Approaches, and Bus Ramps - have been designated contributing resources to the San Francisco-Oakland Bay Bridge, a multi-component property listed on the National Register of Historic Places (NRHP). According to the draft Memorandum of Agreement (MOA) included in the EIS/Report, the California Legislature has granted a specific exemption to State law prohibiting the demolition of historic structures as follows:

"The Legislature thereby approves demolition of the Transbay Terminal building at First & Mission Streets in the City and County of San Francisco, including the associated ramps, for construction of a new terminal at the same location..." (AB 812, 2003).

SUMMARY COMMENTS

Our concerns are twofold. First, three of the structures slated for demolition (and not addressed by AB 812) – 165-173 Second Street, 191 Second Street, 580-586 Howard Street – have been designated as contributing resources in the Second & Howard Streets District. Demolition of these three structures in the Second & Howard Streets District also result in isolation of four additional contributing resources in the District, adding to the adverse impact of the undertaking on the integrity of the District. While it is clear that the proposed undertaking will adversely affect all six properties, not enough information has been provided in the EIS/Report materials to determine the overall effect of the proposed demolition on the integrity of the Second & Howard Streets District or the Bay Bridge District (as listed on the NRHP).

Second, the MOA Section III (F) stipulates that a reevaluation of the Bay Bridge District shall occur within 180 days of completion of the undertaking to determine whether the nomination should be amended or whether the bridge no longer qualifies for listing and should be removed from the NRHP. The MOA states that the Transbay Joint Powers Administration will conduct the evaluation in consultation with the SHPO. A similar clause is not included for the Second & Howard Street Historic District in the Mitigation Section IV of the MOA. From the information provided, it is unclear whether an evaluation was completed to assess the potential impact of the proposed undertaking on the Second & Howard Street Historic District, or if not, what was the basis for this result. If an evaluation has not been done, our recommendation would be to complete this process for the Second & Howard Street District.

The Department of the Interior has no objection to Section 4(f) approval of this project, provided the measures to minimize harm mentioned above are included in the project plans and implementation. Because this Department has a continuing interest in this project, we are willing to cooperate and coordinate with you on a technical assistance basis in further project evaluation and assessment. For additional information regarding our comments, please contact Ms. Elaine Jackson-Retondo, PhD, Cultural Resources, National Park Service, Oakland, California; telephone 510-817-1428.

Sincerely,

Willie R. Taylor

Willie R. Taylor
Director, Office of Environmental Policy
and Compliance

cc:
Ms. Marie Pang
Caltrain
Peninsula Corridor Joint Powers Board
1250 San Carlos Avenue
P.O. Box 3006
San Carlos, CA 94070-1306

APPENDIX E: BIBLIOGRAPHY

Anthropological Studies Center, *Archaeological Impact Assessment for the San Francisco Transbay Terminal/Caltrain Downtown Extension Project,* November 2001.

Arup, *Working Paper 7.0 Pre-Concept Engineering Report,* April 2001.

Association of Bay Area Governments, BAAQMD, and Metropolitan Transportation Commission, *Bay Area 1999 Ozone Attainment Plan,* 1999.

Association of Bay Area Governments, BAAQMD, and Metropolitan Transportation Commission, *Bay Area 2001 Ozone Attainment Plan,* 2001.

Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines,* April 1996.

Bay Area Rapid Transit /U.S. Department of Transportation and SamTrans, *Summary of Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement, BART-San Francisco Airport Extension,* January 1995.

California Air Resources Board, Air Quality Data, 1996-2000.

California Air Resources Board, MVEI7G Emissions Factors, Run, Date: June 18, 2001.

California Division of Mines and Geology, *Special Publication 78,* 1987.

California High Speed Rail Authority, *Final Business Plan for Building a High-Speed Train System for California,* June 2000.

Caltrain, Federal Transit Association, U.S. Department of Transportation, and Peninsula Joint Powers Board, *Draft San Francisco Downtown Extension EIS/EIR,* 1997.

Caltrans, City of San Francisco, and Federal Highway Administration, *Draft EIS/EIR for Alternatives to Replacement of the Embarcadero Freeway and the Terminal Separator Structure,* 1995.

Caltrans, Division of Engineering Services, *Energy and Transportation Systems,* July 1983.

City of San Francisco, *Alternatives to Replacement of the Embarcadero Freeway and the Terminal Separator Project,* 1995.

City of San Francisco, Proposition H – Downtown Caltrain Station, 1999.

Environmental Protection Agency, Federal Register Notice, March 30, 2001.

Environmental Science Associates, *Consistency with Existing Plans and Policies*, 2001.

Environmental Science Associates, Technical Memorandum, Potential Wind Conditions, August 2001.

Environmental Science Associates, Transbay Terminal Summary Project Description Response to Questions, June 2001.

Environmental Science Associates, Wind Study Technical Memorandum, 2001.

Federal Railroad Administration, *Safety of High Speed Guided Ground Transportation Systems, EMF Exposure Environments Summary Reports*, August 1993.

Holman & Associates, *Archaeological Research Design/Treatment Plan for the Embarcadero Freeway Replacement/Terminal Separator Structure Project*, 1996.

ICF Kaiser Engineers, Inc., *Archaeological Resources Investigations of the Caltrain San Francisco Downtown Extension Project,* May 1996.

JRP Historical Consulting Services, *Historic Architectural Survey Report for the Transbay Terminal/Caltrain Extension Project,* August 2001.

Leavitt, Dan, Deputy Director of the California High Speed Rail Authority, Letter to Maria Ayerdi, Transportation Policy Advisor, Office of the Mayor, City and County of San Francisco, October 5, 2000.

Metropolitan Transportation Commission, 2001 *Regional Transportation Plan*, December 2001.

Metropolitan Transportation Commission, *Bay Area Regional Transportation Improvement Plan*, February 2003.

Metropolitan Transportation Commission, et al, *Working Paper 4.1 Evaluation of Terminal Site Alternatives*, January 2000.

Metropolitan Transportation Commission, *Project Development Phase, Final Report and Executive Summary*, March 2001.

Metropolitan Transportation Commission, *Regional Transit Expansion Policy,* December 2001.

Metropolitan Transportation Commission, *Regional Transportation Plan*, March 2002.

Metropolitan Transportation Commission, *San Francisco Bay Crossing Study, Final Report*, July 2002.

Metropolitan Transportation Commission, *Transbay Terminal Improvement Plan: Working Paper 3.5: Summary of Phase 1 Findings by the Transbay Panel*, June 11, 1999.

Metropolitan Transportation Commission, *Transbay Terminal Improvement Plan Study*, January 2001.

Metropolitan Transportation Commission, *Working Paper 2B: Terminal Architectural Analysis*, October 2000.

Metropolitan Transportation Commission, *Working Paper 4.1.A: Site Alternatives Transit Evaluation, Draft for Review*, September 1999.

Metropolitan Transportation Commission, *Working Paper 12 Terminal Design Modifications and Refinements*, March 2001.

Parsons, *Caltrain 25kV, 60Hz, ac Electrification Program, Overview of Preliminary Engineering Operating and Maintenance Costs*, July 2001.

Parsons, *Caltrain Ridership Projection for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project, Draft Report*, October 2001.

Parsons, *San Francisco Caltrain Downtown Extension Project Train Operations Simulation*, November 2002.

Peninsula Corridor Joint Powers Board, *Design Options Screening Report, Caltrain San Francisco Downtown Extension Project*, 1995.

Peninsula Corridor Joint Powers Board, *Finding of Effect: Locally Preferred Alternative, Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project*, August 2003.

Peninsula Corridor Joint Powers Board, *Transbay Terminal Reconfiguration Structural Analysis Report*, September 1995.

Peninsula Corridor Joint Powers Board, *Transbay Terminal/Caltrain Downtown Extension Project, Area of Potential Effects for Archaeological Resources*, September 2000.

Peninsula Corridor Joint Powers Board, *Volume I – Main Report, Geotechnical Site Investigation*, September 1995.

San Francisco Bay Conservation and Development Commission, *Management Plan for the San Francisco Bay, The San Francisco Bay Plan.*

San Francisco Board of Supervisor's Resolution 1040101.

San Francisco City Planning Code Article 10.

San Francisco City Planning Code Article 11.

San Francisco County Transportation Authority, *Caltrain Downtown Extension/Transbay Terminal, Preliminary Operating Plan,* December 2001.

San Francisco Municipal Railway, *South of Market Action Plan,* February 2001.

San Francisco Planning Code Section 148, September 2001.

San Francisco Planning Code Section 295, September 2001.

San Francisco Planning Department, *535 Mission Street Final Supplemental Environmental Impact Report*, December 1999.

San Francisco Planning Department, *First and Howard Streets Project Final Environmental Impact Report*, January 2000.

San Francisco Planning Department, *Port of San Francisco Waterfront Land Use Plan*, 1997.

San Francisco Planning Department, *San Francisco General Plan,* June 1996.

San Francisco Redevelopment Agency, *Draft Transbay Redevelopment Project Area Design for Development Vision,* August 2003.

San Francisco Redevelopment Agency, *Mission Bay Subsequent Environmental Impact Report,* November 3, 1998.

Snyder, John, "Rincon Point/South Beach Historic Warehouse-Industrial District," *Caltrans Architectural Inventory/Evaluation Form*, July 22, 1983.

State CEQA Guidelines Appendix G, September 2001.

State CEQA Guidelines Section 15382 September 2001.

Terry A. Hayes Associates, LLC, *Transbay Terminal Improvement Project: Bus Access and Storage Supplemental Air Quality Impact Analysis,* March 2003.

Transbay Joint Powers Authority, Approval of the Cooperative Agreement between the Transbay Joint Powers Authority, City and County of San Francisco, and Caltrans, May 2003.

Transbay Joint Powers Authority, *Locally Preferred Alternative Report for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project,* March 2003.

Transportation Research Board, *Highway Capacity Manual, Special Report 209* (Washington, D.C.), 1994.

Water Transit Authority, *Implementation and Operations Plan, Section 2*, July 2003.

Wilbur Smith Associates, *Transbay Terminal Area/Caltrain Extension Traffic Analysis,* September 7, 2001.

APPENDIX F:

URBAN FORM PROGRAM
DRAFT TRANSBAY REDEVELOPMENT PROJECT AREA
DESIGN FOR DEVELOPMENT VISION

The following is a summary of the urban form program as contained in the Draft Transbay Redevelopment Project Area Design for Development Vision released by the San Francisco Redevelopment Agency in August 2003.

As shown in F-1, the draft vision includes an urban form program for the proposed Project Area designed to preserve sunlight, views, and open space. While the "full build" alternative includes approximately 4,700 residential units, this level of development would create a virtual wall of residential towers along Folsom Street and north of Folsom Street between Main and Beale Streets. Based on community input from the public workshops, the number of residential towers was significantly reduced and would include fewer, taller towers surrounded by low-rise development between four and eight stories in height. The spacing between the towers is intended to protect sunlight, open space, and views within the proposed Project Area.

The draft program includes approximately 3,200 new residential units on the publicly owned development parcels, including several smaller, underutilized adjacent parcels, as follows (numbers and letters correspond to Figure F-1):

Residential.

Block 1
A – 8-story (80-foot), 88,000-square-foot building with 75 residential units
B – 4-story (40-foot), 18,000-square-foot building with 16 residential units

Block 2
T – 40-story (400-foot), 440,000-square-foot tower with 353 residential units
A – 4-story (40-foot), 27,000-square-foot building with 23 residential units
B – 16-story (160-foot), 88,000-square-foot building with 75 residential units
C – 6-story (60-foot), 19,000-square-foot building with 16 residential units

Block 3
T – 55-story (550-foot), 605,000-square-foot tower with 485 residential units
A – 4-story (40-foot), 27,000-square-foot building with 23 residential units
B – 8-story (80-foot), 43,000-square-foot building with 34 residential units and retail space
C – 6-story (60-foot), 19,000-square-foot building with 13 residential units and retail space

Figure F-1: Draft Urban Form Plan for Redevelopment Area



Block 4
T – 30-story (300-foot), 330,000-square-foot tower with 265 residential units
A – 8-story (80-foot), 39,000-square-foot building with 34 residential units
B – 4-story (40-foot), 17,000-square-foot building with 14 residential units
C – 8-story (80-foot), 45,000-square-foot building with 38 residential units
D – 4-story (40-foot), 28,000-square-foot building with 24 residential units
E – 8-story (80-foot), 45,000-square-foot building with 34 residential units and retail space
F – 6-story (60-foot), 15,000-square-foot building with 11 residential units and retail space

Block 5
T – 55-story (550-foot), 605,000-square-foot tower with 485 residential units
A – 6-story (60-foot), 60,000-square-foot building with 51 residential units
B – 4-story (40-foot), 19,000-square-foot building with 16 residential units
C – 8-story (80-foot), 64,000-square-foot building with 54 residential units
D – 8-story (80-foot), 58,000-square-foot building with 49 residential units
E – 4-story (40-foot), 16,000-square-foot building with 15 residential units

Block 6
T – 45-story (450-foot), 495,000-square-foot tower with 397 residential units
A – 6-story (60-foot), 56,000-square-foot building with 48 residential units
B – 6-story (60-foot), 30,000-square-foot building with 26 residential units
C – 4-story (40-foot), 19,000-square-foot building with 16 residential units

Block 8
A – 4-story (40-foot), 16,000-square-foot building with 14 residential units
B – 4-story (40-foot), 16,000-square-foot building with 14 residential units
C – 6-story (60-foot), 15,000-square-foot building with 12 residential units and retail space
D – 8-story (80-foot), 23,000-square-foot building with 17 residential units and retail space
E – 8-story (80-foot), 41,000-square-foot building with 30 residential units and retail space
F – 16-story (160-foot), 82,000-square-foot building with 65 residential units and retail space

Block 9
T – 30-story (300-foot), 330,000-square-foot tower with 263 residential units and retail space
A – 4-story (40-foot), 29,000-square-foot building with 24 residential units
B – 8-story (80-foot), 39,000-square-foot building with 33 residential units and retail space
C – 6-story (60-foot), 21,000-square-foot building with 16 residential units and retail space

Block 10
A – 6-story (60-foot), 12,000-square-foot building with 10 residential units
B – 8-story (80-foot), 52,000-square-foot building with 44 residential units

These residential units are assumed to be approximately 60 percent for-sale and 40 percent rental and would include a variety of unit types and sizes with an average unit size of 1,000 square feet. Ground-floor residential units would be designed as individual townhouses, with entrances elevated at least 3 feet above street level and set back from the sidewalk to provide space for landscaping and other sidewalk amenities. Parking for all new residential development would be required to be below grade, with a maximum of one parking space per residential unit. Developers would be required to separate the cost of parking spaces from the cost of residential units and provide spaces for interested car-sharing programs on site. The Final Design for Development will include a set of standards and guidelines for residential development in the new Transbay neighborhood.

It will be the policy of the Redevelopment Agency that 35 percent of the new residential units built within the proposed Project Area will be affordable. At least 25 percent of all new residential units developed within the Project Area is intended to be affordable to, and occupied by, households whose incomes do not exceed 60 percent of the area median income, and an additional 10 percent of all dwelling units developed within the Project Area are intended to be affordable to, and occupied by, households whose incomes do not exceed 120 percent of the area median income. These affordable units are assumed to be a combination of stand-alone, 100 percent affordable housing developments, such as affordable senior housing, and "inclusionary" units, or affordable units built within market-rate developments. At least 15 percent of all units in new market-rate developments are intended to be "inclusionary" units.

Office. *The program includes new office development on two publicly owned parcels in the proposed Project Area, as shown on Figure 5.22-28. The offices are configured as follows (numbers and letters correspond to Figure 2.2-28):*

Block C-1:
16-story (160-foot), 200,000-square-foot office building

Block C-2:
52-story (550-foot), 1,040,000-square-foot building with 565,000 square feet of office space and a hotel

Hotel. *The program includes new hotel development on the publicly owned parcel just north of the new Transbay Terminal. This hotel would serve high-speed rail passengers using the new Terminal as well as the larger downtown area. The hotel on Block C-2 would occupy 475,000 square feet of the 52-story building on the site.*

Retail. *The program includes approximately 40,000 square feet of ground-floor retail space concentrated in the residential area along Folsom Street. This new retail space will serve future residents of Transbay as well as existing residents in Rincon Hill.*

Public Improvements

Because one of the purposes of the Redevelopment Area is to serve regional commuters with easy access to the Bay Bridge, the proposed Project Area currently does not offer pedestrians a pleasant experience. To transform the area into a livable residential neighborhood, the Draft Design for Development document also includes improvements to the streetscape and open space for area residents and pedestrians. Four main types of public improvements are included: (1) neighborhood parks, (2) landmark plazas (3) pedestrian-oriented alleys, and (4) widened sidewalk zones.

The most prominent of the proposed public improvements is the addition of widened sidewalks to improve the pedestrian experience along all the streets in the area, providing connections to and from downtown, the waterfront, South Beach and Yerba Buena. The sidewalks along Beale, Main and Spear Streets are proposed to be widened to provide usable open space for the area's residents. In addition, it is proposed that the neighborhood be served with new parks programmed with various uses. Together these parks total 126,800 square feet.

Neighborhood Parks*. Two primary target zones for neighborhood parks are those zones where new residential development housing would be focused: Block 7, the publicly owned parcel framed by Main, Beale and Folsom Streets; and the Mixed Use area around Second Street. Each of these zones sites has been identified for a major new public park. While these will not be large enough to accommodate ball fields or other large-scale active recreation, they would provide neighborhood open space similar to that found in nearby San Francisco neighborhoods.*

The park identified just north of Folsom, bounded by Main and Beale Streets is similar in size to Sidney Walton Park in the Golden Gateway area. Like Sidney Walton Park, this park could be well landscaped and frequented by nearby residents and workers. The park would also be similar to Washington Square in North Beach that accommodates informal recreation and passive activities.

The site configuration for the parks located in the mixed-use district will require additional study, as they are dependent on the configuration of the bus ramps leading to the Transbay Terminal. Given the locations of these ramps, it may be possible to provide a passive or informal park such as South Park in this area for neighborhood use, as well as more active recreation uses adjacent to or under the freeway ramps (e.g., handball or basketball courts).

Tower locations and heights have been carefully defined to minimize shading of parks and expanded streetscapes during the mid-day hours throughout the year.

Landmark Plazas. *The primary opportunity and logical site for a landmark public plaza is on the north and south of the primary Transbay Terminal edifice, the east-west spine that will house the primary vehicular circulation for the terminal. To the north and south of this transportation facility will be the primary access points to the Terminal, where large numbers of people would enter and exit daily. To the south, an office building is permitted but not yet built. If plans change for this property, consideration could be give to a larger plaza leading to the south terminal entries. On the north of the Terminal, depending on its ultimate configuration and associated development, an opportunity for a major public space, outdoors or enclosed like a "winter garden," exists.*

Alleys*. The proposed program includes new alleys as well as extensions to existing alleys throughout the Project Area, allowing for better pedestrian circulation throughout the neighborhood. Pedestrian alleys can have a high level of pedestrian activity, and can be improved with special paving, lighting, plantings, and furniture. Some alleys could be closed to vehicular traffic at lunch or for special occasions to allow the entire alley to become a pedestrian space, and to allow it to accommodate outdoor dining, etc. In some portions of some alleys, access to parking garages and service docks and the movements of delivery vehicles will limit the ability to create these pedestrian zones.*

Widened Sidewalk Zones*. The street environment is poor throughout the Transbay district, with few street trees, little in the way of pedestrian amenities, sidewalks that are cracked or in disrepair, and no pedestrian street lighting. Significant improvements to the sidewalk environment appear necessary and are planned as a part of the redevelopment of the area.*

Conditions in the Transbay area represent a unique opportunity to improve the public realm of open space and the pedestrian environment through a focus on the sidewalk areas. Wide streets exist throughout the neighborhood. While this width is needed in some locations to accommodate the volumes of traffic associated with commute movements into and out of the city, this width does not appear to be necessary on other streets, and excess street capacity appears to exist. This capacity could be put to use through widened sidewalks, returning more space to the pedestrian from the automobile zone.

The widened sidewalks could serve two roles: (1) as improved linkages throughout the area but in particular to the terminal itself for the high volumes of pedestrian traffic that is expected as the area redevelops, and (2) as usable public open space on certain streets where adequate room exists to allow more active recreation uses. Following is a discussion of opportunities to create specially widened sidewalks in three zones.

Folsom Street *has been identified in the past as a location for a special pedestrian right-of-way that might act as the center of the new neighborhood and provide an active link to the waterfront along the Embarcadero. The analysis of traffic volume requirements shows that four travel lanes are required: three eastbound and one westbound. In addition, this street is anticipated to include parking on both sides to support retail uses*

and to buffer pedestrians from traffic. An eastbound bicycle lane is also anticipated. On the north side of the street, a 15-foot setback is proposed to be required throughout the proposed Project Area. Two alternative configurations of Folsom Street are described below.

In the first configuration, sidewalks would be improved on both sides of the street. On the north side, a 15-foot setback, combined with a seven-foot sidewalk zone, would provide a generous sidewalk area on the sunny side of the street – large enough for extensive plantings and furnishings or sidewalk seating for cafes and restaurants. The southern edge sidewalk is a typical neighborhood scale sidewalk and could be furnished with lighting, street trees, and site furnishings such as benches.

In the second configuration, a median would be added between the eastbound and westbound lanes. This would leave a 17-foot sidewalk on the north side (made possible by the 15-foot setback), which is still a generous sidewalk allowing for extensive landscaping and furnishings on this sunny side. The median would provide an opportunity to make this street distinctive among Transbay-area streets, as there is inadequate width on any other streets to provide a continuous median such as this.

Significant portions of ***Main, Beale, and Spear*** *Streets carry the lowest vehicular traffic volumes in the area. In fact there is excess capacity within the vehicular right-of-way for projected traffic volumes. This makes it possible to use some of the street width for a pedestrian sidewalk zone.*

Widening of sidewalks on these streets would be important given the significant number of housing units that would have access from or be adjacent to these streets, and could therefore enjoy the benefits of adjacent improved sidewalks. These streets are also the primary connectors from the eastern portion of the financial district to the South Beach waterfront area, where major open space amenities and public destinations are located, e.g., Pacific Bell Park. Since these streets connect through to the waterfront (whereas no street to the west does until you reach Second Street), and since they are also nearly flat, they appear to be prime pedestrian priority corridors.

The Draft Design for Development would improve the street in an asymmetrical fashion. This would result in sidewalks of as much as 32 feet on one side, with 15 feet on the other. Parking would remain on both sides of the street, and adequate width would be provided for bicycle routes. The 32-foot wide sidewalk would create a new prototype for open space in San Francisco, where the sidewalk would be so wide that it would constitute linear open space, and could be improved with small-scale active recreation uses. These might include small tot lots, bocce ball courts, and chessboards, as well as the uses that could be accommodated on a normally wide sidewalk, such as outdoor dining.

Other Streets: *Options are being explored for widening the sidewalk environment of other Transbay area streets. However, projected traffic volumes on many streets are such that only limited improvements would be possible – none of the scale and extent as those proposed for Folsom, Main, Beale and Spear Streets.*

Memorandum of Agreement

among the

Federal Transit Administration, and California State Historic Preservation Officer

for the

Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project in San Francisco County, California

WHEREAS, the Federal Transit Administration (FTA) has under consideration construction of a new multi-modal Terminal on the site of the present Transbay Transit Terminal, extension of the Peninsula Corridor Service (Caltrain) from its current San Francisco terminus at Fourth and Townsend Streets to a new underground terminus beneath the new Terminal, and establishment of a Redevelopment Area Plan with related development projects, including transit-oriented development on publicly-owned land in the vicinity of the new multi-modal Terminal (Undertaking) as proposed by the Transbay Joint Powers Authority (TJPA), the City and County of San Francisco (CCSF), the Peninsula Corridor Joint Powers Board (JPB), and the San Francisco Redevelopment Agency (SFRA); and

WHEREAS, on March 28, 2003, the TJPA selected a Locally Preferred Alternative (LPA) for this Undertaking that includes the West Ramp Transbay Terminal Alternative, Full Build Redevelopment Alternative; and Second-to-Main Tunneling Alternative; and

WHEREAS, FTA is the lead federal agency for this Undertaking, pursuant to the National Environmental Policy Act (NEPA) and the co-lead agencies are the CCSF, JPB, and the SFRA;

WHEREAS, the TJPA, as a Responsible Agency, intends to become the project sponsor, a grantee for federal grant receipt purposes, and the recipient to FTA assistance; and

WHEREAS, the California Department of Transportation (Department) has indicated that it will transfer title to the historic property known as the Transbay Transit Terminal, which is a component of the San Francisco – Oakland Bay Bridge (Bay Bridge), a multi-component structure that is listed on the National Register of Historic Places (NRHP), to TJPA, after receipt of satisfactory proof that FTA has issued a Record of Decision pursuant to NEPA for construction of the Undertaking, and

WHEREAS, this Undertaking will adversely affect historic properties listed or eligible for listing on the NRHP, including components of the Bay Bridge and the Second and Howard Streets Historic District, and may have effects on archaeological properties that have not yet been identified; and

WHEREAS, the Bay Bridge East Span Seismic Safety Project in San Francisco and Alameda counties is a separate undertaking from the subject Undertaking; and

WHEREAS, FTA has consulted with the California State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, FTA, TJPA, CCSF, JPB, SFRA have consulted with Department; the City of Oakland, the San Francisco Architectural Heritage; the San Francisco Planning & Urban Research Association (SPUR); the National Park Service (Western Regional Office); the National Trust for Historic Preservation; the American Institute of Architects Preservation Committee; San Francisco Beautiful; Transbay Citizens' Advisory Committee; the Oakland Heritage Alliance; the San Francisco Landmarks Preservation Advisory Board; and San Francisco Tomorrow, about the Undertaking and its effects on historic properties, and have taken all comments received from these parties into account; and

WHEREAS, the California Legislature has considered the importance of proceeding with the Transbay Transit Terminal project and has granted a specific exemption to State Law prohibiting the demolition of historic structures with the following language: "the Legislature hereby approves demolition of the Transbay Terminal building at First and Mission Streets in the City and County of San Francisco, including its associated ramps, for construction of a new terminal at the same location, designed to serve Caltrain in addition to local, regional, and intercity bus lines, and designed to accommodate high-speed passenger rail service." (AB 812, 2003);

NOW, THEREFORE, FTA and SHPO agree that the Undertaking will be implemented in accordance with the following stipulations in order to take into account the effect of the Undertaking on historic properties.

STIPULATIONS

I. Applicability of Stipulations

If FTA provides funding assistance or a loan guarantee for the Undertaking, FTA will ensure that the TJPA implements the following stipulations, which are applicable to the Locally Preferred Alternative (LPA).

II. Professional Standards

All activities regarding history, historic preservation, historical archaeology and prehistoric archaeology that are carried out pursuant to this Agreement will be carried out by or under the direct supervision of persons meeting, at a minimum, the Secretary of the Interior's professional qualifications standards (48 FR 44738-9) in these disciplines.

III. Mitigation of Effects on Components of the San Francisco-Oakland Bay Bridge (Bay Bridge)

A. Permanent Interpretive Exhibit at the Terminal

TJPA will direct the design and engineering team for the Undertaking to integrate into the design of the new terminal a dedicated space for a permanent interpretive exhibit. The interpretive exhibit will include at a minimum, but is not necessarily limited to: plaques or markers, a mural or other depiction of the historic terminal, and Key System, or other interpretive material.

TJPA will consult with Department regarding the availability of historical documentary materials and the potential use of salvaged items from the existing Transbay Transit Terminal for the creation of the permanent interpretive display of the history of the original Transbay Transit Terminal building and its association with the San Francisco-Oakland Bay Bridge and the potential salvaged items from the existing Terminal.

Department will assist TJPA in planning the scope and content of the proposed interpretive exhibit. In addition, TJPA will also invite the Oakland Heritage Alliance, the San Francisco Architectural Heritage, the California State Railroad Museum, and the Western Railway Museum to participate. TJPA, while retaining responsibility for the development of the exhibit, will consider, jointly with Department, the participating invitees' recommendations when finalizing the exhibit design. TJPA will produce, install, and maintain the exhibit.

TJPA will also consult with the City of Oakland about its interest in having a similar interpretive exhibit in the East Bay. If agreement is reached prior to completion of final design of the Terminal, TJPA will provide and deliver exhibit materials to a venue provided by the City of Oakland.

B. Salvage

TJPA, in consultation with Department, will identify elements of the existing Transbay Transit Terminal that are suitable for salvage and interpretive use in the exhibit in the new Terminal or in museums. Within two years of signing of this agreement, TJPA will offer these items to San Francisco Architectural Heritage, the California State Railroad Museum, Sacramento, the Western Railway Museum, the Oakland Museum, and any other interested parties. Acceptance of items by interested parties must be completed at least 90 days prior to demolition of the Transbay Transit Terminal. TJPA will remove the items selected in a manner that minimizes damage and will deliver them with legal title to the recipient. Items not accepted for salvage or interpretive use will receive no further consideration under this agreement.

C. Oakland Museum of California Exhibit

TJPA will consult with Department and the Oakland Museum about contributing to Department's exhibit at the Oakland Museum relating to the history and engineering of the major historic state bridges of the San Francisco Bay Area. TJPA will propose contributions to such an exhibit that may include an interpretive video including the history of the Transbay Transit Terminal and the Key System. Components to such an exhibit may include photographs, drawings, videotape, models, oral histories, and salvaged components from the terminal. In addition, TJPA will assist the Museum by contributing to the cost of preparing and presenting the exhibit, interpretive video, as well as the costs of an exhibit catalog or related museum publication in conjunction with the exhibit, in a manner and to the extent agreed upon by TJPA, Department, and the Oakland Museum of California if consultation results in agreement between TJPA and Oakland Museum prior to demolition of the existing Transbay Transit Terminal. TJPA has established a maximum budget of $50,000.00 for the Oakland Museum of California exhibit and the interpretive video.

D. Documentation

Prior to the start of any work that would have an adverse effect on historic properties, TJPA will consult with the California SHPO, to ensure that the Transbay Transit Terminal has been adequately recorded by past efforts. Collectively, these past studies, which include Department's past recordation of a series of remodeling and seismic retrofit projects that have occurred since 1993, may adequately document the building, making Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation unnecessary. In addition, TJPA, assisted by Department, will seek to obtain the original drawings of the Transbay Transit Terminal by the architect Timothy Pflueger. If the drawings cannot be copied and included in the documentation, then TJPA will consult with SHPO regarding recordation level and specifications for completing additional documentation. When the SHPO finds the documentation to be adequate, then TJPA will compile this documentation into a comprehensive record. All

documentation will be submitted to SHPO and Department Headquarters Library with a xerographic copy to the Department District 4 Office. TJPA will contact the following repositories to inquire if they would like to receive a xerographic copy of the documentation: History Center at the San Francisco Public Library, San Francisco Architectural Heritage, the Oakland History Room of the Oakland Public Library, the Oakland Museum of California, and the Western Railway Museum. TJPA will ensure that these records are accepted by SHPO prior to demolition of the Transbay Transit Terminal.

E. Reevaluation of the Bay Bridge

Within 180 days after FTA determines that the Undertaking has been completed, TJPA, in consultation with FTA and SHPO, will re-revaluate the Bay Bridge, a property listed on the NRHP, and determine whether the National Register nomination should be amended or whether the bridge no longer qualifies for listing and should be removed from the National Register. As appropriate, TJPA will prepare and submit to the FTA and SHPO either an amended nomination or petition for removal, to be processed according to the procedures set forth in 36 CFR Part 60(60.14 and 60.15).

IV. Mitigation of Effects on Second and Howard Streets Historic District and Protective Measures for Rincon Point/South Beach Historic Warehouse Industrial District

A. Protective Measures

TJPA, in consultation with the owners of historic properties immediately adjoining the construction sites, will develop and implement measures to protect the contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District from damage by any aspect of the Undertaking. Such measures will include, but are not necessarily limited to those identified in Appendix A to this Agreement.

B. HABS/HAER Documentation

Prior to the start of any work that would have an adverse effect on historic properties, TJPA will ensure that the three historic properties that will be demolished are recorded in accordance with HABS/HAER standards, as appropriate. These buildings are:

- 191 2nd Street, (APN: 3721-022),
- 580-586 Howard Street, (APN: 3721-092 through 3721-106), and
- 165-173 2nd Street, (APN: 3721-025).

TJPA will contact the HABS/HAER branch of the NPS to obtain guidance regarding the level of recordation and specifications for completing the documentation. All documentation will be submitted to SHPO, with xerographic copies to the History Center at the San Francisco Public Library, San Francisco Architectural Heritage, and the Oakland History Room of the Oakland Public Library. TJPA will ensure that these HABS/HAER records are accepted by NPS prior to carrying out any other treatment.

C. Repair of Inadvertent Damage

TJPA will ensure that any damage to contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District resulting from the Undertaking will be repaired in accordance with the Secretary of the Interior's Standards for Rehabilitation. The condition of the contributing properties will be photographed prior to the

start of the Undertaking to establish the baseline condition for assessing damage. To record these existing conditions, TJPA will consult with property owner(s) about the appropriate level of photographic documentation of building interiors and exteriors. A copy of this photographic documentation will be provided to the property owner(s), and will be retained on file by TJPA. If repair of inadvertent damage is necessary, TJPA will submit plans to the SHPO for review and comment to ensure conformance with the Secretary of the Interior's Standards for Rehabilitation.

D. Reevaluation of the Second and Howard Streets Historic District

Within 180 days after FTA determines that the Undertaking has been completed, TJPA, in consultation with FTA and SHPO, will re-revaluate the Second and Howard Streets Historic District and determine whether the National Register nomination should be amended or whether the district no longer qualifies for listing and should be removed from the National Register. As appropriate, TJPA will prepare and submit to the FTA and SHPO either an amended nomination or petition for removal, to be processed according to the procedures set forth in 36 CFR Part 60(60.14 and 60.15).

V. Mitigation of Effects on Archaeological Properties and Development and Implementation of a Treatment Plan for Archaeological Resources

TJPA or its consultants will carry out, in consultation with the JPB and CCSF, the following activities regarding mitigation of potential archaeological resource impacts.

A. Research Design/Treatment plan development

The TJPA will have a comprehensive Research Design/Treatment Plan for archeological resources prepared by a qualified consultant. The Research Design/Treatment Plan will be consistent with the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37) and take into account the ACHP publication, Treatment of Archaeological Properties: A Handbook (ACHP 1980), and SHPO guidelines.

B. Research Design/Treatment Plan Specifics

The Research Design/Treatment Plan will include, at a minimum:

i An Historical Context for the Area of Potential Effects for Archaeological Resources (APEAR). The Historical Context will present prehistoric and historic-era overviews of the project area. The Historical Context should incorporate data developed in the Archaeological Research Design and Treatment Plan for SF-480 Terminal Separation Rebuild (Praetzellis and Praetzellis, 1993) and the San Francisco-Oakland Bay Bridge, West Approach Replacement: Archaeological Research Design and Treatment Plan (Ziesing, 2000) for the portions of the APEAR within the scope of these documents.

ii A Research Context for the APEAR. The Research Context will identify expected archeological property types and develop research themes, questions, and data needs. To the extent applicable to expected property types, the Research Context will incorporate the research framework developed in the Revised Historical Archaeology Research Design for the Central Freeway Replacement Project (Thad M. Van Bueren, Mary Praetzellis, Adrian Praetzellis, Frank Lortie, Brian Ramos, Meg Scantlebury and Judy D. Tordoff).)

iii Testing/Data Recovery Plan that will specify, at minimum:

- The properties or portion of properties where evaluation and/or data recovery are to be carried out;
- The properties, if any, that will be affected by the Undertaking but for which no data recovery will be carried out;
- The manner in which inadvertent discoveries will be treated;
- The methods to be used for data recovery, with an explanation of their relevance to the research questions/themes;
- The methods to be used in cataloguing, analysis, data management, and dissemination of data;
- The proposed disposition of recovered materials and records, including discard and deaccession;
- The manner in which any human remains and associated/unassociated funerary objects, including those of Native American or Native Hawaiian origin, will be treated;
- The security procedures to be undertaken to protect the archeological testing/data recovery site from vandalism, theft, or unintended damage;
- The final report summarizing, describing and interpreting the results of testing/data recovery;
- The measures to be undertaken to ensure curation of recovered data determined to have appropriate research potential.
- Research Design/Treatment Plan Review

TJPA will submit the Research Design/Treatment Plan to all parties to this Agreement for a thirty (30) calendar day review following receipt of the Plan. If any party fails to submit their comments within thirty (30) days, TJPA may assume that party's concurrence with the Research Design/Treatment Plan. TJPA will take any review comments into account, revise the Research Design/Treatment Plan accordingly, and will notify any party whose comments were not incorporated into the Plan.

C. Notification

TJPA will promptly notify the SHPO, FTA, and Department as appropriate, if any properties are found that meet the conditions for eligibility for inclusion in the NRHP.

D. Report Standards and Dissemination

TJPA will ensure that all reports from implementation of the Research Design/Treatment Plan meet contemporary professional standards and the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37). Copies of all final reports will be provided to the SHPO, the Northwest Information Center at Sonoma State University, the Federal Transit Administration, Department, and the Environmental Review Officer of the CCSF.

E. Confidentiality

The signatories to this Agreement acknowledge that historic properties covered by this Agreement are subject to the provisions of § 304 of the National Historic Preservation Act of 1966 and § 6254.10 of the California Government Code (Public Records Act), relating to the disclosure of archeological site information and, having so acknowledged, will ensure that all actions and documentation prescribed by this Agreement are consistent with § 304 of the National Historic Preservation Act of 1966 and § 6254.10 of the California Government Code.

VI. Annual Report

TJPA will prepare an annual report describing the status of its efforts to comply with the mitigation measures set forth in Stipulations III through V of this Agreement. The annual report will be prepared following the end of the each fiscal year (July 1 to June 30) and will be distributed by TJPA to all of the signatories to this Agreement by July 30 of each year, until TJPA determines that the applicable mitigation measures set forth in Stipulations III through V inclusive, of this Agreement have been completed.

VII. Amendments, Legal Compliance, Termination, and New Agreement

A. Amendments

If any signatory to this Agreement determines that an amendment to its terms should be made, the signatory will immediately consult with the other signatories to this Agreement pursuant to 36 CFR 800.6 (c)(7). This Agreement may be amended only upon written concurrence of all signatory parties.

B. Legal Compliance

All signatories to this agreement shall comply with all applicable laws and regulations of the State of California and the United States.

C. Termination

If the signatory parties to this Agreement do not reach consensus on amendment(s) as provided for in this stipulation, FTA and SHPO may terminate it. The party terminating the Agreement will in writing provide all other signatories with an explanation of the reasons for termination. If the Agreement is not amended or terminated, the Agreement will remain in effect as originally executed, and FTA will notify the other signatories that the attempt to reach consensus on amendment(s) was unsuccessful.

D. Action Following Termination

If this Agreement is terminated by FTA or SHPO for any reason, and FTA determines that the Undertaking will proceed, FTA will execute a new Memorandum of Agreement with the signatories under 36 CFR 800.6.

VIII. Dispute Resolution

Should any signatory to this Agreement object to the manner in which the terms of this Agreement are implemented, or to any documentation prepared in accordance with and subject to the terms of this Agreement, FTA will consult further with the objecting party to resolve the objection. If FTA determines within fourteen (14) days of receipt that such objection cannot be resolved, FTA will forward all documentation relevant to the dispute to the ACHP, including FTA's proposed response to the objection. Within thirty (30) days after receipt of all pertinent documentation, the ACHP will:

- Advise FTA that it concurs in FTA's proposed response, whereupon FTA will respond to the objection accordingly; or

- Provide FTA with recommendations which FTA will take into account in reaching a final decision regarding the dispute.

Any ACHP comment provided in response to FTA's request will be taken into account by FTA with reference only to the subject of the dispute. The signatories' responsibilities to carry out all actions under this Agreement that are not the subject of the dispute will remain unchanged. FTA may authorize TJPA to implement that portion of the Agreement which is subject to dispute after receiving and taking into account, any ACHP comments issued in accordance with this stipulation. FTA's decision regarding resolution of the dispute will be final.

If the ACHP fails to comment within the time period specified in this stipulation, FTA may authorize TJPA to implement that portion of the Agreement which is subject to dispute in accordance with FTA's proposed response to the objection as submitted to the ACHP, and after taking into account any SHPO or ACHP comments. FTA's decision regarding resolution of the dispute will be final.

IX. Public Objections

If any member of the public objects to the manner in which the provisions of this Agreement are implemented, FTA shall immediately notify the other parties in writing of the objection and take the objection into account. FTA shall consult with the objecting party and, if the objecting party so requests, with any or all of the other signatories, for no more than thirty (30) calendar days. Within fourteen (14) calendar days following closure of the consultation period, FTA will render a decision regarding the objection and notify all parties of this decision in writing. In reaching a decision, FTA will take comments from all parties into account. No provision of this stipulation will preclude FTA from continuing to implement any provision of the Agreement that is subject to public objection.

X. Duration

A. Reconsideration

If FTA determines that construction of the Undertaking has not been initiated within ten years following execution of this Agreement, the signatories shall consult to reconsider its terms. Reconsideration may include continuation of the Agreement as originally executed, amendment, or termination in accordance with Stipulation VII.

B. Terms Fulfilled

This Agreement will be in effect through FTA's implementation of the Undertaking, and will terminate and have no further force or effect when FTA, in consultation with the other signatories, determines that the terms of this Agreement have been fulfilled in a satisfactory manner. FTA will provide that other signatories with written notice of its determination and of termination of this Agreement.

Execution and implementation of this Agreement is evidence that FTA has afforded the ACHP a reasonable opportunity to comment on the Undertaking and the effect of the Undertaking on historic properties, and have themselves taken into account the effect of the Undertaking on historic properties.

Federal Transit Administration

By: _____ Date: _____
Title:

California State Historic Preservation Officer

By: _____ Date: _____
Title:

Invited Concurring Parties:

Transbay Joint Powers Authority

By: _____ Date: _____
Title:

City and County of San Francisco

By: _____ Date: _____
Title:

Peninsula Corridor Joint Powers Board

By: _____ Date: _____
Title:

California Department of Transportation

By: _____ Date: _____
Title:

Appendix A: Protective Measures:

Following are mitigation measures to be implemented to protect properties eligible for on in the National Register of Historic Places. The measures described would be implemented by a combination of construction contract specifications, drawings, and provisions, as well as public affairs programs. TJPA and JPB staff would be assigned to work directly with the public to provide project information and to resolve construction-related problems. The TJPA and JPB will work with community residents, elected officials, local businesses, and community organizations to tailor the mitigation program to best meet community needs. Contractors will be monitored to assure that mitigation measures are met.

I. Preconstruction Activities

- **Undertake building data survey.** A pre-construction structural survey would be completed to determine the integrity of existing buildings adjacent to and over the proposed extension. This survey would be used to finalize detailed construction techniques along the alignment and as the baseline for monitoring construction impacts during and following construction. During construction, the TJPA and JPB would monitor adjacent buildings for movement and, if movement is detected, take immediate action to control the movement.

- **Complete detailed geotechnical investigation.** During final design, additional sampling (drilling and core samples) and analyses of subsurface soil/rock conditions would be used to detail and finalize the excavation and its support system to be used in the retained cut, cut-and-cover and tunnel portions of the extension. Current data, including subsurface sampling conducted in 1995 and 1996 for the 1997 Caltrain DEIS/DEIR have been used to identify the proposed construction techniques presented in the following sections, which form the basis for the impact analysis that follows in Section 5.21.

II. General Construction Measures

- **Provide signage.** The TJPA and JPB would work with establishments affected by construction activities. Appropriate signage would be developed and displayed to direct both pedestrian and vehicular traffic to businesses via alternate routes.

- **Install level deck.** Decking at the under-street cut-and-cover sections would be installed flush with the existing street or sidewalk levels.

- **Provide for efficient sidewalk design and maintenance.** Wherever feasible, sidewalks would be maintained at the existing width during construction. Where a sidewalk must be temporarily narrowed during construction (e.g., deck installation), it would be restored to its original width during the majority of construction period. In some places this may require placing the temporary sidewalk actually on the deck. Each sidewalk design should be of good quality and approved by the Resident Engineer prior to construction. Handicapped access would be maintained during construction where feasible.

III. Soils/Geology

- **Underpin existing buildings, where deemed necessary, to protect existing structures from potential damage that could result from excessive ground movements during construction.** The design of the tunneling and the excavation procedures (and construction sequence), and the design of the temporary support system will be developed with the objective of controlling ground deformations within small enough levels to avoid damage to adjacent structures.

Where the risk of damage to adjacent structures is too great, special measures may be implemented such as: (1) underpinning, (2) ground improvement, and/or (3) strengthening of existing structures to mitigate the risks.

The cut-and-cover alignment passes near settlement-sensitive structures in the vicinity of the intersection of Second and Townsend streets, including buildings in the Rincon Point / South Beach Historic Warehouse – Industrial District (i.e., 166-178, 180, , and 350-360 Townsend Street).

The tunnel alignment passes under a number of old and settlement-sensitive structures in the vicinity of the intersection of Second and Townsend streets, including buildings in the Rincon Point / South Beach Historic Warehouse – Industrial District (i.e., 130, 136, 144-146, 148-154, and 162-164 "Townsend Street; 634, 640, 650, and 670-680 Second Street; and 301-321 Brannan Street).

Even though the tunnel will be excavated using the stacked drift method, and even though the tunnel will be excavated in the Franciscan Rock formation, the risk of potential adverse impacts of tunneling on the existing buildings must be assessed, because the rock cover over the tunnel is rather shallow.

As part of the initial studies performed in 1996, preliminary plans were developed to protect/strengthen existing structures to mitigate the risk of adverse impacts of tunneling on existing structures. Underpinning, if it is deemed necessary, is one of the options for mitigating adverse effects of tunneling on the existing buildings. Underpinning involves modification of the foundations of the building so that the superstructure loads can be transferred beyond the zone of influence of tunneling. Underpinning may include internal strengthening of the superstructure, bracing, reinforcing the existing foundations, or replacing the existing foundations with deep foundations that are embedded outside the zone of influence of tunneling.

Other alternatives, in lieu of underpinning, involve strengthening of the rock between the building and the crown of the tunnel. Grouting in combination with inclined pin piles can be used not only to strengthen the rock but to make the rock mass over the tunnel act as a rigid beam, which would allow construction of the tunnels with no adverse effects on the buildings that are supported on shallow foundations over the tunnel.

Preliminary plans for underpinning have been developed that allow cost estimates to be made for underpinning. During the detailed design phase of the Project, underpinning plans will be developed specific to each of the buildings that may require it. It is not necessary at this stage of the Project to develop detailed underpinning plans.

These issues will be addressed on a case by case basis, along the alignment, during the detailed design phase of the Project. The methodology that is proposed for the Caltrain Downtown Extension, i.e. to design the support system to control ground deformations within tolerances, and selectivity strengthen structures that may be too weak to resist even small deformations, was successfully used for the Muni Metro Turnback project, and should be effective for the Caltrain Downtown Extension Project as well.

- Assure proper design and construction of pile supported foundations for structures to control potential settlement of the surface. Stability of excavations resultant impacts on adjacent structures can be controlled within tolerable limits by proper design and implementation of the excavation shoring systems.

IV. Air Emissions

- Upon completion of the construction phase, buildings with visible signs of dirt and debris from the construction site shall be power washed and/or painted (given that permission is obtained from the property owner to gain access to and wash the property with no fee charged by the owner).

V. Vibration

- **Limit or prohibit use of construction techniques that create high vibration levels**. At a minimum, processes such as pile driving would be prohibited at distances less than 250 feet from residences.

- **Restrict procedures that contractors can use in vibration sensitive areas.** It is often possible to employ alternative techniques that create lower vibration levels. For example, unrestricted pile driving is one activity that has considerable potential for causing annoying vibration. Using the cast-in-drilled-hole piling method instead will eliminate most potential for vibration impact from the piling.

- Require vibration monitoring during vibration intensive activities.

- Restrict the hours of vibration intensive activities such as pile driving to weekdays during daytime hours.

- Investigate alternative construction methods and practices to reduce the impacts in coordination with the construction contractor if resident annoyance from vibration becomes a problem.

- Include specific limits, practices and monitoring and reporting procedures for the use of controlled detonation. Controlled detonation may be required during tunnel construction through rock for both the cut-and-cover and stacked-drift construction methods, subject to additional geotechnical investigations and other considerations that would be determined during the final design and construction phases of the project. Any use of controlled detonation would be closely controlled and monitored to avoid damage to existing structures. Specific limits, practices, and monitoring and reporting procedures would be included within the contract documents to ensure that such construction methods, if used, would not exceed safety criteria.

- **Use high-resilience track fasteners or a resiliently supported tie system** for the Caltrain downtown extension for areas projected to exceed vibration criteria.

SCH No.95063004
City Project No. 2000.048E

VOLUME II

TRANSBAY TERMINAL / CALTRAIN DOWNTOWN EXTENSION / REDEVELOPMENT PROJECT

in the City and County of San Francisco

FINAL ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL IMPACT REPORT AND SECTION 4(f) EVALUATION

RESPONSES TO PUBLIC COMMENTS ON THE

DRAFT ENVIRONMENTAL IMPACT STATEMENT/ DRAFT ENVIRONMENTAL IMPACT REPORT AND DRAFT SECTION 4(f) EVALUATION

by the

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION

and the

CITY AND COUNTY OF SAN FRANCISCO,
PENINSULA CORRIDOR JOINT POWERS BOARD, AND
SAN FRANCISCO REDEVELOPMENT AGENCY

March 2004

Responses to Public Comments on the Transbay Terminal/ Caltrain Downtown Extension/Redevelopment Draft Environmental Impact Statement/Environmental Impact Report

INTRODUCTION

The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) was released for public review on October 4, 2002. Notice of availability of the Draft EIS/EIR was published in the *San Francisco Independent* newspaper and posted at the Planning Department. Five hundred fifty newsletters were sent to the mailing list announcing the availability of the Draft EIS/EIR, and a letter was sent directly to property owners whose properties could be directly affected by the Project. Fifty 11"X17" posters were posted throughout the Project area, including along Second Street. Notices were sent to all property owners within 300 feet of the project boundary as required by the San Francisco Administrative Code Chapter 31.

As announced, the Draft EIS/EIR was available for on-line review on the Transbay Joint Powers Authority (TJPA) web site. Three hundred eight two copies, both printed and compact disc versions, of the Draft EIS/EIR were mailed to agencies and individuals. The document was also available for review at the following locations:

- Caltrain Headquarters, Second Floor Reception, 1250 San Carlos Ave., San Carlos
- San Francisco Central Library, 100 Larkin Street (at Grove)
- City of Berkeley Central Library, 2090 Kittredge Street (at Shattuck)
- San Francisco Planning Department, 1660 Mission Street, First Floor Public Information Center
- AC Transit Headquarters, 1660 Franklin Street, Oakland (Board Secretary)
- Main libraries of cities along the Caltrain Corridor

Three public hearings were held:

- November 12, 2002 at 5:00 pm – San Francisco Redevelopment Agency Commission in the San Francisco City Hall,
- November 13, 2002 at 7:00 pm (with an open house at 6:30 pm) – Caltrain Headquarters, San Carlos, California, and
- November 26, 2002 at 12:30 pm – San Francisco Planning Commission in San Francisco City Hall.

At the request of the public, the comment period was extended by the Planning Commission on November 26 to December 20, 2002. The agencies, organizations, associations, businesses, and individuals listed in the table beginning on the next page provided comments on the Draft EIS/EIR.

The final environmental documentation consists of three volumes. Volume I is the Final EIS/EIR (which is the Draft EIS/EIR as amended). Volume II contains responses to public comments on the Draft EIS/EIR, and Volume III contains the written comments and transcripts from the public hearings. In this Volume II, public comments are organized under specific categories. The following table provides the comment number(s) provided by each agency, organization, association, business, or individual along with the page number(s) on which the corresponding comment(s) and response(s) to these comment(s) can be found.

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COMMENTS AND RESPONSES

The following provides all the public comments received on the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Draft Environmental Impact Statement/ Environmental Impact Report. The comments are organized by subject matter, and responses are provided to each comment. In some instances there were many similar comments which are grouped with a single overall response.

1.0 "PURPOSE AND NEED"

1.1.1 AC Transit – Kathleen Kelly, Deputy General Manager, Service Development, December 20, 2002

"In reviewing the draft EIS/EIR, the Planning Committee of AC Transit's Board of Directors raised some concerns. One concern was that the Purpose and Need statement contained on page S-I did not make any mention of improvements for passengers. We propose that the following language be added to the listing of needs addressed by the project: "Improve the Terminal as a place for passengers and the public to use and enjoy."

Response 1.1.1 The Purpose and Need Section of the Final Environmental Impact Statement/Environmental Impact Report (Final EIS/FEIR) has been revised to incorporate this suggestion.

1.1.2 Golden Gate Bridge District, Alan R. Zahradnik, Planning Director, November 19, 2002

"District concurs with the primary objectives of the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project (Project) to improve public access to bus and rail services, modernize the Transbay Terminal, and reduce non-transit vehicle usage."

Response 1.1.2 The EIS/EIR co-lead agencies acknowledge the District's concurrence with the Project's primary objectives.

1.1.3 San Francisco Muni, Jose Cisneros, Deputy General Manager for Capital Planning & External Affairs, December 17, 2002

"We are please to see this project moving forward, as it is a very important project for the future of transportation in San Francisco and for the entire Bay Area. This project is critical as a major regional linkage, and will improve transit services for a wide variety of riders."

Response 1.1.3 The project has been designed to provide a major regional linkage and improve transit services.

1.1.4 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"In recounting the history of recent planning efforts in and around the Transbay Terminal, it is important that this document cite the voter initiative of November 1999 that instituted the current process. Two sections are particularly relevant to this document; Section 2. 'As part of the extension of Caltrain downtown, a new or rebuilt terminal shall be constructed on the present site of the Transbay Transit Terminal serving Caltrain, regional and intercity bus lines, Muni, and high speed rail, and having a convenient connection to BART and Muni Metro...' Section 9. 'The mayor, the Board of Supervisors, and all relevant city officers and agencies are hereby forbidden

from taking any actions that would conflict with the extension of Caltrain to downtown San Francisco, including, but not limited to, pursuing any uses that conflict with Section 2; or undertaking any other land use or development efforts that would conflict with the intent of this legislation.'

"This mandate must be followed in implementing this project. In the case of this document, it should be the guide for determining the environmentally superior project."

Response 1.1.4 It is assumed that the commentor is referring to Proposition H, an initiative passed by the San Francisco voters in 1999. This proposition is referred to in the Draft EIS/EIR seven times as follows:

Summary Chapter, Section S-1, page S-3	Describes the proposed extension of Caltrain as consistent with Proposition H.
Chapter 1 Purpose and Need, Section 1.2.4, page 1-11.	Discusses the importance of the terminal and Caltrain in the context of the voters improving Proposition H. Provides a brief statement of what is contained in the proposition.
Chapter 1- Purpose and Need, Section 1.2.4.5, page 1-16	Notes that Proposition H includes the new Terminal as the preferred location of future high speed rail.
Chapter 2–Description of the Project Alternatives, Section 2.3.I.2, page 2-46	Notes that withdrawal of the Main/Beale site as the site of the new terminal is consistent with Proposition H.
Chapter 6-Financial Analysis, Section 6.6.3, page 6-11.	Notes that the project has local support as evidenced by passage of Proposition H in 1999.
Chapter 8 – Draft 4(f) Evaluation, Section 8.6.1.1, page 8-11	States that the proposed new Terminal site is consistent with Proposition H.
Chapter 8- Draft 4(f) Evaluation, Section 8.6.1.2, page 8-11	States that the withdrawal of the Main/Beale site was consistent with Proposition H.

The comments regarding Sections 2 and 9 of Proposition H as being determinant for the selection of the environmentally superior alternative seem to misconstrue the focus of Proposition H. This voter approved measure concerned extension of the Caltrain tracks, which currently terminate at the Fourth and Townsend Caltrain Station, to a new or rebuilt station on the site of the Transbay Terminal and the pursuit of certain improvements in Caltrain facilities and services. The Environmentally Superior Alternative along with the reasons for its selection are found in Volume I, of this EIS/EIR on page S-27, Section S.7.

The comments also cite Section 9 of the ordinance, but the citations omit a relevant portion of this section. Section 9 of Proposition H provides as follows (including the omitted portion in bold):

> *"The Mayor, the Board of Supervisors, and all relevant city officers and agencies are hereby forbidden from taking any actions that would conflict with the extension of Caltrain to downtown San Francisco, including, but not limited to, pursuing any uses* ***for the present Transbay Terminal site*** *that conflict with Section 2, or undertaking any other land use planning or development efforts that would conflict with the intent of this legislation."*

Such efforts would include development efforts that the City, its officers, or agencies sponsor on public property, or land use planning efforts such as rezoning or redevelopment plan activities that might change the pattern of development in a way that is inconsistent with the intent of the legislation. The EIS/EIR analyzes a project to extend Caltrain to a new or rebuilt terminal that is

proposed on the present site of the Transbay Terminal. This Project meets the intent of Section 2 of Proposition H and does not conflict with Section 9 of Proposition H.

CEQA only requires that the review process for a project and its alternatives satisfy the requirements set forth in State and local law for the conduct and analysis of environmental review. This EIS/EIR complies with these requirements. As set forth in CEQA Guideline Section 15121, an EIR is an informational document which informs the public decisionmakers and the public about the project's physical impacts to the environment, identifies possible ways to minimize significant environmental impacts, and describes reasonable alternatives to the project. It is not an approval of the project described therein.

1.1.5 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"The League of Women Voters of the Bay Area, an inter-League organization of twenty-one local Leagues in the nine Bay Area counties has long advocated for this project because of its importance for regional transit connectivity. Several LWVBA goals are in alignment with the opening Statement of Purpose and Need (S-I), notably:

- "Improve public access to bus and rail services.
- "Enhance connectivity between Caltrain and other major transit systems. Reduce non-transit vehicle usage.
- "Improve regional air quality by reducing auto emissions.
- "Facilitate transit use by developing both market-rate and affordable housing next to a major transit hub.
- "Provide a multi-modal transit facility that meets future transit needs."

Response 1.1.5 The co-lead agencies of the EIS/EIR acknowledge the agreement between the League of Women Voters' goals and the Project's Purpose and Need.

1.1.6 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"BayRail Alliance, a rail transit riders' group consisting mostly of Caltrain riders, wishes to submit the following comments on the draft Transbay Terminal EIS/EIR. We are strong supporters of the Transbay Terminal project, and we feel that it is one of the most exciting public transportation and land use projects in the United States...

"Summary of our Recommendations: Build a new terminal and rail extension that can accommodate the next fifty years of growth for rail and bus transit in the Bay Area and California..."

Response 1.1.6 The EIS/EIR co-lead agencies acknowledge the BayRail Alliance's support for the Transbay Terminal Project. Planning for this Project has been designed to accommodate transit needs far into the future.

1.1.7 Roger Brandon, Speaker, 11/26/02 Public Hearing

"I'm here about the proposal to move the downtown Caltrain terminal from its present location at Fourth and Townsend Streets to First and Mission Streets, going underground on Second Street, having two levels underground at First and Mission Streets. It is expensive to locate a railroad underground. This project raises many other questions. How any trains will be waiting underground to unload at First and Mission Streets during the morning rush hour? "It would be easier to find some other way to get into the downtown business district. If you're familiar with

the, the train system, you know there could be 10 trains arriving in an hour, and several trains leaving in an hour. This proposal does not seem feasible. "Many people do not realize that we already have a good connection with downtown transportation lines for incoming rail passengers. All they have to do is a cross to street to Fourth and Townsend Streets and board a Muni Metro line which will connect them with a transbay rail system.

"We have a transbay connecting system in places. For good reason, San Francisco voters rejected the proposal on the San Francisco ballot one year ago. It is not necessary. It is impractical. This is another waste of money, spending money for the sake of spending money. The present terminal location at Fourth and Townsend Streets is better for the city, and we should reject this underground terminal. We had better find some practical-minded fiscal managers for the city who do not want to put up a new building every time we find a surplus in the accounting. We find that the EIR overlooks many, many obvious problems and that the proposal, it is a, not realistic, not a good idea. And the voters, the voters decided against it a year ago on the ballot. Their good decision should not, should not be overturned. Thank you."

Response 1.1.7 Based on train simulations performed of the worst case conditions, no trains would be waiting to unload. Incoming trains would enter without delay, unload, and either remain in place, move to the tail track, or move to the yard. The proposed terminal would have sufficient capacity to load and unload trains without delays.

Existing connections at the Fourth and Townsend Caltrain Station to downtown San Francisco do not perform as well as the proposed Caltrain Downtown Extension. The time penalty for transferring to and from Muni Metro and local buses at the Fourth and Townsend Caltrain Station severely limits the number of riders willing to take the train directly to the employment center in the Transbay Terminal area. Even though Caltrain serves the entire Peninsula, its potential to serve downtown San Francisco is greatly limited by the time-consuming transfers. Project studies indicate that the existing Muni Metro connection between downtown and Fourth and Townsend requires about 30 to 35 minutes to reliably make the trip in the PM-peak period. During the AM peak, the trip between Fourth and Townsend to downtown requires about 20 minutes on the average. These times include five-minute walk times on the downtown end. The primary problem, particularly in the PM peak period, is the predictability of the Muni Metro service for connecting with Caltrain. Caltrain departures typically are on time and trains depart on average every 20 minutes during the peak periods. Passengers desiring to catch a particular train on a return trip in the afternoon are required to allot sufficient time for the connection to avoid missing the intended train. Connections to the AM reverse commute have a similar problem, affecting the fastest growing segment of the Caltrain ridership.

With the opening of the Millbrae Intermodal Station in June 2003, BART provides another connection between Caltrain and the downtown, but a trip to the BART station near the Transbay Terminal requires more travel time and a larger fare by comparison to the proposed Transbay Terminal Station. Between Millbrae and the Financial District close to the Embarcadero Station, the new BART connection is only slightly faster (two and five minutes) than the existing Caltrain with a Muni Metro connection and costs an additional $1.65 each way.

In contrast, with a downtown station at the Transbay Terminal, Caltrain would serve trips from the entire Peninsula to downtown San Francisco, delivering commuters to the center of the downtown quickly and conveniently without a transfer and thus maximizing the number of transit riders to the downtown from the Peninsula. Extending Caltrain to the Transbay Terminal is projected to make the trip to the Financial District eight to 14 minutes faster than BART, with an assumed passenger facility charge (PFC) of $0.75 at the new terminal, and 10 to 18 minutes

faster than currently possible on Caltrain between Millbrae and the Financial District with the now required transfer at Fourth and Townsend.

It should be noted that the extension of rail tracks from Fourth and Townsend to the Transbay Terminal would also enable a high-speed rail station in the Financial/South of Market District – a primary purpose of the Project. The rail extension would provide direct service for Caltrain and high-speed rail to the proposed multi-modal facility, allowing for a seamless transfer to the other transit providers operating in the new facility.

Multiple alignment alternatives have been reviewed for the extension of Caltrain into Downtown San Francisco, as described in Section 2.3, Volume I, of this EIS/EIR. The Transbay Joint Powers Authority adopted in March 2003 a Locally Preferred Alternative for the Caltrain Downtown Extension, including the Second-to-Main Caltrain Extension Option.

San Francisco voters did not reject but rather passed Proposition H in 1999 affirming support for a Caltrain Downtown Extension.

1.1.8 Jennifer Clary, President, San Francisco Tomorrow, Speaker, 11/26/02 Public Hearing

"I'm president of San Francisco Tomorrow... Norm Rolfe wanted to correct an earlier speaker, and to remind you that Proposition H in November 1999 passed with almost 80 per cent of the vote and designated an extension to Caltrain and a new Transbay Terminal, and continued urban design comments.

Response 1.1.8 The EIS/EIR co-lead agencies concur with Ms. Clary's statements regarding Proposition H.

1.1.9 Michael Rothenberg, December 19, 2002

The Draft EIS/EIR provides a comprehensive view of the project, project alternatives, why it is needed, its overall potential scope, impacts, benefits and costs. The initiating item, as made clear in the document, was the seismic problems of the existing Transbay Terminal and need to replace it with an earthquake-safe terminal. I commend staff of all agencies involved in this project for recognizing, early-on, the opportunity this provided to expand the project scope to include both redevelopment of the surrounding area and extension of Caltrain into a new terminal be built to accommodate its operation.

"The need to replace the current terminal is clear and the opportunity to redevelop the surrounding area should be done where feasible, under either of the "Build" alternatives. However, I believe the Caltrain extension into the terminal should be eliminated from the planning process for the following reasons:

"(1) such proposed extension, estimated to cost in the $800 million range, is far too costly for the potential ridership gain involved.

"(2) the severe funding difficulties in the current economic environment, likely to continue indefinitely, will work against the Caltrain extension proposal and probably keep it from being funded, especially considering its weak economic features and more financially-attractive and cost-effective aspects of competing projects. The current official state budget shortfall, more than $34 billion, will result in severe state funding cutbacks for proposed transportation projects and there are Federal cutbacks to also be considered. Therefore, the Caltrain extension

component should be dropped so the terminal replacement and area redevelopment aspects of the proposal would not be hindered by failure to secure funding for the Caltrain extension component.

"(3) other potentially greater cost-effective approaches benefiting both Caltrain and Muni Metro riders are either available now, or potentially available, and they can be implemented more quickly and should be developed."

"(4) the extension puts all the burden to seek funding and build the Caltrain extension on the project partners (San Francisco Planning Department, the San Francisco Redevelopment Agency, and the Peninsula Rail Joint Powers Board), though it will be designed to allow High Speed Rail trains reach downtown San Francisco. This "piggy-backing" on these three agencies' efforts to reach downtown San Francisco, without itself seeking, obtaining and constructing its own downtown access, is unfair and unethical, and works to divert costs that otherwise should be borne by the California High Speed Rail Authority. (In fact, its own web site, regarding funding and building the system, assumes 15% of the right-of-way is in public ownership and "will be provided to the system at no cost. This cost avoidance amounts to between $373.5 and $499 million ".) High speed rail should bear its own construction costs.

"What is the funding situation of current Caltrain and Muni Metro projects?

"(1) Regarding Caltrain, the DEIS/DEIR notes that Caltrain electrification is based on the assumption that the line will be electrified and new electric powered rolling stock will be purchased. It notes that should electrification not proceed, dual-mode diesel-electric locomotives would need to be purchased and the cost, estimated to be $235 million, added to the Downtown Extension component of the Transbay Terminal project. Peninsula Corridor Joint Powers Board draft minutes for the October 31, 2002 meeting notes that the funding availability is what is driving the electrification project and without money, there is no way the project could move ahead. In that event, I do not believe spending $235 million for the alternative approach, buying dual-mode engines, is either wise or feasible. I certainly do not believe it should be made a part of the Transbay Terminal project scope and its cost borne by the overall project.

"(2) Regarding the Muni Metro, state money, if not cut due to the budget shortfall, should allow the design phase of the northern (Central Subway) portion of the Third Street light rail line to be completed. However, there is no funding for its construction, estimated, in 1997, to cost $750 million. In current dollars, the figure would be even higher.

"What can be done? In place the highly-cost-ineffective Caltrain downtown extension proposal, there are some cost-effective approaches that should be investigated, and design proposals and cost estimates prepared for. The costs for some are almost negligible, compared with the proposed $800 million cost range for the Caltrain extension. I recommend the following be studied:

"(1) Construct a covered pedestrian bridge over (or a pedestrian tunnel under) the westbound King Street traffic lanes, to provide a direct connection between the existing Caltrain Fourth and King Street terminal and the Muni Metro Fourth Street station. This would not only allow riders to go from one system to the other without needing to wait at red traffic lights at that intersection to turn green but also provide protect them from inclement weather. It should attract additional riders to Caltrain and the Muni Metro extension along the Embarcadero and into the Market Street subway.

"(2) Give Muni Metro trains on the surface extension to the Fourth Street station complete traffic signal pre-emption capability, i.e., have all signals turn green along the route whenever a Muni Metro train approaches in either direction. This will speed up the time it takes for riders to get from Market Street to the Caltrain terminal. It should attract yet more riders to Caltrain and the Muni Metro extension along the Embarcadero and into the Market Street subway.

"(3) Increase the frequency of Muni Metro trains between the Market Street subway and the Embarcadero and the Caltrain terminal, as warranted by increased ridership.

"(4) Develop a joint design of the Central Subway portion of the Third Street light rail line to include Caltrain single level electric trains that could run directly into it from the peninsula. Multiple use of this subway would result in shared costs between Muni and the JPB, resulting in lower costs for both agencies and make it easier to secure funding to build it, as it would become a more cost-effective project with the multiple uses I propose. Caltrain would need to be equipped with new single-level diesel-electric motor unit (D/EMU) equipment compatible with the tunnel infrastructure. Being standard gauge, it could possible share common trackage with the Muni Metro trains, or it could be built with separate tracks on its own level, as part of a single construction project. This would be similar to the Market Street Subway, where the two levels housing Muni Metro and BART tracks, and common stations and mezzanines, were built in a single cost-effective project. The new Caltrain D/EMU equipment would run using overhead electric line when in the Central Subway, and would run using the on-board diesel engines (generating electricity to power the wheel motors) when on the existing Caltrain right-of-way between San Francisco and San Jose. Should that line get electrified, this equipment would then get power from the overhead electric line and continue to be used. This would be a more cost-effective solution, when compared with the DEIR/EIS proposal to buy a new set of electric engines for Caltrain, needed to access the Transbay Terminal, costing $235 million. With joint use of the Central Subway and enhanced attractiveness of the Muni Metro surface extension into the Market Street subway, Caltrain riders will have two cost-effective ways to get downtown."

Response 1.1.9 The EIS/EIR co-lead agencies appreciate Mr. Rothenberg's comments regarding the comprehensiveness of the EIS/EIR and inclusion of transit oriented development and the Caltrain Downtown Extension in the Project. They acknowledge Mr. Rothenberg's statement about the need to provide a new Transbay Terminal and an opportunity to provide transit oriented development around the terminal.

Mr. Rothenberg recommends that the Caltrain Downtown Extension be eliminated from the Project. The EIS/EIR notes the multiple benefits from the Downtown Extension. The extension would eliminate the need for train riders to transfer at Fourth and Townsend to reach the employment center of San Francisco, would provide greater seamless connectivity to other forms of transit, reduce travel time for existing passengers as well as attract new passengers, and provide the alignment, trackage, and station for a state-wide high-speed rail system leading to downtown San Francisco.

As part of their action on the FEIS/FEIR, the co-lead agencies will determine if these benefits justify the expenditure of funds for this component of the Project. The co-lead agencies note that the Project, including the Caltrain Downtown Extension, is included as a top priority in the adopted Regional Transportation Plan, as are the other projects identified by Mr. Rothenberg. The regional planning body and regional transportation plan therefore view all of these projects as critical regional priorities. In addition, the voters of the City and County of San Francisco considered this project important enough to pass Proposition H in 1999 directing the City to

implement the Downtown Extension to the site of the current Transbay Terminal, indicating that a majority of City voters think that the project is worthy of implementation.

A refined financial plan has been incorporated into the Final EIS/EIR that includes funding from an increase in bridge tolls on the Bay Bridge (passed by Bay Area voters on March 2, 2004 – Regional Measure 2) and from the California High Speed Rail Project, should that initiative be passed by the voters. SB 1856, signed by the Governor in 2003, places this initiative on the state ballot in November 2004. The co-lead agencies note that the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project funding plan does not include Section 5309 "New Starts" funds, which is a primary funding component for the "Central Subway." Thus, the two projects are not competing for these federal funds.

Mr. Rothenberg's proposal for a shared tunnel under Third Street for the Third Street "Central Subway" would not enable high-speed trains to travel to/from the Transbay Terminal – a requirement of the California High Speed Rail Bond measure. Shared trackage of LRT and Caltrain DMUs, while feasible, would present critical operational challenges; and a multi-level shared tunnel would likely require that the Central Subway be built as a cut-and-cover project (as was done along Market Street for Muni Metro and BART), introducing construction impacts along Third Street.

Transit signal priority technology is already employed on the southbound direction of the N-Judah on the Muni Metro Extension along the Embarcadero. Based on recent discussions with Muni, opportunities for bi-directional transit signal priority technology that would not significantly compromise vehicular traffic flows on streets intersecting with the rail extension are under investigation. Existing ridership levels on the N-Judah line between the Market Street and the Fourth and Townsend Caltrain Terminal do not currently suggest the need for increased capacity. However, Muni would increase frequencies on the N-Judah as demanded by increased rates of ridership.

The need for dual-mode locomotives, should the Caltrain Corridor not be electrified in advance of the Caltrain Downtown Extension, is solely due to the operation of Caltrain in a tunnel from its current terminus at Fourth and King to the Transbay Terminal. Therefore, it is appropriate that such costs be borne by the proposed project. It should be noted, however, some of the existing diesel locomotives may be near the end of their useful economic lives and would need to be replaced or reconditioned regardless of the Downtown Extension Project. Therefore, it would be reasonable to expect that the salvage values of the existing locomotives or reconditioning savings would be credited toward the cost of the dual mode locomotives.

The concept of constructing a covered pedestrian bridge or tunnel connecting Muni and Caltrain at Fourth and King would require a separate study by Muni, the City and County of San Francisco, and the Peninsula Corridor Joint Powers Board. It is outside the scope of the current proposal to extend Caltrain to the Transbay Terminal.

1.1.10 Arthur Meader, Speaker, 11/26/02 Public Hearing

"With regard to the Caltrain issue, and this may be somewhat of an editorial comment, there is a system in place now that I think the city already has spent a lot of money on, basically the N-Judah line which connects perfectly well with Caltrain at Fourth and Townsend. It's a great system. It works very well. I see absolutely no need for the disruption for God knows how long of Second Street or any other street to run an underground train so people from the Peninsula can get to work five minutes faster than they did already.

Response 1.1.10 Please see Responses 1.1.7 and 1.1.9 regarding this subject.

1.1.11 Greg Patterson, December 18, 2002

"I am a resident and owner at 246 Second Street. I am writing to voice important concerns about the Transbay Terminal Project. I am not opposed to improving the Transbay Terminal. What needs to be heard loud and clear, however, is that the proposed project area and changes (as well as the construction process itself) will affect not just business, but the increasing number of currently overlooked San Francisco residents in that same area. Also critical is the character, historical buildings, and quality of life for this growing residential area.

There must be designs and development plans that will only enhance the city, rather than hurt its historical buildings, character and residential neighborhoods."

Response 1.1.11 Effects of the Transbay Terminal Project on business, residences, and historic properties are extensively reviewed in the EIS/EIR, along with proposed mitigation measures to reduce or eliminate these adverse effects. The conceptual designs for the Project have taken into account the overall effects on adjoining communities and have been refined to minimize these impacts, to the extent possible and practicable.

The selected Locally Preferred Alternative (LPA), for instance, would involve tunneling along much of Second Street rather than use of cut-and-cover construction. The selection of this tunneling option as part of the LPA took into account the fact that the cut-and-cover option would introduce more severe construction impacts such as noise, air emissions, and traffic and would require demolition of 10 additional historic structures.

1.1.12 Arthur L. Meader, III, December 19, 2002

"How many people does Caltrain actually move and do the projections for increased ridership, even if to be believed, justify a project of this magnitude now?"

Response 1.1.12 Please see Table 3.1-15 (formerly Table 3.1-14) in Volume I of this EIS/EIR that lists the current and projected Caltrain ridership. Also please see Response 1.1.9.

1.1.13 Yevgeniy Lysyy, Speaker, 11/13/02 Public Hearing

"... What's the reason for this project? ... There are much more important problems in the United States and by people in the Bay Area, in particular, the transportation field. Caltrain, I admire Cal- --admire Caltrain. It's – it's very – very smart way and like for stupid European multiple units. But one train in half an hour, it does not very good service. Trains would be --Trains could be short just for two cars but around every 10 to 15 minutes. Free to commute costs.

"There --there must be a rapid transit across the bay. There is a bus, but it's also goes rarely, once a half an hour, and it's slow. It goes on city streets. It's convenient for people of Palo Alto and Union City but not for people of Sunnyvale on Amtrak, not the rapid transit... So there are --I mean, I'm from Russia, and I often call Americans "practical impractical Americans." And so what do we see – So-called practical Americans about to spend huge money. There is a reason for this project? Yes, but there are much more important --important project. And I could show you picture, for instance. This picture [indicating] shows a train – train coming off. Train – train comes every few minutes. Most – most pleasant – most pleasant subway here. But some use ground transportation. You see many cars, buses, street cars there; and so trust me, all – three or four trains must go train station to over here. And trust me, all the stuff; it's all been problems...I'm sorry... I have no comments to this project."

Response 1.1.13 The Caltrain Downtown Extension has been designed so as not to preclude an ultimate extension of the system across the San Francisco Bay to Oakland. The purpose of and need for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project is described in Chapter 1, Volume I, of this EIS/EIR. Please also see Response 1.1.9.

2.0 PROJECT ALTERNATIVES – TRANSBAY TERMINAL

Note: Comments 2.1.1 through 2.1.11 all concern the West Ramp Alternative for the Transbay Terminal. One response is provided to all of these comments, and this consolidated response can be found following Comment 2.1.11.

2.1 WEST RAMP ALTERNATIVE

2.1.1 AC Transit – Kathleen Kelly, Deputy General Manager, Service Development, December 20, 2002

"AC Transit supports the Environmentally Superior Alternative identified on Page S-27 of the EIS/EIR – the West Ramp Transbay Terminal, Second to Main, Tunneling Option, and Full Build. We believe that the West Ramp alternative strikes an appropriate balance between the needs of bus circulation and the potential for redevelopment in the surrounding area. AC Transit supports redevelopment in the Terminal area as a way to generate both financing for the Terminal and ridership on our service."

2.1.2 SPUR – Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Toward these ends, our preferred set of options for this project are: West Ramp alternative..."

2.1.3 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"For the record, here are San Francisco Tomorrow's preferred alternatives: ...West Ramp Transbay Terminal. This reduces the amount of land required for the ramps, allowing more opportunities for residential development..."

2.1.4 M. Kiesling, Regional Alliance for Transit (RAFT), December 18, 2002

"The bus portion of the project is a well-researched design, and is the result of a decade of work. We support the West Ramp Alternative."

2.1.5 Architecture 21, Michael Kiesling, December 20, 2002

"The terminal capacity and operations described in the DEIR meet all the objectives that I worked for over the past years. I support the West Ramp Alternative as the preferred alternative."

2.1.6 Norman Rolfe Speaker, 11/26/02 Public Hearing

"And the western bus alternative, that's the one which is not in the loop, should be preferred because that would offer the best potential for development, and also it will probably result in a superior urban environment."

2.1.7 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"We are in favor of the West Ramp Alternative. In addition to increased land available for development, its configuration provides better access for bus riders because the buses encircle a single platform."

2.1.8 Margaret Okuzumi, BayRail Alliance, Speaker, 11/13/02 Public Hearing

"Overall, I think as far as the alternatives are concerned, the west ramp alternative looks like it has – you know, it's a superior ramp alternative because it allows for more redevelopment. Just aesthetically also it's better. And so I think we would support that."

2.1.9 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"Summary of our Recommendations: We strongly support the full build, West Ramp alternatives and bus storage facility location.

"On the bus side, we support the West Ramp alternative because it provides adequate capacity and a well-thought-out operating plan while increasing the amount of land available for transit-oriented development. We also support the bus storage area under I-80 as it elegantly meets bus operational needs and it will improve a blighted area."

2.1.10 Andrew Sullivan, Rescue Muni, Speaker, 11/12/02 Public Hearing

"You can take that bus loop down, and use the land to fund the project, and reduce the cost to taxpayers which in this time of economic uncertainty is particularly inappropriate."

2.1.11 Andrew Sullivan, Rescue Muni, December 20, 2002

"Rescue Muni supports the following Alternatives to the Project: .... West Ramp only. We support the West Ramp option versus a full loop ramp because it will free up much more space for Transit-Oriented Development around the site.

Responses 2.1.1 through 2.1.11 The EIS/EIR co-lead agencies acknowledge AC Transit's, SPUR's, San Francisco Tomorrow's, RAFT's, Mr. Kiesling's, Mr. Rolfe's, League of Women Voters', BayRail Alliance's, and Rescue Muni's support of the West Ramp Alternative. This option was adopted in March 2003 by the Transbay Joint Powers Authority (TJPA) as the Locally Preferred Alternative (LPA) for inclusion in this Final EIS/EIR. The West Ramp Option would not include an eastern bus ramp/loop, and was adopted in part because of its beneficial effects on the overall urban environment and the fact that it would make more land available for Transit Oriented Development.

2.2 PEDESTRIAN CONNECTION BETWEEN NEW TERMINAL AND BART STATION

2.2.1 BART – Thomas E. Margro, General Manager, December 20, 2002

"The current surface connection between the Transbay Terminal and the Embarcadero BART/Muni Metro Station, which is described as "convenient" on page 1-16, is actually quite challenging. The description should be revised to illustrate the physical inconvenience of this connection more accurately, specifically referencing the distance, number of street crossings and elevation changes required to transfer between systems.

"Pages 2-36, 2-37 and 5-118 reference a pedestrian tunnel underneath Fremont Street to connect the Transbay Terminal with the Embarcadero BART/Muni Metro Station. If designed appropriately, such a connection could facilitate transfers between regional systems by removing conflicts between surface traffic and transit patrons, shortening transfer times, and reducing elevation changes. BART has recommended this connection in our Embarcadero Station Access Plan, released earlier this year.

"We are concerned that the pedestrian linkage is not sufficiently described or analyzed in the DEIR. Page 5-119 states that only 700 transfers per day are estimated to occur between BART and Caltrain in Downtown San Francisco (only 2% of Caltrain riders, as indicated on page 5-135).

"Given the existing traffic volumes on the Bay Bridge and Highway 101 corridors, we believe this may be an underestimate and would like the Final EIR to provide a justification for this number.

"In addition, the EIR should be revised to describe the connection's "footprint" (including the width, height and depth of the proposed tunnel) and include a diagram illustrating its configuration. Besides reducing street-activating foot traffic, underground passageways may pose security concerns if they are underutilized and poorly designed. The EIR should discuss security-enhancing features such as retail activity, clear sightlines and cameras, and patron amenities. Additionally, the EIR should include and analyze a moving sidewalk option to shorten transfer times, reduce the frequency of missed connections, and improve convenience for senior citizens, people with disabilities, and patrons with luggage.

"We recognize that funding may not be sufficient initially for an underground passageway. Consequently, a clearly-defined aboveground connection should be added as an alternative and analyzed in the Final EIR."

Response 2.2.1 Compared with the existing Caltrain Station at Fourth and Townsend Streets, the proposed Caltrain Station at the Transbay Terminal would provide more convenient connections between Caltrain services and Muni, BART, AC Transit, SamTrans, Golden Gate Transit, and private carriers. The station would also allow Caltrain passengers from the Peninsula to reach downtown San Francisco without transferring to other modes of travel. As noted in Sections 2.2.2.1 and 2.2.2.2, Volume I, of this EIS/EIR, both options for the Caltrain Downtown Extension would include an option for a pedestrian connection underneath Fremont Street to the Embarcadero Muni Metro/BART Station. Please see Section 5.19.6.1, Volume I, of this EIS/EIR for an analysis of the anticipated pedestrian impacts of this design option.

The analysis of transfers between BART and Caltrain in downtown San Francisco in the Draft EIS/EIR was based on projections by the MTC regional model, which was used as an adjunct to the main ridership analysis. Recent regional model projections were performed to check the transfer volumes but did not yield a higher number. The transfers between BART and Caltrain in

downtown San Francisco may be understated due to the lack of model sensitivity or other factors, but no further information is available to determine a more refined transfer volume.

The pedestrian connection between the new Transbay Terminal and the Muni Metro/BART Embarcadero Station would facilitate transfers between regional systems, remove conflicts between surface traffic and transit patrons, shorten transfer times, and reduce elevation changes between these facilities. The co-lead agencies for the EIS/EIR acknowledge that BART has recommended this connection in its Embarcadero Station Access Plan released in 2002.

The San Francisco Planning Department also recognizes some of the design challenges associated with this proposed underground connection, e.g., security and the desire not to pull pedestrians from the street level. The following points summarize the San Francisco Planning Department's position:

- The design of such a pedestrian tunnel should be oriented primarily (or in some fashion limited exclusively) to transit passengers making connections between stations, rather than as an alternative circulation system that might draw general pedestrian traffic from the street level.

- Any retail or services located in the tunnel should not compete with street level commerce and should be oriented to transferring transit patrons (i.e., convenience retail such as newsstands) making connections between stations.

- The design of such a pedestrian tunnel should encourage non-transferring transit passengers to use the street level for general circulation downtown and should direct pedestrians to street level amenities and services.

Should the underground connection not be implemented in the short or long term due to funding constraints, the San Francisco Redevelopment Agency, as part of its redevelopment plan – design for development, will evaluate means by which pedestrian connections between the new Transbay Terminal and existing BART stations (both the Embarcadero and Montgomery stations) could be enhanced. The Redevelopment Plan will propose a large, atrium-style plaza north of the terminal on Mission Street that will greet pedestrians as they enter and exit the terminal. This plaza would be transparent to the sky and open to the public and could accommodate retail space and other amenities to enhance the entrance and exit to the terminal along Mission Street. There would also be improvements to the sidewalks on Mission Street such as landscaping and new street trees. These and other improvements are part of the *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) for the Transbay Redevelopment Area. Potential surface connection improvements to both BART stations could include such actions as:

- Improvements and expansion of sidewalks on Beale, Fremont, and First streets
- Installation of a mid-block pedestrian signal at the intersection of Ecker and Mission Street
- Implementation of traffic calming measures on Stevenson and Jessie streets.

A cross section of the optional passageway is provided in the EIS/EIR (please see Figure 2.2.24 in Volume I), but a plan view of the proposed facility's footprint has yet to be produced. Actual location of the facility would be dependent upon a number of factors including the provision of easy access to the stations at either end, the location of existing underground utilities and other potential design constraints. Detailed design features of this walkway will be developed during final design.

2.2.2 AC Transit – Kathleen Kelly, Deputy General Manager, Service Development, December 20, 2002

"In reviewing the draft EIS/EIR, the Planning Committee of AC Transit's Board of Directors raised some concerns ... They also discussed the potential pedestrian tunnel connecting the Terminal and BART/Muni Metro at Market St. Our view is that this tunnel would help improve the Terminal as a multi-modal transit hub. However, AC Transit is more concerned with building the Terminal and bus facilities in a timely fashion. Therefore, we would suggest that the tunnel to Market St. be built if and only if there are sufficient funds available to complete both the basic project and the pedestrian tunnel. If funds are insufficient, Transbay Terminal could be designed and built in a way that allows the tunnel to be constructed at a later date."

Response 2.2.2 Please see Response 2.2.1 above. The co-lead agencies acknowledge AC Transit's position regarding funding priorities. The new Transbay Terminal will be designed to accommodate (not preclude) construction of an underground connection in either the short or long term.

2.2.3 M. Kiesling, Regional Alliance for Transit (RAFT), December 18, 2002

"Generally, we support the fully tunneled option, leading to a Second to Mission terminal, with no underground connection to BART."

"Specific revisions to these basic alternatives include: A good pedestrian connection to a Market Street subway (Muni/BART) is important, but recommend that other options besides a costly and sterile underground corridor be considered."

Response 2.2.3 Please see Response 2.2.1 above.

2.2.4 Architecture 21, Michael Kiesling, December 20, 2002

"Connection to Market Street: I do not support an underground connection to Market Street, although I do urge surface improvements to both sidewalks along Beale, Fremont and First Streets, and installation of a mid-block pedestrian signal at the intersection of Ecker and Mission Street. Ecker Street has been improved as a pedestrian way between Mission and Market Streets, leading to the Montgomery Street (Muni/BART) station. The intersections of Stevenson and Jessie with Ecker should also be modified to raise the Ecker crossing to slow traffic on Stevenson and Jessie. As a further improvement, the possibility of adding an entrance to the Montgomery Street station near Ecker on Market Street should be assessed."

Response 2.2.4 Please see Response 2.2.1 above.

2.2.5 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"Summary of our Recommendations: Contain overall project cost by eliminating or postponing construction of underground tail tracks and storage yards and the underground pedestrian connection to Market Street; and by avoiding cut-and-cover construction wherever feasible.

"Similarly, postpone constructing the underground pedestrian connection to BART. We ask that it be included in the project design, but this connection can be built at a later date when pedestrian volumes at the terminal increase."

Response 2.2.5 The co-lead agencies for the EIS/EIR acknowledge BayRail Alliance's suggestions regarding funding priorities. The Transbay Joint Powers Authority (TJPA) has adopted a Locally Preferred Alternative (LPA). As part of this adoption, the TJPA recommended

inclusion of the underground connection between the new terminal and the Muni Metro/BART Embarcadero Station, but only if funding can be obtained. This TJPA position is consistent with the BayRail Alliance's recommendation.

2.2.6 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"We are concerned about transit connectivity after construction is completed. The document states that construction of a pedestrian tunnel connecting the TBT to BART is more likely in one configuration than the other. The (perhaps unintended) message seems to be that this connection might easily be dispensed with, especially if financing is short. This is a necessary link in the regional transit network, and is critically important for physically challenged persons. It is not just a rainy day convenience."

Response 2.2.6 The co-lead agencies for the EIS/EIR acknowledge the League of Women Voters' position on this connection. The TJPA has adopted a LPA, and, as part of this adoption, recommended inclusion of the underground connection if funding can be obtained. As stated during the TJPA meeting, this position was not taken to diminish the benefits of the underground connection but rather to recognize Project funding constraints and the need to establish funding priorities.

2.2.7 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"A pedestrian tunnel or other seamless enclosed pedestrian connection between the Transbay Terminal and BART is absolutely essential to make this a regional multi-modal transit facility. It is a necessary link in the regional transit network, and is critically important for physically challenged persons. It is not just a rainy day convenience."

Response 2.2.7 Please see Response 2.2.6 above.

2.2.8 SPUR – Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Toward these ends, our preferred set of options for this project are: ... Pedestrian connection to BART."

Response 2.2.8 Please see Response 2.2.6 above.

2.2.9 Andrew Sullivan, Rescue Muni, Speaker, 11/12/02 Public Hearing

"We favor an underground connection to Muni Embarcadero station. It's much like in Europe where we have connection to SBahn and UBahn to the underground connection. It needs to be considered as part of the ultimate plan so users can stay out of the weather."

Response 2.2.9 Please see Response 2.2.6 above.

2.2.10 Mr. Sheerin, Speaker, 11/13/02 Public Hearing

"And I think the whole project should be built as close as possible to Market Street because that's where you've got the greatest number of people commuting through, and the transit corridor is all right there with the surface rail and the Muni and the BART. And if you live further away, even with an underground terminal, the further away you make it from Market Street, the longer

that transit time is and the longer people's overall commute is. And you really need to make sure that connections are short, simple, easy, and direct as possible."

Response 2.2.10 Please see Response 2.2.6 above.

2.2.11 William Blackwell, Architect, November 12, 2002

"On other items, Joan Kugler insisted that an underground connection to BART is in the TBT project. It is not in the cost estimate, however, and otherwise ignored in the EIS/EIR. I think the underground concourses with moving walkways connecting BART, Caltrain, and TBT are the links that make a multi-modal facility."

Response 2.2.11 The cost for the underground connection to BART is shown in the capital cost tables in Chapters 2 and 6, Volume I, of this Final EIS/EIR. Please see Response 2.2.6.

2.2.12 William Blackwell, Architect, December 2, 2002

"Page 2-6. The diagram shows an underground connection to BART as a design option. The summary on page S-7 says this pedestrian connection would be to the Embarcadero Station, rather than to Montgomery Street. There is only one short paragraph in EIS/EIR (Page 5-118) and the choice of BART stations is not discussed. The BART connection is evidently not in the cost estimate.

"Page 5-118. Pedestrian tunnel if under Fremont Street would be to the BART Embarcadero Station rather than Montgomery Street. See comment, page 2-6. These spacious pedestrian tunnels with moving walkways would greatly enhance public access to bus and rail services, a primary purpose of these projects. See the detail drawing of the underground pedestrian intersection at Second & Minna included with Attachment No.1."

Response 2.2.12 Please see Responses 2.2.1 and 2.2.6 above.

2.2.13 Frances Wong, November 22, 2002

"Para S.7 Concur ... and the Market to Mission pedestrian tunnel build or no build should be in the Superior Alternative statement. This tunnel should be built as part of the initial construction.

"Page 5-118. This tunnel would be a catalyst not only for the one block Fremont Street corridor between the Transbay Terminal and Market Street, but then the area adjoining the perimeter of the Embarcadero station mezzanine concourse. A comfortable climate controlled passageway from work to transit would extend from First and Folsom to Market and Drumm. The pedestrian count for this tunnel underestimates the potential uses and benefits for the redevelopment area."

Response 2.2.13 Please see Responses 2.2.1 and 2.2.6 above.

2.3 CONNECTION TO FERRY SERVICES

2.3.1 Golden Gate Bridge District, Alan R. Zahradnik, Planning Director, November 19, 2002

"EIR Comments/Ferry Building

- "Page 4-52 attributes the decline in use of the Ferry Building "to almost nothing" as being a result of electric trains over the Bay Bridge. The DEIS/DEIR should recognize that the decrease in ferry transportation described only reflects travel to and from the East Bay. Overall decline in ferry transportation to the Ferry Building is primarily attributed to construction of the Bay Bridge (for East Bay communities) and the Golden Gate Bridge (for North Bay communities).
- "The DEIS/DEIR should acknowledge the current growth in ferry transportation at the Ferry Building and its status as a regional transportation facility.

Response 2.3.1 The following two paragraphs have been added to Section 4.16.6.1, Volume I, of the FEIS/FEIR

> *"Caltrans' reports identify the introduction of electric train services on the Bay Bridge as causing the rapid decline in ferry use, and the corresponding decline of the Ferry Building as a transportation hub. In addition, there was also a modal shift from public transit to private automobile use with the opening of the Bay and Golden Gate Bridges, which also contributed to the almost total loss of ferry patronage. During this era, the Transbay Terminal became the primary transit gateway into the city."*
>
> *"It should be noted that as congestion on the Bay and Golden Gate Bridges has increased, the Ferry Building reclaimed some of its historic importance as a transportation terminal. Current plans anticipate 33,000 to 40,000 weekday daily passengers on commuter ferry boats by 2020. (Water Transit Authority Implementation and Operations Plan, Section 2)."*

2.3.2 Architecture 21, Michael Kiesling, December 20, 2002

"Additional transbay commute capacity can be achieved through expansion of the transbay bus service, an integral part of this project, and the growth of the ferry network. AC Transbay service today is a fraction of what it was in the 1970's, so simple expansion to previous levels can add significant capacity. Finally, the expansion of the regional ferry system will take place mainly in the Bay Bridge corridor."

Response 2.3.2 Increases in AC Transit service are expected to be the primary means to meet anticipated peak period Bay Bridge travel demand. Ferry service studies have indicated that while new water transit service will assist in meeting these needs, it cannot meet all the transit demands in the corridor (*Water Transit Authority Implementation and Operations Plan*).

2.3.3 Mr. Sheerin, Speaker, 11/13/02 Public Hearing

"I'm also concerned that there don't seem to be any plans with the Ferry Building or the Ferry terminals; and it seems to me that by – I don't know if it's possible, but by shifting it a block east, it might be possible to make another underground connection to the Ferry terminals or overhead pedestrian passways to make it possible to have more direct connections possibly even with a small people mover. But I think that's very important that you give people an easy way to get from the Ferry Terminal to the integrated terminal."

Response 2.3.3 It would not be possible to move the proposed new Transbay Terminal, given that Proposition H requires that the new facility be built on the site of the current terminal.

However, as part of the proposed redevelopment area's design for development, the San Francisco Redevelopment Agency will evaluate means by which pedestrian connections between the new Transbay Terminal and the Ferry Building could be enhanced. Potential surface connection improvements to the Ferry Building could include improvements and expansion of sidewalks on Mission, Beale, Fremont, and Main Streets. The recently released *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) proposes sidewalk improvements to all the streets in the proposed Project Area, though not expansion of sidewalks on Mission and Fremont Streets (or other high-traffic vehicular corridors). Howard, Folsom, Beale, and Main Streets would have widened sidewalks, and all streets would have improved landscaping and new street trees.

2.4 PEDESTRIAN/BICYCLE/ACCESSIBILITY

2.4.1 Leah Shahum, Executive Director, San Francisco Bicycle Coalition (SFBC), December 5, 2002

"I am writing on behalf of the San Francisco Bicycle Coalition (SFBC) in response to the Draft EIS/EIR for evaluation of the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. The SFBC is a nonprofit advocacy group promoting bicycling for everyday transportation. In addition to our 4,000 members, we also work on behalf of the estimated 30,000 regular bike riders in San Francisco. The SFBC has been a supporter of this project, in general.

"The SFBC has serious concerns about the severe underestimation of bicycle parking spaces recommended in the proposed project. The proposed 105 bike parking spaces in the new Transbay Terminal is inadequate. The project should provide at least 300 indoor bike parking spaces, which meet the city's legal requirements for new commercial buildings (Section 155.4 of the S.F. Planning Code).

"Bicycle parking at transit centers in the Bay Area has proved immediately successful and popular in the past few years. The Berkeley BART bicycle station regularly reaches capacity at its 75-space bike parking station. The Palo Alto Caltrain bike station regularly parks 60 bikes per day.

"The S.F. Embarcadero BART bike station, planned to open in early 2003, is expected to hold 150 bicycles. And Caltrain's planned bike station at the S.F. Fourth & King site, projected to start operation in Fall 2003 will hold at least 100 bikes. Given the central location and high regional transit ridership expectancy for the new Transbay Terminal, it will clearly call for significantly more bike parking spaces than the more constrained transit stations listed prior.

"Simply considering the bicycle ridership levels in San Francisco and, specifically, on Caltrain proves the wisdom of increasing the number of Transbay Terminal bike spots. In San Francisco, an estimated 30,000 residents bike regularly for transportation, according to a 1998 David Binder Research Poll. This number is expected to have risen in the past four years, and does not even include non SF residents traveling to the city via combined means of transit and bikes.

"That multi-modal commute choice of bikes and transit is increasingly popular in the Bay Area, as evidenced by the fact that 6% of Caltrain's riders bring their bikes on the trains, a figure that is actually over capacity.

"While most transit systems in the Bay Area accommodate bicycles at some level – including AC Transit, Samtrans, Golden Gate Transit, BART, and Caltrain – there is clearly a capacity problem, as evidenced by the regular overflow of bikes on Caltrain. In addition, the buses hold only up to two bicycles each. As space on transit is limited, indoor, secure bicycle parking must be provided at as many transit stations – particularly regional ones – as possible.

"We formally request that the Transbay Terminal project increase its bike parking units to 300 to be located indoors in a secure, visible, easily reached location.

In addition, a change should be made in the EIR to reflect that a stretch of Howard St. does now have bike lanes between 5th and 11th Streets. The SF Department of Parking and Traffic is currently considering a proposal to extend those bike lanes eastward to Fremont Street. Bike lanes on Howard Street will only increase the ease and frequency of bike trips to and from the Transbay Terminal."

Response 2.4.1 Bicycle access and storage are important aspects of the Transbay Terminal design. Program space, although not specifically allocated at this stage of conceptual planning and design, has been established in general terms to be consistent with multi-modal facilities with similar passenger volumes. Provisions for bicycle storage and a staffed bike station will be considered in the design process, and the TJPA will assure that there is sufficient space for bicycle parking to be consistent with demand.

At this stage of planning, the estimated demand for bike parking at the new Transbay Terminal has been recalculated as 232 spaces. If needed, a facility that double- or triple-stacks bicycles (like the Berkeley and Embarcadero bike stations) could be provided in the same overall space. The methodology used to derive this estimate along with revised assumptions is fully described in Section 5.19.6.2 Bicycle Impacts, Volume I, of this EIS/EIR.

Presently, most of the AC Transit buses can accommodate two bikes, although 39 of AC Transit's MCI's can handle six bikes. Section 3.4.2.1, Volume I, of the Final EIS/EIR has been revised to reflect the striping of a bike lane on the north side of Howard Street between Fifth and Eleventh Streets.

2.4.2 Golden Gate Bridge District, Alan R. Zahradnik, Planning Director, November 19, 2002

"EIR Comments/Pedestrian Impacts

- "Page 3-44 of the DEIS/DEIR provides an accurate portrayal of sidewalk conditions at GGT bus stops on Fremont and Mission streets near TTT. It accurately describes potential conflicts between queuing bus passengers and sidewalk pedestrians on sidewalks that are narrow and furnished with street furniture that effectively reduces pedestrian space. The DEIS/DEIR also highlights the benefits for both queuing bus passengers and sidewalk pedestrians of the Fremont Street overhang of the existing 350 Mission Street building. District strongly advocates the use of overhangs for new buildings constructed in San Francisco with adjoining bus stops to reduce sidewalk obstacles.
- "The DEIS/DEIR also discusses the general lack of curb space for GGT buses on Fremont Street. For this reason, GGT Routes 2, 4, and 8 completely bypass the TTT area. District supports expansion of GGT curb space near TTT to enhance bus passenger queuing space and facilitate consolidated bus operations.
- "Page 5-131 summarizes pedestrian levels-of-service in the TTT study area. The poor levels-of-service at the Mission and Fremont street intersection highlight the need to make improvements at the street level for bus queuing passengers and sidewalk pedestrians.
- "Since a mid-block pedestrian analysis for the sidewalks on Fremont Street between Market and Mission, and between Mission and Howard streets, was not performed, the EIR does not address levels of sidewalk congestion that could be exacerbated for 2020 Baseline Plus Project conditions.
- "Page 5-136 recommends potential mitigating measures to enhance pedestrian flow near TTT. District supports these strategies, not only for TTT area but for all new buildings built in San Francisco."

"EIS/EIR Comments/Paratransit and Taxi Services

- "DEIS/DEIR should mention that a new TTT should be designed to provide a street level paratransit transfer location adjoining the primary taxi zones as well as the ground level terminal facilities between Fremont Street and First Street. Enclosed is an October 24, 2000 letter from the Partnership Transit Coordination Committee to Metropolitan Transportation

Commission (MTC) pertaining to many design-related issues. It is offered for your information."

Response 2.4.2 The request from Golden Gate Transit for use of overhangs for new buildings constructed in San Francisco with adjoining bus stops to reduce sidewalk obstacles will be provided to San Francisco Planning Department case planners with projects in the area around the terminal for consideration during project review for those proposed projects. The request for additional curb space will be communicated to the planning and design team for the new terminal for coordination with other City agencies such as the Department of Parking and Traffic and ISCOTT (the City's Interdepartmental Staff Committee on Traffic and Transportation). The mitigation measures listed on page 5-136, Volume I, of the EIS/EIR will be incorporated into the Project design as much as feasible, although there may be some restrictions on limiting newspaper boxer or magazine racks.

As noted in Section 5.19.6.1 Pedestrian Impacts, not all of the increase in pedestrian activity anticipated for year 2020 around the Transbay Terminal is attributable to the Transbay Terminal/Caltrain Downtown Extension Project, including area redevelopment. A considerable increase in pedestrian movements results from area growth that will occur even without the project between 2001 and 2020. Only about a seven percent increase (9,482) in total pedestrian volumes by 2020 would actually be generated by the project of 140,845 pedestrian trips among the traffic zones analyzed.

As described in Section 5.19.6.1, Pedestrian Impacts, Volume I, the pedestrian level of service analysis was performed in accordance with city requirements at the corners and crosswalks of five intersections surrounding the Transbay Terminal. Qualitative observations of the existing conditions on Fremont Street were documented and summarized in Section 3.4.1.3, Special Pedestrian Conditions, Volume I. These observations included descriptions of the sidewalk, physical design characteristics, and bus loading patterns."

Curb space would be allocated for paratransit on street level at locations consistent with ADA requirements.

2.4.3 Partnership Transit Coordination Committee (PTCC) Accessibility Committee, October 24, 2000

"At the September 11, 2000 meeting of the PTCC Accessibility Committee, Rod McMillan, MTC staff, gave an informative presentation on the status of the Transbay Terminal (TBT) Improvement Plan, the regional effort to replace the existing San Francisco Transbay Transit terminal with a new, state-of-the-art building and multi-modal center. On October 10, 2000, a subcommittee of the Accessibility Committee met with Mr. McMillan to further review the conceptual plan and report back to the full Committee. As a result of this review, PTCC can advise MTC that it supports the plan and would like to compliment the design that was ultimately developed as well as the consultants' obvious hard work. The Accessibility Committee would also like to forward to MTC and the Bay Area Toll Authority (BATA) the following comments and recommendations regarding the plan which were adopted by the Accessibility Committee at its October 23, 2000 meeting:

"1. TBT should be designed to provide a street level paratransit transfer location adjoining the primary taxis zone as well as the ground level terminal facilities between Fremont and First Street. The location should enable paratransit vehicles to approach from all directions, facilitate connections between paratransit van and taxi service, and minimize the distance between terminal facilities and transfer location for disabled passengers. Referring to the current concept

design, a location on the north side of Natoma Street between First and Fremont St. west of the proposed mid-block crosswalk appears to meet this criteria. Less vehicle traffic on Natoma Street would minimize conflicts with other vehicles and minimize potential hazards to transferring passengers. Because as many as four paratransit providers may use the transfer location, the location should be approximately 100 ft. long, sufficient to accommodate up to three vans or small buses.

"2. The facilities adjoining the transfer location should be in keeping with adopted regional criteria for paratransit transfer locations. According to these criteria, the facilities should:

- "be clean, safe, sheltered, well-lit and provide seating; provide accessible telephones and restrooms near the location;
- "be open during comparable hours to the paratransit service, with ample activity and people nearby;
- "be clearly marked with the adopted regional transfer location sign.

"In accordance with these criteria, the terminal building should be designed so that restroom, escalator, elevator, telephone, seating, ticketing, and staffed facilities are located as close as feasible to the paratransit transfer site.

"3. As a new state-of-the-art transportation center, TBT presents a unique opportunity to create a state-of-the-art accessible facility. Innovative accessible features and concepts should be incorporation into the design where ever possible. These include:

- "minimizing distance, slope, and travel requirements between accessible features within the facility
- "providing restrooms and telephones on every floor; providing elevators and escalators between all floors and within each section of the proposed three section TBT building. (Accessibility Committee understands that space is constrained in the portion of TBT containing the ground floor Muni/Golden Gate Transit bus-bays. However, Accessibility Committee believes an elevator connecting these bays to all other transit levels is a necessity for mobility impaired customers.)
- "orientation surfacing as well as warning tiles (easily recognized by color, contrast, texture and sound) to assist visually impaired passengers with navigation through out the building;
- "crosswalks and paths of travel clearly signed or marked and indicated by a central tactile guideline;
- "providing tactile orientation maps at every building entrance;
- "clear paths of travel, free of street furniture and other architectural obstructions between entrances and boarding areas;
- "providing Braille signage and information to indicate bus poles, ticket machines, rest rooms, elevators, and other essential landmarks;
- using "talking" or auditory signs in addition to visual signs;
- "provide the means to make visual as well as audible public service announcements through-out the station; .windscreens where needed;
- other concepts as needed.

"Accessibility Committee is in the process of preparing a list of accessible design guidelines (to be forwarded to you under separate cover) that will include specific criteria for such components as bus bays, cross walks, pathways, bus pole and sign locations.

"4. An accessibility professional who is expert in the ADA Accessibility Guidelines N (ADAAG) and California Title 24 requirements must be part of the design team as the project moves forward. This project provides an opportunity to design and build a state of the art accessible transit

facility that incorporates the principals of universal design to insure that the terminal is user-friendly and accessible to all transit customers. This opportunity can be realized by:

- "including an accessible transit professional on the design team;
- "including passengers with disabilities in the public review process to obtain feedback on the design of TBT;
- "inviting the PTCC Accessibility Committee to provide input and review and comment on the plan.

Response 2.4.3 The new Transbay Terminal will be designed to be user-friendly and accessible to all transit customers. The TJPA intends to ensure participation of all members of the community in the terminal's design. The detailed layout and inner workings of the terminal and street frontages will be developed following the conclusion of the EIS/EIR process and securing of the Record of Decision on the EIS. The building, street, curb and sidewalk designs will be in accordance with all ADA requirements and the designs will strive to meet the adopted goals of the PTCC Accessibility Committee.

The linear nature of the terminal creates significant curb space and building frontages at every block of the facility. Planning and design that capitalizes on frontages immediately adjacent to fully ADA accessible elevators, telephones, ticketing, and restrooms will provide efficient and comfortable patronage for all passengers, and specifically disabled passengers.

Wayfinding for terminal users, whether they are daily commuters or the one-time visitor, will be given a high priority. Tactile wayfinding using surfacing, Braille maps, signage and transit information, audio visual signage and clear paths of flow are all vital ingredients to achieving the goal of a first-class intermodal facility.

The co-lead agencies request that the list of accessible design guidelines from the PTCC be forwarded to the Transbay Joint Powers Authority prior to initiation of design on the terminal. The PTCC Accessibility Subcommittee is encouraged to continue to participate in the design and review of the Terminal when the project moves from the environmental process into more detailed design.

2.4.4 Margaret Okuzumi, BayRail Alliance, Speaker, 11/12/02 Public Hearing

"The projected bicycle parking figure at a Transbay Terminal seems pretty low. It's listed as 105. I'm sure that the San Francisco Bicycle Coalition might have some more input on this. I know the Palo Alto bike station is currently parking 60 bikes a day. And ridership at that station is lower than projected at the Transbay Terminal, especially 20 years from now."

Response 2.4.4 Please see Response 2.4.1.

2.4.5 Margaret Okuzumi, BayRail Alliance, Speaker, 11/13/02 Public Hearing

"Also, the amount of bicycle storage at the terminal seems a bit low. I mentioned last night that the Palo Alto Bike station is currently parking 60 bicycles a day, and their patronage is not as high as – as Fourth and King right now, especially projecting out 20 years into the future, and it seems low."

Response 2.4.5 Please see Response 2.4.1.

2.4.6 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"Bicycle Accommodation: The projected number of bike parking spaces required at the Transbay Terminal, 105, is extremely low. The Palo Alto Caltrain station, for example, has approximately 400 class 1 bike parking spaces (open-air racks), 3 dozen class 2 spaces (bike lockers) and 90 class 3 spaces (bike parking spaces monitored by staff).

"On-board bicycle accommodations will be limited to 32 spaces with the new Baby Bullet cars even as demand grows. Bicycle-riding Caltrain patrons have long complained about the problem of "bumping", or being unable to board a train that is already full of bikes. The problem has been exacerbated by lack of secure bike parking at stations.

"It is much easier to provide additional bicycle facilities at the station than to expand on-board bicycle capacity. It is highly desirable to encourage bicycling in lieu of driving to the station, to reduce automobile congestion in the vicinity of the station. It is also as much as ten times cheaper to provide bike parking than automobile parking.

"The Nakano train station in Tokyo has a staffed bike parking garage which accommodates over 3600 bikes in a double-decker, two-story structure, and it is regularly 80% full. Over 55 train stations in Japan have bike parking facilities which have capacity for more than 2000 bikes. Similarly, many train stations in Europe have bike parking facilities which accommodate from 300 to 3,000 bikes, depending on passenger volume at the station. For example, Munster station has bike parking for 3,000 bikes; Rheine, 1,500; Oldenburg, 1,500; Bremen, 500; and Hanover, 350. (see Figure 4)

"The world-class, high-volume Transbay Terminal is sure to see much greater bicyclist patronage than the smaller Palo Alto station does today. We ask that you greatly increase the amount of bike parking at the Transbay Terminal, and include provisions for a staffed bike station."

Response 2.4.6 Please see Response 2.4.1.

2.4.7 Andrew Sullivan, Rescue Muni, December 20, 2002

"Bike Storage: Significantly increase bike storage at the new terminal over the 105 spaces planned. We suggest 1,000 spaces."

Response 2.4.7 Please see Response 2.4.1.

2.4.8 Transportation Solutions Defense and Education Fund (TRANSDEF), David Shronbrunn, President, December 20, 2002

"5-138: Please explain the methodology used in developing the surprisingly low projected need for bike storage."

Response 2.4.8 Please see Response 2.4.1.

2.4.9 City and County of San Francisco; Traffic Engineering Division; Bond Yee, Deputy Director and City Traffic Engineer, Jack Fleck, Senior Transportation Engineer, Jerry Robbins, Transit Planner V, December 18, 2002

"It is not clear that the LOS calculations account for increased pedestrian volumes at intersections like First/Mission and Fremont/Mission. These intersections used to be much more congested in the pre-BART era when there were more pedestrians going to and from the TBT at peak hours. Does the report include the impact of increased ped crossings?"

"Bicycles -Page 3-49- DPT is proposing to add bike lanes on Howard Street from Fremont Street to 5th Street. Bike lanes are already installed on Howard from 5th to 11th.

"Page 5-138 -The plan for 105 bike storage spaces is good, but there should be a provision for additional space if needed. We do expect large increases in bike riders as bicycle facilities continue to improve in San Francisco."

Response 2.4.9 The LOS analysis in Section 5.19.6, Volume I, addresses the increases in pedestrian volumes that are anticipated to result from the project (including redevelopment and increased ridership on AC Transit and Caltrain) by the year 2020, The analysis includes the intersections, First/Mission and Fremont/Mission, and estimates the level of service at the crosswalks and corners of these intersections. This analysis incorporates the pedestrian volumes that are expected to occur as a result of growth in the Transbay Terminal Area unrelated to the project.

Section 3.4.2.1, Volume I, of this Final EIS/EIR has been revised to reflect the installation of the bike lane on the north side of Howard Street between Fifth and Eleventh Streets. Please also see Response 2.4.1.

2.4.10 BAAQMD, William C. Norton, Executive Officer/ APCO, November 21, 2002

"We believe that if the Terminal is to function optimally as a multi-modal facility then the design of the building and the surrounding redeveloped area must improve access to pedestrians and bicyclists. The DEIR indicates that the future project scenarios would significantly increase the number of pedestrians on sidewalks and at intersections in the vicinity of the Terminal and result in a significant impact. The measures in the DEIR to improve pedestrian access appear insufficient to mitigate the impacts to less than significant. We request that the FEIR consider improving pedestrian access by expanding the sidewalks and narrowing street widths in the vicinity of the Terminal. The DEIR also indicates that future project scenarios would result in an almost ten-fold increase in bicyclists in the vicinity of the Terminal. To integrate bicycling with the multi-modal Terminal, we recommend that the Project link planned bicycle routes along Howard and Second Streets with the Terminal. Once inside the Terminal, bicyclists should be able to easily connect with buses and trains or have the option of on-site storage, such as a bike station."

Response 2.4.10 During the planning for the new Transbay Terminal bus facility, one of the goals was that any changes in the area surrounding the terminal be balanced so that any one transportation mode is not favored over another. Increasing sidewalk widths is one of the proposals included in the recently released *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) produced by the San Francisco Redevelopment Agency (please see Section 2.2.4.2 and Appendix F, Volume I, of this Final EIS/EIR). Please also see Responses 2.4.1 and 2.4.12.

2.4.11 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"Pedestrian Access (post construction) (Page 5-135). The underground connection from the terminal to BART seems important to provide transit linkage, to serve physically challenged riders, to relieve sidewalk congestion and exposure to wind, rain, and traffic mishaps. While

restricted vehicle access is a corollary of intense transit-oriented development, poor Pedestrian Levels of Service would seem to suggest more specific mitigations.

- "Is connection to buildings with commercial offerings either below grade or from bus level skyway possible?
- "Would the linkage save on total trip times, attracting more transit ridership?
- "Could a table be provided summing potential users (bus, Caltrain, high speed rail passengers)?
- "How does the Great Expectations plan in the DEIR/EIS compare with that MTC analyzed?

Response 2.4.11 As noted in Sections 2.2.2.1 and 2.2.2.2, Volume I, both of the proposed alignments for the Caltrain downtown extension include a design option for a pedestrian connection underneath Fremont Street to the Embarcadero Muni Metro/BART Station. As noted in Section 5.19.6.1, Volume I, of the EIS/EIR, the pedestrian tunnel would divert some of the pedestrian traffic from surface streets. The Level of Service (LOS) analysis indicates that the pedestrian tunnel would improve the performance of the southern crosswalk of the Mission/Fremont intersection from LOS C to LOS B. However, none of the other crosswalks or corners of the five intersections studied in the LOS analysis would be affected by the pedestrian tunnel.

Assuming that many transit users of the Transbay Terminal would find the pedestrian connection underneath Fremont Street convenient just to cross Market Street away from traffic and weather, Table A illustrates what the range of users might be. It is estimated that those connecting to BART and Muni Metro would make up about one-third of the total low case, or about 2,400 daily users.

Table A
Potential Daily Users of the Proposed Fremont Street Pedestrian Tunnel

Case	High-Speed Rail	Caltrain	AC Transit	Total
Low Estimate	2,300	3,400	2,400	8,100
High Estimate	4,700	6,800	5,400	16,900

Note: Assumes range of 10% (low) to 25% (high) of transit passengers using the tunnel to cross Market Street in addition to those connecting with BART or Muni Metro.

Source: Parsons Corporation, September 2003

Connections to buildings with commercial offerings either below grade or from bus level skyway may be possible but will depend on a variety of factors to be explored during final design. The suggestion will be communicated to the team to be selected for the design of the new terminal. It should be noted, however, that the San Francisco Planning Department discourages skyways across rights-of-way (including alleys) in accordance with the San Francisco General Plan. Such skyways block public view corridors and reduce sunlight/sky exposure, in addition to pulling pedestrians off of the streets. Below grade connections between buildings are evaluated by the Planning Department on a case-by-case basis.

The Transbay Terminal concept as identified in Working Paper #12, Terminal Design Modifications and Improvements (MTC, March 2001), and the West Ramp Alternative described in the Draft EIS/EIR are the same.

2.4.12 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Pedestrians

- "The Second-to-Main and Second-to-Mission Caltrain Extension Alternatives both include a design option for a pedestrian connection underneath Fremont Street to the BART Embarcadero Station (S-7, also 5-118). However, only 0.16% of people walked, 4.63% took BART, and 0.23% took Muni rail to get to the Transbay Terminal in the morning (3-46). Also, while 78% of TBT patrons walked from the Terminal to their destinations in SF in the mornings, only 1.7% of them use BART and 2.96% of them use Muni rail. Please explain how the pedestrian tunnel to BART/Muni would significantly promote linked transit ridership and stem pedestrian reductions in the TBT area.
- "Special Pedestrian Conditions concerning casual carpool and Golden Gate Transit queues are mentioned (3-43); however, there are no mitigation measures proposed for these conditions.
- "The EIS makes no mention of current or future obstacles to pedestrians with disabilities, or how the TBT intends to comply with the Americans with Disabilities Act."

"Bicycles: The EIS adequately covers the issues of bike lanes, bike ridership, and bike storage. However, it also needs to identify short-term bike parking at the TBT or on the sidewalks around it as a way to promote bike ridership and lessen automobile impacts."

Response 2.4.12 The increased convenience of a pedestrian tunnel for transferring between BART and Muni Metro under Market Street to the modes using the Terminal would likely increase the use of transit. Inconvenience is frequently given as a major reason for not taking transit. Factors like convenience, reduced exposure to weather or traffic are difficult to model, however, with the result that the estimates of connecting transit trips based on existing conditions may not be accurate. Please see Response 2.4.11 for a range of estimates of potential pedestrian tunnel users that also includes those walking to land uses north of Market Street.

Please see Response 2.4.3 regarding the anticipated full compliance with ADA requirements during the design and development of the Transbay Terminal and Caltrain Downtown Extension. Bike racks for temporary storage will be accommodated at accessible street level locations near the Terminal in areas providing good levels of visibility.

Section 5.19.6.1 Pedestrian Impacts, Volume I, proposes mitigation measures that would improve pedestrian conditions in the areas around the new terminal. This area includes the segments of Fremont Street that are used for Golden Gate Transit queuing as well as the segment of Beale used for casual carpool. The proposed measures include widening sidewalks and corners along streets and intersections. Other signalization improvements for pedestrian crossings at key intersections are also described in Section 5.19.6.1. The San Francisco Redevelopment Agency recently released the *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003). This document includes proposed sidewalk widenings along Folsom, Beale, Main, and Spear Streets (please see Section 2.2.4.2 and Appendix F, Volume I, of this Final EIS/EIR).

2.5 Relationship to Third Street Light Rail (IOS and New Central Subway), Geary Corridor, and Transbay Crossing

2.5.1 San Francisco Muni, Jose Cisneros, Deputy General Manager for Capital Planning & External Affairs, December 17, 2002

"Our other main concern is that Muni has done a significant amount of work on a future Geary light rail subway connecting to Transbay Terminal, which is not referenced in this document. Muni worked with the consultants and staff on the January 2001 MTC study to ensure that provisions for future Geary light rail subway would be included in the new facility, including protection of right-of-way, provision for terminal space in the facility, and other aspects needed to integrate a future Geary LRT line into the facility. We recommend that the work done for the 2001 MTC study be reviewed in this light, and appropriate modifications be made to this document to reflect that work, so that the concepts developed at that time can be developed and expanded in the CER and PE phases of the Transbay Terminal project. Our primary concern is that subway access under Folsom (or Howard) be maintained for the Geary LRT branch off of the Central Subway between Third Street and the Transbay Terminal, and that terminal space for the line be reserved. We want to ensure that neither the Caltrain extension nor the Geary LRT subway project proceed with design assumptions that would preclude the other project from proceeding, particularly at locations where the alignments meet and/or cross. Again, we would be happy to meet to discuss the Geary LRT project in greater detail.

Chapter 2 -Description of the Project Alternatives: This section should include descriptions of the future Geary light rail subway and its interface with the Transbay Terminal and the Caltrain alignment. There should be a new section that describes the route that the subway would take from a junction with the Central Subway at Third & Folsom (existing design concept), or possibly from Third & Howard, then under Folsom or Howard to Transbay Terminal. This section should describe how the subway would be related to the Caltrain underground alignment and any other underground features and how the station would be integrated into the Transbay Terminal. Muni's proposal for all of these features was presented to the MTC project team in 2000. Attachment A is a map from the Executive Summary of the project report that indicates two conceptual alignments for the Transbay Terminal branch off of the Central Subway. Although the alignments shown do not reflect our precise preferred alignment, they do indicate that this issue was known at the time the report was issued in January 2001. Attachment B is more detailed information on the Geary project, from the April 1995 Geary Corridor System Planning Study.

"Page 2-6 -Section 2.2 Project Components: Include a description of the future Geary LRT line as an additional component of the project.

"Page 2-7 -Section 2.2.1 Transbay Terminal Alternatives: Include a description of the future Geary LRT line as an additional component of the project.

"Page 2-8 -Figure 2.2-1 -Transbay Terminal West Ramp Alternative Map: The location of the future Geary LRT line should be indicated on this map.

"Page 2-9 -Section 2.2.1.1 -Transbay Terminal West Ramp Alternative: In the discussion on the floor plan, note that space for a Geary LRT subway station would need to be accommodated in the design.

"Page 2-16, Section 2.2.1.2, Transbay Terminal Loop Ramp Alternative: In the discussion on the floor plan, note that space for a Geary LRT subway station would need to be accommodated in the design.

"Page 2-17, Figure 2.2-7, Transbay Terminal Loop Ramp Alternative Map: The location of the future Geary LRT line should be indicated on this map.

"Page 2-18, Section 2.2.1.3, Transbay Terminal Construction: This section should include a description of how provisions for the Geary LRT subway would be made in advance of the actual construction of the subway. It is likely that the new Transbay Terminal would be built before the Geary subway, so it would be important to ensure that an appropriate "box" be built at the time the terminal is constructed to reserve space for the subway and station.

"Page 2-28 and 2-29 - Figure 2.2-15 and 2.2-16 -Plan & Profile Drawings: The location of the future Geary LRT line should be indicated on these drawings.

"Page 2-32 and 2-33 - Figure 2.2-19 and 2.2-20 -Plan & Profile Drawings: The location of the future Geary LRT line should be indicated on these drawings.

"Section 3.1.5 - Future Rail Transit and Bus Service - Pages 3-26 through 3-28: This section should include a major Geary rail or bus project as a possible future transit project in the study area. Muni performed a Geary Corridor Planning study in 1994 and 1995, and we have attached excerpts from the Final Report showing the project recommendations and alternatives for terminal configurations (Attachment B). The Geary study recommended moving forward to a Major Investment Study (MIS) and EIS/EIR with three alternatives:

- "Light Rail, all-surface configuration (to Transbay Terminal on a street alignment basically the same as discussed for the E and F-lines in these comments).
- "Light Rail, surface configuration west of Laguna, subway east of Laguna
- "Trolley Coach, surface configuration west of Laguna, subway east of Laguna

"The Geary alternatives with subway configurations contained several proposed downtown routings for the subway. The most likely alternative is for the Geary line to use the Central Subway in the downtown area through the Union Square area and then into South of Market, with a branch off of the Central Subway at Third Street & Folsom (or Howard) for the Geary line, proceeding easterly under Folsom (or Howard) Street to Beale, directly behind the Transbay Terminal. One of the alternatives also included the Central Subway branch coming to the surface on either Folsom or Howard.

"At the time the study was performed, Muni's governing board, the Public Transportation Commission (PTC), accepted the report and elected not to move forward to an MIS and EIS/EIR until a viable financial plan could be developed. The PTC also elected not to select a preferred mode and alignment.

"A Geary project is one of the four corridors listed in the San Francisco County Transportation Authority's 'Four Corridor Plan', and is also included in Muni's recent publication 'A Vision for Rapid Transit in San Francisco', and has been included in Muni's Short Range Transit Plan. Given the proximity to the Transbay Terminal, it should be mentioned in this section.

"In 2002, as part of the Muni publication 'A Vision for Rapid Transit in San Francisco', Muni developed a service plan for a Bus Rapid Transit (BRT) Service on Geary, which would

significantly reconfigure and speed service on the Geary corridor, from Transbay Terminal to Ocean Beach. This change would increase ridership on the corridor by approximately 5,000 people a day, and would include increased service from the Transbay Terminal. The Geary BRT corridor will be included in an amendment to Muni's SRTP/CIP, and would be operational before any new rail service in the corridor.

"Page 3-27 -Section 3.1.5.3 and 3.1.5.4 - Muni Third Street Light Rail and Muni Central Subway: Muni's Third Street Light Rail project has two phases. Phase 1 is the Initial Operating Segment (IOS), and is referenced in Section 3.1.5.3. Phase 2 is the New Central Subway (NCS), and is referenced in Section 3.1.5.4. These two sections should be combined into one section labeled "Third Street Light Rail Project", with discussion of the two phases as two phases of the same project. Also, it is important to note that the New Central Subway alignment in the South of Market area under Third Street will be built complete with the junction connections for the Geary subway branch to Transbay Terminal."

Response 2.5.1 The Final EIS/EIR, Volume I, has been changed to better highlight the possible future interface between the Third Street Light Rail Project (Phase 1 – IOS and Phase 2 – New Central Subway) and the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. The co-lead agencies note that both projects – the Transbay Terminal/Caltrain Downtown Redevelopment Project and the Third Street Light Rail Project – are included as top priority projects in the adopted Regional Transportation Plan and will need further coordination as design plans are drafted for the proposed Transbay Terminal and Caltrain Downtown Extension.

Section 2.2, Project Components of the Final EIS/EIR, Volume I, now notes that the Train Mezzanine Level of the new Transbay Terminal would be designed to ultimately accommodate Muni Metro's tracks (leading from the Third Street and Geary Corridor alignments) and a Muni Metro Station in the Terminal at the point in time that Muni implements this project.

In addition, per Muni's request, Sections 3.1.5.3 and 3.1.5.4 of the Draft EIS/EIR have been combined under one section in Volume I of this Final EIS/EIR. The section, entitled "Third Street Light Rail Project," discusses the two phases of the Muni Project. It notes that the New Central Subway (NCS) alignment in the South of Market area under Third Street would be built with junction connections for the Geary subway branch to Transbay Terminal. The section describes how Muni's subway would relate to the Caltrain underground alignment and how the Transbay Terminal will be designed so as not to preclude a Muni Metro station on the train mezzanine level.

A new Section 3.1.5.4 has also been added to Volume I discussing the Geary Rail or Bus Project, and a new figure (Figure 3.1-6, Volume I, of this Final EIS/EIR) has been added (reflecting Muni's Attachment A) showing Muni's anticipated route options that a connecting subway could take to the new Transbay Terminal from a junction with the Central Subway at Third and Folsom (existing design concept), or possibly from Third and Howard Streets, then under Folsom or Howard to the Transbay Terminal. This new figure has been added rather than adding the proposed Muni Metro route options to the figures in Chapter 2. These Chapter 2 figures show components of the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project for which environmental impacts have been evaluated and cost estimates developed.

There appear to be no engineering conflicts with the proposed Muni Metro routes to a new terminal. As shown on Figure 3.1-6, Muni could conceptually travel east from Third Street to Second Street via either Folsom or Howard Streets. The current transbay terminal conceptual

design would not preclude a Muni Metro Geary Street Line extension into the mezzanine level of the terminal, and future engineering and design will work to not preclude accommodation of Muni Metro into the terminal. The current conceptual design assumes sufficient room above the Caltrain tracks and platforms from a Folsom or Howard Street alignment into the terminal. Final design will be carried out in a cooperative manner to assure that the terminal and track subway box structure layout would not preclude Muni alignments and can accommodate Muni loadings. As the Downtown Caltrain Extension crosses under Third Street at Townsend, the subway box will be designed to support Muni's Third Street system.

2.5.2 San Francisco County Transportation Authority, Jose Luis Moscovich, Executive Director, December 19, 2002

"It appears that the design of the Terminal does not provide for the future development of a Muni Metro station. Since the current plan for the Geary Corridor calls for a station at the Transbay Terminal, the design should accommodate its inclusion, or at least not foreclose on its future development."

Response 2.5.2 Please see Response 2.5.1.

2.5.3 BART – Thomas E. Margro, General Manager, December 20, 2002

"In addition to the Transbay corridor, there are opportunities for rail expansion within San Francisco and elsewhere. For example, rapid transit along the Geary corridor has been contemplated for many decades. Potentially such a service could be linked with a future transbay rail crossing via the Transbay Terminal, which would increase transbay capacity and improve links between the East Bay and the northern half of San Francisco.

"However, it appears that the Transbay Terminal facility has not been designed for future rail service outside of the Peninsula and East Bay corridors. Regardless of current funding limitations, long-term expansion should not be precluded by the facility design. The DEIR should be revised to show how future rail projects, particularly in the Geary corridor, could interface with the Transbay Terminal facility."

"Page 2-4 references Muni's future Third Street Light Rail/Central Subway project. It is our understanding that the light rail line is planned to cross the Caltrain alignment in the vicinity of the existing Caltrain terminal at Fourth and King, but that there are multiple options being considered for that area. Please indicate in the Final EIR both in text and on a map how the light rail line will interface with the relocated Fourth/King Caltrain Station. For safety and security reasons and to minimize transfer times, it would be preferable if the stations were located adjacent to each other so that patrons do not have to cross streets or walk long distances unnecessarily."

Response 2.5.3 Please see Response 2.5.1.

2.5.4 Andrew Sullivan, Rescue Muni, Speaker, 11/12/02 Public Hearing

"This doesn't refer to the proposed Folsom alignment. We don't think a Pine Street alignment would make sense."

Response 2.5.4 Please see Response 2.5.1.

2.5.5 San Francisco Planning Commissioner Michael Antonini, 11/26/02 Public Hearing

"And there are allusions in the report to the possible inclusion of a tube to allow trains to run in other directions, perhaps under the Bay towards the East Bay as part of the project. I think that's very farsighted."

Response 2.5.5 As part of its planning, the co-lead agencies for the EIS/EIR assured that the train alignments would allow for an ultimate extension across the San Francisco Bay as a future separate project.

2.6 TRANSBAY TERMINAL/RAMPS DESIGN AND TERMINAL OPERATIONS

2.6.1 California Department of Transportation, Timothy C. Sable, District Branch Chief, December 20, 2002

"Ramps: Chapter 2, Sections 2.2.1.1 and 2.2.1.2, the feasibility of providing the bus ramp from the existing east loop ramp down to the new temporary terminal is not clear, since no profiles are shown.

"Additionally, the structural feasibility of "scabbing" the proposed temporary ramp to the existing east loop ramp is not discussed.

"Chapter 2, Figure 2.2-6: Again, due to a lack of profiles, the spatial arrangement of how some of these structures would operate is not clear. For example, it appears that the Department's SFOBB Electrical Substation that supplies power to the entire Bridge and its Communications Center would be impacted by one of these ramps.

"Traffic Operations: Page 2-12 and figure 2.2-6: 'Access to this bus storage area would be via Third Street and a two-way 'storage link' ramp that would connect with the Bay Bridge - Transbay Terminal bus ramps.' We assume that this 'storage link' will be a bus-ONLY facility that does NOT require buses to merge with auto traffic exiting the Bay Bridge on the right side Fremont off-ramp before the buses get to the terminal."

Response 2.6.1 The co-lead agencies have changed the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project so that the temporary bus ramp to the temporary bus terminal is no longer necessary. It therefore is no longer part of the proposed Project. The Final EIS/EIR includes an analysis of the impacts of this change (please see sections 2.2.1.3, 2.2.2.1, and 5.21.1.1, Volume I, of this Final EIS/EIR.) Project capital costs have also been revised to reflect this change (please see Section 2.2.2.4, Volume I, of this Final EIS/EIR).

Additionally, the permanent bus access ramps for the West Ramp Transbay Terminal Option have been redesigned and are shown in the Figure 2.2.4, Volume I, of this Final EIS/EIR. The redesigned ramps no longer include a direct connection between the Bay Bridge and the permanent bus storage area passing over Caltrans' SFOBB Electrical Substation or Communications Center. Therefore, the redesigned ramps would no longer affect these Caltrans facilities.

As shown in Figure 2.2-4, bus circulation from the bus storage areas (under the west approach to the Bay Bridge between Second and Fourth Streets) to the Transbay Terminal would be via the in-bound bus ramps from the Bay Bridge. These bus ramps from the Bay Bridge are bus-only from where they split from the general-purpose lanes to Fremont Street. The split from the Fremont Street off-ramp is planned for approximately the same location as shown in the Caltrans contract documents for the reconstruction of the Bay Bridge West Approach/Seismic Retrofit Project (Caltrans Contract Number 04-0435V4). Thus, the bus access ramps to the Transbay Terminal would be bus-only and would not require buses to merge with auto traffic exiting the Bay Bridge on the right side of the Fremont off-ramp before the buses get to the terminal.

2.6.2 San Francisco Muni, Jose Cisneros, Deputy General Manager for Capital Planning & External Affairs, December 17, 2002

"Muni has participated for several years in the planning of the proposed new Transbay Terminal, including the Metropolitan Transportation Commission planning efforts and in charettes led by

Simon Martin Winkelstein and Morris (SMWM) as a consultant to MTC. We also interacted extensively with John Eddy at Arup during the MTC planning effort, and developed concepts that should be brought into this EIS/EIR process.

"Muni, with 750,000 rides per weekday, is the largest transit operator in the Bay Area and seventh largest in the U.S. Muni's two largest transit corridors are Market and Mission Streets, both of which feed into Transbay Terminal. Muni currently serves the Transbay Terminal with a number of motor coach (MC) and trolley coach (TC) routes, and Muni is by far the highest volume carried at street level at this facility, both in terms of riders and in terms of number of vehicles.

"Muni is concerned that the Transbay Terminal EIS/EIR does not fully address Muni's current and future needs for Muni service to the Transbay Terminal, including serving current riders, a future Geary light rail line, new customers arriving on Caltrain and other heavy rail services, and new residents and employees in the Transbay Terminal Redevelopment Area. We are concerned that the space allocated to Muni in this document is the minimum level needed for current operations, and does not allow for any of the capacity expansions to our service that can reasonably be foreseen. One good example of this is that, although Muni's surface light rail tracks were recently removed from in front of the existing Transbay Terminal, Muni needs the flexibility to be able to serve the new Transbay Terminal with historic streetcar lines in the future, such as the F and/or E-lines. Muni would like to discuss these issues with you in more detail and to work closely with you to make sure that Muni's needs are met.

"Page 2-10 - Figure 2.2-2: Muni & Golden Gate Transit Street-Level Facilities: The area designated for Muni and Golden Gate Transit to share street-level facilities in the blocks between Fremont and Beale and between Mission and Howard is the minimum space necessary to accommodate current operations, and does not allow for growth and expansion in the future. While the size and capacity of the overall area may initially be adequate, the number of lanes for Muni, the island configuration and the storage areas need to be able to accommodate future capacity expansion and provide flexibility for growth in the future. Muni needs at least five (5) separate lanes inbound (not four, as shown in Figure 2.2-2), with three (3) boarding islands, which can be shorter than the islands shown. Also, Muni needs layover areas. These needs were identified and communicated in meetings regarding Muni and the Transbay Terminal in the period 1999-2001. The following information was communicated to MTC planners in memos and meetings (including 3/24/00), and summarizes Muni's needs for street- level facilities:

"TRANSBAY TERMINAL PLANNING: MUNI OPERATING REQUIREMENTS
"Alternative 2: Muni in new street between Fremont-Beale & Mission-Howard:

- "Accommodate current Muni lines: 5, 6, 38, 38L, and possibly two other lines (e.g., 2, 3);
- "Have the capability to bring in Muni historic streetcar rail lines (E and/or F);
- "Provide space for bus stops and layover areas;
- "Provide space on Mission Street for Muni lines: 14, 14L (14L terminates in Transbay Terminal street-level facility on Saturdays);
- "Provide space on First & Fremont Streets for bus stops for Muni's 10-lines;
- "Provide space inside Transbay Terminal upstairs for Muni 108-Line, and provide access to on-street terminals from freeway ramps if terminal is not open 24 hours a day, 7 days a week;
- "Provide for future flexibility and growth;
- "Also accommodate at least two other Muni Lines: 1 & 41, in Muni terminal area or on Beale St.; and
- "Difficult to achieve Muni needs if area is shared with Golden Gate Transit.

"Minimum Requirements for Muni:

- "The Transbay Terminal should provide convenient and safe transfer activity between Muni and the other primary terminal operator AC Transit.
- "The approach to the Transbay Terminal and exit from the terminal by motor coaches and trolley coaches should be at least as safe and efficient as the present condition. Traffic patterns in and around the terminal must efficiently accommodate at least the current level of activity, and should provide for capacity for expansion.
- "The terminal should accommodate at least the minimum number of vehicles on the lines shown below. The type and size of the vehicle, the number of coaches on each line that will need to layover at any one time at the terminal, and the number of trips per hour at the peak are shown following the line designation *(note: Muni lines, vehicle sizes and numbers of coaches may change over time):*

    - o "38-Geary, Motor Coach (MC), 60' (3 coaches at a time, 20 trips per hour);
    - o "38-Geary Limited, MC 60' (2 coaches at a time, 16 trips per hour);
    - o "5-Fulton, Trolley Coach (TC), 40' (2 coaches, 13 trips/hr);
    - o "6-Parnassus, TC 40' (2 coaches, 11 trips/hr);
    - o "2-Sutter, MC 40' (1 coach, 8 trips/hr), may be converted to TC in the future;
    - o "Provide space on First & Fremont Streets for bus stops for Muni's 10-line;
    - o "Provide space inside Transbay Terminal upstairs for Muni's 108-Line, and provide access to on-street terminals from freeway ramps if terminal is not open 24 hours a day, 7 days a week;
    - o "1-California, 40' or 60' TC (2 coaches, 12 trips/hr) -either inside street-level facility at Fremont & Beale, or on the street on Beale; and
    - o "41-Union 40' TC (2 coaches, 10 trips/hr) -either inside street-level facility at Fremont & Beale, or on the street on Beale.

- "Each line needs an independent storage lane that can accommodate the number of coaches needing to layover at anyone time.
- "At least two 6" high boarding islands, at least 40' by 8' each for each lane.
- "Safe areas to exit passengers, which includes an 8'x 6' area to deploy wheelchair lifts.
- "An area to park a supervisor's automobile and a revenue or maintenance truck.
- "Muni operator restrooms (separate restrooms for men and women).
- "A space in the terminal with direct access to the Bay Bridge to accommodate the layover and passenger loading for Muni's 10B-line Treasure Island service (assume 1 bus every 20 minutes). Also, when the terminal is closed (e.g., in the middle of the night) and the 10B-Line is still running to Treasure Island, provide a location for the 105-line to load and for a convenient route from the street-level facility at the terminal to the Bay Bridge.
- "A covered area or shelter for waiting passengers in close proximity to passenger boarding areas. Assume up to 40 passengers at anyone time.
- "The Muni loading and layover areas should be flat, with the loading areas easily accessible for disabled passengers.
- "The Muni areas should accommodate expansion of up to 2 additional lines, or 4 buses at any one time and 24 per hour."

Response 2.6.2 The access and capacity of the Muni facilities in and around the Transbay Terminal, as contained in the current conceptual plans, appear to be consistent with the charettes referenced in the comment. Muni forwarded its needs to the MTC contracted architects/planners (SMWM team) in a memo dated May 4, 2000, and the current comments mirror the requests made in that memo. Additional meetings were held with Muni and the

SMWM team subsequent to May 4, 2000, and an e-mail dated June 19, 2000 from the SMWM team to Muni staff included the following points:

- The plan calls for Muni lines 2, 3, 5, 6 and 38 and 38L to use the Muni Transbay Terminal off-street facility. Currently Muni terminates the 5, 6 and 38 and 38L routes at the Transbay Terminal (on the 14L on Saturdays). Therefore the new facility increases Muni route capacity by about one-third.

- The physical layout of the Muni terminal area calls for three loading areas and an additional separate loading area for Golden Gate Transit's basic services.

- The SMWM team simulated the operations of the proposed Muni terminal with lines 2, 3, 5, 6 and 38 and 38L – schedules were developed, these schedules were forwarded to Muni for review, and the afternoon peak period (the period of greatest demand) was computer simulated. The results of the simulation found that all of the proposed routes could operate efficiently within the proposed terminal area. In addition, the consultants estimated that the Muni-dedicated terminal area has latent capacity for another 20 to 30 percent more transit vehicles.

Based on the SMWM Team's analysis as transmitted to Muni, the conceptual design of the new Transbay Terminal would have a latent capacity of at least 20 percent. The terminal simulation and analysis also showed that Golden Gate's basic route operation would not create difficulty in achieving Muni's needs. Specifically, there are four aisles in the proposed mid-block loading area. According to a Fehr and Peers bus simulation study conducted in 2000, Aisles 1 and 2 (designated under current deigns for Muni) would have significant extra capacity and would be able to accommodate future expansions of Muni service. However, Aisles 3 and 4 would be near capacity. Aisle 4 is designated for use by GGT and will likely be near capacity primarily because GGT buses are expected to stage for about 30 minutes each and there are a limited number of staging spaces in that aisle. Should more capacity be need for Muni service, on-street terminal space could be developed on streets south of the terminal, or Muni could through-route additional services through the South of Market area.

The June 19, 2000 e-mail also indicates that Muni's suggested rail operations could be accommodated in the proposed bypass lane as included in the current conceptual terminal plans. The current terminal plans also assume that Muni's Treasure Island bus would be accommodated on the upper bus level of the terminal.

It should be noted that current conceptual plans call for boarding islands wider than Muni's request, and the entire area is covered and sheltered by the terminal structure. Other detailed design issues, such as final routing of the bus lines, HOV lanes, and length of boarding islands, bypass wires, etc., will all be decided in the final design phase in collaboration with Muni staff. For example, the Muni area grading will be consistent with the needs of the terminal and the connections to Fremont and Beale Streets, and ADA requirements for access will be incorporated in the design (please see Response 2.4.3.)

2.6.3 Golden Gate Bridge District, Alan R. Zahradnik, Planning Director, November 19, 2002

"EIR Comments/Bus Access Ramps

- "Figures 2.2-5 and 2.2-6 (pages 2-14 and 2-15) present the proposed off-site bus storage facility for GGT and AC Transit, and the direct access bus ramps connecting the off-site storage facility with TTT and Fremont Street. Although District appreciates incorporation by this

Project of a permanent storage facility that it has sought since 1972 (i.e., when GGT began transbay bus service from Marin and Sonoma counties into San Francisco), there are some issues the DEIS/DEIR does not appear to address.

- o "The GGT off-site facility between Third Street and Fourth Street is not shown to be directly connected to the ramp system proposed to TTT. The lack of a direct ramp from the GGT bus storage area makes this off-site facility completely vulnerable to weekday evening traffic congestion on Third Street. District strongly suggests that the feasibility of a direct ramp, as provided for the AC Transit off-street storage facility, be further investigated.
- o "The direct access ramp to Folsom Street is labeled on Figure 2.2-6 as a "possible future" connection. District strongly suggests that any potential lack of this connection as part of the Project is a serious shortfall. The absence of a direct connection between the off-site storage facility and Fremont Street would make GGT bus services in San Francisco totally dependent on evening peak period traffic conditions on surface streets. Potential congestion will decrease GGT schedule reliability and would likely require GGT to acquire a new staging facility near TTT.

"EIR Comments/Street-Level Facility

- "Figure 2.2-2 (page 2-10) presents proposed street-level facilities for GGT and San Francisco Municipal Railway (Muni). A single 13-foot lane for bus boarding, although adequate from passenger and bus loading viewpoints, may prove problematic from an operating perspective should a bus become disabled in the 13-foot lane and a by-pass lane is not provided. To mitigate this operational concern, District recommends the DEIS/DEIR mention either a drop-off area for bus passengers at either the near side of the street-level facility on Beale Street or in front of the new TTT on Mission Street.

"EIR Comments/GGT Storage at 8th and Harrison Streets

- "Page 2-18 correctly states that the current GGT midday storage facility, which presently occupies the site of the proposed temporary terminal, requires 'a new site...to be identified.' GGT is presently in the process of relocating its midday storage facility from the Main/Beale site to a leased lot at 8th Street and Harrison Street. This relocation should be accomplished in March 2003.

"EIS/EIR Comments/Paratransit and Taxi Services

- "DEIS/DEIR should mention that a new TTT should be designed to provide a street level paratransit transfer location adjoining the primary taxi zones as well as the ground level terminal facilities between Fremont Street and First Street. Enclosed is an October 24, 2000 letter from the Partnership Transit Coordination Committee to Metropolitan Transportation Commission (MTC) pertaining to many design- related issues. It is offered for your information.
- "There is very little information in the DEIS/DEIR pertaining to taxi service to and from the new TTT. This issue may be critical from street level activity, terminal space allocation, and traffic congestion viewpoints. Since taxi service may potentially become a significant mode of access to and from TTT with the introduction of high-speed rail service (albeit a separate future project), District recommends that taxi service to and from TTT be discussed in the DEIS/DEIR.

"EIR Comments/TTT Alternatives

- "Page 5-2 describes Impacts Common to Both Transbay Terminal Alternatives. It states how GGT and AC Transit buses would be stored on a lot on Harrison Street between Second and Fourth Streets. It is not clear whether the lot described is referring to the proposed off-site

storage facility bounded by Second, Perry, Fourth and Stillman streets. It is also not clear, based on description of the Loop Ramp Alternative (see pages 2-14 and 2-15) whether an off-site facility will be provided for GGT.

- "Table 5.19-1 (page 5-110) summarizes the two TTT and No Project Alternatives in terms of bus operational differences. It compares bus storage locations, travel times, and travel distances for the alternatives. This table raises the following questions as they pertain to GGT bus operations.

  - "Bus Storage: This table indicates bus storage for the Full Loop Alternative will occur on the on-site ramps and off-site storage lot. Please specifically identify where storage would occur for GGT buses.
  - "Travel Distances: Estimated travel distances are provided for AC Transit. Travel distances for GGT buses should also be provided.
  - "Travel Times: Estimated travel times are presented for AC Transit operations. Estimated travel times for GGT operations should also be presented.

"EIR Comments/West Ramp Alternative

- "Page 5-111 clearly describes how AC Transit would operate between the off-site storage facility and TTT. It states, "AC Transit buses would operate independently of local traffic between the Bay Bridge, the storage area, and the Transbay Terminal. Direct connections would be provided on elevated ramps..." Other than reference to the storage facility for GGT buses, no reference is made to how GGT buses would operate between the off-site storage facility and the beginning of revenue service on Fremont Street. As part of consensus building and planning efforts with MTC, there was considerable discussion of providing GGT buses with ramps that would also permit buses to operate independently of local traffic. District staff had understood that ramps connecting the off-site storage facility and Fremont Street would be provided. These ramps would assure GGT level of service and schedule reliability and potentially reduce operating costs. This is also true in light of traffic-related impacts discussed in Chapter 5 of this document (see comments below).
- **"**Page 5-111 does not clearly describe features of the West Ramp Alternative for GGT bus operations. It cites Muni and Golden Gate Transit bus operations, patron entry, ticketing, and joint development. DEIS/DEIR should clearly identify features and specify the benefits for GGT of this TTT Alternative.
- "Page 5-113 notes "a direct connection between the Terminal and the surface streets was determined to be unnecessary for bus operations." District staff has repeatedly mentioned during consensus building and planning process with MTC that the current street access to TTT and access from Second Street south of Harrison Street via the elevated ramps requires an additional two miles of deadhead travel for GGT. District requested that a design option consider direct access from city streets to the terminal be investigated at the outset of this project. For example, District staff suggested a contraflow lane be considered on the Fremont Street off-ramp as a potential low-cost design option.
- "Second paragraph of page 5-114 cites" any significant expansions in Muni or GGT capacity would require the staging of buses at an alternate location." How much expansion by Muni or GGT would trigger this additional staging? Where would this additional staging be located?"
- "Page 5-116 makes reference to a change in GGT operating costs following construction of the off-site storage facility. EIR should refer to upcoming relocation of GGT's midday storage to the 8th and Harrison Street site (effective March 2003) to determine the new site's affect on GGT operating costs.

"EIR Comments/Loop Ramp Alternative

- "Page 2-15 of the DEIS/DEIR describes bus storage for the Loop Ramp Alternative to occur on the (elevated) bus ramps for TTT. DEIS/DEIR does not specifically mention whether bus storage for GGT is provided, although Figure 2.2-7 (page 2-17) indicates 'Additional Bus Storage (under Bay Bridge Approach).' The description of this TTT alternative does not clearly indicate whether a permanent midday storage facility is provided for GGT. Absence of a midday storage facility for GGT, for any TTT alternative, is a serious shortfall and does not adequately address the needs of GGT bus services in San Francisco. Similarly, direct access ramps connecting an off-site facility and Fremont Street need to be accommodated.
- "Page 5-116 cites this TTT Alternative would feature 'street level bus service for Muni and Golden Gate Transit in the block east of Beale Street (as opposed to the mid-block crossing between Fremont and Beale as proposed in the West Loop Alternative').' The DEIS/DEIR does not provide any further description of this street-level arrangement. How many berths will GGT be provided? Where would this street level bus service be located? How will GGT bus operations (e.g., access between a midday storage facility and the beginning of revenue service) be affected?
- "Page 5-117 cites 'both AC Transit and Golden Gate Transit would be available beneath the western approach of the Bay Bridge at Second Street.' How does the space, layout, and the ability to provide a direct ramp between the midday storage site and Fremont Street (i.e., a route of travel that is independent of local street traffic) vary for GGT buses compared to the West Ramp Alternative?
- "No reference is made on page 5-117 concerning GGT operating costs with this TTT Alternative. EIR should refer to upcoming relocation of GGT's midday storage to the 8th and Harrison Street site (effective March 2003) to determine the new storage facility's affect on GGT operating cost.

"EIR Comments/Operating Costs

- "Page 5-120 presents an estimated $312,000 annual increase in GGT operating costs attributed to the relocation of the midday storage function from the current lot at Main/Beale to the new off-site storage facility beneath I-80. This cost estimate assumes GGT midday storage at the current Main and Beale lot. GGT will be relocating its midday storage operation to a lot on 8th and Harrison streets in March 2003. GGT operating cost impacts relative to the relocation to a the proposed storage facility should assume the 8th and Harrison site as the existing condition.

"EIR Comments/Traffic Impacts

- "Page 5-126 states the project 'would result in adverse (traffic) impacts' and 'mitigation measures for the seven (impacted) intersections have not been proposed, and the impacts associated with the Project would be considered adverse and unmitigatible.' District recommends full consideration of direct ramps between GGT off-site storage facility and Fremont Street to eliminate circulation of GGT bus traffic on local streets during the evening peak period when traffic conditions surrounding the TTT area operate under extreme levels of congestion.
- "According to Table 5.19-5 (page 5-123) Harrison Street and Second Street currently operate at LOS E (delay of 44.9 seconds and v/c capacity at 1.11). Given the close proximity of this intersection to the proposed GGT off-site storage facility, District believes that GGT will be highly susceptible to traffic queuing on Third Street. District, therefore, urges consideration of a direct ramp connecting the storage facility with the Fremont Street off-ramp.
- "Similarly, Table 5.19-5 (page 5-123) cites poor traffic levels-of-service throughout the TTT area under existing and projected 2020 conditions. GGT needs direct ramps between the off-site storage facility and Fremont Street. Lack of these ramps would require a street level staging area near the TTT area."

Response 2.6.3 Golden Gate Transit (GGT) buses would be stored in the same location under either Transbay Terminal Option – specifically under the west approach to the Bay Bridge, as shown on Figure 2.2-6, Volume I, of this Final EIS/EIR. It should be noted that the Transbay Joint Powers Authority selected the West Ramp Transbay Terminal Options as the Locally Preferred Alternative.

The co-lead agencies acknowledge that Golden Gate Transit has moved its current storage facility to Eighth and Harrison Streets from the Main-Beale site. The co-lead agencies note that GGT's current storage is more distant from the Transbay Terminal than would be the case for the proposed GGT permanent storage facility under the west approach to the Bay Bridge, as designated under the Transbay Terminal Project. The Final EIS/EIR has been edited to note GGT's current storage location and the beneficial impacts that relocation of GGT to the proposed permanent bus storage facility under the west approach would have on GGT operating costs (see sections 5.19.1.1, 5.19.2, and 5.19.3.5).

As requested by GGT, a drop off location on Mission between Fremont and First, in front of the new Transbay Terminal, will be proposed for inclusion in the final design of the Transbay Terminal. Curb space would also be allocated for paratransit on street level at locations near the Transbay Terminal, consistent with ADA requirements.

GGT buses would enter the permanent storage facility from Fourth Street in the morning. The only at-grade bus crossing would be for GGT buses leaving its facility in the afternoon and crossing Third Street at Perry Street. The GGT buses would cross Third Street at mid-block via a traffic signal synchronized with the traffic signals at Harrison and Bryant streets, causing minimal interruption to the Third Street traffic with projected operations at Level of Service (LOS) A – the best classification for LOS. During the pm peak, there are currently sufficient gaps in the Third Street traffic to permit the Golden Gate Transit buses to cross without a signal, but signal is preferred to improve safety. All other bus movements near the facility (including all AC Transit buses) would be within the storage areas and on dedicated bus ramps separated from the street system.

Figure 2.2-4, Volume I, of this Final EIS/EIR has been updated to show the revised ramp system. A connecting ramp from the inbound bus ramp from storage to the Fremont Street off-ramp has been included in this change. The purpose of the connecting ramp is to provide GGT with a direct connection from the permanent storage area under the west approach to the Fremont Street off-ramp. This connection will allow GGT to avoid much of the local traffic between storage and the beginning location for their bus routes (i.e., where the buses actually begin to load passengers).

The limited widths of Stillman and Perry Streets upon completion of the Bay Bridge west approach project preclude the introduction of a bus ramp from GGT storage over Third Street and connecting with the ramps from the AC Transit storage to the terminal. Similarly, the lack of sufficient headroom over Third Street and under the Bay Bridge west approach prevents providing such a ramp within the footprint of the west approach.

The co-lead agencies note that the three Golden Gate bus bays under the terminal for the West Ramp Alternative is more than is currently utilized by GGT in the existing facility. With the proposed elongation of the terminal with the West Ramp Alternative versus the existing terminal, there are ample opportunities for GGT to work with the City and County of San Francisco to secure additional curb space to accommodate expansion of GGT service.

Travel distances and times would not vary for GGT for the terminal options, and features for GGT would be similar under each option.

Caltrans recently initiated a construction contract to have the Fremont Street off-ramp upgraded for seismic safety reasons. The design reflected in the contract was well underway at the time of the MTC Terminal Improvement Study and virtually complete during the preparation of the Draft EIS/EIR. Although requests were made by the MTC Study Team to consider some design modifications, the importance of maintaining Caltrans' design schedule prevented significant alterations to the design. The designed Fremont Street off-ramp does not have sufficient width to accommodate a contra-flow lane and still provide the necessary general-purpose highway capacity.

Please see also Response 2.6.4 regarding taxis.

2.6.4 San Francisco County Transportation Authority, Jose Luis Moscovich, Executive Director, December 19, 2002

"Once the facility is completed, and with the inclusion of high-speed rail service, the terminal will serve significantly more long-distance and non-commuter passengers. Although most passengers will take advantage of the multiple transit connections available at the site and others will walk, it is expected that a portion of them will be served by private transportation. It is not clear from the information offered what provisions are contemplated, if any, for bicycles, taxi stands, or private vehicle pick-up and drop-off areas, as well as short-term waiting areas (The entry-level drawing on page 2-10 only shows buses). Is it to be understood that private vehicles picking up passengers are going to wait in a holding pattern driving around the terminal? If so, what provisions are being made to handle the traffic?

"On page 5-94 the design concept shows a very attractive but complicated roofline. Considering that tall buildings will surround the terminal, and that as a result the perspective view of the building as shown on Figure 5-16.1 is not probable, has consideration been given to a more easily constructible (and therefore less expensive) roof that provides some of the same functionality? Furthermore, has the potential for additional development above the terminal itself, for retail or other uses, been seriously considered?

"Also on page 5-94, the bottom drawing shows what appear to be cars and other vehicles in two underground levels adjacent and to the left of the Caltrain station with a large (approx. 170 feet) three-level atrium space above it. There is no mention of this space in the project description, although apparently it is also shown on the plan on page 2-10. Is it part of the Terminal or is it a representation of the adjoining private sector development envisioned for that space?"

Response 2.6.4 There is considerable curb length in and around the terminal. Taxi pick-up and drop off space will be included as part of the Transbay Terminal design and the Redevelopment Agency's design for development, particularly in relation to the proposed hotel development in front of the new terminal. The *Draft Transbay Redevelopment Project Area Design for Development* proposes new taxi space and sidewalk improvements in front of the new terminal on Mission Street. Please also see Response 2.2.1 regarding the proposed atrium plaza in front of the new Transbay Terminal and Response 2.4.1 regarding bicycle storage.

The roof designs shown in the EIS/EIR are only conceptual at this stage of planning. As noted in the capital cost estimates and project schedule (Figure 5.20-8, Volume I, Final EIS/EIR), value engineering will be undertaken for all aspects of the design. The Transbay Terminal's long and

narrow shape is not conducive to dedicated cores for development above the facility, as noted by developers who advised the conceptual design team.

The automobiles shown in the Figure 5.1.6-1, Volume I, are intended to represent the sub-surface parking area that likely would be developed as part of the hotel proposed north of the new Transbay Terminal.

2.6.5 City and County of San Francisco; Traffic Engineering Division; Bond Yee, Deputy Director and City Traffic Engineer, Jack Fleck, Senior Transportation Engineer, Jerry Robbins, Transit Planner V, December 18, 2002

"Size of the terminal- Page 5-111 - "The new terminal will accommodate 35,000 rail and bus passengers during the peak hour. This is 11,000 more passengers than the 24,000 passengers projected for peak hour demand in 2020. The current peak hour passenger flow at the existing Terminal is 10,000 passengers." This raises a concern about overbuilding. Currently the Transbay Terminal is larger than it needs to be. If the new terminal is even larger, there will be a lot of empty space. Could some of that space be used for storage of buses? Are there interim/back-up plans in case the large ridership projections do not materialize?"

Response 2.6.5 The long, narrow nature of the Transbay Terminal site and the desire to provide extensive access for patrons among the floors and to the street level for the new Transbay Terminal led to the provision of extensive internal circulation being included in the current conceptual designs for the Transbay Terminal. The passenger numbers quoted above are the numbers that can be accommodated by the design and not the expected number of actual patrons. The facility is sized so that patrons do not feel cramped or limited in the amount of area per patron.

2.6.6 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"The bus portions of the Transbay Terminal analysis appear good. The capacity is adequate, but not excessive, and the operating plan is well thought out. However, a signal will probably be needed mid-block on Fremont Street between Mission and Howard Streets to expedite Muni and Golden Gate Transit buses exiting the terminal."

Response 2.6.6 A traffic signal is planned at this mid-block location, as noted in Section 2.2.2.1, Volume I, of this Final EIS/EIR. Please also see Response 2.6.7.

2.6.7 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Page 2-7, Bus Storage: Section 2.2.1.1, West Ramp Alternative: AC Transit Bus Storage is listed as between 42 and 53 buses, plus Golden Gate Transit Storage. No number is given for the Golden Gate Transit Storage portion of the project. In Section 2.2.1.2, Loop Ramp Alternative description, bus storage is identified as being 120 on the ramp and up to 53 in a storage yard. If the entire bus storage need can be accommodated in the storage yard as shown in the West Ramp Alternative, then what is the rationale for choosing the Loop Ramp Alternative to provide storage? Conversely, in the Loop Ramp Alternative what is the need for a bus storage yard if the ramp will provide over twice the storage of the West Ramp Alternative? It would be helpful to provide a chart showing the projected storage needs of the various operators.

"Page 2-9: The text indicates that Golden Gate Transit basic service will be located in the new mid-block terminal, while page 5-114 indicates that Golden Gate Transit commuter service would use the new mid-block boarding area. Which one is correct, and how do the services differ?

"Please explain why Golden Gate Transit commuter service buses continue to be staged at the curb. Why were they not included in the new Terminal regardless of where the midday layover occurs?

"Page 2-12 states that with the new terminal that SamTrans would terminate on Mission Street between Fremont and Beale Street, and that SamTrans buses would load on Fremont Street immediately south of the terminal. Would the Mission Street curb between Fremont and Beale Street become the new layover location for SamTrans buses? How much of the curb would be affected? No analysis of the impact of this on parking and traffic operations is presented in Chapter 3.

"Page 3-44 identifies current operations of the Golden Gate Transit buses, including the problems with pedestrians queuing for the bus blocking pedestrian flows on Fremont Street. Given the significant increase in street level activity from development in the area, why haven't Golden Gate Transit operations been entirely shifted to the new Transbay Terminal? Why hasn't a plan for street level loading of Muni, SamTrans and Golden Gate Transit buses been developed and illustrated? How much of the street curbs during the AM and PM peak hours will be dedicated to idling buses? How and where will future increases in Golden Gate Transit service be accommodated? The impact of operations that remain at street level should be fully discussed.

"Page 5-113 states 'assuming the implementation of a diamond (bus only) lane on Beale Street between Market Street and through the terminal's designated Muni loading area…' which implies an HOV lane on Beale Street. How would this look? Also, would there be an HOV lane on Fremont Street? Would the existing mid-block signal that facilitates buses exiting from the hump to access traffic flow be removed, or be moved?

"Street improvements included as part of the new Terminal should be described in Chapter 2. There are discussions in Chapter 5 that indicate that street improvements would be made. For example:

- "It is unclear if there is a bus lane on Beale Street or on Fremont Street. Discussion of Muni bus travel times (on page 5-113) indicates that 'assuming the implementation of a diamond (bus only) lane on Beale Street...' Would there be a bus lane? How would it be configured? What would be the impact on traffic operations?
- "Similarly, what would the roadway striping be on Fremont Street? Would the existing bus lane be eliminated? Relocated?
- **"**Page 5-136 indicates that there would be a new mid-block signal on Fremont Street between Mission and Howard Street south of the overpass. What would happen with the existing signal? Has an operations analysis of the buses entering and exiting the terminal been conducted? Why hasn't it been included in Chapter 3 or 5?
- "Page 5-136 indicates that a pedestrian mitigation measure should be to ensure that "the Transbay Terminal design increases corner and sidewalk widths at the four intersections immediately surrounding the terminal." Shouldn't this level of terminal design already have been completed? What would happen to the existing travel lanes and curb parking/bus stops? Why haven't these been included as part of the project and their effects analyzed?

"Section 5.1.1.1 - Impacts common to both alternatives states, 'Additional impacts would occur due to off-site staging and parking requirements for both AC Transit and Golden Gate Transit.

Buses would be stored at a lot on Harrison Street.' Please clarify how the impacts of the Loop Ramp alternative (Sec. 2.2.1.2), a facility that will hold up to 173 buses, will be the same as for the West Ramp Alternative (Sec.2.2.1.1), a facility that holds only 53. The West Ramp and the Loop Ramp alternatives are quite different, with significantly different impacts on land area where bus storage is concerned.

"Table 5.19-1, Operational Differences between Transbay Terminal Alternatives: The numbers in the table don't add up. Some examples:

- "Bay Bridge to Terminal: Based on the illustrations in Figure 2.2-1 and 2.2-7, please explain how the West Ramp alternative requires an additional 1,100' of travel distance, the equivalent of 2.5 city blocks, between the Bay Bridge and the Terminal, if the Terminal is in the same location as the existing terminal. The actual travel distance should be less, since the first bus bays are up to 1100' feet closer than other alternatives, given the actual travel paths involved. If the number reflects looping within the facility before arrival for the West Ramp, then the distance from the Terminal to the Bay Bridge should be called out separately, since the West Ramp Alternative will have a shorter travel time for this leg.
- "Bay Bridge to Terminal to Storage Area: How can this number be the same as for Bay Bridge to Terminal? Since the Loop Ramp and West Ramp alternatives include bus storage in the same yard, as indicated in Section 2.2.1.2, then why aren't the travel distances the same?
- "Storage Area to Terminal to Bay Bridge: Same as above.
- "Travel Times: the travel times do not match travel distances – Travel time from Bay Bridge to Terminal
  - "Existing Terminal is 216 seconds for travel distance of 6500'
  - "West Ramp is 317 seconds for travel distance of 7600'
  - "Loop Ramp is 227 seconds for travel distance of 6500'
  - "Why is the travel time greater for the Loop Ramp vs. existing, if the distance is the same?

- "Travel Time from Storage Area to Terminal To Bay Bridge
  - "Existing Terminal is N/A. Buses are currently stored on the ramp, and not in the facility. (See p. 5-114, Bus Storage Areas) Why is this not reflected in the table?
  - "West Ramp is 329 seconds for travel distance of 7600', a difference of + 12 seconds over the same distance listed for Bay Bridge to terminal. Reversed, the same travel time is 334 seconds, a 17 second increase for the same route in reverse.
  - "Loop Ramp: why is travel time 13 seconds more than the same distance given for Bay Bridge to Terminal? Why does the same trip in reverse take 3 seconds less? why the discrepancy between this and the West Ramp alternative?
- "Please review the remaining travel times and distances for similar problems.
- "Ramp to Terminal: if the Loop Ramp Alternative replicates the same configuration and function as the existing condition, why is there no travel time listed here?
- "Notes: Note 1 of the table says that 'no deadheading or off-site staging is currently involved with AC Transit operations'. P. 5-114 says that currently AC Transit buses are stored on the access ramps and not in the terminal. If the current facility and the Loop Ramp alternative both use the access ramp for bus storage, how can one not require 'deadheading or off-site staging' when the other does?

"Table 5.19-2:

- "AC Transit operating costs. Given the errors listed above, the numbers here don't seem to add up. If the terminals are all in basically the same place, then the numbers should be closer than shown. Given the information presented, we question that operating costs could be so much higher for the West ramp than for the existing situation.

- "P. 5-117 says that table 5.19.2 shows that the Loop Ramp Alternative requires a 78% increase in operations and maintenance costs, and then characterizes this as 'not significantly higher... than under the current situation.' Please clarify how such an increase is not significant.

"Page 5-136
- "The text indicates that there would be a new traffic signal on Fremont Street between Mission and Howard Street. Would the new signal be in addition to the existing mid-block signal? What would a 'full stop' phase be? Since the only vehicular movement at the mid-block crosswalk is westbound, and since buses exit the surface terminal downstream of the proposed new mid-block signal, a signal similar to the one that currently exists north of the terminal should be sufficient to accommodate pedestrians and vehicular traffic.
- "The EIR/EIS does not include operational analysis of the access and egress from the surface level of the new Terminal."

Response 2.6.7 The Loop Ramp Alternative (page 2-18 of the Draft EIS/EIR) would allow for approximately 120 standard 40-foot buses to be stored on the eastern bus ramps, and the remaining bus storage (for approximately 53 buses) would off-site at the proposed bus storage locations under the Western Approach to the Bay Bridge (Assessor Blocks 3762 and 3763). Page 2-18 of the Draft EIS/EIR states that the specific location(s) of the remaining bus storage (above the 120 that would be stored on the ramps) for the Loop Ramp Alternative has not been finalized. Page 2-18 notes that bus storage would occur off-site at "one or both storage sites described under the West Ramp Alternative."

Although up to 120 buses could be stored on the ramps for the Full Loop Option, additional storage capacity would still be required. Thus the off-site storage facility under the west approach to the Bay Bridge would still be required under either Transbay Terminal Option.

The Transbay Joint Powers Authority has selected the West Ramp Terminal Option as the Transbay component of the Locally Preferred Alternative. Principal reasons for this selection included:

- The blocks south and east of the terminal at Beale and Howard Streets and Folsom at Beale and Main Streets would be open for development, which is not the case for the Full Loop Alternative.
- The eastward views along Howard Street would open up toward the bay and the East Bay hills Southward views along Beale, Fremont, and First Streets toward Rincon Hill would also open up.
- This alternative would have lower capital costs.

As shown below, numerous commentators on the Draft EIS/EIR stated their preference for this West Ramp Alternative, and the alternative best represents the consensus solution emanating from multiple agencies and community representatives involved in the Metropolitan Transportation Commission's Transbay Terminal Study. AC Transit, the main current tenant in the existing terminal and one of the primary anchor tenants in the new facility, has reviewed the operational characteristics of the West Ramp Alternative and found them to easily meet operational requirements for both current Transbay bus schedules and potential future service levels.

The text on page 5-114 of the Draft EIS/EIR has been revised in Volume I of this Final EIS/EIR. Muni bus routing from Market to the proposed Terminal would continue operations on First Street

in a dedicated bus lane and turn left onto Mission Street. A portion of the curb frontage on Mission between First and Fremont Streets would remain as passenger pick-up and drop-off for Muni's current Mission routes as well as the routes that currently use the existing crescent in front of the Transbay Terminal. The buses continuing to the Muni/GGT area at street level under the terminal between Beale and Fremont Streets would continue on Mission to Beale Street where they would turn right into a dedicated bus lane on the west side of Beale Street. Once on Beale, the buses would drop passengers on the Beale curb just before turning into the Muni/GGT area under the terminal. Passenger pick up would occur in the Muni/GGT area and buses would gain access to Fremont Street via a mid-block signal that would replace the current Muni signal on Fremont. Transit vehicles would return to Market Street along Fremont Street.

GGT service plan for both the basic routes and the commuter lines allows for distribution throughout the city as the routes approach the Golden Gate Bridge. Since the terminal ramps are south of the terminal and further from the GGT routes, using the terminal interior would lengthen the routes and increase GGT operating costs. In addition, the terminal would have to be substantially larger to accommodate all the GGT commute buses. Hence, the prudent decision is to accommodate GGT storage needs and allow for good access through the terminal ramp system to a variety of street terminals. In addition, GGT has stated that its bus service likely will not increase substantially. Rather, an increase in Marin-San Francisco non-auto movements would probably be handled by more by high speed ferries from Larkspur.

SamTrans assumes that with the BART extension to the Airport/Millbrae stations and the Caltrain Downtown Extension, service to the terminal will be substantially reduced, so only limited curb space will be necessary. Should curb space be too limited, project sponsors expect that the bus facilities on the bus levels of the proposed terminals would be able to accommodate the slight increase in bus activity required by introduction of SamTrans into the new facility. Section 5.19.5, Volume I, of the EIS/EIR reviews the impacts from lost parking in the Transbay Terminal area from the proposed Project.

Section 5.19.1 (including Tables 5.19.-1 and 5.19-2), Volume I, of this Final EIS/EIR has been revised to clarify the transit impacts and to correct errors in the Draft EIS/EIR presentation. It should be noted that the travel distances are longer for the West Ramp Alternative than for the Full Loop given that the terminal is slightly longer than the Full Loop Alternative. This is because the terminal is fitting 26 articulated bus bays and four standard bus bays on one center platform versus the three platform scenario of the Full Loop Alternative. The longer distance of the terminal translates into a longer travel distance.

The labeling in Column 1 of Table 5.19-1 for the "Bay Bridge to Terminal" has been revised to read "Bay Bridge to Terminal to Bay Bridge." The values are the longest distance and are equal to the distance to the permanent storage area. Travel times do not always match distances given that there are different rates of travel on various parts of the ramps. Fehr and Peers estimated that buses would operate on the ramps between 20 and 35 mph and at 10 mph while inside the terminal. The storage of some buses on the ramps for the Full Loop Alternative is now reflected in Table 5.19-1 of the Final EIS/EIR in the rows entitled "From Ramp to Terminal," which have been revised to show the estimated distance and time for AC buses to depart from parking on the ramps to gain access the terminal platforms. It should be noted that the Loop Ramp Alternative does not replicate the same configuration and function as the existing condition. The Loop Ramp Alternative also includes storage under the western approach to the Bay Bridge, and allowances have been incorporated into the average speeds to account for some bus parking on the ramps.

Table 5.19-2 and the corresponding text have been revised to reflect consistent and accurate costs.

Regarding note 1 in the Table 5.19-1, "deadheading" in this case means repositioning buses from the East Bay to the Transbay Terminal for use in the afternoon. The analysis assumed no change in East Bay deadheading, so "deadheading" in this instance refers to the longer distance between the terminal and bus storage than the existing condition with AC Transit bus storage on the ramps. Specifically, the existing loop terminal allows for the buses to be closer to the terminal than either of the proposed alternatives.

Increased sidewalk widths would be accommodated by appropriate building setbacks rather than decreasing the roadway cross-sections. The final design process will address the specific building design issues that will provide sufficient sidewalk widths.

The existing signal on Fremont Street between Howard and Mission Streets would be relocated to the location of the Muni and Golden Gate Transit egress. A simulation of the bus operations exiting the Muni/GGT facility showed that street operations would be satisfactory with the relocated signal.

2.6.8 Mr. Sheerin, Speaker, 11/13/02 Public Hearing

"And I'm also concerned that some of the sketches I've seen here of multiple levels on the platform separates the ground level from the train and bus terminals by two or more levels, and that seems to me like that will also make it more difficult and cumbersome for people to make connections. You have to deal with elevators and escalators and staircases. And in that case, it seems to me if you could – maybe it's not possible to do on one level, but eliminate the intermediate mezzanine level if at all possible so that the – again, the travel time is decreased.

"In looking at the diagrams and listening to the last speaker, it occurred to me I don't see any large seating areas in this cross section of the terminal, and that's been one of the – I think, the biggest problems with the existing Caltrain terminal and much of the stations along the way. It's – there are a few benches, but not very many. And so if you've got a trainload of people waiting for the next train, they all have to stand; and that's not very conducive to convincing more people to mass transit and a train three quarters of your way to commute. It's, you know – especially like the end of the day: tired people want to sit down, and you ought to need to let them do that on a train or in large seating areas, such as are found in other train terminals throughout Europe and the US.

"And partially I'd like to address the last speaker's comments on why he doesn't think this project is necessary. But to encourage people to take mass transit in greater numbers and more frequently, you need to make the connections as few as possible and as easy as possible; and the current location of the train station is not conducive to that, and not all of these designs are conducive to that. You need to make the station layout have as few levels as possible, be as easy to get through, lots of seating, easy connections to both trains, buses, the mass transit on Market Street, and the Ferry Terminal."

Response 2.6.8 Stairs, escalators and elevators would provide vertical circulation between levels of the new terminal. The mezzanine would provide for passenger waiting areas, a potential Muni connection to Third Street, program space for operators, and back-of-house requirements for building operations. Minimizing travel distance between modes is generally regarded as a means of enhancing connectivity and, thereby fostering ridership. The current conceptual design for the terminal minimizes travel distances between modes by stacking the

modes rather than placing them at the same elevation, which has a tendency to increase travel distances and time. The use and extent of seating areas in the terminal will be evaluated as part of the Transbay Terminal final design process. Please also see Response 1.1.7.

2.6.9 Architecture 21, Michael Kiesling, December 20, 2002

"In 1992 I circulated the first version of my plan for extending Caltrain to the Transbay Transit Terminal. The result of over five years of research and design, it suggested that a tunnel could be dug under Rincon Hill to bring trains from Mission Bay to the Transbay Terminal. Over the next decade, I refined the design to meet the changing technical and political situation. My comments come from my decade-plus involvement with the project.

"The bus and terminal building project, described in the DEIR, is an excellent design. This portion of the project was often the most contentious, as initially the City of San Francisco proposed removal of the bus facility. The current design can be further improved by shifting the footprint of the facility to the west, to occupy the area of the failed residential high rise project to the immediate west of the terminal. This would allow the above-ground portion of the terminal to keep to the west of Beale Street, removing the need to bridge that street."

Response 2.6.9 The co-lead agencies for the EIS/EIR acknowledge Mr. Kiesling's prior extensive involvement in the proposed Project. Per Mr. Kiesling's suggestion, the proposed footprint of the terminal has been re-evaluated and is now proposed to be further west than is shown in the Draft EIS/EIR. This change in location for the terminal means that the new terminal would no longer span Beale Street and represents a costs saving to the project, with no apparent loss in terminal utility and no significant change in project impacts. This refinement is further described and evaluated in Sections 2.2.1.2 and 2.2.2.1, Volume I, of this Final EIS/EIR.

2.6.10 Transportation Solutions Defense and Education Fund (TRANSDEF), David Shronbrunn, President, December 20, 2002

"It appears that the upper bus level of the West Ramp Alternative uses only half of the space available. It would be desirable for the building to have the structural capacity to build out the other half, if demand for it should develop in the future."

Response 2.6.10 The option of building a full level at the top of the terminal should future demand warrant has been and will continue to be considered in the design of the terminal.

2.6.11 Frances Wong, November 22, 2002

"Page 5-113. If a diamond lane is established on both Beale and Fremont, surface rail connection should be provided from Market Street for E and F line tripper service at the Transbay Terminal. This would share use of 600 volt trolley with Muni lines 5 and 6. The incorporation of heritage trolley service at the Transbay Terminal provides both a historic link and practical direct connection to the waterfront for both daily commuters and off peak tourists."

Response 2.6.11 Under the current terminal conceptual designs, the Muni area on the surface between Beale and Fremont Streets is designed to accommodate a rail operation, with adequate clearances (horizontal and vertical) for rail vehicles.

2.6.12 Ken Bukowski, Councilmember, City of Emeryville, Speaker, 11/12/02 Public Hearing

"I'm a councilmember from the City of Emeryville and have followed this project the last 10 years or so. I want to make a couple of points about the proposal currently out there to take out

the bus ramps. It's really in the East Bay, sued Caltrans on account of taking down the ramp. A settlement was entered into where they were going to take the ramp down and proposed to put it back. It doesn't make sense to put it back without it being part of the new project. Somebody should look into that. We want to make sure that the terminal has viability."

Response 2.6.12 The Transbay Joint Powers Authority has selected the West Ramp Transbay Terminal options as a component of the Locally Preferred Alternative. Replacement of the east ramp would not be necessary should this new terminal option be designed and built. The status of lawsuits or resolution of such suits regarding the disposition of the east ramp in the interim is beyond the scope of this EIS/EIR.

2.6.13 James Wittmann Dear, November 18, 2002

"Visual and aesthetic impact is hard to quantify. If we can try to improve the project keeping in mind its overall sculptural qualities and incorporating ornamentation and variation of form with the fabric of the district architecture, I hope that this will last another seventy-five years. The ramps need to be more than just 'less visually intrusive due to their uniform appearance and minimal supporting structures' (5.16.2 page 5-93). That sounds like a causeway to me."

Response 2.6.13 This portion of the visual analysis of the new terminal ramps notes that the stacked ramp configuration would have a reduced footprint and minimal supporting structures, suggesting that the ramps would therefore be less visually intrusive. The ultimate aesthetics of the ramps will be determined during final design, which will involve community input to assure, to the extent possible, that the ramps are visually pleasing and fit into the urban design and fabric.

2.6.14 Greg Patterson, December 18, 2002

"Similarly, once built, the Transbay Terminal will stay for many years, so should be designed with the long-term character of the city in mind."

"The Terminal design shown is apparently just a schematic possibility and not a real design. Urban Design impacts are impossible to assess since the schematic shown was developed specifically for preliminary study and the architecture shown is apparently conjectural. Have Guidelines been developed to assist the eventual project architect? Will there be a signature style of architecture for the Terminal that is in any way similar to what is suggested by the sketches in Figure 5.16-1?"

Response 2.6.14 Guidelines are being developed to assist the eventual project architecture. The "sketches" of the new Transbay Terminal in Figure 5.16-1 are conceptual and will be further developed as the Project proceeds through preliminary and final design, which will include a public involvement process.

2.7 OFF-SITE BUS STORAGE FACILITY

Note: Comments 2.7.1 through 2.7.38 all concern various environmental aspects of the proposed off-site bus storage facility under the west approach to the Bay Bridge between Second and Fourth Streets. One response is provided to all of these comments, and this consolidated response can be found following Comment 2.7.38.

2.7.1 California Department of Transportation, Timothy C. Sable, District Branch Chief, December 20, 2002

"Proposed Bus Storage: In Chapter 2, Figure 2.2-5, the feasibility of providing a parking double-deck under the I-80 structure is not clear.

"The impacts of the proposed bus storage under Interstate 80 (I-80) between Stillman, Perry, Second and Fourth Streets are not adequately addressed in the DEIR. The West Ramp Alternative displaces AC Transit and Golden Gate Transit bus storage from current locations on the Terminal East Loop and the surface lot at Main, Beale, Folsom and Howard Streets, respectively. The Project includes a direct ramp connection between the proposed storage facilities and the new Terminal. The Noise and Vibration portions, as well as the Air Quality portions of Table S-I do not address the impacts of the proposed bus parking underneath the I-80 structure on the residences and businesses on Stillman and Perry Streets.

"Storage of 200+ buses between Second and Fourth Streets, plus a two-level automobile parking structure at Fourth Street, could represent a substantial change from the existing use that would require an Air Quality Assessment from the Regional Air Quality Board and/or Association of Bay Area Governments (ABAG) addressing the impacts of the proposed use on air quality based on the Bay Area Air Quality Assessment Model.

"Also, Streets and Highways Code Section 146 'Use of Airspace for Mass Transit' requires that the Department exercise discretion in allowing only such uses that conform to established safety design standards, and are consistent with good ecological and environmental planning. Any commitment we make to the Transbay Joint Powers Authority to provide airspace for the proposed use would be subject to the Air Quality Assessment, and our approval of the parking structure development plans.

2.7.2 AC Transit – Kathleen Kelly, Deputy General Manager, Service Development, December 20, 2002

"We are aware that some property owners and residents in the Second St. & I-80 area have raised concerns about the bus storage planned under the freeway there. They have raised concerns about both air quality and traffic impacts. AC Transit sees this bus storage site as a critical and integral part of the project that should not be changed. By providing dedicated ramps from the bus storage site to the Terminal, AC Transit can quickly and reliably move buses from one to the other. If our buses had to operate from another storage site to the Terminal, which required the use of often congested Downtown San Francisco streets, this would substantially increase our running time and operating cost.

"We also believe that the air quality and traffic concerns are misplaced. The air quality concern is based on an obsolete image of highly polluting diesel buses. Modern clean diesel buses eliminate all but a small fraction of former emissions. In addition, the buses would only be running at the storage site for a few minutes per day. The number of cars that currently use the site is larger than the projected number of buses, so that the existing cars also have air quality impacts. The

bus storage facility and ramps could actually improve traffic in the area. The storage sites are currently used as parking lots for automobiles, which access the lots via city streets. By creating dedicated ramps and removing on street trips, traffic congestion could actually ease."

2.7.3 Golden Gate Bridge District, Alan R. Zahradnik, Planning Director, November 19, 2002

- "DEIS/DEIR (pages S-1 and 1-1) describes the many transit benefits achieved by this Project. Equally important, however, is the project's inclusion of a permanent storage/layover facility for regional bus operators. This facility will continue to allow GGT to provide level of service and schedule reliability for its customers. Although passenger amenities are important for the general public, the ability for GGT to maintain level of service and schedule reliability are critical to the attractiveness and success of GGT bus service in San Francisco. Page 1-2 should also acknowledge the operational benefits provided for regional bus operators by this Project.
- "A permanent midday storage facility is very critical to the retention of successful GGT bus service in San Francisco. District recommends that the bus storage and bus access ramps proposed by this Project be identified as a priority transit improvement that could be advanced independently in the event the Project is delayed.
- "Table S-1 of DEIS/DEIR (page S-10) states that mitigation of displaced public parking by bus parking will be accommodated with a 'parking deck' under the freeway between Third Street and Fourth Street. This table should clarify that bus parking at grade level is the higher priority and public parking could co-exist onsite on a deck.

2.7.4 M. Kiesling, Regional Alliance for Transit (RAFT), December 18, 2002

"As part of this we STRONGLY support the dedicated off-site bus storage facility between Perry and Stillman Streets, beneath the Bay Bridge approach structure. An issue of contention with the previous designs for the terminal was the lack of adequate bus storage. RAFT fought long and hard to ensure that any new terminal would be operationally equal-to or better than the existing terminal. The proposed location, under the freeway, is close to the terminal and maximizes the use of this already impacted public land. We support designing the bus storage facility to mitigate the concerns of its neighbors, and suggest that with proper landscaping and architectural treatment, the neighbors will find the facility a compliment to their neighborhood, and a great improvement over the existing public parking lot. Additionally, concerns about possible bus diesel exhaust will probably be well-mitigated through the advancement of bus propulsion technology by the time the facility is operational."

2.7.5 Architecture 21, Michael Kiesling, December 20, 2002

"The bus storage facility is crucial to the operation of the terminal. The location proposed for bus storage, beneath the west approach to the Bay Bridge, between Fourth and Second Streets, connected to the terminal by grade-separated ramps, is the best alternative available. The storage facility will be an improvement over the unimproved parking lots that currently occupy the land under the freeway. Proper landscaping and design will make an aesthetic improvement to the neighborhood. The maintenance and security of the facility will improve the safety of the neighborhood. The continuing evolution of bus propulsion technology, the switch to cleaner fuels, will result in fewer pollutants in the neighborhood, not more."

2.7.6 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"Summary of our Recommendations: We strongly support the full build, West Ramp alternatives and bus storage facility location."

2.7.7 Chadowitz, Operations Manager, Britanne Corporation, November 7, 2002

"I am writing this letter to you to implore you to reconsider using the Stillman Street parking Lots between Second and Fourth streets as bus storage. Stillman Street residents and businesses will already be severely affected by the rebuilding of the bridge approach, do we also need to be subjected to reduced air quality by bus emissions?

"If you visit our little neighborhood of businesses and homes you will see that the parking lots are a closed environment. The freeway overhead closes in the lots that are closely bordered on each side by buildings. These buildings house our businesses and our families. This is not an industrial park, this is a neighborhood.

"Please help us to continue the growth of our area, not contribute to its demise. I am sure that you can find a great alternative area in a place that would not be as negatively affected as our street. May I suggest Fourth and King, or the Pier across from Bayside, or Port property, or how about under some of the property being built adjacent to the Transbay Terminal?"

2.7.8 Titan Management Group, Michael Alfaro, Vice President, December 12, 2002

"These comments are submitted on the ... "Environmental Document" on behalf of the Clocktower Lofts Owners Association:

- "The Clocktower is an historic building in a historic area.
- "The Clocktower is a live/work building providing housing for 127 families including small children.
- "The Clocktower is already an area in city with mitigations for the Giants Stadium. Second Street is designated as a pedestrian walkway; Third and Fourth Streets are the bus bridges.
- "This area is already subject to extensive disruption during Caltrans' bridge and approach demolition and rebuilding for next 5 years.
- "The Clocktower relies on open windows for ventilation as do many of its Stillman Street neighbors.

"Bus Storage Facilities: One of the project elements is development of bus storage facilities. 42 or 53 AC Transit Buses would be stored between Second and Third Streets at Stillman, facing our building. 140 Golden Gate Transit buses would be stored between Third and Fourth. These bus yards would concentrate noise and diesel emissions in a semi-enclosed area near high density residences and businesses.

"The Environmental Document is obligated to consider the environmental impacts of the project, including all its components. The Environmental Document does contain a discussion of air quality impacts. It appropriately includes a micro scale air quality assessment. The microscale analysis, however, was limited to an assessment of the concentrations of carbon monoxide.

"The California Air Resources Board has identified diesel emissions as a carcinogen. In recognition of the health risks to children from diesel exhaust, the ARB has just taken action to prohibit idling of school buses within 100 feet of a school building, see htp://www.arb.ca.gov/newsrel/nr121202.htm.

"The buses utilizing the storage facilities contemplated by this project will undoubtedly be a source of diesel emissions. These emissions could be a significant health risk because of the number of buses involved. The Environmental Document acknowledges that bus engines will be warmed up in these storage areas (page 5-63). The emissions in these storage areas will be

more concentrated than they would be in an open area because of the semi-enclosed covering of the freeway structure. In addition to presenting possible health hazards to residents in the surrounding areas, the relative enclosed nature and lack of significant airflow in this area may present substantial health hazards to the bus drivers and associated mass transit employees. There are numerous residences located in this area that house sensitive populations, including children. There is a residence for the elderly adjacent to this area.

"An analysis of the environmental impacts of this project should include an identification of the residences near the bus storage facility, the sensitive populations that would be affected, and an analysis of the potential exposures to diesel exhaust, including a worst case analysis and a cumulative impact analysis.

"Diesel engines are also notorious sources of noise. The noise will also be greater because it will be partially contained by the freeway structure. The Environmental Document contains only a four line qualitative discussion of the bus storage facility noise impacts (page 5-63). There is no quantitative analysis presented.

"The Environmental Document proposes construction of a sound wall on the south side of the storage areas to mitigate the noise impacts. This appears to be based on recognition that the noise impacts would be regarded as significant though that is not explicitly stated. There is no analysis of how effective the sound wall would be. A sound wall may not be effective since it would be expected that noise would reflect off the bottom of the freeway structure and escape over the top of a sound wall. A sound wall on the south side of the storage areas will not mitigate the noise impacts on the Clocktower at all.

"There are accepted methodologies for conducting a quantitative noise analysis of the operation of these storage facilities. Such an analysis should be performed and presented. If there are significant impacts, they should be acknowledged and mitigated. There should also be an analysis of the effectiveness of any proposed mitigation measures."

2.7.9 Elizabeth Carney, Nov. 26, 2002

"While we are all in favor of efficient and effective public transportation, the concerns of the 127 families at the Clocktower Lofts (Second St. at Bryant) have not been adequately taken into account in the development of the Trans Bay Terminal Plans, specifically the development of the bus storage and maintenance area indicated in the Draft EIR/EIS and the construction and operation of the trains and tunnels.

- "Transbay Tunnel and Caltrain Extension. Other Solutions Can Be Found. Bus rapid transit could replace the rail system proposed here at much lower cost.

"There are many impacts during the construction and operation of the Caltrain extension tunnel. What are those construction impacts? What is the damage to the building that might result and how can those risks be managed? Is there blasting? Would the construction structurally undermine the building? While we believe the Clocktower is on rock, the geological studies contained and reported in the EIR conflict with other reports on hand regarding the quality of the rock, with more sand and sandstone than reported.

This is a 127 family work/live loft building, with requirements for access and functioning during work hours and in the evening and night. The construction plans do not take this into account.

"What are the impacts during tunnel operation: of vibration, from exhaust, from noise from the operation of the trains must be studied in detail, as the EIR fails to even recognize the hallway as a part of the residence.

"Bus Storage and Maintenance located between Second and Fourth Streets at Stillman, facing our building, the bus yard would be an aesthetics issue and concentrate congestion, vibration, noise and diesel emissions in an enclosed area not appropriate for the high density residences and businesses.

- "EIR Not Responsive to Residents

"We already expressed our concerns at the Public Hearing April, 2001, and in writing, requesting a study of the effects of emissions on the many residences and businesses. We are concerned that public safety needs are not being met and we are considering legal action. Until now, we have been nearly ignored in the process, we are not on the distribution list for information, nor is the Clocktower – an historic building – listed in the EIR/EIS roster of buildings of historic merit. Where we do appear in the EIR, the sound wall mitigation is directed to the wrong side of the property. (The Clocktower is on the East side of the property in question).

- "Other Locations Can Be Found

"The function of day storage of AC Transit Buses, and Golden Gate Transit Buses can be contained within the Transbay terminal and adjoining buildings. For example, as David Baker and Associates Architects have recommended, it could be the first level of a multi-level residential development such as the Spear or Folsom projects. Adjoining the terminal project itself, its location there or at an alternative location would be more appropriate than in the middle of a dense residential and small business area-this is not an empty vacant area of abandoned lots.

- "Other possible locations could be explored, such as:
  - "Widen the area now used for this bus storage and leave it where it is
  - "Caltrans paint yard at Bryant and Main (Build double deck with bus storage below) Fourth and King
  - "Port Property- vacant piers
  - "Ground level of property being developed adjacent to Transbay Terminal- such as 201 Spear and 300 Folsom.

"When contemplating the new locations, given the carcinogenic classification of Diesel particulate, staging of buses should be inside, allowing the filtering of ventilation. New models of buses which use of particle traps, new clean burning diesel buses (or vegetable oil technologies) or electricity can be utilized.

- "Combination of Impacts: Existing Planning Already Puts Hardship Burdens on Neighborhood Families and Small Businesses

"In the San Francisco Planning Document for the new Giants Stadium EIR and 'Pacific Bell Park Transportation Management Plan,' April, 1999, the area in question for the proposed bus yard is already part of the parking plan and mitigations to accommodate the needs of the Giants and neighborhood during games. In the same document the Second Street area has been designated a walking and bicycle zone, not a bus bridge. Many mitigations have been made already to accommodate the Giants plans. Please do not add additional burdens on this neighborhood. Parking is already very difficult here for small business and residents alike.

"The Transportation Management Plan notes, 'An important objective of the Pacific Bell Park parking plan is the program to protect residential parking supplies in neighborhoods nearby the

ballpark. The San Francisco Redevelopment Agency Rincon Point-South Beach Citizens Advisory Committee (CAC) has indicated that residents and businesses... are very concerned about not being severely impacted by baseball traffic or parking...'

"The planned demolition and rebuilding of this area for the Bay Bridge approach will eliminate approximately 1,000 spaces of the parking and add construction for upwards of five to ten years. Please do not add additional burdens on this neighborhood's small business and families.

- "Traffic Congestion already High

"The pressures on Second Street, Third and Fourth Street and around the Bay Bridge approaches during the evening rush hour are already very intense for this neighborhood. Contemplating a heavier use by adding buses to exit on these streets seems unlikely to succeed.

- "Health Issues and Public Safety Need to Be Addressed

"Diesel fumes are carcinogenic and funnel directly into the building in the current plan. Fumes will accumulate under the low bridge approach and funnel directly into the first level of the building. New Caltrans designs will make it worse with the first deck even closer to the building.

"No one seems aware of the air pollution issues from the EIR team. Have there been visits made looking at this issue? A study of Air Pollution Emissions should be made, especially with respect to diesel emissions.

"The Clocktower has 127 families, including small children for whom diesel fumes are especially dangerous. Stillman Street is also a high density residential and small business population. Both we and our neighbors rely on open windows for ventilation. Noise and vibrations from buses will adversely affect occupants. Safety to pedestrians needs to be enhanced in the walk down Second Street.

"The Clocktower is an historic building in an historic area. Every effort should be made to have aesthetic approaches to these problems.

"I enclose a petition signed by residents."

2.7.10 Bryant Street Associates, GZPM, Edward A. Green, Managing Agent, December 3, 2002

"This letter is written on behalf of Bryant St. Associates, the owners of property located at 55 Stillman St, San Francisco. I have reviewed the Draft EIR and find it lacking in assessing the impact of the proposed permanent relocation of bus storage during the day to an area between Stillman and Perry Streets, from Second St. to Fourth St., San Francisco.

"In determining the impact of this aspect of the Transbay Terminal Plan, the EIR fails to reference proposals currently under study by the City Planning Department to rezone much of the SOMA area, particularly the areas adjacent to the proposed bus storage yard. Part of the rezoning is to include residential uses.

"If the City is actually looking to encourage housing in these areas, then the impacts of a permanent bus storage yard on such housing should be discussed. As an alternative to the proposed bus storage location referenced above, the document should consider alternative locations which would not impact potential housing contemplated by the rezoning.

"The EIR should also consider whether daytime storage for AC Transit and/or Golden Gate Transit should be accommodated at all. Currently Samtrans, which provides routes which interface with Transbay Terminal, does not store buses near Transbay during the day. Perhaps a lesser cost alternative, and possibly a lesser impact-generating alternative, would be for AC buses to travel back to the East Bay after their morning runs, where such buses could be re-utilized more effectively during the day for East Bay transit riders. A similar analysis should be looked at for Golden Gate Transit buses, where such buses could be re-used during the day to serve San Francisco-Marin transit demand.

"If the project removes the existing ramp structure, with its own attendant impacts, to generate an impact in a different location, then the general impact is not mitigated, just shifted to a new location. A re-assessment of the desirability of accommodation of daytime bus storage for commuters should be in order."

2.7.11 Francis B. Mathews, May 18, 2001

"We are writing to express our concern over a proposal linked to the above mentioned project, requiring the closing of the Stillman Street parking lots between Second and Fourth streets. We understand that a EIR report is underway and we would like the report to address the following;

"Air Quality - the proposed bus parking lot is located under the concrete west approach to the Bay Bridge with residential and commercial buildings fronting both sides of the parking lot. Diesel fumes from idling buses would be trapped in this tunnel-like environment polluting the air that ventilates through the adjacent buildings. The Planning Department approved numerous live-work projects on Stillman Street; Clocktower lofts, 21 Stillman etc., combined with several existing apartment buildings, the bus parking lot certainly isn't harmonious to our environment.

"Recently we visited the Golden Gate Transit and Sam-Trans bus parking lots and were alarmed to find the buses idling with diesel fumes spewing out long before exiting the parking lots.

"Our neighborhood will be severely impacted by the demolition and re-building of the Bay Bridge west approach as well as the potential construction of the Third Street Muni-Line – we should not be subjected to additional, ongoing noise and pollution from the bus storage.

"Alternatives: We recommend the following alternative locations be considered for the bus storage.

"1 - CALTRANS paint yard on Bryant and Main, a two-story structure would allow for the maintenance yard and courtyard on top, and bus storage below.
"2 - Treasure Island
"3 - Fourth and King Streets
"4 - Pier/Port property across from Bayside Village
"5 - Incorporated with the development, (lower levels) of adjacent parcels to the transbay terminal."

2.7.12 Francis Mathews, MDC Properties, September 30, 2002

"This letter is to follow up our letter dated May 18, 2001 regarding a proposal which would require the closing of the Stillman Street parking lots between Second and Fourth Streets. We are seeking full disclosure on your EIR with regards to air quality and to address our increased concern regarding new national reports, particularly one from the National Institute for Occupational Safety and Health (NIOSH) regarding the CARCINOGENIC EFFECTS Of EXPOSURE TO DIESEL EXHAUST. The information in this report as well as others contend that exposure to

diesel fumes should be reduced to the lowest feasible limits. We have also discovered that diesel exhaust contains more than 40 chemicals that are listed by the EPA as toxic air contaminants, known or probably human carcinogens, reproductive toxins or endocrine disrupters. If the diesel fumes from the idling buses were sustained over any period of time, they would be potentially very dangerous to all residents and commercial tenants of our neighborhood. These are health risks that we cannot accept. We cannot allow a known carcinogen to be introduced into an environment where we live and work every day.

"We sincerely hope that you will explore every alternative to this proposal and take our concern very seriously. We are willing to work with you to find a viable solution and have already recommended several alternative locations which much less environmental impact."

2.7.13 Francis Mathews, MDC Properties, October 25, 2002

"I am hand delivering this letter, along with copies of our previous correspondence dated May 18, 2001 and September 30, 2002, and copies of studies which show significant impact and danger from diesel fumes. The EIR did not address this very important issue. We are already exposed to pollution of all kinds from the traffic on the approach to the Bay Bridge; buses idling and coming and going to and from a rather enclosed storage area under this unventilated approach would escalate the air and noise pollution to unacceptable levels. I am hoping that this will get your attention and that we will be able to halt all further forward motion on this proposal.

"I was quite dismayed to discover that not only did we not receive a copy of the EIR as requested, but in reviewing a Stillman Street neighbor's copy, Stillman and Perry Streets were completely absent, with the exception of a brief mention of noise pollution from the proposed bus storage. We raised these issues at the April 4, 2001, Scoping Meeting. Why weren't these issues evaluated in the EIR? Although we are concerned with noise pollution, we are also greatly concerned with the impact of diesel fumes on air quality, the dissolution of all parking between Second and Fourth Streets in the established lots. I think it is important to note, these parking lots were listed in the Pac Bell Ballpark EIR as important to that facility. Also the greatest concentration of commercial development, hence parking demand, is on Second Street.

"In conclusion we are concerned and suspicious of the desire to push through this proposal without exhausting other alternatives. We have distributed petitions to our concerned friends and neighbors and these shall be returned to you as soon as all signatures are in. Letters are also forthcoming." [Attachments]

2.7.14 Francis and Janice Mathews, December 19, 2002

"As the owners of 25 Stillman St., 35 Stillman St., 470 Third St. and 585 Howard St, we ask that you read and respond to our concerns regarding the Transbay Terminal Project EIR/EIS.

- "The Stillman St. site is unsuitable for bus storage because it is a highly populated area with hundreds of residences, and many high-density office buildings in this two-block site.
- "Most if not all of these buildings have operative windows and employ external air as their sole source of ventilation. The diesel exhaust, noise and additional traffic impact of a bus storage site is inappropriate and dangerous in our highly populated neighborhood.
- "The 'San Francisco Planning Department SoMa Community Planning Process Rezoning Alternative' Draft Packet dated Nov. 19, 2002, shows that the plan for this neighborhood is to encourage an even higher percentage of residential and office use. Putting a bus storage site in the middle of this would not be a compatible use for this area.

- "As there are families and a school site in this 2-block area, a much more extensive analysis of air quality, sound, vibration and traffic would have to be implemented. Please note that the State has now banned idling buses near schools. The California Air Resources Board passed this measure on Thursday, December 12th, 2002. Before expending a lot of money to do these extensive studies, I hope you instead determine, with the additional information that you have before you, that alternative sites should be considered instead.
- "Traffic to and from the proposed bus storage would have a significant impact on the already burdened Third Street and Fourth Street corridors.

"Alternative location for the Bus Storage Facility
- "Those buses that don't need frequent access to the Transbay Terminal should be stored in a more industrial area, away from residences and high-density office use. Alternatively, they should be put into circulation in Marin, the East Bay and San Francisco to make a more frequent and efficient bus service (see paragraph below on "Bus Rapid Transit").
- "The buses that do need access to the Terminal should be stored in or closer to the Terminal.
- "There is substantially more height clearance at this location and it is much closer to the Transbay Terminal. Alternatively, the bus storage could be designed into one of the adjacent re-development projects or into the Terminal itself.
- "Traffic in the South of Market area would be much less impacted by a bus storage site closer to the terminal.

"Bus Rapid Transit: Both the "cut & cover" and the "tunneling" options for the Caltrain extension would be disruptive to our neighborhoods. Please do an analysis of a "Bus Rapid Transit" alternative. This would be more cost effective and less disruptive. It could utilize more of the "idle" buses during off peak times by setting up a system that would be fast, easy and encourage increased ridership. This would decrease the amount of space you would need for bus storage, and thus could incorporate the smaller storage site into the Transbay Terminal development site.

"To quote Stuart Cohen of the Transportation and Land Use Coalition (San Francisco Magazine, Dec. 02), "Together, AC Transit and Muni already are close to 60 percent of the transit riders in the Bay Area, and both bus companies say they could add a whole lot more with a few innovations. In the cities, they would introduce what's known as 'bus rapid transit' on major arteries. These buses would operate like trains, traveling in their own lanes, with the ability to trip traffic signals so that they don't get stuck at lights. The buses would make fewer stops, and the bus shelters would be more like train stations, with protection from the rain and signs that give real-time projections about when the next bus is arriving. Throughout the cities, buses would be frequent and fast (even during off-peak times) especially in neighborhoods where people don't have cars. Along two major corridors in Los Angeles, where 'bus rapid transit' is a top funding priority, installing such a system has reduced bus riders' commute times by 25% and increased ridership by close to 40% (see "Trains vs. Buses: the L.A. Lesson).

"My husband spoke at the initial Scoping meeting in April 2001 and we reiterated our concerns in two subsequent letters (May 18, 2001 & Sept. 30, 2002 - see attached) and at the Planning Commission meeting in November 2002. Our attorney, John Capron, also submitted a letter (attached) in November 2002. Those comments are all incorporated by reference in these comments."

2.7.15 J. R. Capron, November 8, 2002

"I represent the owners of 25 Stillman Street and 35 Stillman Street. I am writing to request an extension of the public comment period for the Transbay Terminal DEIS/EIR. Further, I am

requesting that you require a more in-depth analysis of the negative impact to the area of the proposed Bus Storage Area along Stillman and Perry Streets.

"Both of these requests should be granted for the following reasons:

- "My clients and others in the Stillman/Perry Street neighborhood publicly voiced their concern regarding this bus storage proposal at the DEIS/EIR Scoping Meeting on April 4th, 2001, during the tape-recorded session for public comment. Notwithstanding this fact, Stillman and Perry Street buildings are not even mentioned in the report.
- "Many people also followed up these comments with letters, again asking that the DEIS/EIR include analysis of noise, air quality, and traffic. Instead of covering these issues, there was only one small paragraph in the entire DEIS/EIR which mentioned the noise impact on the Second St. Clocktower building. There are other residential and commercial buildings in the area, including a large, low-income project on Third and Perry, that would be even more severely impacted and they were not included in the mitigation measure identified in the DEIS/EIR. We request that a quantitative analysis of noise impacts from the bus storage yard be prepared for the sensitive receptors adjacent to the proposed bus storage area, and that the mitigation measure be expanded as necessary.
- "There is no analysis in the air quality section of the impact of diesel emissions on nearby residences adjacent to the bus yard. In fact, there is no mention of any change in diesel emissions. While there may not be any increase in regional emissions because the new Terminal might not increase the number of buses or distance traveled, there will be changes in the locations of diesel emissions with the new bus storage yard. Most emissions from diesel engines are relatively heavy particulates that are local problems. We request that a quantitative analysis be carried out of the impacts of additional diesel emissions using the methodology developed by the California Air Resources Board in their publication entitled "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles" in Appendix VII (published in 2000).
- "The west approach span of the Bay Bridge is a lid to the proposed storage area that is boxed in between Stillman & Perry. This configuration would force the toxic diesel fumes into the many residence and offices of this densely populated neighborhood. Most if not all of the buildings in this two-block area rely exclusively on open windows/external air for their ventilation.
- "I am informed that several people, and possibly many more, who requested to be notified when the EIS/EIR was published, never received notification. My clients were not notified although their names were on the circulation list. They found out about it weeks later through a chance conversation with a friend. The public needs more time to respond.
- "The area currently has to deal with the negative impact of the Bay Bridge at its doorstep. Further, those along Stillman and Perry will have to live with the 5-8 year demolition and rebuilding of the west approach of the Bay Bridge. They may also have to tolerate their main exit artery (Second St.) being torn up for the proposed rail system. Any tenant or owner who sticks it out during this extended construction period (potentially a decade or more) shouldn't be asked to tolerate permanent health and noise hazards that this storage area would impose. If you put in a permanent, 2-block diesel bus storage area, you are effectively condemning the buildings in this two-block area.

"I am enclosing some recent studies showing the toxic effects of diesel exhaust. I strongly urge that you make a site visit to the area and meet with the residents/tenants to more fully understand the impact of this proposal. Once you have done this I think you will agree that other sites would be more suitable for the bus storage area.

"Because of the impending deadline for the public comment period, please respond to me in writing by November 14th regarding extending the public comment period and including a more in-depth analysis of the proposed bus storage area site alternatives."

2.7.16 Bruce W. Barnes, Barnes Equipment Company, December 16, 2002

"I have spoken at the public hearings on April 4, 2001, November 12, 2002 and November 26, 2002 in opposition to the proposed permanent location of the AC/Golden Gate Transit Bus Storage Facility on Stillman/Perry Street. I have reviewed the report titled Draft Environmental Impact Statement/Draft Environmental Impact Report and Draft Section 4(f) Evaluation concerning the impact analysis performed for the Bus Storage portion of the proposed project.

"The report does not address the impact on our neighborhood that will be caused by placing a Bus Storage Facility for approximately 200 buses within this two (2) block area. The draft report is grossly inadequate as it pertains to the impact that diesel fumes and circulating buses will have on the Stillman/Perry Street neighborhood.

"1. The report is silent on the pollution and health hazards that will be caused by the increase in diesel emissions in the neighborhood. Diesel exhaust fumes are listed by the EPA as toxic and likely to cause lung cancer in humans. The EPA has found diesel exhaust triggers asthma and other respiratory problems.
"2. The report is silent on the traffic impact to the one way street and neighborhood. The report does not address bus circulation on Stillman Street. Figure 2.2-5 on page 2-14 shows the one way direction on Stillman Street being changed. Do all the Golden Gate transit buses enter Stillman from Third Street? Bus circulation and the impact within the Stillman/Perry neighborhood is not addressed.
"3. The Draft EIR does not address the impact of the increase in the noise level resulting from the proposed Bus Storage Facility in the center of the Stillman/Perry Street neighborhood. The report (Section 5.8.6 & 5.8.7) mentions increased noise from the Bus Storage Facility as pertaining to only one (1) Building in the neighborhood. The noise levels are not quantified. What happened to the other forty (40) Buildings that make up the immediate neighborhood surrounding the proposed Bus Storage Facility?
"4. The loss of approximately 800 parking spaces to the businesses and residents has not been mitigated by 300 parking spaces in the proposed parking deck at Fourth and Stillman.
"5. None of the issues and resulting impacts raised in my certified letter to Ms. Joan Kugler dated July 5, 2001 have been addressed in the Draft EIR report. We have had no response to our letter. Not even a phone call.
"6. Our Neighborhood will be impacted for the next 5-7 years as the West Approach is rebuilt. Caltrans has made public assurances in several open meetings that the parking would be returned under the West Approach at the conclusion of the project.

"The extent of the impact on our neighborhood depends on which ramp alternative is selected for further study and analysis. The Loop Ramp Alternative would provide for the storage of 120 buses on the eastern open air bus ramps. This alternative along with finding a more suitable permanent Bus Storage Facility now for the Golden Gate Transit buses would eliminate the need for Stillman/Perry Street neighborhood Bus Storage Facility under the West approach.

"The Draft EIR Report presents an analysis and modeling criteria (Section 5.7) for the carbon monoxide (CO) levels on 8 intersections downtown. The Draft EIR makes no mention of any analysis or modeling for the elevated levels of carbon monoxide (CO) that will be present over the ambient conditions due to diesel bus circulation, idling and warmup in the eight (8) acre site in the middle of our neighborhood. A bus storage facility will have a significant carbon monoxide

(CO) level impact within the Stillman/Perry Street neighborhood that must be addressed. Many of these Buildings and residences in this two (2) block area use operable windows for code required ventilation and air changes in the structures.

"The proposed location of the temporary Golden Gate Transit Bus Storage Facility during construction of the Transbay Terminal project is not identified in the Draft EIR. The temporary Golden Gate Bus Storage yard should be built as the permanent facility at the front end of the project in an open air location that will not impact residents and businesses with increase diesel emissions and toxic carbon monoxide. This would also eliminate the cost of a new temporary storage facility for Golden Gate Transit.

"169 Stillman Street for 18 years has served as a private day school for up to 40 children. We are currently negotiating a new lease with a private Charter School. Locating an enclosed Bus Storage Facility across the street from our Building and circulating buses up and down the street is condemning the legal highest and best use of our Building. The State of California has banned idling buses near schools. The California Air Resources Board passed this measure on Thursday, December 12, 2002.

"Your planning efforts and analysis should be directed at locating a suitable open air facility for all bus storage that can not be accommodated on the open air elevated ramps or in the new terminal design. You should be able to accommodate all buses on the open air ramps, open air lots or design adequate storage space within the proposed Transbay Terminal. Trying to circulate and store 200 plus buses in a storage area with a lid on top and surrounded by business and residents is like trying to drive square pegs in round holes, they do not fit.

"I again request that you consider the alternative locations that have been presented to date and explore other suitable open air sites away from residences, schools and business. The buses that need to access the terminal should be stored in the terminal or on the open ramps and lots.

"If the Stillman/Perry neighborhood continues to be proposed for the Bus Storage Facility, extensive analysis must be included in future reports with regards to air quality, noise and noise. With respect to air quality it is imperative that your analysis and modeling address levels of carbon monoxide (CO) exposure to children as well as adults as their are families in addition to a school site located in this two (2) block area.

"I have attached a copy of my July 5, 2001 letter for your ready reference. We look forward to hearing from you regarding alternative locations for the proposed bus storage facility in the event the project moves forward."

2.7.17 Bruce W. Barnes, Barnes Equipment Company, July 5, 2001

"We are the Owners of the property at 169 Stillman Street in San Francisco. I spoke with you briefly after the presentation at City Hall on the evening of April 4, 2001 regarding one component of the proposed project that we are troubled by in our Neighborhood. That element is the proposed bus storage and parking facility location!

"The last several years our Neighborhood has been bracing for the temporary loss of the two (2) public parking lots under the west approach structure to the Bay Bridge between Second and Fourth located on land owned by the State of California. The Neighborhood (owners, tenants and residents) depend on the two (2) lots for public parking.

"When the Caltrans seismic retrofit project of the west approach was disclosed to the Neighborhood 5 years ago, we were advised of the temporary loss of the parking during portions of the seismic retrofit and reconstruction work currently scheduled to start in the Fall of 2001. The public parking was scheduled to be returned to the Neighborhood when the project was completed. Caltrans promised this in a public meeting.

"The bus storage and parking component of the Transbay Terminal project ("Project") currently being circulated for comment and consideration has targeted the public parking area under the west approach to be used for Golden Gate Transit and AC Transit bus storage and holdover facility to service the Project. Apparently no other areas were considered which may be more appropriate for bus storage and parking than underneath an elevated structure fronted on two sides by a narrow right of way consisting of one way streets, sidewalk, limited parking, and loading zones for our Neighborhood.

"Some of the very apparent problems we foresee based on the limited details provided to date are the following:
"1. The existing west approach overhead roadway structure over the proposed bus facility is heavily concentrated with large concrete abutments and columns closely spaced to support the west approach structure overhead. The lot configuration and circulation for buses is very inefficient. A tour of the numerous bus transit storage facilities in the Bay Area will demonstrate how inefficient and problematic it would be to place buses idling underneath a confined overhead structure full of bridge piers and columns.
"2. The Neighborhood already has already been impacted by a heavy concentration of vehicle emissions from the west approach roadway. The existing emissions in the air at the elevated roadway level impact the upper floors of the buildings along Stillman and Perry with operable windows at the freeway level. It also impacts HVAC systems for these Buildings that must circulate outdoor air from roof top levels where emission are discharged from the vehicles on elevated roadways. Adding approximately 230 buses under the elevated roadway will add a significant new element of emissions and air quality problems to our Neighborhood. It will be a significant burden and impact on the businesses and residences that directly front the street level of Stillman and Perry.
"3. The proposed bus storage area is bounded on the North by Perry Street with only a 35' right of way and on the South by Stillman Street with a 35' - 40' right of way with extensive encroachment into the right of way from the west approach concrete columns and abutments that line the North side of Stillman Street.
"4. The businesses and residents along Stillman Street will be severely impacted by buses circulating on the existing very narrow one way street (20-22' in width from the sidewalk to the exist concrete bridge columns encroaching the right of way) in front of the Buildings on Stillman between Third and Fourth Street. It will not be possible to unload delivery vehicles or park in the very limited street right-of-way parking if buses are circulated up and down Stillman Street and Perry Street. There will be new gridlock on the streets that are already choked or closed when deliveries are made.
"5. Some existing Building occupancies have City Building Code occupancy classifications that require a minimum of 20' clear roadways (without sidewalk, encroachment, loading zones or parking spaces) for emergency vehicles. Buses circulating up and down Stillman Street will significantly impact the traffic, loading, unloading and emergency vehicle access. It is not uncommon for portions of the street to be blocked and closed while deliveries and pickups are made with large trucks and trailers that serve the businesses and residents on the Streets.
"6. The Neighborhood is already forced to endure what is currently scheduled to be 5-6 years of disruptive heavy construction work. Many of the businesses and residences on Stillman Street are within 20' of the elevated west approach roadway that will be demolished and rebuilt. Now,

we are being informed that after we endure 5-6 years of disruption, the only public parking in the Neighborhood will be taken, and in its place a permanent disruption is planned -circulating and storing some 230 buses in a confined area bound by a limited right-of-way along two one way streets that are already heavily impacted.
"7. The 140 Golden Gate transit buses proposed to be stored between Third and Fourth street will have to cross 5 lanes on Third Street to access the proposed ramps in the proposed storage area between Second and Third. This lot already has low clearance because of the existing grades and the elevated roadway. The plan for a possible Muni Central Subway in the Third Street corridor is another obstacle. It will take years to relocate utilities and place underground structures below grade for a Central Subway up the Third Street corridor. Buses circulating and leaving a storage area between Third and Fourth will have to cross Third Street to access the proposed stacked bus ramps planned to serve the Project. It is difficult to imagine the construction of a subway project in the middle of the two proposed bus storage facilities.

"It is also difficult to imagine the impact the proposed bus storage facility will have on the Neighborhood with 230 buses running and circulating in and out of the two (2) confined lots between Stillman, Perry Street, Second and Fourth Streets. The proposal to operate 230 buses out of this confined area can't be justified to the Neighborhood, nor can the additional noise, traffic and air quality impact be mitigated. Bus transit and storage facilities are planned and designed with open air storage areas without columns, roof tops and other obstruction that hinder circulation and trap emissions from idling diesel engines.

"Buses idling and circulating around and under the existing west approach structure designed to support an interstate freeway rather than store buses is a poor option to spend tax payers money studying. There are existing residential units on Stillman Street and more new units currently under construction.

"Our Neighborhood is currently preparing for the western approach reconstruction project that is finally scheduled to start this fall. We would all like to see a light at the end of the reconstruction project for the Neighborhood. Our Neighborhood wants the parking back that we were promised; we do not want it turned into a bus yard full of idling diesel buses circulating in and out of the Neighborhood for the proposed Transbay Terminal.

"I recently received a copy of a letter addressed to you from by Francis Mathews regarding the bus storage impact in the Neighborhood. The five alternative locations mentioned in the letter appears to be a good place for the project team to start scoping for the proposed bus storage facility-element of the Project. I am sure the project team could find many additional suitable sites for the bus facility that would not have the significant impact on a Neighborhood that is already severely impacted by noise, vehicle emissions, a planned multi year major construction project, and restricted right of way and access at Street level. These sites should all be addressed in your Draft EIR as additional alternatives to study from your scoping process.

"We look forward to hearing from you regarding alternative locations for the proposed bus storage facility."

2.7.18 James Wittmann Dear, November 18, 2002

"Since the Off-Site Bus Storage Facility is proposed right across the street, I read that section carefully. There is no Air Quality analysis of the bus storage lot (5.7.2). With all those buses idling underneath the freeway with nowhere for the air to go, I think it is fair to ask about Carbon Monoxide "pooling" on Stillman Street. The building in which I live is mixed-use. Five of the six units are residential and rely on open windows for cooling and ventilation. Diesel fumes and

particulate impacts of the proposed bus storage lot are not addressed in the report (Table 5.7-3); therefore, the project does not conform with 40 CFR Part 93, especially Section 116 (5.7.3).

"I am pleased that noise mitigation is proposed for the bus storage facility. My concern is that the report mentions my neighbors in the Clocktower without reference to other residential buildings on Stillman Street and a low-income residence on Perry, Yerba Buena Commons (5.8.7). Will noise mitigation apply only for those who live in the Clocktower?

"The report does not specify that the access ramp from the storage lot to the Terminal will be grade separated at Second Street but it does state at-grade mid-block crossing of Third Street (5.19.1.1, page 5-114 and 5-115). If the buses in the two-block long storage lot cross Second Street and Third Street mid-block at-grade in order to return to the Terminal during the afternoon rush hour, I think that that will have an impact on vehicular traffic on Second Street. It is not addressed (Table 5.19-5) or (5.19.4.3). Third Street is defined out of the project area.

"Why not locate the bus storage above the new terminal as they do at the Port Authority of the Hudson bus station in New York City? If it has to be across the street, I am looking to ensure the most beneficial impact...

"The sound-walls of the proposed off-site bus storage facility likewise must be architecturally related to the street."

2.7.19 Art Wagner President Clarus Consulting LLC, October 24, 2002

"I am writing to express my strong opposition to the proposed bus storage in parking lots between Second and Fourth streets running along Stillman Street. The diminished air quality and increased noise that would come as a result of bus storage would render this area uninhabitable for businesses and residential tenants alike."

2.7.20 Steve Caramia, Caramia Design, October 31, 2002

"I have become aware of a plan to use the Stillman Street parking lots between Second and Fourth Streets for bus storage. This is not a good idea. This is a heavily populated area 24 hours a day, especially during working hours when all of the adjacent buildings are full of working tenants and residents.

"I have been a tenant at 35 Stillman since 1991, when this neighborhood was next to nowhere. I've seen the dot com boom come and go, experienced the snarling foot and car traffic of Giants games, and expect the Bridge retrofit to cause a major disruption sometime soon.

"Idling buses should not be added to the mix! Please consider the alternatives."

2.7.21 Jan Johnson, Speaker, 11/12/02 Public Hearing

"I'm speaking on behalf of the management of 88 Perry Street in Yerba Buena Gardens which is a fairly new project with about 260 low-income apartments at Third and Perry. It's adjacent to the proposed bus storage where the diesel buses would be stored for the Golden Gate and AC Transit. And the concerns which were not addressed that we could see in the study is that this building has operative windows, relies exclusively on the outside air for ventilation, and it is, you know, directly next to this proposed bus storage site. So we would like to have studies done on the effects, the carcinogenic effects of diesel fumes. I know there are studies now on that. Also, there's concerns about noise, and also traffic issues with the buses, especially on Third and

Fourth Streets. So pretty much, we're asking that you consider an alternative site closer to the Transbay Terminal. Thank you."

2.7.22 Luis Belmonte, Speaker, 11/26/02 Public Hearing

"I am one of the developers and one of the owners of the Yerba Buena Commons, 257-unit SRO project at the corner of Third and Perry Streets. And despite all of the rotten things said about SROs today, I think we have a fine place for people to live 220 square feet of housing including a kitchen and bathroom, and for $600 a month, you get a furnished unit with utilities and cable television. It's safe, it's clean, and it's affordable. Our income threshold is approximately $22,000 a year, 40 per cent of the median. I have 257 residents who live immediately adjacent to the place that the EIR proposes to put all the buses, and I think that's an inappropriate place to put the buses. And I think that that impact should be looked into as part of this EIR. We get enough noise and pollution from the freeway. And from proposed freeway relocation, I think that this adds unnecessarily to the burden. And given all of the cant that surrounds affordable housing, we actually have some here that was produced. And we shouldn't denigrate the lifestyle of the people who are living there by putting all the buses in the world right next to them."

2.7.23 Francis Mathews, Speaker, 11/12/02 Public Hearing

"I'm Francis Mathews, and we, I manage several properties along Stillman Street which like the previous speaker is adjacent to the new bus storage area that's proposed for the new Transbay Terminal. We weren't given a lot of advance notice, that we have letters that will be going out that will be more specific. But you know, our properties, you know are both residential and commercial. They're lower-rise buildings with operative windows for ventilation. The EIR didn't address any of the added impacts of the, the diesel bus fumes, or the additional noise that would be associated with parking several hundred buses right next to our properties. This neighborhood is going to be severely impacted over the next 10 years during the seismic upgrade of the west approach to the Bay Bridge and followed, at the same time bringing the Third Street Rail Project down through the neighborhood and – possibly the, you know, bringing a high-speed rail down Second Street. And we are in favor of the Transbay Terminal. We just feel that we've been – we are going to be severely impacted by all these other projects, and to, you know, wait all that out just to push the bus storage facility down on our backs is unreasonable. We'd like to see other alternatives investigated, including in some of the redevelopment projects, restoring the buses down the lower level with those, widening the existing ramps where AC Transit buses are currently stored, or looking into other areas in Mission Bay for the buses. So that, that sums it up. Thank you for your attention."

2.7.24 Jan Johnston Matthews, Speaker, 11/26/02 Public Hearing

"I wish to comment on the proposed terminal for bus storage. I don't feel that there was adequate environmental studies done on this site. In fact, although we spoke at the initial scoping meeting over a year ago about our concerns, Stillman and Perry Streets weren't addressed in the EIR. This proposed site is a high-density area with hundreds of residents, low-income housing as well as office buildings. Many of these buildings use exterior air as their sole source of ventilation, mostly opening windows. So since Perry and Stillman Street is narrow, they're close to these lots. You've got the overpass close to this area, creating a lid effect which would exacerbate the noise and the toxic diesel emissions from the bus storage site, not only as they're entering and leaving, but as they sit there and idle to warm up. And I can go into more details in a letter.

"This storage would also impact traffic and safety issues in our community. I request again that you analyze alternative sites for buses that – bus lines that need to access the Transbay Terminal incorporate their storage areas in or around the Transbay Terminal more closely to the Transbay Terminal site versus blocks and blocks away. For those buses that don't need access to the terminal, store them, either at their existing sites, or in an industrial area that doesn't have a high density, residential and commercial usage that this area has.

"In the SOMA community planning process, rezoning alternatives that was distributed and discussed at the November 19th meeting, it shows that this area, Stillman and Perry between Second and Fourth, is one of the areas being encouraged to be more residential. Would you allow a company to build, or a person to come and build a facility that have the emissions, the noise, and the diesel, and everything else that this bus storage site would? You know, impact, how it would impact our neighborhood.

"So please consider that in your report, that this is a community, not just an area underneath the approach to the Bay Bridge. We already have to deal with the teardown and building of this rail at our doorsteps, and possibly the Third Street Rail, and the Second Street tunnel or tube. If you put a bus storage site in front of our doorsteps, it's like the nail in the coffin. There goes our community. So please, I ask that you do more detailed study on this, and also analyze alternative sites for the bus storage. Thank you."

2.7.25 Ted Pollak, Speaker, 11/26/02 Public Hearing

"My name is Ted Pollak, a resident of 461 Second Street, the Clocktower Building. I am very concerned about the proposed bus parking facility under the freeway there for a number of reasons including noise, traffic and more importantly, the effects of the diesel fumes. If I may read a paragraph out of the Chronicle today concerning diesel, 'Diesel exhaust from all sorts of vehicles, mostly trucks and buses, accounts for 70 per cent of the cancer that's from air pollution in California. The state estimates...' this is a number from the state. Environmental working groups and advocacy groups are using the same formula as the state which estimates that emissions account for 90 per cent of San Francisco's cancer risk. To put potentially 100 diesel buses in an area where children and people live and work is something that needs to be addressed. And I don't think it's adequately addressed in the EIR. Thank you."

2.7.26 Elizabeth Carney, Speaker, 11/26/02 Public Hearing

"There are a number of us from the Clocktower and from the neighborhood. A show of hands, who's here about this issue? And I also have 30 people on a petition that I will submit that are also neighbors and residents of the 127 families of the Clocktower that are concerned about this issue. As I said, I hope that we'll have the chance to have the comment period extended because with respect to the tunnel construction, it's a very complex issue. Noise, vibration, air impacts. And we'd really like the opportunity to study this further so we can also assure that there won't be damage to this historical building.

"The main thing that I wanted to speak to you about was that it seemed to me that the EIR does not deal with diesel emissions at all in the current draft. And it is my understanding that EPA is, has mentioned there's 40 toxicogenic air contaminants within diesel fuel. So I would hope that this omission could be replaced with an opportunity to study and analyze this further. The 127 families that live at Clocktower all rely on air ventilation from windows. And the way that the bridge approach works, if the diesel buses were sited where it's proposed, that air would tunnel, along, underneath that approach and directly into our building which is open, and then directly

into the units. So I would hope that the EIR study group could come and actually look at the site regarding this because there's nothing in the study so far that deals with this aspect at all.

"The neighborhood has been going through other mitigations, The Giants Stadium has been a huge adjustment with the mitigations that were included in that transportation plan. It doesn't mention in the EIR that this neighborhood is at all a part of other studies, but, the earthquake project that Caltrans is working on also will take away parking during this construction and make chaos. This also is not mentioned in the EIR, that there are additional burdens that the neighborhood will be experiencing.

"Finally, the traffic around the approach to the Bay Bridge is often, as you probably know, at a standstill. We have a hard time coming in and out of our building. And to consider that adding more buses to that mix, we don't think will be a very viable solution. The traffic is not addressed in the EIR, as well. Thank you very much for the opportunity."

2.7.27 Bruce Barnes, Speaker, 11/12/02 Public Hearing

"Good evening. I'm from 169 Stillman Street 13 between Third and Fourth Streets. My primary concern this evening is the proposed bus storage transit facility that's being proposed between Third and Fourth in the area of Stillman. We've gone on the record with a letter quite some time back regarding some of the issues we'd like to see addressed specifically with regards of the bus storage facility and its impact on the neighborhood. I think that – in reviewing the EIR report, I only saw a brief paragraph that considered the impact on the neighborhood. I'd like to see more time on some impact we perceive on diesel fumes, health effect on the neighborhoods. We have a lot of businesses, now housing going in that area. Our building is – right now, we're in negotiating for a charter school, 15-20 feet away from where the bus storage facility is being proposed. I'd like you to reconsider the location. There are a lot of areas that would better serve that type of facility, especially with not having a lid over the top of it like the current freeway is. Thank you."

2.7.28 Bruce Barnes, Speaker, 11/26/02 Public Hearing

"I'm here speaking on solely with regard today on the bus, the temporary bus storage facility that is being proposed for the area bounded by Stillman Street, Perry Street, Second, and Fourth. It's a little hard to tell from this diagram; it's basically the area where the west approach of the Bay Bridge is, all the elevated ramps are – it's used by Caltrans, surface parking operated by lot operators. There's about 700 parking spaces that serves the neighborhood and a lot of other areas.

"My main concern is these diesel emission fumes and the health hazards in regards to the diesel emission fumes. I spoke at the earlier hearings, and I also wrote a registered letter in July of 2001. That letter specifically identified emissions as a major concern of the neighborhood, diesel emissions. At the time, I wasn't aware of the finding with regard to cancer, and things that have recently been disclosed. And I found an EIR that – my concerns that I addressed to the managers doing that project, they were not even addressed in the EIR report. It's silent in regards to diesel fumes in our neighborhood, and the impact of parking these buses underneath the west approach, it's been described here as basically a lid on the top of that area. Air quality is a problem down there. In our neighborhood, emissions is a problem. You know, you can go out on the rooftop of our two-story building that's 25 feet away from the west approach. When there's no traffic, there's no sense of smell. When there's traffic, a lot of traffic sitting there idling and backed up, there's a whole different sense of smell.

"I think that other, alternative sites ought to be explored. The question came up earlier in the prior EIR that was being reviewed as to where the AC buses were going to be stored. Right now, as I read the report, they have not found a temporary home for the Golden Gate buses. But they're to be stored permanently – based on this report, I shouldn't say permanently. They're going to be housed during the day between Second, Fourth, excuse me, Third, Perry and Stillman. And the AC buses are supposed to be stored between Third and Second. There's roughly, roughly about 190 buses in the EIR report. I think more came out. But I think there will – some buses are going to be stored on ramps, depending upon what alternative is finally decided on, how the, the loops are going to be done, and the ramps are going to go into the new facility.

"Our neighborhood's been bracing for the last two to three years for the start of the reconstruction of the overhead structure. Basically, five to six lanes are going to be rebuilt right in our front doors over the next roughly seven years. I understand the project – the bids were received last week. It's ready to be awarded. You know, this neighborhood, we're losing parking, we're losing our street for periods of time during this construction. And when we get all done, we'd like to see something back that we were promised which is adequate parking. And now that we're being faced with inheriting all the buses, we would like to see that the Commission really do their job on this EIR, and really look at alternative sites, especially when a site hasn't been identified for Golden Gate, where their buses will be stored while they build this facility.

"Maybe a bus storage facility should be designed early and built somewhere else that could not just be used in the interim, but could be permanent and a facility more conducive to – maybe an open-air facility, and the emissions wouldn't be as much. The impact wouldn't be as much as on other places.

"I currently have a school in my building, 18 of the last 22 years. We're in the process now of negotiating a lease with a new charter school for about 60 kids. Our building would be across from what looks like to be the entrance to the bus."

2.7.29 Arthur L. Meader, III, December 19, 2002

"I am a resident at the Clocktower at 461 Second Street, San Francisco, California. I have reviewed as best I can the EIR on the Transbay Terminal/Caltrain/Redevelopment project and offer the following comments:

"I disagree strongly with the suggestion of a bus storage facility across the street from the Clocktower. Literally, it seems, hundreds of buses may be stored there. The EIR does not adequately address the issue of pollution (noise, fumes, particulate matter) that will result from these buses being stuffed under the freeway ramps in that area. Clocktower residents are not the only people living in the area: there are residences on Stillman and Harrison Streets, I believe, that would be affected as well.

"Even more woefully inadequate is the discussion of resulting traffic problems which can be expected from ferrying buses to and from the new transbay terminal. Several of the intersections in the area are already "worse case scenario" at peak traffic times (see the EIR for the Giants' stadium and the EIR for some proposed high rises also in this same general area). I can tell you from firsthand experience that peak traffic times go well beyond typical rush hour scenarios now, including weekends. There are "horn concertos" many nights of the week already.

"Other options for the buses would be much more appropriate. I suggest housing them at the transbay terminal itself or at some other location closer to the terminal (I know you don't want to take up space where other high rise buildings are likely to be proposed in the near future and that the honchos at Charles Schwab, Gap, etc. don't want the buses in their neck of their woods either – better to squeeze'em in with hapless homeowners).

"Regarding the analysis of expected noise and vibration from running a huge tunnel right down Second Street, literally feet away from the Clocktower building, the EIR seems so far off base as to be from the world of science fiction and junk science. So unacceptable noise in the hallway is not the equivalent of unacceptable noise in the house? Even though this is all in the same building, it doesn't matter?

"I'm sure you are aware of the fact that the Clocktower is already at Ground Zero for another huge construction project, viz., the re-do of the western approach to the Bay Bridge. Exactly where is the study showing what the cumulation of that and the proposed mega-project now before you (and the proposed three- and four-hundred foot towers just blocks away) will be? What happens when each EIR says such-and-such intersections are already at maximum traffic degradations but makes little or no reference to the combination of all these proposals?

"Discussion in the EIR is totally lacking about what happens to access to the Clocktower garage when our block of Second Street is "closed" (this is not a "delivery entrance," as mentioned in the report)."

2.7.30 Arthur L. Meader, III, November 22, 2002

"I am a resident at the Clocktower, near ground zero for the proposed Transbay terminal bus storage facility (Second and Stillman Streets). To put it nicely, you've picked a lousy location, pretty much guaranteed to pour lots of diesel fumes and particulate matter into people's homes, not to mention the accompanying noise that can be expected. Someone's brain was not in gear when this plan was developed or have you not ever seen the chaotic traffic mess present in the area nearly every night (weekends not excluded but not quite as bad). If you want real problems, I suggest adding lots and lots of buses to the mix per your idea.

"There should be plenty of areas actually closer to the Bay and to the proposed terminal where the buses can be housed. Let me guess: the Powers That Be didn't want these pollution-spillers in their backyard(s) so why not foist them off on hapless residents in the area (there are residents on Stillman and other parts of Second Street as well as Clocktower people that will be affected). I say why not nestle these babies right next to the Gap headquarters or under the Charles Schwab building. You won't convince me that those locations aren't as practical or more so than your apparent choice.

"Please reconsider this ill-advised proposal."

2.7.31 Arthur Meader, Speaker, 11/26/02 Public Hearing

"I too live at the Clocktower, Second and Bryant Streets. I would like to reiterate the other comments. I feel like this is a stealth report. I have no idea how much money is involved in these projects, but it's a heck of a lot of money. And I think we should be afforded some time to respond to some of the issues, particularly, to reiterate, concerning traffic, diesel, and wind issues around that area.

"I know from personal experience that the traffic in that area is a nightmare. And that's quite a bit of the time. To add, I don't know how many buses into that mix will only make things worse. There have to be some better and more viable alternatives. Running closer to downtown, I think that's certainly possible.

"The issue about air quality cannot be overstressed. Diesel pollutants are serious matters. And I do not believe that this report adequately addresses that at all."

2.7.32 George Yamas, Speaker, 11/26/02 Public Hearing

"I speak on behalf of 15 homeowners at 21 Stone Street. We're concerned about the fumes from the storage unit. I mean the bus storage unit at the proposed site between Second Street and Fourth Street, concerned about the traffic impact on Second Street if buses are going to be grade separated, going to go on a rim across or above Second Street, then again between the storage, Third and Fourth Street, if we're going to cross that grade or be above Third Street. It's a very heavy-use street, Third Street.

"I'm the owner of a building on Stillman, and have been for 25 years. I wanted to basically support the people that feel it is not a compatible use to put the buses storage there for the obvious reasons, some of which we already heard; regard residential commercial usage etc.

"I'd also like to point out to you that it seems to me that the developers that will be developing the project along with the Transbay Terminal have a responsibility to find a less dense, a less controversial place to store those buses as part of the project. And there's no denying that putting that storage at that location is going to interfere with the quality of life of a lot of residents, a lot of tenants. And to diminish the value of people's property – that seems like an unfair transfer of wealth and sense from the developers to the local people. They've been supporting that for a long, long time in that area.

"The other thing I'd like to point out is that all the proposals I've seen are stressing more residential construction in that area. It seems to me that's a very incompatible use, to encourage more residential use, then people can get sick with the diesel fumes, the traffic and safety issues, etc., involved with parking some buses there, thank you."

2.7.33 George Yamas & Lorilane, George Yamas, Managing General Partner, December 11, 2002

"This letter is a follow-up to my oral objection on the referenced subject at the Planning Commission's 11/26/02 hearing. I am the Managing General Partner and majority owner of a commercial building at 51 through 53 Stillman Street in San Francisco. My partners and I have owned this building since 1977 and have watched the neighborhood develop into a true mixed-use area where millions upon millions of dollars have recently been invested in both upgrading existing buildings as well as new development into retail, residential and commercial uses. The new proposed rezoning plans all call for more residential use in this area which seems consistent with the general location and overall quality of living this area offers.

"Obviously, the permanent parking of hundreds of buses in the middle of this mixed-use area has significant negative impact on it and is totally incompatible with its current and proposed future uses due to noise, health-safety issues, traffic, parking, and other reasons already stated by other owners.

"One can argue back and forth as to just how damaging the exhaust fumes are to the local residents and tenants but no one can seriously argue that the relocation of the buses to this area does not seriously diminish the quality of life for the tenants and residents as well as negatively impacting property values. To illustrate my point please imagine this bus storage facility was being relocated in front of your place of residence. What would be the day to day impact on your quality of life? If you own your residence how do you expect it would affect the long-term value of your home?

"The impact is so negative that those affected have no choice but to oppose this relocation by any and every means they have, including litigation.

"Clearly, the developers of the new projects making the bus relocation necessary have or, should have the burden of finding a lower impact site for the buses. Their responsibility for the impact of their project on other property owners seems clear and is similar to well established shaping or view-blocking issues where the party causing the negative impact is responsible to compensate the affected parties.

"My suggestion is to urge any approval of the subject projects be conditioned upon the new project's developers finding a less dense, more suitable and less controversial site for their buses to be relocated on.

"Staying with the current site is a lose-lose situation for everybody. The City loses property tax values, one of its most successful mixed-use areas as well as excellent future residential sites where residents can truly walk to most work places. The locals lose their quality of life and investment value. Lastly, the developers of the sites surrounding the Transbay Project are likely to be delayed needlessly as those opposed to this bus relocation fight it. Why put unnecessary obstacles on a project that appears to be good for the City? Doesn't it make sense to help the project by eliminating this serious flaw as soon as possible?"

2.7.34 San Francisco Planning Commissioner William Lee, 11/26/02 Public Hearing

"I think the issue regarding diesel is a major issue, and as you may be aware, the Board of Supes has requested Muni within the next four months convert all the buses to natural gas. But I think there's a misconception by the public that diesel is in itself a carcinogenic. Diesel is a mix of exhaust from oils that are burned. Some of it could be carcinogenic. Some of it could not be. We talk about carcinogens. A lot of people have a misnomer. Quite a few of the things you eat and wear are carcinogenic. The question is how potent is the carcinogen? I would ask the Planning Commission to work with the Bay Area Air Quality Management District and include in your report their reviews on diesel. If they don't have the information, go to EPA, and they will provide you with updated information regarding the diesel issue. I think the public also has a misunderstanding that under Bay Area quality management district standards included here. You should look at the particular matter, the standard.

"These are particular matters you're looking at with regards to diesel exhaust. That's particle size. If it's between one and ten microns – that is the size you breathe in and out. If it's larger, the likelihood of you breathing it in is small because it's too heavy and will fall out. Plus in your nose and mouth, it wouldn't go deep into your lungs. If it's less than one micron, you would breathe it in and it will go out again. I think the public – we would be well served to educate the public regarding diesel. If there's any way for the Planning Department to do that, we would appreciate it."

2.7.35 Planning Director Gerald Green, 11/26/02 Public Hearing

"That might assist us in developing some response to this. In trying to form some response to this, your desire is to, that this document includes something educational in terms of what the standard is?"

2.7.36 San Francisco Planning Commissioner William Lee, 11/26/02 Public Hearing

"That is correct. So the public may read the document – we used to have a cancer of the week. When they had it the last time was when they used, tested on bacteria, called the Ames Test. Ninety per cent of the stuff was carcinogenic. The public believes if it's carcinogenic, you get it. But we should worry about mutagens which carry them to the next generation.

"What I'm concerned about, everybody is using this as an issue – about carcinogens. I think the risk management documents are out there by EPA and other regulatory agencies that will be very helpful in explaining the risks regarding diesel."

2.7.37 San Francisco Planning Commissioner Kevin Hughs, 11/26/02 Public Hearing

"Well, I believe that an environmental impact report that is adequate and accurate as it relates to this project should contain with respect to, to diesel emissions some study of what speed and wind direction as it relates to the freeway overpass."

2.7.38 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"What is the mitigation proposed for off-site bus storage?"

Response to 2.7.1 through 2.7.38 Following is a consolidated response to public comments (Nos. 2.7.1 through 2.7.38) regarding the proposed off-site permanent bus storage facilities for AC Transit and Golden Gate Transit District. Additional information is included in Volume I of this Final EIS/EIR in Sections 5.7.3 and 5.8.6 regarding the air quality and noise impacts and the proposed noise mitigation measures for the proposed bus storage facility.

- **Facility Location/Bus Operations**

The proposed off-site bus storage facility would be under Interstate 80 (I-80) – the west approach to the San Francisco Oakland Bay Bridge – between Stillman, Perry, Second and Fourth Streets.

The proposed storage facility site would place a transportation use under an existing transportation use, on publicly owned transportation property. The site offers substantial locational efficiencies in relation to the ramp configuration and proximity to the proposed new terminal. The Golden Gate Transit mid-day bus parking area is proposed for the eastern portion of the block between Third and Fourth Streets. The remainder of this block has been designated as public parking to replace the existing parking under the west approach. The retrofit program for the west approach will include expansion of the freeway over most of Perry Street between Third and Fourth, placing the freeway near the industrial uses along this street. Based on current conceptual designs (please see the Figure 2.2-6, Volume I, in the Final EIS/EIR), a bus lane for movement of Golden Gate Transit buses within the GGT proposed facility has been included under the retrofitted freeway along the northern edge of the GGT storage area. GGT buses entering this facility would do so from Fourth Street. GGT buses would exit from the east

end of this facility, crossing Third Street with a new traffic signal. They would then enter the AC Transit bus storage area and use the grade-separated bus ramps to travel to the terminal area to begin their routes.

AC Transit mid-day storage is proposed to be between Second and Third Streets. Clearance between grade and the underside of the I-80 structure (the west approach) is roughly 16 feet. With some two or three feet of excavation, a parking facility with ground level and one elevated deck can be accommodated. AC Transit buses would enter and exit this facility from an exclusive bus ramp under the west approach that would be grade separated across Second Street leading to the new Transbay Terminal.

Buses would be stored from 7 am to 6 pm weekdays and would not idle for extended periods of time. Buses would not be maintained or serviced on the site. The facility is proposed for bus storage, and there would be virtually no activity on the site from 9 am to 3 pm.

- **Adjoining Community**

The co-lead agencies acknowledge that the permanent bus storage facility is located in an area adjoined by businesses and residences along Second, Third, Stillman, and Perry Streets (please see Figure 4.1-1(a) and (b), Volume I, of this Final EIS/EIR). The off-site permanent bus storage facility has been designed to efficiently accommodate the needs of AC Transit and Golden Gate Bridget District for mid-day bus storage and to minimize or eliminate impacts to the adjoining community – particularly through the use of noise walls that will block noise impacts and reduce air emission and visual impacts to the community. These walls would also act as a visual screen for the facility, and the local community will be invited to assist in the overall design of these walls.

The nearest school, the Filipino Education Center, is approximately 430 feet from the proposed bus storage facilities. The buses that would be stored in the facilities would be transit buses, not school buses, and would not be idling within 100 feet of a school building.

The bus circulation to the Golden Gate lot would not affect Stillman Street because the buses would circulate under the freeway along Perry Street and within the storage area. The graphic in this Final EIS/EIR, Volume I, showing the bus storage facility (Figure 2.2-6) has been updated to reflect this. A traffic signal would be installed on Third Street at Perry to enable the Golden Gate buses to cross the street (please see **Traffic/Transportation** discussion below). AC Transit buses would operate solely on the dedicated bus ramps and within the storage facility.

The Transbay Joint Powers Authority has selected the tunneling option as part of the Locally Preferred Alternative to be included in this Final EIS/EIR. With the tunneling option, Second Street would not be closed to traffic during construction at the Clocktower building.

- **Air Quality Assessment**

The co-lead agencies have completed an air quality assessment[1] of the proposed permanent bus storage facility as reported in these responses and in this Final EIS/EIR, Volume I, in Section 5.7. The co-lead agencies note that the proposed Project is designed to increase transit usage regionwide thus reducing single occupancy vehicle usage and air emissions in the Bay Area

[1] Terry A. Hayes Associates, LLC, *Transbay Terminal Improvement Project: Bus Access and Storage Supplemental Air Quality Impact Analysis,* March 2003.

Region. We also note that the Project includes not only the construction of a bus storage area for 174 transit buses but also dedicated bus ramps that would remove buses from the local streets and improve traffic circulation in the area. In addition, the continuing evolution of bus propulsion technology and the switch to cleaner fuels will result in fewer pollutants from the buses stored in this facility. Reduction in emissions levels over future years is required by California Title 13, CCR Section 1956.8, "Emission Standards for Heavy Duty Diesel Emissions."

The supplemental air quality assessment is based on year 2020 diesel bus emission factors as set forth by the California Air Resources Board (CARB). These emission factors reflect the projected diesel bus fleet mix for the year 2020 and were adjusted to include bus models from the year 2008 until 2020 only, which accurately reflects the anticipated fleet mix for the proposed project. CARB considers clean diesel technology when calculating its emission factors but does not assume that all buses running in the year 2020 will be clean diesel.

The supplemental air quality analysis incorporated meteorological data taken from the Arkansas Street air monitoring station, which is approximately one mile south of the proposed bus storage facility. Local wind patterns, as measured from the station, were taken into account in order to estimate pollution concentrations, including those associated with diesel buses. The analysis took into account the cumulative effect of various pollutant sources on the area. Included in the analysis is the ambient background concentration as measured by the nearest air monitoring station as well as pollutant concentrations generated by street traffic and freeway traffic.

The proposed storage area is currently used for vehicular parking, and an additional vehicular parking structure is proposed to replace the existing parking (or a fraction thereof) lost as a result of the proposed project. The amount of vehicular parking would remain the same or decrease under the proposed Project scenario, and emissions from street traffic, which reflect traffic generated by the current parking lots, have been included in the overall pollution concentration levels projected for future conditions. Thus, impacts from the proposed replacement parking structure are considered in the air analysis, and concentration levels due to the proposed parking lot would remain equal to or below the amount generated from existing parking.

The supplemental air quality assessment assumed that buses would be running at the storage site for a few minutes each day. Specifically, when estimating pollutant concentration, it was assumed that the buses would be idling for three minutes and that they would be moving at 15 miles per hour on the dedicated ramps – a conservative estimate. It would take between six and 11 minutes for the buses to travel to the terminal from the proposed storage facility at this speed.

The supplemental air quality analysis evaluated sensitive receptors within 500 feet of the proposed bus storage facility. These sensitive receptors include residences, parks, and schools. The analysis addressed air pollution concentrations (including PM_{10}) associated with buses, including pollutant emissions associated with diesel exhaust fumes, at the proposed bus storage facility.

Additionally, the air quality analysis accounted for noise walls proposed for the storage facility and their impact on adjacent residences. It was determined that the sound walls would serve to reduce pollutant concentration levels outside of the facility at adjacent sensitive receptors.

The potential impact of pollutant trapping inside the storage area due to the sound walls and overhead freeway is regulated by the U.S. Occupational Safety and Health Administration's

(OSHA) standards for air toxic exposure in the work place. OSHA has determine the interior threshold levels of CO, NOx, and PM_{10} air concentrations to be 50 ppm, 5 ppm, and 5000 µg/m3 respectively. The projected concentration levels of the pollutants inside the storage facility would be well below these OSHA standards, as determined by the supplemental air quality impact analysis. Thus, no significant air quality impact based on these standards would be anticipated. Should pollutant concentration levels exceed these limits, OSHA has established appropriate procedures for ventilating such pollutants to acceptable levels. Additional information can be found in the Supplemental Air Quality Analysis Report, which is available for review by appointment at the Planning Department.

The supplemental air quality analysis concludes that pollutant concentrations would not exceed the California Ambient Air Quality Standards (CAAQS) that are designated to protect public health with an adequate margin of safety, and thus, would not have a significant impact at any sensitive receptor locations.

The criteria used to evaluate air quality impacts from the proposed project are the CAAQS. These outdoor air quality standards are adopted by the State's enforcement agency, i.e. the California Air Resources Board (CARB), as provided for in the California Health and Safety Code section 39606. These standards set legal limits on outdoor air pollution and are designed to protect public health and welfare. Ambient air quality standards define clean air, and are established to protect even the most sensitive individuals. Typically, the outdoor CAAQS are more stringent and provide a wider margin of safety than indoor air quality standards promulgated by such agencies as OSHA.

An air quality standard defines the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. The standards are based on the CARB's on-going review of scientific studies on the health effects of individual air pollutants. As new scientific information on public health consequences becomes available, the CAAQS are periodically revised. In light of new information and studies, CARB is responsible for determining whether CAAQS need to be revised to adequately protect human health, particularly sensitive population groups. For example, The Children's Environmental Health Protection Act (CEHPA, California Senate Bill 25, Escutia 1999) required CARB and other state agencies to evaluate all ambient air quality standards by December 2000 to determine whether these standards adequately protect human health, particularly that of infants and children. The CEHPA also required staff to prioritize those standards found to be inadequate for full review and possible revision. The evaluation found that health effects may occur in infants, children, and other potentially susceptible groups exposed to pollutants at levels near several of the current standards, with PM_{10}, ground-level ozone (O3) and nitrogen dioxide (NO2) receiving the highest priority for review and revision, and the current standards reflect these findings.

The co-lead agencies acknowledge the bus idling requirements contained in Title 13: CCR Section 2480 (effective July 16, 2003). The co-lead agencies note that, even though the law applies to both school buses and transit vehicles, operations at the proposed facility would not violate this recent state law.

- **Noise Assessment for Off-Site Bus Storage Facility**

As shown in Section 5.8.7 of the Draft EIS/EIR, it was determined early in the process that a noise wall should be incorporated into the design of the bus storage facility to mitigate impacts of noise from this facility. In response to comments made regarding potential noise impacts, however, an additional noise analysis has been performed to determine more precisely the noise

impacts and appropriate mitigation measures for the off-site bus storage facility (please see Sections 5.8.6 and 5.8.7, Volume I, of this Final EIS/EIR). Based on the supplemental noise analysis, the following more precise mitigation measures have been identified. The proposed noise mitigation locations are:

- **Residences North of the AC Transit Facility.** Severe noise impact is projected for the residences to the north of the AC Transit facility at the corner of Perry and Third Street. Because of the configuration of the site, noise barriers are not an option for noise mitigation. Therefore, sound insulation will be installed to mitigate the noise impacts at this location. At a minimum, sound insulation will be applied to the façade facing the bus storage facility (the south façade).

- **Residences South of the AC Transit Facility.** Noise impact is projected for the residences to the south of the AC Transit facility along Stillman Street. For these residences, a combination of two barriers would mitigate the noise impacts. The first noise barrier will be approximately 10-12 feet high and run along the southern edge of the AC Transit storage facility. The second noise barrier will be approximately 5-6 feet high and will be located on the portion of the ramp at the southwestern corner of the AC Transit facility. To minimize the potential for reflections off the underside of the freeway, noise barriers will be treated with an absorptive material on the side facing the facility.

- **Residences South of the Golden Gate Transit Facility.** Noise impact is projected for the residences to the south of the Golden Gate Transit facility along Stillman Street. A noise barrier would mitigate the impacts. The barrier will be approximately 10-12 feet high and run along the southern and a portion of the eastern edge of the Golden Gate Transit storage facility. To minimize the potential for reflections off the underside of the freeway, the noise barriers will be treated with an absorptive material on the side facing the facility.

Noise walls will be landscaped, although the actual design will be developed in cooperation with area residents. The walls will be constructed prior to the development of the permanent bus facilities.

The proposed bus storage facility would not create a “tunnel-like environment” in that it would not be fully enclosed. The proposed sound walls would not extend to the freeway overpass, and the facility would not be enclosed on all sides.

- **Noise/Vibration from Train Operations**

Please see Response 17.1.2.

- **Vibration from Construction**

Construction of the Caltrain tunnel in the vicinity of the Clocktower would be underground and deep, and impacts therefore would not occur on the surface, other than possible temporary vibration impacts of controlled detonation, if needed for construction in this area. Given that the proposed tunnel in the vicinity of the Clocktower is deep, vibration impacts are expected to be minimal.

Controlled detonation may be required at some locations along the tunnel alignment, but there is no way to determine whether controlled detonation would be required in the vicinity of the

Clocktower. If controlled detonation is required, it can be designed to control vibrations within acceptable tolerances. Also, such operations can be timed so as to have the minimum possible impact on residents. An appropriate level of monitoring would be implemented to verify that construction vibration is maintained at tolerable levels.

- **Traffic/Transportation**

The bus access leading to the facilities would have only one at-grade crossing. Golden Gate Transit (GGT) buses would enter the storage facility from Fourth Street in the morning. The only at-grade bus crossing would be for GGT buses leaving its facility in the afternoon and crossing Third Street at Perry Street. The GGT buses would cross Third Street at mid-block via a traffic signal synchronized with the traffic signals at Harrison and Bryant streets, causing minimal interruption to the Third Street traffic with projected operations at Level of Service (LOS) A – the best classification for LOS. During the pm peak, there are currently sufficient gaps in the Third Street traffic to permit the Golden Gate Transit buses to cross without a signal, but a signal is preferred to improve safety. All other bus movements near the facility (including all AC Transit buses) would be within the storage areas and on dedicated bus ramps separated from the street system. Please note that Second Street, the street on which the Clocktower (461 Second) fronts, would not be affected by the bus traffic.

- **Parking**

Regarding the loss of parking from the west approach retrofit, it should be noted that the retrofit is entirely separate from the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. All of the parking (roughly 1,000 spaces) within the area bounded by Perry, Stillman, Second, and Fourth Streets will be displaced for 5 to 10 years by Caltrans for the duration of the seismic retrofit of the west approach.

The Transbay Terminal/Caltrain Downtown Extension Project will require continued use of the parking areas under the freeway between Second and Fourth for construction and development of the off-site bus storage facility. Completion of the Transbay Terminal/Caltrain Downtown Extension would allow the restoration of up to 300 spaces under the Bay Bridge west approach just west of the planned Golden Gate bus storage area between Third and Fourth Streets, as noted in the Draft EIS/EIR on Page 2-16 and shown in Figure 2.2.6 of Volume I, Final EIS/EIR. As with the existing at-grade parking, this parking would be available to users of both the ball park and the commercial areas. In addition, upon completion of the project, the 24-hour parking displaced by the planned AC Transit and Golden Gate Bus storage facilities between Second and Fourth Streets under the Bay Bridge west approach would be available in the evenings and weekends for public parking.

The need for property to store buses for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project was not identified until 2000 by the MTC Transbay Terminal Improvement design team. The need for removing the parking was reported in a series of public meetings held by the Terminal Improvement Design Team in 2000 and reported in the Draft EIS/EIR for this Project.

Under California Public Resources Code Section 21060.5, “environment” means “the physical conditions that exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, and objects of historic or aesthetic significance.” Parking supply is not considered to be a part of the permanent physical environment in San Francisco. Parking conditions are not a static condition, as parking supply/demand varies from day to night,

from day to day, month to month, etc. Hence, the availability of parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people change their modes and patterns of travel. Therefore, parking deficits are considered to be social effects, rather than impacts on the physical environment as defined by CEQA.

Parking deficits may be associated with secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality, or noise effects caused by congestion. Regarding such potential secondary effects, cars circling and looking for a parking space in areas of limited parking supply is typically a temporary condition, often offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts which may result from a shortfall in parking in the vicinity of the proposed project would likely be minor and difficult to predict. In the experience of San Francisco transportation planners, the absence of a ready supply of parking spaces combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles or travel by foot) and relatively dense patterns of urban development, may induce drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service, in particular, would be in keeping with the City's "Transit First" policy.

Thus, a parking shortage is not considered to be a permanent condition and is also not considered to be a physical environmental impact even though it is understood to be an inconvenience to drivers. Therefore, the creation of or an increase in parking demand resulting from a proposed project that cannot be met by existing or proposed parking facilities would not itself be considered a significant environmental effect under CEQA. In the absence of such physical environmental impacts, CEQA does not require environmental documents to propose mitigation measures solely because a project is expected to generate parking shortfalls.

The overall loss of parking from the Project is discussed in Section 5.19.5, Volume I, of this Final EIS/EIR, which states in part

> *"With the loss of parking, vehicles previously bound for the displaced parking spaces would have to park in other parking facilities nearby or the people making these trips may now choose to use transit, given the reduced availability of parking.*
>
> *"Based on a review of a recent parking inventory, the current study area parking supply is at approximately 85 percent capacity during the weekday-midday. As a result of the reduction in parking spaces, usage is likely to reach capacity during the weekday-midday. Given the first-in first-served nature of parking, with early morning commuters able to park closer to their destination, loss of area parking would mean that vehicles arriving later would have to park further away from their destinations or chose another mode of transportation. The permanent loss of parking could deter commuters from driving, with a probable increase in public transit use. The provision of a new multi-modal transit facility that provides improved access to locations throughout the region would serve to mitigate the adverse parking capacity impacts."*

The EIR prepared for the ballpark took into account the loss of parking associated with the Transbay Terminal Project (please see Appendix A, page A.127 of the Giants Ballpark EIR).

- **Historic Clocktower**

The Clocktower, at 461 Second Street (APN 3764-071), is otherwise known as the Schmidt Lithograph Building. As noted in the JRP survey report dated August 2001 (revised November 2001), this building has been determined eligible for the National Register as a contributing element of the South End Historic District. (Office of Historic Preservation Determination of Eligibility: 38-85-0001-0016, 8-13-1997). Because of this determination of eligibility, it was not necessary to further describe or evaluate the building for this study. The property is addressed in the *Finding of Effect: Locally Preferred Alternative, Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project* (August 2003) document, which has been summarized in Section 5.14, Volume I, of the Final EIS/EIR and is incorporated by reference.

Furthermore, because of this eligibility, it was included in the list of historic properties identified in both the JRP survey report and in the Draft EIS/EIR as a historic property. It was shown in the survey report in the table entitled "Pre-1957 Properties Previously Listed or Determined Eligible for the National Register, Individually or as a Contributing Part of a Historic District," and in Table 4.16-1 of the Draft EIS/EIR.

- **Alternative Locations**

Other locations proposed by the commentors for the permanent bus storage facility would introduce significant financial, operational, and regulatory constraints. Following is a review of alternative sites reviewed as part of the MTC Transbay Terminal Study and the estimated associated costs.

AC Transit operates about 230 afternoon peak period trips from the Transbay Terminal to locations in the East Bay. Currently, AC stores about 30 buses at the terminal on school days, and deadheads in the afternoon another 75 buses that have layovers in excess of 15 minutes and use a "remote" layover area. Year 2020 demand is expected to increase to about 50 buses in storage with another 50 to 60 buses circulating within storage and staging facility. Golden Gate Transit stores about 130 buses in downtown San Francisco. This demand is expected remain for the year 2020.

Alternatives evaluated for the MTC Transbay Terminal study included: (1) no facility, (2) Second/Third/Fourth I-80 Freeway (proposed alternative), (3) parking on terminal ramps. (4) Eighth and Harrison, and (5) Vermont/15th and 16th.

(1) No Facility – Under this alternative, both Golden Gate and AC Transit would deadhead vehicles from downtown San Francisco to their respective operating bus yards in the East Bay and in San Rafael. Depending on the "home yard," and assuming a low of 30 deadheading buses and a high of 50 for AC Transit, and assuming an operating cost of $90 per hour for AC Transit, the total daily additional cost to deadhead these vehicles would range between $2,070 and $6,000 ($300,000 to $1 million annually, based on 180 school days), in addition to increased regional diesel emissions from the increased bus mileage required. Please see Table B below.

Table B

Additional Costs -- AC Transit - No Storage Alternative

Range	Deadheading Vehicles	One Direction Additional Time (min)	Both Direction Additional Time (min)	Total Additional Daily Cost
Low/Low	30	23	46	$2,070
Low/High	30	40	80	$3,600
High/Low	50	23	46	$3,450
High/High	50	40	80	$6,000

Hourly Cost $90

For Golden Gate Transit, assuming the "home yard" is the San Rafael facility on Anderson Drive, deadhead times are estimated at about 40 minutes (from Golden Gate Transit Route 40 and AC Transit Line L Schedules). Assuming a $90 per hour cost, the total daily additional cost to deadhead these 130 buses would be about $15,600 daily and $4 million annually, in addition to increased diesel emissions. Please see Table C below.

Table C

Additional Costs -- GGT Transit - No Storage Alternative

Deadheading Vehicles	One Direction Additional Time (min)	Both Direction Additional Time (min)	Total Additional Daily Cost
130	40	80	$15,600

Hourly Cost $90

(2) Second/Third/Fourth I-80 Freeway – Under this alternative – the proposed site discussed in the EIS/EIR – both Golden Gate and AC Transit would store buses midday weekdays only under the freeway structure of the west approach to the Bay Bridge (Interstate 80). AC Transit would be assigned the land under the freeway between Second and Third Streets. By 2020, AC Transit would store 50 buses midday, and on school days would additionally stage up to 100 buses for periods longer than 15 minutes. At any one time, up to 97 buses could be in the storage facility or on the ramps of the facility. AC would store buses to ensure independent movement (buses could move in and out of the facility without affecting other parked vehicles). Golden Gate Transit would use the block between Third and Fourth Streets. Golden Gate would store 130 buses in a stacked arrangement, which does not allow for independent movement of buses.

In general, buses from both AC and Golden Gate would arrive between 7 am and 9:30 am, and leave between 4 pm and 7 pm. After 7pm, and on weekends and holidays, the facility could be used for public parking for various activities including Yerba Buena Center events and Pacific Bell Ballpark activities.

There would be an exclusive, dedicated ramp from the terminal into the AC Transit Second Street facility. From this point, AC would gain direct access to the terminal on dedicated ramps, while Golden Gate would gain access to the Fremont Street off-ramp and start service on city streets. To gain access to the AC facility and its ramps, Golden Gate buses would cross Third Street at grade into the AC facility

(3) Parking on Terminal Ramps – Currently, AC Transit parks up to 70 buses on the ramps leading into the Transbay Terminal. This alternative would store AC buses on the new ramps into the terminal.

For the West Ramp Alternative, a key difference between the current and proposed terminal is the lack of the east side loop and the parking on that ramp. While the west side ramp has been designed to queue up to five buses at the throat of the terminal, it does not provide for additional bus storage. This alternative allows bus traffic to be reconfigured to allow for "left-handed" running of the buses with a center island, making the east loop unnecessary and opening this property for development. San Francisco City policy favors both removal of the east loop and no storage of buses on the loop for aesthetic considerations, as outdoor, observable bus parking in the proposed redevelopment area is considered as contributing to blight.

For either the West Loop Alternative or the Loop Ramp Alternative, additional bus parking is necessary. The total amount of vehicles within AC Transit storage will exceed 100, while Golden Gate Transit is expected to require storage for 130 buses. Even aside from aesthetic issues, additional bus parking cannot be provided on the new ramps in sufficient quantity to meet either AC Transit's or Golden Gate Transit's needs.

The Transbay Joint Powers Authority has adopted the West Ramp Alternative as a component of the Locally Preferred Alternative for inclusion in this Final EIS/EIR.

(4) Eighth and Harrison – Golden Gate Transit recently entered into a lease to occupy the former Coach USA bus facility on Eighth and Harrison Streets in South of Market. This site is about 150,000 square feet and can store more than 130 buses. Use of this site, however, has introduced an increase in the GGT operating costs due its increased distance to the beginning and end of its routes. This additional bus travel also produces increased diesel emissions. Development of the GGT storage under the west approach to the Bay Bridge as evaluated in this Final EIS/EIR would reduce these operating costs. GGT has therefore urged that the schedule for development of the bus storage facility under the west approach be accelerated (please see Comment 2.7.3). The Eighth and Harrison location requires about one mile of additional operation in each direction, per stored bus. Please see Table D.

The total annual operating cost increase would approach $400,000, while the total increase in daily bus operations would exceed 17 hours. While either AC or Golden Gate could use this facility, there is not enough room for both services to use the site. In addition, the AC Second Street facility has been designed to allow for staging and dispatching a short distance into the terminal on dedicated ramps and facilities. These operating advantages are not available at the Eighth and Harrison location.

Table D

Additional Costs -- GGT Transit - 8th/Harrison

Deadheading Vehicles	One Direction Additional Time (min)	Both Direction Additional Time (min)	Total Additional Daily Cost
130	4	8	$1,560

Hourly Cost $90

(5) Vermont/15th & 16th – Golden Gate Transit had earlier identified the area under U.S. 101 on Vermont Street between 15th and 16th as a possible location for bus storage, at least during the Transbay Terminal reconstruction period. The site is about half the size of Eighth and Harrison (about 80,000 square feet), which severely limits storage capacity when freeway columns and other obstructions are considered. The site is also further away from the downtown service area that Golden Gate or AC must access (about 1.6 miles further than the I-80 freeway location). Please see Table E.

Table E

Additional Costs -- GGT Transit - Vermont/15th-16th

Deadheading Vehicles	One Direction Additional Time (min)	Both Direction Additional Time (min)	Total Additional Daily Cost
130	7	14	$2,730

Hourly Cost $90

The total annual operating cost increase would approach $600,000, while the total increase in daily bus operations would exceed 30 hours. While either AC or Golden Gate could use the facility, there is not enough room for both services to use the site. In addition, the AC Second Street facility has been designed to allow for staging and dispatching a short distance into the terminal on dedicated ramps and facilities. These operating advantages would not be available at the Vermont location.

Additional locations suggested by the commentors are discussed below.

Caltrans Paint Yard. Use of the Caltrans paint yard at Bryant and Main (double deck structure) would interfere with Caltrans activities. Decking of this site would require working near the Bay Bridge anchorage. In addition, it would be extremely difficult to provide direct access ramps from the location into the terminal.

Treasure Island. The Treasure Island Plan would not allow for a bus storage facility and this site would increase costs and decrease reliability given that it would require use of Bay Bridge, adding additional bus traffic to an already congested facility, to gain access to and from the new Transbay Terminal.

Rail Yard at Fourth and King. The rail yard at Fourth and King will be used completely for rail uses and is substantially more distant from the Transbay Terminal. It would not allow for direct ramp access to the terminal.

Piers on San Francisco Waterfront. The piers on the San Francisco waterfront have significant structural problems, and the Port likely would demand significant rents. Bus storage use would be a non-conforming use with the Bay Conservation and Development Commission regulations, the State agency that regulates waterfront uses adjoining the San Francisco Bay. Direct access ramps would again not be possible.

Other Properties around the Terminal. The other properties around the Transbay Terminal are better suited to residential and commercial uses than bus storage, and City policy is to develop those properties, primarily for housing. The proposed site under Interstate 80 cannot be used for such development.

As can be seen from this analysis, the proposed location for the permanent bus storage facility is optimal when compared to the other alternative sites that were considered.

Existing Terminal. The Transbay Terminal has not been designed for bus storage, due to the costs and operating inefficiencies that would be associated with such an approach. To provide storage inside the terminal would result in an inefficient terminal with too little circulation area. While it is true that bus storage closer to the terminal would reduce traffic impacts from the buses further away from the terminal, the traffic impacts for the proposed site would be limited to a coordinated, mid-block crossing of Third Street that would operate at Level of Service (LOS) A (best category of service) in the pm-peak hour in 2020. In placing the bus storage beneath the freeway, transportation uses are matched with transportation uses, leaving the parcels closer to the terminal to be developed for more concentrated residential and commercial uses that are compatible with and have easy access to the new multi-modal transit facility.

- **Bus Rapid Transit Option**

Bus Rapid Transit (BRT) cannot be readily applied to this Project. Application of the BRT approach would not enable a downtown station for the California High Speed Rail Program – part of the Project's intended purpose (Please see Chapter 1, Project Purpose and Need). BRT would also not be in conformance with Proposition H passed by the San Francisco voters in 1999 that requires the extension of Caltrain to the site of the current Transbay Terminal.

Buses are currently used to pick up Caltrain passengers at Fourth and Townsend. The time it takes to make this transfer and travel on buses using city streets makes this an inefficient solution to providing service to downtown (please see Response 1.1.7), and the removal of traffic lanes or parking lanes between Fourth and Townsend and the Transbay Terminal for a BRT application would introduce severe business, rights-of-way, and traffic impacts. The grade separated Caltrain Extension eliminates the need for a transfer and would not introduce these additional impacts. Buses arriving from and departing to the East Bay need to contend with the traffic congestion on the Bay Bridge, and the use of dedicated high occupancy vehicle lanes across the Bridge has not been accepted by Caltrans, again prohibiting application of the BRT approach. The co-lead agencies have incorporated the referenced materials and comments regarding BRT into the administrative record.

- **Land Use/Planning**

One of the goals of the South of Market planning and rezoning process is to continue and expand on the unique mixed-use community that presently exists. The EIS/EIR does evaluate the changes that would occur with the bus parking in the areas of noise, traffic, and parking. The proposal is to replace the current car parking with bus parking which is acknowledged in the document to be a more intensive use.

Both the South of Market and the Rincon Hill planning processes are looking at expanding the mixed-use neighborhoods with additional housing. One of the reasons that these areas are being looked at for expanded housing is because of the availability of various modes and a high degree of transit service as exemplified by the upgrading of the Transbay Terminal and the extension of Caltrain. Integral to having increased transit service throughout the SoMa area is having the backup facilities for bus and train service.

The EIS/EIR looks at existing plans and zoning as part of the evaluation of consistency with plans and zoning as set out by the CEQA Guidelines, Section 15125(d).

The EIS/EIR (Volume I, Section 7.2 discusses the local context for potential cumulative effects particularly in the area of traffic and notes that the 2020 Cumulative discussion contained in Chapter 5, Section 5.19.4, incorporated other plans that had been recently proposed at the time of the preparation of the environmental analysis, including the Rincon Hill Rezoning, South of Market Redevelopment Plan, and Mid-Market Redevelopment Area Plan. In the current work for the Community Planning in the Eastern Neighborhoods South of Market Area, the Planning Department is still looking at a number of options for zoning and height districts. All options include a continuation of mixed-use development where "opportunities for housing-both affordable, and market rate and for space for production, distribution and repair activities" will continue to exist. In addition, all options provide for retail and office use in various areas. With the mitigation (construction of a sound wall) as set out in the Draft EIS/EIR on page 5-63, the potential for a significant noise effect from the bus storage area is mitigated.

The present Rincon Hill Plan adopted in 1985 calls for the creation of a unique mixed-use neighborhood with a high priority for housing. The current planning for these areas, as detailed in the "Downtown Neighborhoods Initiative" as part of the "Citywide Action Plan for Housing," also envisions housing, with the retention of the existing mixed use nature, including retail and PDR uses. The re-use of the under-freeway area in this two-block segment would not be introducing a totally new use as the area has historically been used for parking.

- **Community Involvement/Environmental Review Process**

Notice of availability of the Draft EIS/EIR was published in a *San Francisco Independent* newspaper and posted at the Planning Department. A newsletter was sent to 550 people on the mailing list announcing the availability of the Draft EIS/EIR, and a letter was sent directly to property owners whose properties could be directed affected by the Project. Fifty 11"X17" posters were posted throughout the Project area, including along Second Street. Notices were sent to all property owners within the project area and within 300 feet of the project boundary as required by the San Francisco Administrative Code Chapter 31.

Supplemental information regarding the issues associated with the proposed bus facility in the Stillman/Perry Streets area is also provided in both Volume I and Volume II this Final EIS/EIR,

which has been provided to the commentors. At the request of the public at the November 26, 2002 public hearing, the Planning Commission extended the public comment period to December 20, 2002. The signed petition is part of the comments and the administrative record for the Project.

- **Agency Coordination**

The co-lead agencies and the Transbay Joint Powers Authority (TJPA) look forward to a continued cooperative working relationship with the California State Department of Transportation on all relevant issues associated with the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project, including the proposed bus storage facilities. The co-lead agencies and TJPA acknowledge that use of Caltrans airspace requires the Department's exercise of discretion and approval of the parking structure development plans and will work with Caltrans to assure that safety design standards are met and that the facility design and construction are consistent with good ecological and environmental planning.

- **Caltrans West Approach Retrofit Project**

The Caltrans Bay Bridge West Approach Seismic Retrofit Project is a construction project that is anticipated to be completed in 2010. The demolition and construction of the bus storage facility would coincide with the later phases of the seismic retrofit project.

The conceptual layout of the bus storage facilities was developed with the design documents prepared by Caltrans including all structural locations, sizes, and clearances. Additionally, Caltrans' planned west approach structure and the Perry and Stillman rights-of-way were taken into account during the planning and locating of the bus storage. It is the co-lead agencies understanding that, upon completion of the Bay Bridge West approach Retrofit project designed by Caltrans, the west approach structures will be closer to the existing Clocktower building and other buildings along Stillman and Perry Streets. Additionally, Caltrans' planned reconstruction of the west approach will increase the clearance below the elevated roadway.

Coordination with Caltrans will be an essential part of staging and scheduling the construction activities. As construction timelines can often change, the Terminal and Downtown Extension final design effort will work with Caltrans as the start of construction grows near to confirm there are no conflicting activities. The design of the bus facilities would be coordinated fully with the design of the west approach retrofit in an effort to minimize the duration of impacts on the adjoining neighborhood.

Based on the revised project schedule for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project (shown in Figure 5.20-8, Volume I, of this Final EIS/EIR), there could be simultaneous tunneling for the Caltrain Downtown Extension as the Caltrans retrofit work is progressing. As noted in the EIS/EIR, the tunneling would be below ground. Tunneling below Second Street from Townsend through to Folsom will be stacked-drift tunneling well below the surface to minimize impacts on activities at street level. The Downtown Extension tunnel width would be limited to the footprint of Second Street along portion. Caltrans' retrofit construction that is subsurface in this area will be comprised strictly of foundations. The Caltrans' foundations will be outboard of the Second Street right-of-way and, therefore, clear of the tunneling activities.

- **Coordination with Other Related Project**

The mitigations measures that were a part of the Giants Stadium project have all been completed as that project has been completed and in use for a number of years. The Draft EIS/EIR as noted in the comment above did take into account the future plans as well as the existing plans for the Transbay/Rincon area.

Possible construction of a New Central Subway along Third Street may be disruptive in varying degrees to all activities on Third Street. The construction approach is under review for this project, and the requirements of the New Central Subway Project on Third Street will be to mitigate these impacts to the extent required by the environmental review process. Should construction of the two projects occur during the same time frame, coordinated construction schedules will be developed to minimize disruption and cumulative construction impacts.

- **Construction Schedule**

The co-lead agencies acknowledge the operational benefits provided for the regional bus operators (AC Transit and GGT) by the off-site bus storage facility, e.g., reductions in deadheading miles for bus vehicles and direct ramp access to the new bus facility and Folsom Street. The co-lead agencies will review the feasibility of advancing the time period to construct construction of this component of the Project, but the availability of funding and the schedule for the retrofit of the west approach by Caltrans will affect this schedule.

2.8 TEMPORARY BUS TERMINAL DESIGN AND OPERATIONS

2.8.1 San Francisco Muni, Jose Cisneros, Deputy General Manager for Capital Planning & External Affairs, December 17, 2002

"Page 2-19, Figure 2.2-8: Layout of Temporary Bus Terminal: The Temporary Bus Terminal will need to include provisions for trolley wire on the streets adjacent to the Temporary Bus Terminal, not just in it. This would also include a new boarding island on Beale Street near Howard for the 1-California trolley coach line. These, along with other Muni issues, were discussed with MTC consultants in 1999-2001.

"The following is a summary of how bus lines will be routed during the operation of the Temporary Transbay Terminal facility (2003-2006?) at Howard/Beale/Folsom/Main. This is subject to revisions as the design develops, and we will need to work with the project engineers to ensure that appropriate routings are available to us.

"Trolley Bus Routes:

- "5-Fulton/6-Parnassus: Continue inbound (I B) on eastbound (EB) Market to Beale, southbound (SB) Beale, left to EB Howard, right into terminal loop at Main (SB contra-flow lane), drop-off passengers at terminal drop-off just south of Howard, continue around loop to layover on westbound (WB) Folsom between Main and Beale (5-line uses first position, 6-line second position). Resume outbound trip with right onto northbound (NB) Beale contra-flow lane, pick-up passengers on Beale south of Howard, left onto WB Howard (protected signal phase), right onto northbound (NB) Fremont, resume existing outbound (OB) route.
- "1-California -Existing IB route on SB Beale to switch mid-block between Mission and Howard, switch onto left-side curb diamond lane, drop passengers and layover at new boarding island on Beale, NS Howard. Pick-up passengers at island and resume OB trip by making a left onto EB Howard, left onto NB Main, continue on current OB route.
- "41-Union -Existing IB route on SB Beale, left onto EB Howard, left onto NB Main. Drop off passengers and layover at existing layover location on East Side of Main FS Howard. Pick-up passengers and leave layover, resume existing routing on NB Main.
- "Turnbacks -ensure that the following turnbacks for trolley coaches would be available:
  - "Turnback 14-Mission coaches from IB to OB via right on SB Beale from EB Mission, right on Howard, right on NB Fremont, left on WB Mission.
  - "Route 14-Mission coaches into terminal via right on SB Beale from EB Mission, left on Howard, right into terminal, around terminal loop to left on WB Howard, right on NB Fremont, left on WB Mission.
  - "Pull-ins on 1, 5, 6, and 41-lines that will by-pass the terminal -use right-hand mid-block switch on SB Beale between Mission and Howard, drop-off passengers NS Howard, right onto WB Howard, normal route back to Presidio or Potrero divisions.

"Motor Coach Routes

- "38/38L/2 -Continue IB route on EB Market to Beale. Right on SB Beale to Howard, left on EB Howard, drop-off passengers on the south side of Howard between Beale and Main, right onto main (contra-flow lane), layover at curbside at curb lane on SB Main St. (contra-flow lane). Resume outbound trip with right onto NB Beale, left onto WB Howard (protected phase), right onto NB Fremont, resume existing OB routing onto WB Market."

Response 2.8.1 Figure 5.21-1, AC Transit, Muni and Golden Gate Transit Access to the Temporary Terminal, in this Final EIS/EIR, Volume I, has been revised to reflect the routing descriptions provided by Muni.

2.8.2 Golden Gate Bridge District, Alan R. Zahradnik, Planning Director, November 19, 2002

- "Page 2-20 discusses the proposed temporary bus terminal. It states GGT "would be allocated three bays on the curb." DEIS/DEIR should clearly state whether these bays are located on the Beale Street contraflow lane between Howard and Folsom streets.
- "Figure 5.21-1 (page 5-163) illustrates and page 5-165 discusses access to the temporary TTT at the site currently occupied by GGT's midday storage facility. District appreciates efforts by this project to accommodate GGT bus service during construction of a new TTT.
  - o Figure 5.21-1 and page 5-165 appear to only accommodate GGT's outbound service since no inbound GGT stops are indicated. District's inbound Basic Service bus stops are required on Mission Street, either between Fremont Street and First Street (as in current conditions) or, if not available, between Beale Street and Fremont Street (shown in Figure 5.21-1 as a San Mateo County/Muni bus stop). District desires to serve both the existing TTT and temporary TTT to facilitate transfers with other regional transit operators.
  - o For GGT outbound stops, this figure shows a GGT layover on Folsom Street, a Beale Street bus stop (far side Folsom), and a Fremont Street bus stop (far side Mission). GGT currently has three bus stops on Fremont Street (near side Mission). These bus stops either have to be maintained during project construction or otherwise accommodated near the existing
  - o terminal."

Response 2.8.2 During operation of the temporary terminal, curb space for three Golden Gate Transit Bays and the existing Muni service to the terminal can be accommodated by providing contra flow lanes on Beale and Folsom Streets. Exact curb space locations for these temporary operations will be established during final design. Design considerations will include the actual lines Muni and GGT designate to serve the AC Transit connection in the temporary terminal as well as the appropriate arrival and departure routes based on originations and destinations. Existing stops for GGT, Muni, and SamTrans near the existing terminal will require consideration as the final design and staged demolition and construction of the terminal is formulated.

2.8.3 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Page 5-175. "70 percent of pedestrians going to and from the terminal would have up to a four block longer walk than under the existing situation." This is a severe impact, and may affect transit ridership during the construction period. Some form of mitigation for physically challenged persons is in order. It is important that curb cuts and other features designed to accommodate persons with limited mobility be retained during the construction period. Perhaps some form of shuttle similar to that used in airport terminals would be helpful in mitigating the impacts on less mobile transit users."

Response 2.8.3 The four block walk to the temporary terminal is approximately 800 feet and is estimated to add four minutes of travel time. Frequent Muni bus connections will be available from the temporary terminal to Market Street, making a shuttle service duplicative.

2.9 REHABILITATING EXISTING TRANSBAY TERMINAL

2.9.1 California Department of Transportation, Timothy C. Sable, District Branch Chief, December 20, 2002

"1. Seismic Condition
"As the owner/operator of the Transbay Transit Terminal, the Department has participated in ongoing regional discussion regarding relinquishment of the Terminal to a Joint Powers Authority (JPA) for replacement. The Department determined that until the facility was transferred to the JPA, the Department would need to evaluate seismic risk and acceptability levels. After an evaluation by the Department's consultant, the Office of the State Architect (OSA), the Department entered into and completed various interim seismic upgrade projects from 1993 to 1999 to mitigate the most extreme seismic risks.

"Between 1993 and 1999, OSA completed three seismic retrofit projects, costing approximately $15 million. Prior to commencement of any of the seismic upgrade work the building was classified approximately at risk Level V. After completion of the final phase of the seismic upgrade work, the risk level was reduced to between Level III and Level II.

"2. Terminal Deficiencies
"Because regional consensus pointed to the Terminal's demolition and replacement, the Department and the Metropolitan Transportation Commission (MTC) recommended that major construction deficiencies be deferred, except on a case-by-case situation. Some of the projects recently undertaken are the completed ventilation project in the West Garage, a mechanical evaluation of the elevator and escalators, and the development of a PS&E (plans, Specifications & Cost Estimates) to remedy an Americans with Disabilities Act (ADA)-deficient restroom and drinking fountain in the center unit.

"Some of the remaining major deficiencies at the Terminal include the fire sprinkler systems; the lack of ADA-accessible bus platforms and exit routes; plumbing and electrical service to meet the Uniform Building Code (UBC); and a list of general renovation work that would need to be completed if the existing Terminal were to be designated for full service."

Response 2.9.1 The co-lead agencies for the EIS/EIR appreciate Caltrans' summary of the Transbay Terminal's condition, including its seismic status, the retrofit program, and associated actions taken by the Department.

2.9.2 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Summary Table, p. S-17, Transit Operations Category, No-Build Alternative: What are the impacts on operations if portions of the facility must be closed for seismic upgrading?"

Response 2.9.2 Please see Caltrans summary of the Transbay Terminal building condition and retrofit actions over time provided by the Department's Comment 2.9.1 above. Table F shows the retrofit work completed by Caltrans over recent past and Table G shows the retrofit work that would need to be undertaken for continued use of the Transbay Terminal into the future.

Table F
Transbay Transit Terminal Code Upgrade Projects (1993–99)

Seismic Code Upgrade Projects (Toll Bridge Funds)

Seismic code upgrade of the terminal was necessary to bring the building into conformance with current building seismic codes. Additional building code upgrades originally included in the project scope were deferred pending a regional decision regarding the future of the building. Three interim projects were completed prior to the final project to mitigate the most extreme seismic risk.

Remove and Replace Bus Deck Roof

Initial investigation and removal of built up asbestos material; remove and replace with temporary roof. Designed and bid by Division of Structures on an emergency basis after a report noted the roof was very seismically unsound. ($1,943,840; Completed July 1993)

Interim Seismic Mitigation Phase II(a)–Shear Walls

Construction of new shear walls, shotcrete of existing walls and connecting existing floor diaphragms at separation joints between adjacent portions of the building. ($1,879,000; Completed March 1995)

Interim Seismic Mitigation Phase II(b)–Bus Deck

Provided temporary steel bracing at bus deck for seismic strengthening. ($529,300; Completed January 1997)

Final Seismic Strengthening – Building

Construction of new shear walls, shotcrete of existing walls, steel bracing, viscous dampers, and connecting existing floor diaphragms at separation joints between adjacent portions of the building. Included project related hazardous materials abatement. Waterproofing of temporary roof structure was added on to project to guarantee performance for ten years. ($11,718,517; Substantial Completion August 1999; Completed November 1999)

Building Code Upgrade Projects (Petroleum Violation Escrow Account Funds)

This $910,000 PVEA authorization provided for health and safety, security, efficiency, and accessibility improvements at the terminal.

Security and Architectural Lighting

Repair and replacement of damaged or substandard lighting under existing bridge structures and arcades. Provide new exterior security lighting at front plaza facade. ($280,000; Completed March 1995.)

Access Compliance

Title 24 handicap access modifications including detectable warnings at boarding platforms, and parking at west unit garage. Installed armrests at existing benches. ($198,000; Completed March 1995)

Exiting Renovations at Greyhound

Modifications to exit staircases and ticketing area to correct Fire, Life Safety infractions. ($150,000; Completed June 1996)

Safety, Security, & Health Modifications

Modifications to State Police Office alarm, window, and outside air intake at First Street to reduce diesel fumes. Clean and repoint historic granite facade and aluminum windows. Modifications to non-functioning basement restrooms. Provide maintenance walkway to rooftop mechanical equipment. Install low energy lights at parking areas. ($125,000; Completed December 1996)

Roof Repair, Roadway Drains, Pigeon Netting

Repair leaking roof, improve roadway drainage in Bus Lane 1, replace pigeon netting over First Street and Fremont Street, install reflective tape on bus deck columns, repair and replace damaged light bollards in Mission Street Crescent. ($112,000; Completed December 1998)

Source: Caltrans, 2003

Table G
Transbay Transit Terminal Building – Remaining Deficiencies

Work Item	Work Description
Fire Protection/Fire Exiting Restoration	• Add new fire sprinkler systems and fire extinguishers. • Rehabilitate or modify existing exit stairways/ramps to provide proper exit route.
Handicap Accessibility – General	Resolve the following: • The lack of accessible vertical circulation at all levels and bus platforms. • The path of travel from the public streets into and throughout the building interior. • The lack of accessible parking (designated) at street curbside, surface/street level parking and within parking garages. • The tenant spaces which serve the "public" have numerous accessibility deficiencies. • The "public" toilet rooms require extensive renovation to provide accessibility. (funded)
Handicap Accessibility – Elevators	• Install new passenger elevators in Central Unit to provide "accessible" exit routes.
Plumbing Systems	• Virtually each piece of plumbing equipment is dangerously beyond its expected lifespan, including the steam piping and appurtenances. • Demolish and replace all public and tenant restrooms. • All piping needs to be seismically braced.
Ventilation of Bus Deck	• Complete installation of new ventilation system at bus deck, including exhaust fan and window louvers.
Heating/Ventilating Systems	• Complete replacement of all existing heating and ventilating systems, including boiler plant in basement. Additional new mechanical systems to existing tenant spaces.
Electrical – New Service	• Existing electrical power is insufficient to provide required loads – cost dictated by power company.
Electrical Systems	• Service switchboards and related equipment require replacement due to questionable performance and no ground fault protection. • Existing exit signs require replacement and additional exit signs and emergency fluorescent fixture battery packs installed to comply with exit and egress requirements. • Relocate existing manual fire alarm pull stations to comply with height requirements and additional pull stations installed to comply with fire and life safety requirements. • Replace existing fire alarm system with new and interface with existing newer fire alarm panels. • Remove all "unapproved" adapters, extension cords and provide approved wiring to all electrical equipment. • Install new covers on existing junction boxes/outlets with exposed wiring. • Install emergency telephones throughout the facility. • Increase the reliability of the existing standby generator set.
General Renovation Work	• Renovate entire terminal per historical requirements. • Provide new building security and video monitoring systems. • Major reconstruction and paving of bus lanes and loading platforms. • Rebuild deficient ramps and stairways. • Install noise abatement system at bus deck. • Rehabilitation and new tenant rental spaces. • Total restriping of parking garages. • Relighting of exterior of buildings and site. (partially completed) • Exterior repair and repainting of exterior building and interior spaces. • Add new transit graphic signage system. • Reconstruct exterior art-deco aluminum canopies. • Place or rebuild all aluminum frames and windows. • Addition of adequate seating, trash receptacles and amenities. • Rehabilitation of existing escalators. • Remove and replace all existing doors and door hardware. • Roadway repair at front of terminal. • Repair and replace interior drainage system.
[a] State Architect dated December 6, 1995	

As can be seen from Table G, additional retrofit of the building would involve major renovation work throughout the facility including building systems, offices, and areas used by the general public. Such work would entail temporary closures of offices, temporary closures and disruption of transit rider access routes, and temporary closures and disruption of portions of the transit service areas to comply with the requisite code requirements.

2.9.3 Richard F. Tolmach, President, Train Riders Association of California, December 19, 2002

"We are dismayed to learn that the new Transbay Terminal/Caltrain Extension EIR does not include the alternative of rehabilitating the existing Transbay Terminal for use as a joint rail and bus terminal for Peninsula trains, high speed rail, and Transbay buses: We believe that this alternative should be seriously considered for the following reasons:

"1. The extraordinarily high cost of removing and then replacing the existing facility. Replacement costs are much higher than re-configuring the existing facility. Property acquisition would be entirely eliminated by re-configuring the existing facility.

"2. The estimated cost of rehabilitating the Transbay Terminal in the 2001 MTC Transbay Terminal Improvement Plan Study was only $275 million. Since the existing terminal was built and operated as an interurban railway terminal from 1939 to 1956, the additional cost of rehabilitating the terminal for use by trains of the same weight should be minimal.

"3. A rehabilitated and reconfigured transbay terminal will serve future needs for more than a quarter of a century. The capacity of the existing terminal is well in excess of any prospective needs for the next 30 years or more. For example, the capacity of Lane 3 which formerly accommodated Tracks 5 and 6 would be 300 rail commuter cars per hour assuming 2 minutes for loading or unloading and one minute for entrance and one for exiting. Since Caltrain operates only about 40 cars per hour maximum at present, even a very conservative capacity estimate of 200 cars per hour with 10 car trains would be more than adequate for any for seeable increase in rail commuting from the Peninsula. Lane 2 has room for 15 bus loading zones. Assuming 1.5 seconds loading time per passenger with fare pre-payment, a loading time of 1.5 minutes for 60 passengers, and a consequent minimum headway per zone of 5 minutes, a capacity of 180 buses per hour from the east bay could be accommodated in Lane 2.

"Currently, AC Transit operates only about 80 buses per hour during the peak hour. Similarly, Tracks 1 and 2 in Lane 1 could easily handle all of the high speed trains that one could ever hope to see. Other bus operators, such as Golden Gate Transit, can be easily accommodated in Lane 2 with AC Transit for the foreseeable future. Greyhound which now operates 5 to 10 coaches per hour in Lane 1 could easily be relocated to the ground level such as Natoma Street behind the terminal where Amtrak formerly boarded passengers.

"4. We believe that the reasons given in the EIR for not considering the rehabilitation of the existing Transbay Terminal for rail and bus use to be without foundation or justification. Most, if not all, rail passenger cars in the United States can operate around a 250 foot radius curve. The 870 foot long platforms can accommodate 10 car trains which is more than long enough for any foreseeable demands. The design capacity of the terminal and loop is 75 tons per car which is adequate for most commute rail cars, high speed rail cars, and high speed locomotives. Talgo, which now operates trains in the Northwest, has informed us that their new high speed Talgo 350 Km. trains can with minor modifications negotiate curves of less than 250 feet. There cars also weigh less than 37 tons per truck with passengers as do the French TGVs. With reuse of the terminal for trains and buses as described above, there is no need for an additional bus deck, so

no major seismic work is required. The claim that obtrusive bracing, would be needed for rail was based on the erroneous assumption that an additional deck would be needed for buses above the existing building.

"5. Re-use of the existing Transbay Terminal would not require acquisition of additional property. This is a major cost savings and a major environmental advantage.

"6. Proposition H of 1999 mandates fiscal prudence. Conserving public resources through reuse is the least-cost alternative. The two alternatives considered in the EIR require the installation of a much more massive 2 or 3 level structure over both 1st Street and Fremont Street than the existing single level structure. This installation presents obvious environmental impacts which have not been adequately addressed by the report.

"7. San Francisco Proposition H of 1999 mandates that the City select the most economical alternative for extending Caltrain to the Transbay Terminal that provides rapid and efficient service. Since a loop terminal does not require inbound trains to cross outbound tracks, or outbound trains to cross in front of inbound trains, or require crews to reverse trains, as with a stub end terminal, a loop terminal can be expected to operate with fewer and shorter delays.

"We would also like to recommend that a direct tunnel connecting Tunnel #1 on the Caltrain line with the throat to the Transbay Terminal Loop between Harrison and Folsom be considered. A direct routing would be about 1.25 miles long, require no property takings, and allow much higher speeds south of Harrison Street. In the course of the preparation of the report, reuse of existing facilities was ruled out because of the supposedly high cost, but now appears to be the most feasible option as new construction options assumed by the report now have a cost in the billions of dollars. This is as much true on the Bay Bridge as it is with the Transbay Terminal. Adaptive reuse of both facilities for rail should be studied in detail before any final decision is made on the configuration of a new TBT.

"Whichever option is chosen, we believe a rail terminal on the second level with access to the Bay Bridge should be studied carefully as part of the project. After completion of the new east span, there is no reason to demolish the old span. The east span could be retrofitted for rail (plus bicycles and pedestrians) and connected to the existing west span. The rails-on-the-bridge study concluded that adding rail to the west span would cost less than $1.5 billion, but this alternative was ruled out because of the supposedly high cost. In light of the tunnel alternatives, which soar to $12 billion as estimated by the MTC, rehabilitation of the Transbay terminal is the most feasible option.

"Rail on the Bay Bridge and a second level Transbay Terminal rail facility should be evaluated and compared with the other options in detail before any final decision is made on the configuration of a new TBT."

Response 2.9.3 Please see Caltrans summary of the Transbay Terminal building condition and retrofit actions over time provided by the Department's Comment 2.9.1 and the summary of work completed and work yet to be accomplished to make the Transbay Terminal a functioning facility into the future in Response 2.9.2.

The MTC Transbay Terminal Study concluded that the existing terminal had lost its viable function, and the Purpose and Need (Chapter 1, Volume I, of this EIS/EIR) described for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project includes the provision of

a station at the Transbay Terminal for the California High Speed Rail Program – a need that could not be fulfilled by retrofit of the existing terminal.

The MTC Study and the preparers of this EIS/EIR consulted with the California High Speed Rail Program to establish geometric design criteria that would allow for a wide range of high speed rail equipment options. The small radii of the existing bus ramps would preclude some existing equipment suppliers (namely the European and Japanese suppliers) from competing for the California High Speed Rail concession thereby creating the potential for less competition in the equipment procurement process.

Reintroduction of rail on the Bay Bridge was reviewed as part of the MTC Study and was rejected as too costly, with an estimated construction budget of between $3 and $5 billion in 2000 dollars.

The existing ramp surface area is fully utilized by AC Transit for circulation and storage under their current operating procedures. Proposition H states that the new or rebuilt terminal "shall ... (e) result in the lowest feasible combined costs for construction of the bus terminal and the Caltrain station without sacrificing the aesthetic qualities of the terminal and station and their interface with surrounding development." The commentor's suggestion of providing both bus and rail within the existing bus ramp corridors through the City would also entail the introduction of additional aerial ramps into the area. The additional ramps would consume space that is proposed for extensive redevelopment, including the introduction of substantial housing units, thus interfering with the aesthetic qualities of the terminal and station and their interface with surrounding development.

The Transbay Joint Powers Authority has selected the West Ramp Option as a component of the Locally Preferred Alternative. Among the reasons for this selection was that this option would result in a reduction in aerial ramp structures in the proposed Redevelopment Area around the terminal to achieve an additional Project purpose – namely to revitalize the urban area surrounding the terminal.

3.0 PROJECT ALTERNATIVES – CALTRAIN DOWNTOWN EXTENSION

3.1 SECOND-TO-MAIN VS. SECOND-TO-MISSION ALTERNATIVES

3.1.1 AC Transit – Kathleen Kelly, Deputy General Manager, Service Development, December 20, 2002

"AC Transit supports the Environmentally Superior Alternative identified on Page S-27 of the EIS/EIR – the West Ramp Transbay Terminal, Second to Main, Tunneling Option, and Full Build. We believe that the West Ramp alternative strikes an appropriate balance between the needs of bus circulation and the potential for redevelopment in the surrounding area. AC Transit supports redevelopment in the Terminal area as a way to generate both financing for the Terminal and ridership on our service."

Response 3.1.1 The Transbay Joint Powers Authority (TJPA) adopted in March 2003 the West Ramp Transbay Terminal, Second-to-Main, Tunneling, Full Build Options as the components of the Locally Preferred Alternative (LPA) for inclusion in the Final EIS/EIR. These components are consistent with those recommended by AC Transit.

3.1.2 Andrew Sullivan, Rescue Muni, Speaker, 11/12/02 Public Hearing

"A few specifics here that we'd like to make recommendations on. We know there's a choice among underground alignments for the service. We favor the Mission service that leads to a potential transbay tube. If rail will go across the Bay – it could happen at some point, and we think it should – we think through a new tube is the way to go that connects high-speed rail here to high-speed rail in the East Bay via high-capacity infrastructure. That makes sense because of, we don't think it's necessary to keep that the buses, as long as the buses can maintain the same level of service which appears to be the case in the design as we've looked at it here."

Response 3.1.2 In response to numerous public comments on both Caltrain Extension options, the Peninsula Corridor Joint Powers Board (Caltrain), working with the Transbay Joint Powers Authority, the City and County of San Francisco and the Redevelopment Agency, developed engineering refinements to the Second-to-Mission and Second-to-Main options for the Caltrain Downtown Extension that appeared in the Draft EIS/EIR. Refinements have included changes to the track, platform, and tail track layouts.

Figure 2.2-23, Volume I, of this Final EIS/EIR shows the refined Second-to-Main options More detailed drawings are available in the *Locally Preferred Alternative Report* (March 2003), which is available for review by appointment at the San Francisco Planning Department, 1660 Mission Street. These options were presented and discussed at a public workshop sponsored by the Transbay Citizens Advisory Committee on March 6, 2003. The meeting was open to the general public.

Table H provides a comparison of key characteristics of the refined alternatives. As shown in the table, platform lengths and the length of straight (tangent) platforms were increased for both refined options, and additional through tracks were added to both. The lengths and number of tail tracks were also increased under both options. The refined alignments include three tracks from the Fourth and Townsend Station through to the terminal. The Draft EIS/EIR included only two tracks for the tunnel portion between Townsend and Second Streets. The refined option includes a third track in this segment to improve rail operations and capacity. Additional train storage capacity has also been provided by the refined tail track layouts for both options. The

Second-to-Main Alternative would provide the greatest train storage capacity, as was the case for the Draft EIS/EIR Alternatives.

Table H
Comparison of Refined Caltrain Downtown Extension Alternatives

	Second-to-Main Refined from Draft EIS/EIR	Second-to-Mission Refined from the Draft EIS/EIR
CAPACITY		
Rail line (from Fourth & Townsend to terminal)	• 3 Tracks to terminal	• 3 Tracks to terminal
Terminal	• 6 tracks	• 7 tracks
Platforms	• 3 center platforms	• 3 center platforms • 1 side platform
Platform lengths	• 3 center platforms at 1,300 ft.	• 2 center platforms - 1,300 ft. • 1 side platform at 1,300 ft. • 1 center platform – 740 ft.
Length of straight (tangent) platforms sides	• 2 platform sides - 1,220 ft. • 2 platform sides - 910 ft. • 2 platform sides - 855 ft.	• 2 platform sides - 1,000 ft. • 4 platform sides – 950 ft. • 1 platform side – 600 ft.
Thru tracks	• 5 tracks	• 5 tracks
Tail tracks	• 5 tail tracks serving 5 terminal tracks • Storage for seven 5-car trains. (Encroachment into Main Street redevelopment parcels allows additional tail track)	• 2 tail tracks serving 5 terminal tracks • Storage for four 5-car trains
EAST BAY CONNECTION		
Additional depth needed at platforms [1]	• 40 – 50 ft.	• 40 – 50 ft.
Points of departure/ alignments to bay	• Various possible points of departure/alignments to the bay	• Only one possible point of departure/alignment to the bay
Additional tunneling to reach bay	• 1,000 ft. or more, depending on selected alignment	• 500 ft.
Obstacles	• Possibly Pier 32	• Muni turnaround (Less severe issue with deeper 40 – 50 ft. depth change) • Historic Agricultural Build. (Tunneling under historic bldg. accomplished by BART for the San Francisco Ferry Bldg.)
TAKINGS/EASEMENTS		
Additional to Draft EIS/EIR	• Within Draft EIS/EIR footprint	• Greater impacts to proposed 301 Mission development subsurface structures compared to Draft EIS/EIR Alternative
TERMINAL		
Passenger circulation in Terminal	• Good	• Diminished due to offset platforms
Impacts on new hotel (part of proposed Terminal Joint Development)	• None	• Would affect hotel service space/parking below ground
GEOTECHNICAL		
Reliability of current knowledge	• Reliable given the stage of the design	• Reliable given the stage of the design
Construction risks	• Mainly at Townsend/Second Street curve (additional geotechnical testing/ analysis proposed)	• Mainly at Townsend/Second Street Curve (additional geotechnical testing/ analysis proposed)
PROBABLE TUNNELING TECHNIQUES		
At Townsend/ Second curve	• Mined (stacked drifts) with underpinning of buildings as needed	• Mined (stacked drifts) with underpinning of buildings as needed
Along Second Street to Folsom	• Mined or cut-and-cover	• Mined or cut-and-cover
From Folsom & Second into	• Cut-and-cover	• Cut-and-cover

Table H
Comparison of Refined Caltrain Downtown Extension Alternatives

	Second-to-Main Refined from Draft EIS/EIR	Second-to-Mission Refined from the Draft EIS/EIR
terminal		
Tail tracks	• Cut-and-cover	• Cut-and-cover
ENVIRONMENTAL PROCESS		
Recirculation of environmental document	• Not anticipated	• Not anticipated
Conflicts with proposed developments	• Minor impact on 301 Mission • Impact same as described in Draft EIS/EIR	• Major impact on 301 Mission beyond previously identified impacts in Draft EIS/EIR

[1] Connection to the East Bay requires dropping all train boxes at the terminal to drop below the Bay shipping channel. Consideration should be included in the design of all alternatives for through rail to be constructed below the initial train box.

As noted on the table, the possible future extension of train tracks across the Bay from the Transbay Terminal would require lowering of the tracks some 40 to 50 feet so that the tunnel would enter the Bay below the bottom of the Bay, thus not affecting or interfering with navigable waters. Additional study would be required, as part of the new Bay crossing project by others, to determine the appropriate location of the tunnel under the Bay and to review the techniques and alignments that could be used to lower the rail alignment and tunnel so that it would enter the Bay below water level.

At this point, it appears that the Second-to-Main Alternative would allow greater flexibility to accomplish this objective. The bottom of the Bay increases in elevation further south of Mission Street; so there would likely be more flexibility for optional alignments and greater distances to the Bay for the Second-to-Main Alternative; and more public rights-of-way (streets) are available providing for more track alignment/configuration options, both vertically and horizontally. The greater distance to the Bay would provide more flexibility regarding optional alignments to the Bay. Conversely, critical obstacles are associated with the Second-to-Mission Alternative, including the need to tunnel under (support in place) the Muni turnaround structure, as well as the need to tunnel under (and underpin) the historic Agriculture Building located on the east side of The Embarcadero at the end of Mission Street.

The refined Second-to-Mission Alternative provides greater platform lengths and more platforms, as compared to the Draft EIS/EIR Alternative. It also provides one additional side platform compared to the Second-to-Main refined alternative. The refined Second-to-Mission Alternative clearly provides an efficient train platform layout. This refined alternative, however, would have greater impacts on the proposed 301 Mission development (which was approved for development by the San Francisco Planning Commission on July 31, 2003). As approved, the 301 Mission Street project has been modified to be more compatible with the Second-to-Main alignment, which was selected as the Caltrain Extension Component of the Locally Preferred Alternative in March 2003.

The Second–to-Mission option would also affect the subsurface portion of the joint development hotel proposed north of the new terminal. The passenger flows within the terminal would also be diminished, given that the train platforms would be offset from the terminal itself.

In light of the factors analyzed above and discussed herein, the Transbay Joint Powers Authority (TJPA) adopted in March 2003 the Second-to-Main Alternative as the Caltrain Downtown Extension component of the Locally Preferred Alternative (LPA) for inclusion in this Final EIS/EIR.

The Locally Preferred Alternative Report (March, 2003) is incorporated into this Final EIS/EIR by reference.

3.1.3 Andrew Sullivan, Rescue Muni, December 20, 2002

"Rescue Muni supports the following Alternatives to the Project: Caltrain Extension Alignment - Second to Mission. We feel this alignment is superior for the following reasons:

"Will allow for platforms with less sharp turning radii than the Second & Main alignment. We believe the Second and Main alignment will not accommodate CA High Speed Rail because the platform radii are too sharp, creating large gaps between the train cars and the platform. We believe this is unacceptable.

"Will be a shorter distance to the Bay for a future extension of conventional rail to East Bay."

Response 3.1.3 Please see Response 3.1.2. The platform length preferred by California High Speed Rail Authority is roughly 1,300 feet to provide for two trains on a given platform track at the same time. Both Caltrain Extension Options would restrict the amount of tangent platform to about 900 to 1,000 feet. Review of high-speed rail systems from around the world show many occasions where site constraints have required designers to implement curved platforms. Bridging the gap between the train and the platform edge in these curved conditions is accomplished by mechanical means either on the vehicles or on the platform.

3.1.4 Jeff Carter, Speaker, 11/13/02 Public Hearing

"Also, I would support the idea of the Mission Street alignment so that there is the possibility of a future transbay tube in – parallel to the existing BART transbay tube so we can turn San Francisco into a true world-class transit system with a, i.e., Grand Central station in San Francisco."

Response 3.1.4 Please see Responses 3.1.2 and 3.1.3.

3.1.5 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"For the record, here are San Francisco Tomorrow's preferred alternatives: ... Second-to-Mission, modified (see Figure 1, Note 6). In addition to its superiority for the accommodation of high speed rail, this alternative would appear to be cost-effective than the Second-to-Main alternative.

"We question the combination of alternatives that on page S-27 are identified as the 'environmentally superior alternative.' We suggest that this document recommend and justify the environmentally superior alternative for each component separately. For example, the Second-to-Main platform alternative does not qualify as an environmentally superior alternative because it does not fully meet the purpose and need for the project. The platforms in this alternative are not long enough to accommodate high-speed trains. As the accommodation of high-speed trains is a specific goal of the project as approved by the voters (see Purpose and Need), the Second-to-Main alternative cannot be considered environmentally superior to the Second-to-Mission alternative...

"San Francisco Tomorrow suggests an alternative platform arrangement that is similar to the Second to Mission alternative, but will better accommodate high speed trains (Figure 1). We find the Second-to-Main alternative to be seriously flawed, as the straight portion of the platforms will be only 900 feet long, too short for high speed trains. In addition, using the curved platforms in

this alternative presents dangerous conditions to passengers (see Figure 2) as the distance between the platform and the train can be significant, ranging up to two feet.

"Our modified Second-to-Mission alternative has the secondary benefit of reducing the length required for the underground pedestrian connection to Market Street. In addition, this alternative would simplify and improve the circulation patterns for train riders."

Response 3.1.5 Please see Responses 3.1.2 and 3.1.3.

3.1.6 Norman Rolfe Speaker, 11/26/02 Public Hearing

"Now as for the terminal itself, the Second-to-Mission alternative should be the preferred alternative. The reason for that, this is the one that allows platforms wide enough to accommodate high speed trains in the future. Our proposal for track arrangement is different than that one shown in the EIR. Once again, we'll have a drawing in the packet to illustrate that. We feel that this track arrangement will create a better operating environment and less impact than proposed in the EIR. The second alternative will not permit platforms long enough to permit high-speed trains. That should not be, should not be pursued."

Response 3.1.6 Please see Responses 3.1.2 and 3.1.3.

3.1.7 Margaret Okuzumi, BayRail Alliance, Speaker, 11/13/02 Public Hearing

"There are some concerns about whether the Second-to-Main alternative does a good job of accommodating high-speed rail. So we'll have better questions about that."

Response 3.1.7 Please see Responses 3.1.2 and 3.1.3.

3.1.8 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"Summary of our Recommendations: The downtown extension configuration must be modified to accommodate high speed rail. Pursue a modified Second-to-Mission alignment, rather than the Second-to-Main alignment, as the preferred alternative for the downtown extension.

"Currently, only the Second-to-Main alignment option has platforms long enough to accommodate HSR. However, the highly curved platforms in the Second-to-Main alignment are seriously flawed and ineffectual in their intended purpose of serving the extra long trains needed for HSR. The proposed curvature would result in unacceptably long gaps between train doors and platforms.

"Comments on "Environmentally Superior Alternative: We take issue with the description of the "Environmentally Superior Alternative" on page S-27 of the report, which obscures the differences between the Second-to-Main Caltrain alignment and the Second-to-Mission alignment. We concur that the Full Build, West Ramp, Tunneling options are superior to the Reduced Scope, Loop Ramp, Cut-and-Cover options; however we believe that the characterization of the Second-to-Main alignment as 'fully meet[ing] the purpose and need for the project' is false because we don't believe it provides sufficient accommodation for HSR. The purported benefits of the Second-to-Main alignment are marginal compared to the Second-to-Mission alignment as proposed in the DEIR/DEIS."

Response 3.1.8 Please see Responses 3.1.2 and 3.1.3.

3.1.9 Richard Mlynarik, Speaker, 11/12/02 Public Hearing

"For specific issues, alternatives in the Environmental Impact Report as written, I believe the Mission Street alignment is superior because it has more capability of accommodating high-speed rail service in the future."

Response 3.1.9 Please see Responses 3.1.2 and 3.1.3.

3.1.10 M. Kiesling, Regional Alliance for Transit (RAFT), December 18, 2002

"Generally, we support the fully tunneled option, leading to a Second to Mission terminal, with no underground connection to BART."

Response 3.1.10 Please see Responses 3.1.2 and 3.1.3.

3.1.11 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"We are unable to express a preference on the tail track options, because the information presented is incomplete.

"Toward these ends, our preferred set of options for this project are: … creation of High Speed Rail facilities."

"Page S-6 and Sections 2.2.2.1 and 2.2.2.2 Tail Track Options: The Second-to-Main option takes fewer buildings and less land and costs less than Second-to-Mission. But the EIS/EIR does not explain how the tail track options differ in their operational characteristics, so it is not possible to evaluate whether the Second-to-Mission design has overriding advantages. Which is better: three center platforms, or two center platforms and two side platforms? Two tracks splitting into six tracks, or one track splitting to four terminal tracks, with two other tracks being extended as tail tracks?

"On page 2-35, Section 2.2.2 says that two tracks enter the Transbay Terminal, but Section 2.2.2.2 says that Second-to-Mission's '… southernmost track would branch into four tracks.., [and]… The two northernmost tracks would continue on an angle to Mission Boulevard [sic]..,' Thus, the Second-to-Mission option appears to have three tracks entering the terminal. Please clarify.

"Section 2.2.2.4: Both tail track options allow extension of high speed rail to the East bay, but such extensions would start from different locations and directions. SPUR believes that the East bay extension will eventually happen. Please clarify if one alignment (and if so, which one) offers significant engineering, construction, cost or operational advantages over the other."

Response 3.1.11 Please see Responses 3.1.2 and 3.1.3.

3.1.12 Frances Wong, November 22, 2002

"Para S.7 Concur, except that I prefer the Second to Mission option..."

"The Second to Mission option affords a direct high speed connection to any projected new transbay tunnel for HSR and Capital Corridor trains to Oakland, Sacramento, and east. While a new tunnel could connect to the Main Street option, it entails sharp curves and extended low speed approaches that negate the benefits of HSR."

Response 3.1.12 Please see Responses 3.1.2 and 3.1.3.

3.1.13 Tay C. Via, Coblentz, Patch, Duffy & Bass, LLP, December 20, 2002

"Also, what is the engineering solution to tunneling beneath the Muni turnaround and the historic Agriculture Building at the terminus of Mission Street – how has that cost been addressed in the Second-to-Mission alignment analysis? What are the timeframes and associated costs for each of these? Is it even feasible? How does grade change of this tunneling impact high speed rail?

The DEIS/DEIR fails as a disclosure document without this crucial information that speaks to the fundamental feasibility and impacts of the project. Under both CEQA and NEPA, the perfunctory description of the Second-to-Mission alignment and impacts is a fatal flaw, and the document must be revised to include the requested information."

Response 3.1.13 Please see Response 3.1.2. It is important to again note, as described in Response 3.1.2, that the Second-to-Main Alternative was adopted by the Transbay Joint Powers Authority as the Caltrain Extension component of the Locally Preferred Alternative and that the San Francisco Planning Commission approved on July 31, 2003 the 301 Mission Development.

3.1.14 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"Which terminal and tail configuration is the most amenable to grade separated pedestrian linkage and rail service expansion?"

Response 3.1.14 Please see Response 3.1.2. As noted in Response 3.1.2, given that passenger flows within the terminal would need to be offset from the Terminal building itself for the Second-to-Mission Alternative, the Second-to-Main Alternative would provide better internal circulation between transit modes in the new Transbay Terminal.

3.2 TUNNELING VS. CUT-AND-COVER

Note: Comments 3.2.1 through 3.2.14 all concern positions regarding the Caltrain Extension tunneling option. One response is provided to all of these comments, and this consolidated response can be found following Comment 3.2.14.

3.2.1 Lynn Bunim, Executive Director, SBC Pacific Bell, November 19, 2002

"We believe that by using the tunnel method of construction, the project could reduce the time, expense, and risk involved with either supporting or relocating the utilities that serve this vital portion of San Francisco.

"More than 30,000 SBC Pacific Bell customers suffered major service interruptions on several occasions as a result of the Bay Area Rapid Transit (BART) District's recent construction of the extension to San Francisco Airport. BART used open-cut construction methods. The risk of such a scenario in downtown San Francisco should not be acceptable to either the City or any of the telecommunications companies.

"There are two other construction issues that we want to note. The water table along the route is within several feet of the surface at the route's low points, and would present a significant challenge to open-cut construction. Another factor to consider is the presence of foundation tieback cables in the street placed by recently constructed buildings. These cables are not identified on any City documents; therefore, a high risk exists that many of them might be cut during open-cut construction project. Ultimately, delays would result, as well as extra expense. Like other major downtown employers with thousands of employees working in five major buildings and three field work centers near the proposed construction path, we are also concerned about the disruption, noise, environmental impacts, access restrictions, and quality of work-life issues that open-cut construction would present. Once again, using tunnel construction would avoid these issues for all downtown business workers.

"While we welcome the improvements for public transit and the upgrades to the neighborhood and terminal that your project offers, we simply ask that you utilize the least disruptive methods of construction, namely tunnel construction so that our infrastructure and our service to downtown customers can remain intact."

3.2.2 Matthew Morrison, December 17, 2002

"I hope the possibility of tunneling is explored as much as possible, as I believe it will significantly lessen the impact to the neighborhood."

3.2.3 Titan Management Group, Michael Alfaro, Vice President, December 12, 2002

"All in all, the noise, disruption, and other impacts of the cut and cover tunnel construction alternative are so severe that it should be abandoned as a project alternative."

3.2.4 San Francisco County Transportation Authority, Jose Luis Moscovich, Executive Director, December 19, 2002

"On page 2-37, the description of the Caltrain tunneling option states, '... tunneling appears to be feasible only for that portion of the alignments between Townsend Street and Folsom Boulevard.' The section between Folsom and the Terminal, as well as the tail tracks out to Main Street can also be tunneled if soil stabilization methods such as grouting are used for the sand and mud

sections. The Muni Metro Turnback project demonstrated that tunneling could be performed successfully in unstable soils next to the bay. The advantages of tunneling are many:

- "Reduced utility conflicts, and reduced likelihood of disruption to services (see page 5-152, first paragraph)
- "Minimized disruption to businesses and the general public (see impacts of cut-and-cover on neighborhoods and businesses on page S-20)
- "Reduced noise levels
- "Minimized need for street closures
- "Minimized need for street reconstruction
- "Reduced amount of haul-truck trips and associated traffic congestion, dust, and mud by significantly reducing the amount of excavation and backfill (see page 5-167)
- "Reduced number of buildings that have to be purchased for demolition purposes only

"Given the potential benefits of tunneling, including the possibility of cost reductions, maximizing its use should be considered further."

3.2.5 S.J. Manufacturing, Inc., Seymour Jaron, December 6, 2002

"I am a lease holder as well as an owner respectively, of two buildings directly involved in the report as being in the path of the Caltrain Extension. Therefore, my concerns lie primarily with the construction of the extension itself. I would like to state foremost that I am in favor of mass transit improvements in general, and the redevelopment project specifically. I would like to add my support for the tunneling option recommended by the report, as opposed to the cut-and-cover option, which may require acquisition and demolition of property. I would like to know more about how this choice will be made and within what time frame."

3.2.6 AC Transit – Kathleen Kelly, Deputy General Manager, Service Development, December 20, 2002

"AC Transit supports the Environmentally Superior Alternative identified on Page S-27 of the EIS/EIR-- the West Ramp Transbay Terminal, Second to Main, Tunneling Option, and Full Build.

3.2.7 SPUR – Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Toward these ends, our preferred set of options for this project are: ... tunneling option..."

"Construction Issues: SPUR is concerned about the impacts of the Cut-and-Cover Option to historic architectural resources and existing business operations. Dramatic change to SOMA in the last decade has included the loss or alteration of many historic structures that play a significant role in giving our City its unique character. Many of the buildings that would be demolished under Cut-and-Cover are contributors to historic districts, making their value greater than as individual pieces of architecture.

"The impacts of cut-and-cover when BART/Muni was built under Market Street raise additional concerns. Existing businesses suffered for years from construction limits on public access, and many businesses failed. SPUR therefore supports the Tunneling Option and strongly encourages efforts to minimize adverse impacts to historic structures and districts, and existing businesses.

"The Cut and Cover option will have significant visual and aesthetic impacts in both the near and short term. Operations will cause disruptions to the surrounding businesses and store frontages by making access for customers and employees difficult for extended periods of time. When this

occurred on Market and Mission Streets during the construction of BART, many businesses failed or moved away, resulting in long-term deterioration to the urban fabric, and therefore producing significant negative visual and aesthetic impacts. Similar impacts could and should be expected in the project area under this option.

"The Tunneling option would have significantly fewer aesthetic impacts on the area than the Cut-and-Cover Option. In addition, what is the likelihood that new construction will be of the same scale as that which is demolished?

"What are the mitigation measures proposed for the Caltrain extension? It seems that the Tunnel Option is the way to mitigate the aesthetic impacts of the extension."

3.2.8 M. Kiesling, Regional Alliance for Transit (RAFT), December 18, 2002

"Generally, we support the fully tunneled option, leading to a Second to Mission terminal, with no underground connection to BART."

3.2.9 Architecture 21, Michael Kiesling, December 20, 2002

"I STRONGLY support the Fully Tunneled Option under any alignment. This project cannot rip down blocks of buildings in the South Beach/Rincon Hill neighborhood."

3.2.10 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"For the record, here are San Francisco Tomorrow's preferred alternatives: ... Tunneling Option. The tunneling option will result in less taking of property and less construction impacts on surface traffic and commerce. Proposition H recommends tunneling wherever feasible to minimize disruptions and relocations in the neighborhood... The tunneling method for the Caltrain extension is clearly preferable to the cut-and-cover alternative from the viewpoint of preserving historic structures and minimizing local disruptions. Proposition H also specifies that tunneling be incorporated to the greatest extent possible to minimize relocation of existing homes and businesses."

3.2.11 Norman Rolfe, Speaker, 11/26/02 Public Hearing

"As far as alternatives to the study are adopted, the tunneling alternative for the Caltrain downtown extension should be the preferred alternative. That's the one where there will be the least disruption and taking of property."

3.2.12 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"Summary of our Recommendations: Contain overall project cost by eliminating or postponing construction of underground tail tracks and storage yards and the underground pedestrian connection to Market Street; and by avoiding cut-and-cover construction wherever feasible."

"Cut-and-cover construction should be avoided where it would directly displace multi-story structures or busy roadways such as Second Street; otherwise it can be employed in some locations to reduce costs. We support tunneling, which the DEIR/DEIS indicates will be cheaper and faster than cut-and-cover construction, and which will minimize neighborhood disruption and opposition to the project."

3.2.13 Andrew Sullivan, Rescue Muni, December 20, 2002

"Rescue Muni supports the following Alternatives to the Project: … Subway Construction Method - Tunneling (as opposed to cut-and-cover). We support the tunneling method of excavation versus cut-and-cover. According to the DEIR/DEIS this will be less disruptive and less expensive."

3.2.14 James Wittmann Dear, November 18, 2002

"The tunneling option for the Caltrain Extension is better for the area because it destroys fewer historic buildings in the neighborhood (Table 5.14-1) and has less construction impact on our street."

Response to 3.2.1 through 3.2.14 The Transbay Joint Powers Authority adopted in March 2003 the tunneling option for the Caltrain Downtown Extension as part of the Locally Preferred Alternative for inclusion in this Final EIS/EIR. Regarding this decision, the staff report to the Authority states:

"The staff recommends the tunneling option for the Caltrain Extension. The Caltrain Downtown Extension tracks would begin to descend into a tunnel at about Berry Street, curve east to a new underground station near Fourth and Townsend, continue east under Townsend curving north at about Clarence Place to Second Street, and continue under Second to Howard Street.

"Using cut-and-cover construction, ten buildings would need to be acquired and demolished for the curve from Townsend to Second Street.

"The tunneling option would begin at Townsend Street, just east of Third Street, curve north to Second Street, and stay under Second Street to Folsom Street. (The remainder of the tunnel would still need to be built using cut-and-cover construction.) Geology for this portion of the alignments is characterized as fractured rock, which is not well suited for standard tunnel boring machines, so a highly specialized tunneling technique known as the "stacked drift" approach is proposed. This approach, although more costly than most tunneling approaches, was selected to virtually eliminate the risk of tunnel collapse. Given that the proposed construction technique for tunneling has an extremely low likelihood of collapse or tunnel failure and given that buildings would be underpinned prior to construction, the buildings under which the tunnel would pass would need to be vacated only during the underpinning phase of the construction period.

"The tunneling option therefore offers the following advantages:

- *Demolition of fewer historic buildings – 3 as compared to 13 for the cut-and-cover option.*
- *Substantially fewer construction impacts on street traffic on Second Street.*
- *Overall lower capital cost*

"While cut-and-cover may be easier to construct because it is typically less complicated to work from the surface, the impact on historic buildings alone would require that the tunneling option be chosen. Under Section 4(f) of the Department of Transportation Act of 1966, no federal project may be approved that "requires the use of any land from a … historic site unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such … historic site resulting from such use." The tunneling option appears to qualify as a "feasible and prudent alternative" to

the demolition of ten of the historic sites. Thus, the tunneling option appears to be the only option that adheres to this federal law.

"Finally, strong support was expressed by the public for the tunneling option."

Additionally, Proposition H directs in Section 3 that tunneling be used wherever feasible for the Caltrain Downtown Extension.

Tunneling was proposed for areas where it is anticipated to be feasible, given the current levels of information. The revised construction schedule for the Project (as shown in Figure 5.20-8, Volume I, of this Final EIS/EIR) includes in an early phase of the design process a more thorough evaluation of the geotechnical conditions along the entire proposed Caltrain Downtown Extension alignment. This detailed geotechnical information will allow for a more refined determination of the appropriate and feasible locations for tunneling versus cut-and-cover.

While the Muni Metro turnback project was a remarkable technological success, the conditions at the turnback and along the Caltrain Downtown Extension alignment are substantially different. The portions of the Downtown Extension alignment identified for cut-and-cover do not favor tunneling. For the tail tracks along Main Street, the excavation would be too shallow and tunneling is not technically feasible, i.e., there is not enough soil cover to prevent collapse of the crown and / or face of the tunnel during construction. Also shallow cut-and-cover is much more economical and faster than tunneling. A large number of closely spaced tracks would exist for the segment between Folsom Street and the terminal. For tunneling to be technically feasible, a substantial amount of ground stabilization would be required at a cost that would be many times the cost for cut-and-cover. The implementation of such an extensive ground improvement program would require working from inside the existing buildings, which is not considered practical.

The co-lead agencies for the EIS/EIR acknowledge SBC Pacific Bell's comment that the tunneling approach would also minimize the utility conflicts and associated costs for utility relocation and/or supporting utilities in place that would occur with the cut-and cover method. In that we have been coordinating directly with SBC Pacific Bell, the co-lead agencies recognize that the SBC Pacific Bell utilities represent a critical part of these utilities.

Control of groundwater in excavations is a routine construction process that is dealt with on any project that involves underground construction. The technology is available to deal with groundwater without affecting adjacent properties.

The presence of tiebacks from previous construction projects should not present difficulty during tunnel excavation. Tiebacks are normally used for temporary support of retaining structures during excavation. They are not normally used for permanent support. Therefore, tiebacks for temporary support can be removed during excavation and should not present any difficulty. If permanent tiebacks are present anywhere along the project alignment, they would need to be dealt with on a case-by-case basis. Based on currently available information, however, the co-lead agencies do not anticipate this to be an issue.

SBC Pacific Bell's concerns regarding disruption, noise, environmental impacts, access restrictions, and quality of work-life issues associated with open-cut construction were important underlying reasons for adoption by the Joint Powers Authority of the tunneling option as part of the Locally Preferred Alternative.

3.3 CALTRAIN/HIGH SPEED RAIL ALIGNMENTS, DESIGN & OPERATIONS

3.3.1 Eugene Bradley, Speaker, 11/13/02 Public Hearing

"Speaking as somebody who has used major terminals before in New York City with Grand Central Station, with Penn Station; looking at this project, my concern is – is that you do not have enough train tracks to accommodate not only any future high-speed rail, but also Caltrain's current expansion plans. You're going to need, from what I can see, at least eight tracks or more in order to accommodate Caltrain as well as high-speed rail."

Response 3.3.1 Please see Response 3.1.2. For a number of reasons, including provisions in Proposition H as passed by the San Francisco voters in 1999, the new terminal is proposed to be located at the site of the current Transbay Terminal. This site does present physical limitations regarding the number of possible tracks and platforms. The Locally Preferred Alternative adopted by the Transbay Joint Powers Authority in March 2003 would include six tracks and three platforms, which is the maximum number that would fit into the current site (please see Response 3.2.1). As part of the conceptual engineering that has been performed for this EIS/EIR, the length of tracks and platforms have been made as long as possible to accommodate longer trains. Additionally, the LPA includes a number of trail tracks on the far side (east side) of the terminal to allow for the rapid staging of trains between train storage and loading areas and to reduce the deadheading of trains back to the current yard.

Overall capacity of a terminating station rail terminal such as San Francisco is dependent on many factors, most importantly, dwell time at the platforms, direction of train travel after making a platform stop, track speed and capacity on the terminal approaches, as well as the number of tracks and platforms. The details associated with service levels and operating patterns play a very important role in the terminal capacity. Since both the design and the service levels and operating patterns are at a very conceptual level, many broad assumptions had to be made. A preliminary rail operations capacity analysis of the six-track, three-platform terminating station, indicated that sufficient capacity existed for both expanded Caltrain service as well as high-speed rail.

The Fourth and Townsend station and platforms could also function as a "relief valve" to accommodate some of the Caltrain service if the Transbay Terminal reaches capacity. During further preliminary engineering, a more detailed operations analysis will be performed and the configuration of the tracks and platforms at the Transbay Terminal will be refined to provide the optimum track and platform configuration for the site. The additional operations analysis and track and platform design will occur during future preliminary and detailed engineering and design phases of the Project.

3.3.2 Patrick Moyroud, December 6, 2002

"I am writing in response to the proposed redesign of the Transbay Terminal for use as a combined commuter rail and high-speed rail station. While the overall design is beautiful and efficient, I am very concerned about the rail capacity limits imposed by the unusually small number of tracks proposed (six) within or beneath the terminal. If you look at any major multi-modal rail station, in the USA or in Europe, you will see a much greater number of tracks to accommodate the frequent service required of such a facility. Even in San Francisco today, the existing Caltrain terminal has ten tracks, just to handle one commuter rail line and a few special trains. Major terminals that handle high-speed and commuter rail traffic, such as Washington Union Station and Paris Montparnasse Station, have two or three times as many tracks that are in heavy use from early in the morning until late at night. I do not see how the current proposed

Transbay Terminal design could accommodate the kind of frequent arrivals and departures expected when the high-speed rail service begins.

"The potential for congestion is increased by the fact that the proposed tracks will be underground. Mechanical breakdowns or accidents, no matter how slight, are likely to shut down tunnels and create serious disruptions. For example: anyone who has lived in San Francisco for more than a few years can tell you what a major error it was to build a two-track "stub-end" underground terminal at the Embarcadero Muni Metro station. Every weekday trains would back up in the tunnels, creating massive delays. When a breakdown occurred, the entire system was gravely affected. This problem was only solved when, 17 years later, a multi-track turnaround was constructed beneath the Embarcadero roadway. No one wants to see such an expensive error repeated in the new Transbay Terminal. I hope you agree."

Response 3.3.2 Please see Responses 3.1.2 and 3.3.1. Please note that the train station is not proposed as a stub-end terminal. The proposed refined Caltrain Extension station designs provide multi-track turnaround capabilities similar to the recently expanded Embarcadero Muni Metro Station. These additional turnaround or "tail" tracks will greatly assist in relieving congestion at the platform tracks. These tail tracks have been included in the conceptual station designs to mitigate the types of problems associated with a stub-end station as identified in the comment.

3.3.3 Mark Duncan, Askmar, November 18, 2002

"While some have questioned if six platforms offer adequate capacity, my suspicion is that the combination of tail tracks at the Transbay Terminal and sidings at Fourth and Townsend, can be sufficient with efficient operations. However, loading and handling of luggage for passengers traveling to SFO and on future high-speed rail service may cause capacity problems due to excessive dwell times. As a side note, it appears that the terminal does not have any special provision for passenger luggage, i.e. it appears to assume everyone uses carry-on luggage.

"There exists a question in my mind as to whether there is sufficient redundancy and capacity in the efficient and compact Transbay design to accommodate accidents and equipment failures without undue delays."

Response 3.3.3 Accommodation of luggage handling will be included in the terminal and will be studied and developed during the future design of the Transbay Terminal facility. With the current conceptual designs, luggage handling would occur on the train mezzanine level and delivered to the trains along the platforms.

The inclusion of both tail tracks in the Transbay Terminal design and the third main track from Fourth and Townsend to the terminal will add capacity and redundancy to accommodate accidents, equipment failures, and train servicing activities, while minimizing the impact to scheduled service.

3.3.4 Patrick Moore, Speaker, 11/13/02 Public Hearing

"The question --The concern I have is that talking to Darrell before the meeting – it looks like that the tunnel envelope going from the Fourth and King station to – onto just short of the Transbay Terminal would be constricted to two to three tracks. Considering that Caltrain is planning on spending a lot of money to four-track their entire system and considering also that this section of track will probably be a fairly slow section, it seems like there needs to be better planning for at least four tracks and, you know, maybe trying to fit five in somehow, although I

don't know how you can do it. But constricting ourselves – yourselves down to two tracks in a section where it would be very difficult to add other tracks seems to be a real bad idea, especially considering the probability of having to make deadhead moves along that same section of track."

Response 3.3.4 The option to add a third main track from Fourth and Townsend to the Transbay Terminal is included in the refined conceptual designs of the Caltrain Extension Options. Inclusion of tail tracks in the Transbay Terminal design will greatly reduce the need to make deadhead or non-revenue moves from the terminal to the Fourth and Townsend storage tracks.

3.3.5 City and County of San Francisco; Traffic Engineering Division; Bond Yee, Deputy Director and City Traffic Engineer, Jack Fleck, Senior Transportation Engineer, Jerry Robbins, Transit Planner V, December 18, 2002

"Caltrain - Figure 2.2-11/12 - Currently Caltrain uses Townsend Street for moving its trains during the day. This impacts the City's use of the street for bikes/parking/sidewalks/etc. Will this use of Townsend be discontinued with the new Caltrain alignment? If so, this is a positive impact."

Response 3.3.5 The Fourth and Townsend terminal and storage yard will be reconfigured but remain in use. Stub ended terminating surface station tracks and platforms will be provided as well as a depressed station on the thru main line serving the Transbay Terminal Station. During the future design phases of the project, the City's use of the street for bikes/parking/ sidewalks/etc. surrounding the Fourth and Townsend station will be studied and improved if at all possible.

3.3.6 Architecture 21, Michael Kiesling, December 20, 2002

"Fill Disposal & Storage/Light Maintenance Area: This project will generate a great deal of fill with no identified location to dispose of it. The Caltrain ROW between Palou and Cesar Chavez Streets runs along a 20' embankment. This embankment can be enlarged with suitable spoils from the tunneling and excavation of the rail extension and terminal project to create space for storage tracks and a minor maintenance facility. This can replace the function of the yard near the current Fourth and King terminal, and allow for fill disposal very close in to the project area, greatly reducing hauling costs.

"Seventh Street Curve: Existing and future rail operations will be greatly improved by increasing the radius (and thereby the design speed) of the Seventh Street curve. Today, with the terminal at Fourth Street, there is little operational advantage to increasing the speed of the curve. But, under future conditions, many trains, especially intercity and express trains, will not be stopping in the Mission Bay area. Leaving the Seventh Street curve as a major speed constraint will degrade the operations of the mainline.

"An equitable solution should be easy to reach with Catellus (the owner of the property at Mission Bay) to move the PCJBP operating easement to allow for the improvement of the curve (See Figure 1). The property on the inside of the curve, which would be impacted by re-alignment of the curve, is hemmed in by the existing (and future tracks), the Sixth Street off-ramp from I-280, and the Mission Creek pumping plant. Moving the tracks to reduce the area of this parcel INCREASES the area of the outer parcel, which fronts on Townsend and Seventh Street, facing the edge of the Showplace Square neighborhood."

"Temporary Terminal during Construction: Obviously, Caltrain will be required to continue operation into San Francisco while the extension is under construction. Utilization of roughly one-half (6 tracks) of the existing terminal should provide sufficient capacity for daily operations.

Figure 1 shows a suggested arrangement of the temporary and permanent facilities in the Mission Bay area.

"The first phase of construction would reconfigure the south 6 tracks of the existing station and construct a small portion of the sub-surface mainline in the area that the temporary lead tracks for the terminal will cross the mainline, approximately under the Sixth Street overcrossing. A temporary shoo-fly would also be constructed from Mariposa Street to King Street west of the existing tracks, in the ROW of Seventh Street. Seventh Street is wide enough to accommodate two tracks plus two traffic lanes.

"Once the first phase is complete, trains would run on the shoo-fly from Mariposa Street into the Seventh Street ROW, curve towards the terminal at King Street, passing over the new mainline at about Sixth Street, and then into the southern six tracks at the existing terminal. Excavation and construction of the sub-surface Mission Bay station and depressed mainline from Mariposa Street north would commence, including construction of the 16th and Common Street overcrossings. A permanent lead to the surface station at Mission Bay would also be built to the south of the mainline.

"Once the downtown extension is operational, the 6-track surface terminal would be reduced to a 3-track, 2 platform terminal. I am suggesting that it be set back from both Fourth and King Streets, to allow development of the property on the street frontage to improve the activity in the neighborhood. This shields the trains from the surrounding development, mitigating the concerns over leaving a surface rail operation in the area."

"Mission Bay Sub-Surface Station: The sub-surface Mission Bay station should be constructed with at least three tracks, allowing trains to pass through with trains stopped at each platform. The station should also be deep enough to allow a mezzanine at the east end of the station so the platforms don't have to connect directly with the street. This station will still see heavy ridership after the extension opens, and a good pedestrian flow is crucial to the operation of the station.

"Terminal Basement Platforms: The proposed high-speed rail platforms described in the Second to Main alternative in the DEIR are completely un-workable, due to the gap between the curved platform and standard high-speed rail cars (See Figure 4). This should drop this terminal configuration from consideration, due to its inability to accommodate standard high speed rail train consists, or even standard commuter trains.

"I do not support the inclusion of tail tracks as part of this project. With platforms well over 1000' possible in the basement of the rebuilt terminal and the provision for four of the platforms to extend to 1,450' with minimal effort, crossovers can be added at the midpoint of each pair of platform tracks to allow a pair of Caltrain consists to independently access each platform. The tail track is pulled into the body of the station."

"Recent MTC studies have placed the cost of a new Transbay rail tube between $2.75 and $7.25 billion. Preliminary estimates from the High Speed Rail Authority peg the cost of constructing a new high speed line from the South Bay to Oakland at about $2 billion. It seems clear that Oakland (and the entire East Bay) would be better served with their own line, rather than an expensive transbay connection to the San Francisco line. If it does become necessary to invest in a new transbay rail link, the added cost to tunnel through the pilings of the buildings between Main Street and the Embarcadero will add very little to the overall cost of a multi-billion dollar project.

"For all of the reasons cited above, the platform configuration shown in Figure 3 should be substituted for the current Second-Main Alternative. The design allows for 1,150' platforms in alignment with the terminal, extending to Beale Street. The four tracks on the south side of the terminal can be extended another 300' (for a total of 1,450' -today's European High Speed practice) with minor modifications to the rear extension of the Pacific Gateway building on Mission, between Beale and Main Streets.

"Another alteration to the proposed platform design is to change the arrangement of tracks and platforms from 3 platforms/6 tracks to 4 platforms/6 tracks. This allows crossovers to be placed on all track pairs to allow two 500' train consists to share the same platform. This increases capacity in the station and replaces the function of the discarded tail tracks. The side platforms, serving only one track each, would be narrower, and could be excavated alongside the station box, to limit the total amount of excavation (See Figure 5)."

Response 3.3.6 Use and/or disposal of excavated materials is typically the responsibility of the contractor and is dependent on the needs for specific types of fill materials at the actual time of construction as well as the amounts and types of hazardous materials, if any. The close proximity of the Fourth and Townsend yard to the Transbay Terminal station greatly reduces the length of any non-revenue deadhead moves. Non-revenue deadhead moves use up main line capacity and should be avoided or minimized to the extent possible. A storage or maintenance yard between Palou and Cesar Chavez is approximately three miles from Fourth and Townsend, and any deadhead moves back and from this location would use a considerable amount of main track capacity.

As identified in the revised construction schedule (Figure 5.20-8, Volume I, this Final EIS/EIR), a more detailed rail operations analysis, including impacts of non-revenue deadhead moves, will be performed during future design and engineering phases. The need for tail tracks, as shown on the refined rail designs alternatives, will be verified as part of this analysis. At this conceptual level of design and operations analysis, there are strong indications that tail tracks are required. Although it is not included within the scope of the Transbay Terminal and downtown extension, the location of any high-speed rail maintenance facilities will be included within the High-Speed Rail project.

During the future design and engineering phases, the curves at Seventh Street will be studied to determine which curves can be flattened and the advantages and disadvantages of revising the alignments. The rail corridor near Seventh and Townsend requires a sharp 90 degree turn, and any alignment improvements are constrained by right-of-way physical obstructions, including the City's Mission Creek pumping plant.

A construction staging plan and additional options for track and platform configurations at Fourth and Townsend will be developed during future design and engineering phases. This plan will address continued service to the Fourth and Townsend Station during construction. The co-lead agencies appreciate Mr. Kiesling's suggestions regarding construction staging and station design options. This suggestions will be provided to the design team. Please note that the refined alignment designs in the Final EIS/EIR provide the option for three tracks and two platforms at the Caltrain Mission Bay Station.

Although it is desirable to have 1,400-foot-long tangent platforms, curved platforms will be required at the Transbay Terminal due to right-of-way and site constraints. The refined Second-to-Main design includes three platforms with the tangent portion varying from 855 to 1,220 feet

in length with the remaining portions of curved platform located at the two ends of the tangent platform. The curved portions of the platforms vary from 300 feet at each end to 200 feet resulting in a total platform length of approximately 1,400 feet.

Not all trains are expected to be this length, and many may be shorter. Both high-speed and commuter trains of this length, however, will need to stop at high level curved platforms. In these cases, access to the rail cars located on the curved portion of the platform will need to be restricted or a bridging mechanism built into the car or platform will need to be in place to allow access to the rail car doors, not only at the Transbay Terminal station, but at other potential high-speed station stops such as Millbrae, Palo Alto and San Jose. In Europe, high-speed trains stop at stations with curved platforms. One example of a High-Speed station with curved platforms is Waterloo International Station in London.

Please also see Responses 3.1.2, 3.2.1, and 3.3.7. Given the inherent site constraints associated with the downtown urban setting of the Transbay Terminal, the refined Second-to-Main Locally Preferred Alternative (LPA) appears to offer the greatest flexibility of all the various conceptual alternatives studied. The refined Second-to-Main alternative comes the nearest to meeting the operating, engineering, and service requirements of the rail extension and downtown Transbay Terminal. Reconfiguring the tracks and platforms from three platforms/six tracks to four platforms/six tracks will be studied during the future design and engineering phases of the Project. However, this option or refinement, as well as other refinements, must stay within the right-of-way footprint as defined by the refined Second –to-Main design.

3.3.7 Transportation Solutions Defense and Education Fund (TRANSDEF), David Shronbrunn, President, December 20, 2002

"If the rail lines are extended to the East Bay in the future, the tail track function would be lost. Should the right-of-way for replacement tail tracks be identified and protected?"

Response 3.3.7 The design of a future East Bay extension of the Downtown Extension, even at the very conceptual level, is extremely complicated. Further conceptual studies would need to be performed to determine not only alternative design schemes, but also the operational pattern and service levels serving the Transbay Terminal with a new transbay crossing. Until substantial additional analysis is performed regarding this conceptual transbay crossing, it is difficult to determine if replacement right-of-way for the tail tracks would be required. This analysis will need to be performed by the developers/proponents of such a new crossing.

3.3.8 James M. Patrick, President, Patrick and Co., December 16, 2002

"The Caltrain Extension (Section 5.2) calls for an analysis of a two switch or three switch approach into the new Transbay Terminal. The Three Switch approach requires the taking of considerably more property and much more cut and fill. This alternative seems to be a poor one and will cost considerably more. Why is it being considered as a viable alternative?

"The Caltrain Extension (Section 5.2) calls for the taking of 90 Natoma Street, Block 3721 number 47 for both the two and three switch alternatives. The taking of 90 Natoma appears to be not necessary relative to the Two Switch approach. Are we being too aggressive in our assumptions here?"

Response 3.3.8 The three track alternative would generally fit within the same existing right-of-way footprint as the two track alternative. Most of the right-of-way required for the rail line extension is publicly owned right-of-way beneath Townsend, Second Street, Main Street, and

the Transbay Terminal. The structural section width of the widest tunnel segment increases from 57 feet for two tracks to 67 feet for three tracks, which is not a substantial increase. This width would fit within the street rights-of-way for those portions of the alignments under streets.

The operational benefits of a three track alignment versus a two track alignment could be substantial and will be determined in a detailed rail operations analysis conducted in later phases of the project. The Downtown Extension alignment options have always included three tracks north of Bryant Street and west of Third Street. Accordingly, the impact on 90 Natoma is not dependent on any of the two- versus three-track alternatives.

3.3.9 Adrian Brandt, Speaker, 11/13/02 Public Hearing

"... But what I am concerned about is that you really only have one chance to do it right the first time, and I'm sort of taking a slightly different tack than the prior speaker is that I'm worried about having enough tracks in the facility itself to accommodate sort of the future demand that I would expect to see with Caltrain and high-speed rail in the same facility. And I – There's a – I've seen drawings that are more creative than those in the two official alternatives that seem to shoehorn a lot more tracks and platforms by using a little bit more creative alignments, and I would really like to have this body do it all that it can to explore what it would take to do something along those lines. I mean, maybe not that exact thing, but in the spirit of that, I – I'd like to see, you know, more than two long platforms for high-speed rail, you know, like this other drawing I'm referring that I've seen on the – on the World Wide Web has four tracks. The platforms aren't, you know, straight and narrow, but they – they – it's a much – it seems like a much more creative plan. And I'd like to see a little bit more creativity in trying to get this thing as – as – get the capacity up to the maximum possible from the start, because once it's built, there's really extreme pain involved in ever trying to do that, so --in the future. So I just want to see that explored a lot more aggressively. That's the key comment. Thanks."

Response 3.3.9 The Caltrain Downtown Extension optional designs have been refined and improved in response to a number of public comments and proposals, including those offered by this commentor. Please also see Responses 3.1.2 and 3.3.6.

3.3.10 Norman Rolfe, Speaker, 11/12/02 Public Hearing

"And we also suggest the study authors engage in extensive value engineering because of the sort of things that have been mentioned or will be mentioned, that they should be encouraged to examine and minimize effects on surrounding properties. That is, I believe – we hope these drawings illustrate this, that they could reduce the taking of property by some little, slight changes of right-of-way, and so forth and so on. And the terminal itself, might be possible to defer certain parts of it, certain aspects in the future, and get the thing going a little easier that way."

Response 3.3.10 Please see Responses 3.1.2, 3.3.6, and 3.3.9. Additional evaluation and engineering of the refined Second-to-Main alternative will be conducted during future design and engineering phases. In addition, a thorough value engineering analysis will be made to identify features of the project that could be reduced or modified to reduce costs.

3.3.11 Jeff Carter, Speaker, 11/13/02 Public Hearing

"But as previous speakers have said, the project needs to provide enough capacity to support high-speed rail, projected increase in Caltrain service, inner city Amtrak service and all – you know, whatever else, you know, we can – we have... Other concerns I would have is to decrease the radius as much as possible of the curves so that the trains could, you know, go as quickly as

possible through the project. You know, you look at the maps, and there are some very sharp curves which do restrict the speeds of the trains; and, you know, getting the speeds up there as much as possible is going to attract more people to the – to the train."

Response 3.3.11 Please see Response 3.1.2, 3.3.1, and 3.3.6. The capacity of the rail line extension and the configuration of tracks and platforms of the Transbay Terminal and the tail tracks will be studied in future design and engineering phases of the project. In addition, the possibility of flattening some of the curves to increase speeds and reduce running times will be studied. Concurrently, with the additional design, a thorough rail operating analysis will be performed to analyze the rail operations.

3.3.12 Mr. Sheerin, Speaker, 11/13/02 Public Hearing

"I'd like to reiterate the concern that several other speakers have made about the number of tracks. I feel that four – at least four tracks is critical to supporting the local trains, express trains and long-distance. And, you know, if you've got all three of those, maybe you need five or six to support that and deadheading. But at least four seem to be the minimum that you need to be able to load both local and express trains in both incoming and outgoing directions.

Response 3.3.12 The maximum number of tracks that would fit in the public rights-of-way beneath Townsend and Second Streets is three. An operational analysis of the Downtown Extension, the terminal, and the full Caltrain network will be performed to determine what the theoretical capacity and predicted actual capacity of the system are and how the capacity compares to the demand. An initial operational analysis for the conceptual level design and service levels indicated that sufficient capacity exists with two tracks.

3.3.13 M. Kiesling, Regional Alliance for Transit (RAFT), December 18, 2002

"The Caltrain extension component is good, but further revision is needed in the trackwork and alignment. We would like to point out the proposed high-speed rail platforms in the Second to Main alternative are completely un-workable, due to the gap between the curved platform and standard high-speed rail cars.

"Specific revisions to these basic alternatives include:

- "Easing of the Seventh Street curve for higher-speed operation
- Consideration of a long-term storage facility south of the project area
- "Elimination of a storage yard in the Mission Bay area
- "Addition of a third and fourth track in the Mission Bay area (which can be used for temporary storage)
- "Altering the tunneled alignment to further reduce the impact on buildings along the alignment
- "Altering the rigid design of the terminal trackwork and platforms to maximize the number and length of platforms
- "Consideration of phasing the construction of the tail tracks until the facility is operational and producing a PFC revenue stream, in order to reduce the proposed debt service
- "Consideration of improvements to Ecker Alley, including a new, accessible entrance to the Montgomery subway station, to provide a high-quality, off-street pedestrian connection to Market Street
- "Continued coordination with the operating plans of the proposed statewide high-speed rail project is necessary to avoid costly design errors and enhance possible shared-use of facilities, especially in the area of maintenance and storage"

Response 3.3.13 Please see Responses 3.1.2, 3.3.6, 3.3.12, and 3.3.18. Addition of tracks and other alternative track reconfigurations will be considered in the design and engineering phase of the work. Future preliminary engineering and design efforts will be coordinated with the operating plans of the high-speed rail project. A Memorandum of Understanding was recently executed between Caltrain and the California High Speed Rail Authority that addresses many of the coordination issues.

Utilization of Ecker Alley for pedestrian access to the terminal is currently under consideration in the ongoing Transbay Terminal Design for Development study. There is capacity in the ground floor of the proposed terminal to accommodate a continuation of Ecker between Tehama and Natoma. The continuation's character, either lobby entrance or full passage, will be looked at in the final Design for Development plan and during final design.

3.3.14 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"Summary of our Recommendations:

- "Platform and track design must be modified to include more and longer platforms, with fewer path conflicts, to provide for efficient and successful operation of high speed rail on shared tracks with local service.
- "Track configuration can be improved. The number of platforms should be increased and path conflicts reduced. Track alignments should be improved to lessen tight curvatures, while impacting fewer buildings."

"Rail Platforms and High Speed Rail: While platform lengths presented in the DEIS/DEIR are substantially longer than what is required for conventional commuter trains, they do not provide sufficient capacity for HSR. In Europe and Japan, it is common to run HSR trains that are 14 or 16 cars long (400m/1312ft design standard), and even with this extra length, there has been a movement toward double-decked trains to provide sufficient seating capacity.

"We ask you to examine other options for providing optimum platform length for high speed rail. We believe the Second-to-Mission alignment can be improved substantially to achieve this goal. Richard Mlynarik and Michael Kiesling have outlined a design alternative that will permit longer platforms (see attached Figure 1). We also believe that the number of platforms can be increased. For example, see Figure 2, attached.

"Long platforms have the advantage of providing storage space for two conventional trains end-to-end until tail tracks are constructed at a later phase.

"Improve Track Configuration: We also believe it is possible to add tracks and platforms relatively inexpensively at the stations to increase efficiency of operations. Keeping in mind the long service life of the terminal and future needs, we ask that you modify the design to provide as many operating tracks and platforms as will fit on the site to be installed. For example, see the attached designs by Richard Mlynarik.

"For example, the proposed curvature of the tunneled track alignment near Seventh and Townsend is the same as that of the existing surface tracks which currently forces trains to a crawl. This curve needs to be made less sharp to permit speedier train movement.

"We have concerns about the flexibility of operations allowed by track approaches into the platforms. For example, in Figures 2-2.15 and 2-16 of the DEIR, the four northernmost tracks feed into a single approach track. This greatly constrains train movement into or out of the

station. We ask that you redesign track approaches to reduce such path conflicts, and we believe an improved design is possible.

"While extensive modeling of bus capacity performed as part of the MTC Transbay Terminal Improvement Program, informed the design of the bus terminal configuration, it doesn't appear that there has been any capacity modeling done for rail operations into the terminal. We believe such modeling will show the need for a more flexible approach-track configuration."

Response 3.3.14 Please see Responses 3.1.2, 3.3.1, 3.3.3, and 3.3.6. The primary purpose of the conceptual engineering and conceptual track configuration has been to identify a feasible, yet conservative, right-of-way footprint for the rail extension and Transbay Terminal and evaluate associated environmental impacts. During the later phases of engineering and design, the detailed track and terminal station configuration will undergo iterations of design closely coordinated with additional rail operations analyses to optimize the track and platform configurations. Any redesign of the tracks and platforms will remain within the right-of-way footprint described in the Second-to-Main refined rail options. A preliminary or conceptual rail operations analysis was performed for the Transbay Terminal.

3.3.15 William Blackwell, Architect, November 12, 2002

"I found on page 2-24 the sewage treatment plant and underground collector pipe you mentioned, and now understand why the track slope begins where it does. I assumed that tracks would come in underground beginning at the tunnel entry near 23rd St., 16th St. would remain open, and the entire Caltrain yards at Fourth & King would be one level below grade, an arrangement ideal for a fine terminal at street level. The Fourth & King site with a spur connection to TBT has the potential for a great station, with the downtown multi-modal commuter transit complex as an indispensable adjunct. From the Fourth & King site, a new transbay tube could eventually provide straightforward continuation for HST to Sacramento and a second East Bay commuter rail line.

"Incidentally, I noticed Caltrain electrification is funded only to Fourth & King."

Response 3.3.15 The purpose of the Transbay Terminal and Downtown Extension Project is to extend the Caltrain and future High Speed Rail alignment from its present Fourth and Townsend Station to the Transbay Terminal. The alternative described in the comment above would not meet this purpose. Current designs call for the train to pass over the sewer facilities near 16th Street. The conceptual alternative proposed may merit as an additional spur for a future transbay crossing but would require substantial additional evaluation (please see Response 3.3.7). The Caltrain Downtown Extension includes in its costs and designs the electrification of trains from Fourth and Townsend to the Transbay Terminal and the tail tracks past the terminal.

3.3.16 Frances Wong, November 22, 2002

"Para 2.2.2 and page 2-26, 2-27. The two track segment between station 41 and station 70 must be widened to three or four tracks to match the design on both ends of this segment. This intentional choke point imposes permanent severe operational limitations and prevents any flexibility to adapt to mechanical or other breakdowns. This creates congestion that completely negates any capacity improvements in the terminal or the first ten miles south. The benefit of the four track Townsend Street station cannot be exploited since the crossovers at station 44 do not provide adequate signal separation to expedite a following outbound train. On the inbound

route, reducing the fourth track at station 40 is an impractical design, since any train waiting at the platform will foul the overtaking movement.

"Page 2-33. By adjusting platform spacing, the two platforms angled toward Mission could be fully functional island platforms serving two tracks each and providing needed separation of Caltrain Regional Rail from Amtrak and HSR (High Speed Rail) trains. Since the ticketing, loading, provisioning, and pre trip servicing requirements are different between short and long distance trains, separate platform areas, and their comparable passenger mezzanines above, would encourage smooth passenger flow within the terminal."

Response 3.3.16 Please see Responses 3.1.2, 3.3.4, and 3.3.6. The option of adding a third track between Station 111 and 70, has been included in the refined alternative and will be further analyzed in future phases of preliminary engineering and design. The track and platform configuration at Fourth and Townsend will undergo redesign in the future.

3.3.17 William Blackwell, Architect, December 2, 2002

"Page 2-35... (b) The six platform tracks on the surface cannot be used for trains continuing to the downtown terminus – such as non-electrified trains, for example. See page 2-3 (b) comment re electrification. (c) The platforms for the surface tracks are not long enough for special event trains. Caltrain has said that 1,000 feet is needed.

"Page 2-3. (a) Electrification of Caltrain is currently funded only to Fourth & Townsend. (b) Electrification need not necessarily be in place prior to implementation of Caltrain extension. Push-pull electric locomotives have been used in the past to move diesel-powered trains through tunnels in urban areas, notably at Pennsylvania Station in NYC."

Response 3.3.17 The six platform tracks remaining on the surface of Fourth and Townsend have platform lengths of approximately 850 feet and total train storage lengths varying from 900 feet minimum to 1,950 feet maximum. At this conceptual design level, these track and platform lengths are adequate to handle non-electrified and electrified trains, most special event trains, and even most Amtrak inter-city trains. As the conceptual designs progress into preliminary engineering and design, the track and platform configuration will undergo a more rigorous operations analysis and design to refined even further the layout of the Fourth and Townsend Station area.

Please see also Response 3.3.15 regarding electrification. The Caltrain Extension would be fully electrified. The possibility of utilizing push-pull electric locomotives to move non-electrified train consists to the Transbay Terminal could be studied as a fall-back position. A major disadvantage with this method of operation, however, is the delay that occurs when connecting the electric locomotive to the non-electrified train consist. Such a delay would add to overall travel times on the train, thereby reducing the competitiveness of the train with other modes of travel with a resultant reduction in ridership on the train system.

3.3.18 Matthew Morrison, December 17, 2002

"I am concerned at the large number of buildings that will be demolished for this project. One of the attractive aspects of the SOMA area is the number of historic and interesting buildings built on a human scale. I am particularly thinking of Second Street between Mission and Folsom. I hope we can keep the demolition to a minimum, as I'm afraid that if these building are destroyed, they will be replaced by large, ungainly, and uninteresting buildings whose only purpose is to maximize the profit for the developer.

"Figure 5.2-3 illustrates (by red shading) buildings scheduled to be demolished by the construction. This figure seems to indicate many more buildings slated for demolition than is indicated in the text. I hope that can be minimized.

Response 3.3.18 Please see Responses 3.1.2 and 3.2.4. The Locally Preferred Alternative tunneling option would reduce the number of buildings that would need to be demolished as compared to the cut-and-cover option. The properties identified on Figure 5.2-3 correspond to the properties identified in Tables 5.2.3 and 5.2.4.

3.3.19 Andrew Sullivan, Rescue Muni, Speaker, 11/12/02 Public Hearing

"Plan for rail across the Bay in a not-too-distant future when high-speed rail is being extended beyond the initial network."

Response 3.3.19 A conceptual evaluation has been made of the possible future extension of the train system across the Bay. However, detailed designs have not been developed for this bay crossing. Please also see Response 3.3.7.

3.3.20 Frances Wong, November 22, 2002

"Page 3-23. The California rail plan envisions conventional long distance passenger trains between San Francisco and Los Angeles under the Amtrak California brand by the end of 2004. It is logical that these trains would originate and terminate from the Transbay Terminal after it opens."

Response 3.3.20 This is one of the intended purposes of the Transbay Terminal/Caltrain Downtown Extension Project – a downtown station for the California High Speed Rail system. Please note that the California High Speed Rail Program has yet to select an operator, which may or may not be Amtrak.

3.4 GRADE SEPARATIONS AT COMMON AND 16TH STREETS

3.4.1 Margaret Okuzumi, BayRail Alliance, Speaker, 11/12/02 Public Hearing

"Just some initial comments for the record, one is that we ask that the area encompassed by the EIR be extended to include 16th Street and a possible upgrade separation there. We think this is important for the future operations and efficiency of the train service through that area and also a degree of separation.

"We also think some of the impacts of the building might possibly be adjusted to reduce impacts, and to realize a cost savings to be used to grade separate those areas which have a great potential for conflicts with Muni service and proposed future Muni service, especially along 16th Street."

Response 3.4.1 The southerly project limits for the Downtown Extension and the EIS/EIR begin south of the Common Street grade crossing (Engineering Station 74). The California Public Utilities Commission (CPUC) approved a three-track crossing of Common Street. The Construction and Maintenance (C&M) Agreement with the City of San Francisco includes provisions for a fourth track at grade. The C&M Agreement is referenced as part of the CPUC approval for the Common Street Grade Crossing. The technical issue regarding the Muni wires crossing the future Caltrain overhead category wires will be addressed in the forthcoming Caltrain Electrification EIS/EIR.

Forty-eight at-grade road crossings of tracks along the Peninsula are anticipated to remain after completion of Caltrain's current expansion plans. The California High Speed Rail system requires a fully grade-separated alignment, so each of these remaining crossings would still need to be grade-separated via a cooperative arrangement with the Peninsula Corridor Joint Powers Board (JPB). The conceptual design and environmental clearance to grade separate Common and 16th Streets therefore will be conducted as a future project associated with the High Speed Rail and/or the enhanced Caltrain service plans.

The JPB and California High Speed Rail Authority have been working together and anticipate continued coordination and cooperation regarding use of Caltrain's right-of-way for a portion of the proposed statewide high speed rail system. The two entities recently adopted a preliminary Memorandum of Agreement that is intended to become more specific (e.g., regarding necessary capital improvements) as the two programs – the enhanced Caltrain service and the high speed rail program – progress along the Peninsula Corridor. The approaches to developing each of these grade separations are still in varying stages of conceptual design. Road over- or under-passes, or tunneling, cut-and-cover or elevated train structures are all under consideration for each crossing. The appropriate solution will be developed on a case-by-case basis for each crossing or series of crossings, depending on the associated impacts, costs, physical setting, and adjoining land uses. According to the California High Speed Rail Authority, the proposed solution for grade separation of 16th Street is still under discussion, but grade separation will be necessary for this crossing given the design requirements for the proposed California High Speed Rail Program.

Rather than prejudging the High-Speed Rail Program or Caltrain Expansion program solution, and rather than increasing the costs of the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project for provision of these grade separations, the co-lead agencies for the EIS/EIR are anticipating that these grade separations will ultimately be the responsibility

of the High Speed Rail program and/or included in the long-range planned improvements for the Caltrain system.

3.4.2 Margaret Okuzumi, BayRail Alliance, Speaker, 11/13/02 Public Hearing

"But there are a couple of concerns I do want to bring up. Again, we strongly support this project. One is that we ask that the scope of the EIR be extended southward to encompass 16th Street and the grade separation there. Muni has frequent service along that street, and we foresee a lot of conflicts if a grade separation is not included there. Also in the – this Draft EIR, the – it talks about how the CPUC has approved a grade crossing at Common Street. I wonder if that would include approval for four tracks across Common Street, because based on what I've seen of their – what they've been willing to approve in Santa Clara County, it just – I'm presuming that that approval was based on – on two tracks, not four. So I'm concerned that that would need to be grade separated also. So I'd like for some more information on that."

Response 3.4.2 Please see Response 3.4.1

3.4.3 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"Summary of our Recommendations: It is imperative to grade separate the two street crossings in the Mission Bay area (16th Street and Common Street) as part of the DTX project, as these grade separations will become difficult, if not impossible to construct, once the extension becomes operational.

"Grade Separations – 16th Street and Common Street: We feel that it is of paramount importance to extend the scope of the study a few blocks south, and to include a grade separation at 16th Street. To serve future Mission Bay developments, Muni is contractually obligated to operate the 30-Stockton trolley bus at sub-5 minute headways across the Caltrain line via Sixteenth Street and to operate the 45-Union trolley at sub-10-minute headways across the Common Street crossing. This will pose substantial technical problems with the crossing of trolley and Caltrain overhead wires, and traffic delays will become completely unacceptable as Caltrain service levels increase.

"The downtown extension must allow 16th Street to be grade separated, and it would be most desirable to complete this at the same time as the rest of the project. It may not be possible to do so later and even if it were possible, will be much more costly and disruptive to Caltrain service."

"Common Street: We also feel it is desirable to grade-separate Common Street. We are aware that grade separation was deemed infeasible in an earlier study, and that the CPUC approved an at-grade crossing at Common Street in an earlier decision (across 2 tracks and a Union Pacific siding). Nevertheless, it is highly unlikely that the CPUC would grant approval for a grade crossing across four active tracks. For example, the CPUC recently expressed strong opposition to Caltrain's request to construct an at-grade crossing across four active tracks at Sunnyvale Avenue in Sunnyvale. By beginning the tunnel for the Caltrain downtown extension at a more southerly location, it should be possible to grade-separate Common Street. We suggest cost savings below that will offset the cost of constructing these grade separations."

Response 3.4.3 Please see Response 3.4.1.

3.4.4 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"It is critical to grade separate Sixteenth Street and Common Street as part of the Downtown Extension rail construction. The Caltrain line must be completely grade separated eventually in order to accommodate greatly increased levels of service and high speed trains. If it is not done as an integral part of Downtown Extension construction, it could be difficult if not impossible to do so in the future, given the existence and design of the ramps leading underground on Townsend Street. It should be noted that because Caltrain traffic levels are now at the lowest levels they'll ever be, single-tracking and line closures necessary to undertake this will be least disruptive if done now. It should be possible to accomplish this without closing the line altogether.

"Therefore, an alternative that would place the Caltrain tracks underground from just north of the north portal of Tunnel Number One must be studied. This would eliminate grade crossings at Sixteenth Street and Common Street and make the right of way better suited for future high speed trains. It will also avoid the crossing of Caltrain's 25,000 volt catenary wires and Muni's 600 volt trolley wires on 16th Street. Although this problem has been solved many times and in many places, it would be best to avoid it.

"An alternative in which the proposed underground storage tracks would not be built, but instead be replaced by surface storage tracks in the same location should be studied. Having these tracks on the surface would improve working conditions for cleaning and light maintenance of the rolling stock. They would be accessed via a ramp from the underground line as shown in Figure 1. Development of air rights over the surface tracks could be considered as another revenue source for the project.

Response 3.4.4 Please see Response 3.4.1. The design of main and storage tracks at Fourth and King will be re-evaluated in the preliminary engineering and design and final engineering and design. The substructure storage tracks at Fourth and Townsend in the conceptual Downtown Extension design were located to provide easy access to and from the main tracks when departing to or arriving from the Transbay Terminal. To gain access from the depressed main tracks to surface storage tracks in lieu of the proposed depressed train storage tracks, trains departing or arriving from the Transbay Terminal would have to travel considerably further – as far South as Tunnel 1 or 2 – and make a reverse move on the main track. The additional length of this move combined with the reverse moves that would interfere/disrupt train movements on the main track would be very undesirable from an operational standpoint.

3.4.5 Norman Rolfe, Speaker, 11/12/02 Public Hearing

"One of the things that should be done is that the tracks should actually go underground starting from the north end of Tunnel Number 1. Starting at 16th, the tracks would go underneath. This is going to be necessary in the future when this high-speed rail gets here, as we hope it will. That can be financed by not installing some of the ground storage tracks they have in the city. Those could be surface tracks. It's really critical that that be done."

Response 3.4.5 Please see Response 3.4.1.

3.4.6 Norman Rolfe Speaker, 11/26/02 Public Hearing

"It's very important that separation between 16th Street separate to accommodate the greatly increased number of transit that's anticipated in the future. Therefore, there should be an additional alternative study that has the Caltrain underground, just north of the north portal

tunnel number one and then continue underground from there. There should be further study given to minor changes in routing. When we send our written comments in, we will enclose a drawing illustrating this additional underground and possible other small, little changes in route to reduce the amount of property taken."

Response 3.4.6 Please see Response 3.4.1.

3.4.7 Richard Mlynarik, Speaker, 11/12/02 Public Hearing

"I'd like to include in my comments many things said already. Mr. Rolfe who spoke first said things about the -- separating the Caltrain alignment at 16th Street so we don't have to come in and dig in freshly-dug tunnels once separation becomes necessary."

Response 3.4.7 Please see Response 3.4.1.

3.4.8 M. Kiesling, Regional Alliance for Transit (RAFT), December 18, 2002

"Specific revisions to these basic alternatives include: Grade separations at both 16th and Common Streets."

Response 3.4.8 Please see Response 3.4.1.

3.4.9 Architecture 21, Michael Kiesling, December 20, 2002

"Both grade crossings beneath the I-280 Freeway MUST be grade separated as part of this project. Caltrain (and intercity rail) frequencies will only increase in the future. Muni will be running trolley coaches on 16th Street as part of new service to Mission Bay. Auto traffic will increase dramatically at the 16th Street crossing. The new Common Street crossing will also carry a great deal of traffic. Previous traffic studies for the UCSF campus show 30,000 of auto traffic utilizing 16th Street, and specifically callout the Caltrain tracks as a major barrier to campus access.

"By beginning to descend into an open cut soon after crossing under Mariposa Street, both 16th and Common Streets can be grade separated. The height of the I-280 viaduct is great enough so that the cross streets can be raised some to help with the separation. Additionally, there is enough distance to allow the yard lead for the permanent Mission Bay surface station to climb back to the surface after passing under Common Street. The Mission Creek outfall will need to be rebuilt, but this is not a fatal flaw to the grade separation. These issues are illustrated in the attached Figure 1."

Response 3.4.9 Please see Response 3.4.1. At-grade railroad crossings do constitute a barrier to automobile traffic. Please note, however, that the proposed project does not change the number of trains operating along the Caltrain route, and addressing issues with existing at-grade crossings is part of other planning activities regarding the entire rail corridor along the Peninsula.

3.4.10 Andrew Sullivan, Rescue Muni, December 20, 2002

"Grade Separate 16th Street and Common St.: With a significant increase in rail service in the near future, especially with the commencement of the Baby Bullet service, we believe that the crossings at 16th Street and Common Street must be grade separated now, rather than later. Muni is planning to re-route bus service all the way down 16th Street with frequent headways. We feel it would be very difficult operationally to have two electric systems intersecting one another at this grade crossing as well as potentially dangerous. We also feel Common Street

should be grade separated as it is in the Mission Bay Area, which will soon have high levels of automobile traffic."

Response 3.4.10 Please see Response 3.4.1.

3.4.11 William Blackwell, Architect, November 12, 2002

"I am also bothered about developing a very costly terminal design that accommodates HST without at the same time showing how it is possible for HST to enter San Francisco. I recall that Maria Ayerdi was adamant that Proposition H includes HST. As you noted, the grade crossing at 16th St. prohibits HST."

"Even without HST, the 16th Street grade crossing is a problem. I put a stopwatch on the train crossings one morning. The increase in peak hour trains is in proportion to the projected increase in Caltrain ridership, the railroad crossing gates at 16th Street will block cross traffic about 60 per cent of the time! How would motorists accept that?"

Response 3.4.11 Please see Responses 3.4.1 and 3.4.9.

3.4.12 William Blackwell, Architect, December 2, 2002

"Page 2-35. (a) The grade crossing planned at Common Street will prevent use of these tracks by HSR.

"Page 3-31 (bottom) - Setting the south boundary of the traffic study area at Bryant Street excludes 16th Street (as well as the extension of Common Street) from consideration in this EIS/EIR. Unless these streets are closed to vehicular traffic or grade separation is provided, there can be no high-speed rail service to downtown San Francisco.

"Common Street might be closed, but Sixteenth Street between Third & Seventh Streets is classified as a major arterial. The balance to the Mission Street BART Station is classified as a secondary arterial. Muni ultimately plans a surface light rail line on 16th Street. It is unlikely that this street can be closed. If an underpass is provided, access to Seventh will be curtailed and there will be other traffic impacts. On the other hand, if all of the tracks are undergrounded before reaching 16th Street, the plans for the surface tracks at Fourth & Townsend (page 2-25 and 2-26) no longer apply. There would also be a conflict with the major sewer collector on piles (shown in the profile drawing on page 2-24) to be resolved."

Response 3.4.12 Please see Responses 3.4.1 and 3.4.9.

3.5 RELATIONSHIP OF CALTRAIN EXTENSION ALTERNATIVES TO PROPOSED DEVELOPMENT

3.5.1 Norman Rolfe, Speaker, 11/12/02 Public Hearing

"One thing we want to do is draw the attention of the agency to Proposition H in November which says we shall not approve projects which might interfere with Caltrain, or the terminal, or so forth, including high-speed rail in the future."

Response 3.5.1 The comment focuses on an interpretation of Proposition H (Downtown Caltrain Station), which the San Francisco voters adopted in November 1999. This measure concerned extension of the Caltrain tracks, which currently terminate at the Fourth and Townsend Streets Station, to a new or rebuilt station on the site of the Transbay Terminal. The comment states that the 301 Mission Street project may conflict with the proposed track alignments for the Transbay Terminal/Caltrain Downtown Extension /Redevelopment Project (and its alternatives).

These comments appear to misconstrue the scope of Proposition H. Section 1 of the ordinance is expressly limited to actions to protect the right-of-way as identified in the 1997 Caltrain Draft Environmental Impact Statement/Draft Environmental Impact Report ("1997 DEIS") "from any development that would preclude the extension [of Caltrain] or increase its costs." The 1997 DEIS contains a number of alternatives and alignment options, including the preferred project (the Caltrain Extension to the Transbay Terminal Site Alternative). That alternative contained a segment, referred to as the "Folsom to the Transbay Terminal" component, as described in the 1997 DEIS and depicted on Figure 2.3-9 therein. That segment shows a transition from mined tunnel construction to a cut-and-cover subway occurring just north of Folsom Street at Essex Street, following the right-of-way for the existing outbound bus access ramp that leads from the existing Transbay Terminal to the Bay Bridge. The right-of-way terminates on the north adjacent to the 301 Mission Street site between Minna and Natoma Streets at Beale Street. Because the 301 Mission Street project would be constructed entirely on private property adjacent to but not within the proposed right-of-way identified in the 1997 DEIS, its construction would not adversely affect the right-of-way area that Proposition H earmarks for protection. Accordingly Section 1 of the ordinance does not apply to the 301 Mission Street project.

Section 9 of Proposition H provides as follows: "The Mayor, the Board of Supervisors, and all relevant city officers and agencies are hereby forbidden from taking any actions that would conflict with the extension of Caltrain to downtown San Francisco, including, but not limited to, pursuing any uses for the present Transbay Terminal site that conflict with Section 2, or undertaking any other land use planning or development efforts that would conflict with the intent of this legislation." The 301 Mission Street project would not involve any use of, or affect in any way, the present Transbay Terminal site. In addition, approval of the 301 Mission Street project is not a "land use planning or development effort" under the legislation. Such efforts would include development efforts that the City, its officers, or agencies sponsor on public property, or land use planning efforts such as rezoning or redevelopment plan activities that might change the pattern of development in a way that is inconsistent with the intent of the legislation. Approval of entitlements for a private project that is consistent with the underlying zoning designation is not covered by the language of Section 9.

The Transbay Joint Powers Authority selected a Locally Preferred Alternative (LPA) (on March 28, 2003) that includes the Second-to-Main Caltrain track alignment. The LPA selection process is required by the Federal Transit Administration, a co-lead agency for this EIS/EIR. This selection does not foreclose future changes to design or construction of the Transbay project.

The EIR for 301 Mission Street includes two alternatives, Alternatives E-1 and E-2, that could accommodate the two proposed track alignments of the Caltrain/bullet train extension as it leaves the proposed terminal site and moves in an easterly direction (see pp. 158-167 of the 301 Mission Street EIR). Although the Transbay decision makers may ultimately select a track alignment that is different from the LPA, neither CEQA nor other local law precludes the City from taking action on the 301 Mission Street project, its EIR, or the entitlement decisions related to this project while a final determination on the Transbay project is pending.

Finally, there are state and federal laws and constitutional protections that extend to certain private property rights. Governmental actions that affect those rights may be viewed as invalid or compensable under applicable law.

3.5.2 Pamela Duffy, representing 301 Mission Development, Speaker, 11/26/02 Public Hearing

"My name is Pamela Duffy. I'm with Coblentz, Patch, Duffy and Bass. We represent the owners of 301 Mission Street which is probably adjacent to the transbay terminal to the east. We will, as will many others, have a detailed comment letter to submit before the closing of the comment period.

"Fundamentally, we believe that our exciting, 320-unit housing project which is currently undergoing Planning Department review at 301 Mission Street, and the equally exciting and in fact essential Transbay Terminal may go forward in harmony.

"Fundamentally, we believe our housing project which is currently undergoing Planning Department review is adequate. An adequate Transbay Terminal is moving forward. But we believe the Transbay EIS/EIR could be more sufficient, particularly with regard to the impact from the Second-to-Mission alternative and acting as a disclosure document for you and other decisionmakers. That alternative from Second-to-Mission cuts a broad, 45-foot deep swath across our site, and also contemplates doing the same tunnels all the way down Mission Street. I know that only from deduction. It actually doesn't discuss the cumulative impacts at all of that alternative. It neglects several important areas and doesn't adequately address economic impact, including the loss of the vital tax increment associated with 301 Mission Street which ironically is included in part of the economic feasibility analysis for the Redevelopment Project Area. It fails – in so failing to discuss the economic impacts of the Second-to-Mission alternative, it begs the question of what the economic feasibility of that alternative itself is. It proposes massive excavation the length of Mission Street, the cumulative impacts of which are ignored. There is no discussion of the hazardous materials effects, noise, air quality, or vibration effects on the properties adjacent to Mission Street once it runs on down.

"The real focus ought to be the scientific information that's in the EIR about these alternatives, particularly the Second-to-Mission Alternative. The graphics and the scientific engineering analysis is so vague as to make the feasibility of the Second-to-Mission alternative very doubtful. This is the reason we believe the EIS/EIR so radically understates the impacts of this 45-foot tunnel that starts out across the vast majority of 301 Mission, and then proceeds down Mission Street.

"Fortunately, there is an alternative in the EIR/EIS that is listed as the environmental preferred alternative and to which SPUR referred earlier. That alternative reduces the operating costs, eliminates two platforms, reduces acquisition costs, increases the tax increment, minimizes disruption on Mission Street, a traffic-preferential street, reduces excavation and the related air-

quality effects, and is clearly far more compatible with surrounding economic opportunities. It generally reduces the impacts on land use, not very well covered in this EIS, displacement, socioeconomic fiscal noise vibration, existence of utilities. It also eliminates conflict with existing transportation and transit systems that would occur as the result of tunneling down Mission Street.

"Frankly, when the EIS/EIR so clearly such a preferable alternative – in fact, in the draft, reaches such conclusion – we should pursue it. But if there's a suggestion, a preferred alternative positive Second-to-Mission Street, the EIR is woefully inadequate. As Commissioner Lee inquired about, the standards and alternatives are different from the California Environmental Quality Act and require a high degree of analysis for alternatives which the EIS/EIR does not present.

"It's Coblentz, Patch, Duffy, and Bass. And I'll give you my card. Thank you."

Response 3.5.2 The co-lead agencies agree that the two projects can both be accommodated on their respective sites. The EIS/EIR describes the proposed excavation on Mission Street from the terminal almost to The Embarcadero and describes the socio-economic, hazardous materials, noise, air quality, and vibration effects associated with this portion of the Project – please see Chapters 2, 4, and 5 of the EIS/EIR. Scientific information regarding existing conditions and anticipated environmental impacts is provided regarding each of these subject areas with regard to both the Second–to-Main and Second–to-Mission Caltrain Downtown Extension Options.

Specifically, the Second-to-Mission plans and profiles can be found in the Draft EIS/EIR on Figures 2.2-9 through 2.2-13 and 2.2-18 through 2.2-21 on pages 2-22 through 2-26 and pages 2-31 through 2-34. These figures superimpose the underground alignment on aerial photos. Below the photos is a profile that shows the tunnel with rail in relationship to the existing ground. There is also text in Chapter 2, particularly Section 2.2.2.2, that describes the Second-to-Mission Caltrain Alternative.

Likewise the impacts of the Second-to-Mission Alternative are discussed in Chapter 5: Environmental Consequences and Mitigation Measures. For example in impact Section 5.1, Land Use, Wind, and Shadow, on page 5-3 and 5-4, the land use impacts of both the alignment alternatives are discussed. As the Caltrain extension is to be totally underground, there would be no wind or shadow effects; therefore, the Caltrain extension is not discussed in those sections of the Draft EIS/EIR. However, in the next environmental category discussed, i.e., Section 5.2, Displacements and Relocation, on pages 5-23 through 5-29, the two Caltrain alignment alternatives and their effects are discussed and Tables 5.2-3 and 5.2-4 show potential property acquisitions for each alternative separately. In addition, Table 5.2.5 on page 5-29 shows all the estimated residential and non-residential displacements for each Caltrain alternative and with each construction methodology because different impacts were found with each. The remaining environmental categories were handled in a similar manner having impact discussions where there was a potential for effect.

The proposed project at 301 Mission Street has an EIR that shows two alternatives for the 301 Mission Street project to accommodate the proposed Transbay/Caltrain project; one for each of the Caltrain alternatives. The tax increment that could accrue from a development of the 301 Mission site was not included in the economic analysis for the Transbay Terminal as tax increment because, at the time of preparation of the Draft EIS/EIR, it was not an adopted project.

Please also see Response 3.1.2 which notes that the Second–to-Mission Caltrain Downtown Extension Option was not selected as the Locally Preferred Alternative by the Transbay Joint Powers Authority and that the San Francisco Planning Commission approved the 301 Mission development EIR on July 31, 2003.

3.5.3 Tay C. Via, Coblentz, Patch, Duffy & Bass, LLP, December 20, 2002

"We represent Mission Street Development Partners, LLC, the 301 Mission Street project sponsor. The project site is on the south side of Mission Street between Fremont and Beale Streets, Assessor's Block 3719, Lots 1 and 17. We write to affirm the DEIS/DEIR's conclusion regarding the Environmentally Superior Alternative (including the Second-to-Main alignment) and to request that this Alternative be selected as the Locally Preferred Alternative.

"Both the Second-to-Mission and Second-to-Main alignments can accommodate a potential cross-bay high speed rail connection in the future. However, the Second-to-Mission alignment has numerous adverse impacts in comparison to the Second-to-Main alignment, including substantial and prolonged excavation and closure of Mission Street and unresolvable conflicts with the 301 Mission Street project, a development with substantial public benefits, including generation of tax increment necessary to support the Transbay Project. It is also significantly more costly, due to more extensive excavation, Mission Street disruptions, property acquisitions, and loss of tax increment. None of this is reflected in the document. The DEIS must be revised to include a more thorough analysis of the Second-to-Mission alignment, both to comply with NEPA and CEOA, and to properly identify for decisionmakers and the public its significant impacts.

Introduction and Summary of Comments: By way of background, the 301 Mission Street project is a substantial mixed use development, including 320 dwelling units, commercial spaces, sizable publicly accessible open space and other features designed to activate and enliven Mission Street. It is currently undergoing environmental review, and we anticipate that the Draft Environmental Impact Report ("DEIR") will be published at the beginning of the year. As part of the DEIR process, the City and Caltrain representatives shared conceptual plans for the Transbay Project with the project sponsor and their technical consultants in an effort to evaluate the impact of the Transbay Project on the 301 Mission project. The consultants analyzed the conceptual plans and developed several DEIR project Alternatives. Technical memoranda summarizing the Alternatives are attached as Exhibit A. Those Alternatives consider the feasibility of accommodating both the Transbay Terminal and the Caltrain Extension. Based on this analysis, the project sponsor believes that the 301 Mission Street project could likely be modified in a feasible manner to accommodate the Terminal portion of the Transbay Project and the Second-to-Main alignment. This accommodation would involve a partial acquisition of the 301 Mission Street project site, significant construction coordination and additional construction costs.

"The technical analysis for the 301 Mission Street DEIR concludes that the Second-to-Mission alignment cannot feasibly be accommodated. The DEIR analyzes both building above the alignment and on a 'remainder' area outside of the alignment. As discussed in Exhibit A, those Alternatives are infeasible for a variety of technical, urban design, cost, timing and other reasons. The DEIS/DEIR fails to identify, yet alone analyze, these impacts of the Second-to-Mission alignment on 301 Mission Street.

"The DEIS/DEIR Second-to-Mission financial data is also unsupported. The economic data in the document is based on studies developed for the 1997 Caltrain DEIS/DEIR, which did not include the extension alignments. As a result, there is no evidence – not a single document – in the public record supporting the cost estimates for the Second-to-Mission alignment. Exhibit A establishes some of the 301 Mission Street technical consultants' preliminary cost estimates of

the alignment as it relates to 301 Mission Street, but the DEIS/DEIR itself is devoid of any meaningful cost data for 301 Mission Street or any other aspect of the Second-to-Mission alignment.

"1. Page S-27, Environmentally Superior Alternative. We concur with the document's conclusion regarding the Environmentally Superior Alternative, particularly as it relates to the Second-to-Main component. However, the list of benefits is incomplete. The Second-to-Main alignment significantly reduces operating expenditures and costs (including acquisition costs), increases tax revenue (including from tax increment), minimizes disruptions to Mission Street (a major thoroughfare and General Plan Transit Preferential Street), substantially reduces excavation and related construction truck trips (and related traffic and air quality impacts), retains the 301 Mission Street development, is more compatible with surrounding development and generally results in reduced impacts in the areas of land use, displacement and relocation, socioeconomic, fiscal, noise and vibration, utilities, visual/aesthetic and transportation impacts, all as discussed below in comments 6-15 and in Exhibit A. Please revise the list to include these additional benefits of the Second-to-Main alignment.

"2. Page 1-1. Purpose and Need for Transportation Improvements. The 301 Mission Street Project is consistent with and assists the Transbay Project in fulfilling several of the "primary purposes" and "associated needs" cited on page 1-1. This must be noted in the text so that the public and decisionmakers are advised that the Second-to-Main alignment accommodates the 301 Mission Street project, preserving its associated benefits, while the Second-to-Mission alignment does not.

"The primary benefits of the 301 Mission Street project are as follows. The 301 Mission Street project proposes a substantial mixed-use development of approximately 320 residential units, 120 hotel units, 130,560 gsf of office use, 9,400 gsf of restaurant/ retail use, 6,400 gsf of publicly accessible atrium space and 4,340 gsf of ground-floor lobbies. It would make a positive contribution to the Downtown skyline through innovative design and building form, including a graceful, slender tower articulated through elements such as a podium and central atrium. The project would also provide an active and pedestrian-friendly ground-floor environment, with attractive open spaces and retail uses; contribute significant resources to the City through generation of various fees and taxes (including but not limited to affordable housing, open space, transit, art, schools and child care fees and property, transient occupancy and parking taxes); generate substantial new employment opportunities in a variety of job classifications, including entry-level jobs; and support the City's efforts to redevelop the Transbay Terminal by providing an immediately adjacent, high-quality project generating substantial tax increment. This increment is critical to the Transbay Project, which has a significant funding gap under every development scenario analyzed in the DEIS/DEIR.

"3. Pages 2-21 - 2-37. Project Description for Caltrain Extension Alternatives: The Project Description fails to perform its essential function as a disclosure document because it lacks sufficient detail for the Second-to-Mission alignment. For example, the document does not describe the impacts related to Mission Street generally, the loss of the 301 Mission Street project, and the limited reuse opportunities available for that site. The latter two are described in Exhibit A. The Project Description also omits operational considerations, such as the expense resulting from two platforms and separate tracks under the Second-to-Mission alignment. For these reasons, it is impossible to adequately analyze the impacts of the Second-to-Mission alignment. However, based upon the project sponsor's understanding of the alignment, we have provided additional impacts information below. We request that both the Project Description and

impacts analyses be substantially revised to incorporate these comments and to provide the full level of analysis mandated by NEPA and CEQA.

"4. Pages 2-38 -2-41. Cost Estimates. These cost estimates are fatally flawed in that they refer only generically to source information (usually simply by consultant and year), rather than citing any memoranda or analyses. This is a problem throughout the DEIS/DEIR. We have requested the underlying background documents supporting the DEIS/DEIR Tables, but are advised that no such information exists and that the numbers have simply been updated from earlier reports prepared in connection with the 1997 DEIS/DEIR. However, because the Second Street alignments were not included in the 1997 document, there is no original data to be "updated." Accordingly, there appears to be no evidence in support of these numbers. If such evidence exists, it must be identified and should be made part of the DEIS/DEIR Appendix. Specifically, the text lacks support regarding the right-of-way acquisition, relocation and resale figures and "mid-point estimate for real estate." It is inconceivable that the Second-to- Mission alignment under the cut-and-cover and tunneling options would result in only a $32.6 and $31.2 million additional net cost, respectively, as compared to the Second-to-Main alignment. As established in Exhibit A, there is no feasible 301 Mission Street project Alternative based on the Second-to-Mission alignment. The acquisition cost of 301 Mission Street alone would far exceed the additional net cost cited in the DIES/DEIR. Extremely limited reuse opportunities for 301 Mission Street and complexities of construction work in Mission Street under the Second-to-Mission alignment would substantially increase the net cost differential far beyond the DEIS/DEIR estimate...

"6. Pages 5-3 -5-4. Land Use Impacts. The statements regarding land use impacts are conclusory and unsupported by evidence as they relate to the Second-to-Mission Street alignment. This section ignores facts about that project that are a matter of public record – the sole reference to 301 Mission Street is a one paragraph statement on page 5-4. In fact, the Second-to-Mission alignment would pose a substantial land use conflict with the 301 Mission Street development. As discussed in Exhibit A, the Second-to-Mission alignment renders the 301 Mission Street project infeasible, and severely restricts reuse of the site. The consultants have determined from documents not otherwise even described in the DEIS/DEIR that the alignment involves construction of a forty-five foot deep (or possibly deeper) tunnel which would traverse directly through the 301 Mission Street property. It is obvious that the location of the tunnel and its physical configuration would significantly alter both the remaining below grade and above grade buildable area on the property. The train tunnel and the pedestrian mezzanine connecting the bus terminals will take about 2/3 of the entire site.

"If the 301 Mission Street project does not move forward, the City would not enjoy the various benefits of the project, discussed above, and most importantly its 320 dwelling units, significantly enhanced street-level experience, and substantial tax increment, which is a critical funding element of the Transbay Project. The DEIS/DEIR contains no discussion of the environment that would remain along this important segment of the Mission Street corridor, nor of how loss of development opportunity at this site impacts the value or reuse potential of surrounding properties. The loss of this project is a foreseeable and significant land use impact of the Second-to-Mission alignment that must be identified and discussed.

"Why doesn't the displacement section mention the loss of approximately 320 housing units under the Second-to-Mission alignment?

"8. Pages 5-31 - 5-32. Socioeconomic Impacts. The statements regarding socioeconomic impacts are conclusory and unsupported by evidence as they relate to the Second-to-Mission

alignment. The loss of the 301 Mission Street project and the "limited reuse opportunity as a result of the Second-to-Mission alignment is a socioeconomic impact. As discussed above, that project will generate substantial employment opportunities, fees and taxes that would be eliminated under the Second-to-Mission alignment. The analysis must also include the socioeconomic impacts of businesses disruptions along Mission Street during the lengthy Second-to-Mission alignment construction period.

"The cost of the Second-to-Mission alignment is clearly understated in light of the substantially greater acquisition costs, and the limits to reuse of the property. Specifically, on page 5-45, footnote 7 references a $50 million total valuation for the 301 Mission Street property. How is this reflected in the acquisition estimate tables? What is the basis for this determination? This is inaccurate in that it represents only a partial value for the 301 Mission Street site. Tables 5.6-1 - 5.6-3 misrepresent the difference in acquisition costs between the two alignments, which is shown as only approximately $10 million.

"The estimates for payroll tax and retail sales tax losses are also underestimated. How is the limited reuse of the 301 Mission Street site reflected? There appears to be no analysis of that impact. Presumably Mission Street would be closed in phases over a significant period of time to accommodate the Second-to-Mission alignment. What is the phasing plan? This in turn would have substantial impacts on businesses along Mission Street. These are not even mentioned in the DEIS/DEIR.

"10. Pages 5-55 - 5-65, Noise and Vibration. The statements regarding noise and vibration impacts are conclusory and unsupported by evidence as they relate to the Second-to-Mission alignment. The Second-to-Mission alignment involves a long tunnel which impacts the developability of real estate above the alignment, as discussed in Exhibit A. The Noise and Vibration discussion makes no reference to impacts of the Second-to-Mission Street alignment on 301 Mission Street or other properties along Mission Street, nor does it identify measures (and their associated costs and timing of implementation) that might be necessary to reduce vibration to acceptable levels.

"12. Page 5-96, Visual/Aesthetic Changes. The statements regarding visual/aesthetic changes are conclusory and unsupported by evidence as they relate to the Second-to-Mission alignment. The analysis of visual/aesthetic changes makes no reference to the significant adverse changes associated with the Second-to-Mission alignment. As discussed above (see in particular Downtown Plan policies 13-16) and in Exhibit A, the loss of the 301 Mission Street project and limited reuse opportunities would result in a substantially changed visual environment, both in terms of the street-level environment and the Downtown skyline. The 301 Mission Street project must be included in the photomontages as a reasonably foreseeable project.

"In conclusion, we reiterate our concurrence in the DEIS/DEIR's determination regarding the Environmentally Superior Alternative, which includes the Second-to-Main alignment. While both alignments preserve the opportunity for a future cross bay high speed rail connection in the future, only the Second-to-Main alignment preserves the 301 Mission project and its contributions to the Transbay project. By contrast, the Second-to-Mission project results in numerous adverse impacts, including the loss of the 301 Mission Street project and its associated benefits, without any identified advantages. Accordingly, we request selection of the Environmentally Superior Alternative as the Locally Preferred Alternative."

Attachments to Tay C. Via letter: (1) Niaz A. Nazir, Ph.D., SE, Principal & Project Director, Desimone Consulting Engineers, L.L.C., September 10, 2002, (2) Desimone Consulting Engineers, P .L.L.C., Niaz A. Nazir, Ph.D., S.E., Principal & Project Director, December 4, 2002, and (3) Garry Edward Handel + Associates, Architects, Glenn G. Rescalvo, AlA, Partner, September 19, 2002

Response 3.5.3 As stated by the commentor, the San Francisco Planning Department staff and the 301 Mission project technical team worked together to set out alternatives to the 301 Mission Street project that would accommodate either of the Transbay/Caltrain alternatives, and the Draft EIR for the 301 Mission St project contained an alternative that would accommodate the Second-to-Mission Caltrain Alternative. The primary and associated needs for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project as listed in the document are, by definition, the general goals and objectives of the Project and not those of the surrounding private development.

The co-lead agencies understand that, economically, the Transbay Terminal project and the 301 Mission Street project are mutually beneficial. The Transbay project would provide extremely convenient transportation access for residents and employees of the 301 Mission Street project, while the 301 Mission Street project would provide a pool of potential riders and the potential for additional tax increment for redevelopment area improvements.

The commentor believes that the Second-to-Mission Alternative would limit the 301 Mission site. The co-lead agencies note that there are many examples in this country and around the world where large complex buildings are constructed over underground train stations or tracks. The co-lead agencies understand that the Second-to-Mission Caltrain Option is not the preferred Caltrain Extension Alternative for the 301 Mission Street project sponsors.

The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Draft EIS/EIR describes a number of differences between the effects that could be expected for the two alternatives for Caltrain. (Please see Response 3.5.2.). As required by CEQA Guidelines Section 15125, the Draft EIS/EIR evaluated the effects of the Transbay project against existing conditions at the time the Notice of Preparation was published and distributed (April 2001), and the existing conditions at that time did not include the proposed 301 Mission Street project since it had not been approved. Please note that the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Notice of Preparation of an EIS/EIR was issued on March 17, 2001, in advance of the 301 Street development application, which was submitted on August 16, 2001.

The noise/vibration evaluation in the Transbay Draft EIS/EIR, contained on pages 4-29 through 4-35 and pages 5-55 through 5-63 is against existing conditions and projects that had been approved. The analysis was based on measurements of noise and vibration, accepted noise and vibration models, and project details provided for the analysis. Because the train is operating in a tunnel, there are no noise impacts associated with train operations. There are only a small number of vibration and ground-borne noise impacts associated with the Project, but with a resilient track system, most impacts are mitigated. There are only two locations where the vibration or ground-borne noise levels are slightly above the criteria, and that is including a 5-decibel safety factor in the calculations. The 301 Mission site was not projected to exceed this criterion.

The net order-of-magnitude acquisition cost estimate is described in Section 5.6.2.1 of the Draft EIS/EIR. Accepted appraisal techniques were utilized and a consistent approach was applied to each property. The scope of the analysis for the EIR did not encompass an individual appraisal of each property. Thus, a range of anticipated real estate cost was used. The data utilized for

the cost estimate are from sources often used by appraisers and other real estate analysts, and reflects publicly available information at the time the analysis was performed in August 2001.

The differential in the project cost cited between the Second-to-Main and Second-to-Mission alternatives (both cut-and-cover and tunneling options) of $32.6 and $31.2 million, respectively, reflects a variety of variations between these two options, of which the estimated net order-of-magnitude land acquisition cost is but one factor. Given that the presence of underground rail tracks still allows for construction of a building above the tracks, it was reasonable to assume a resale of the site.

As indicated in footnote 5 on page 5-44, "the two properties on Mission Street for the Second-to-Mission Alternative are estimated at $700 to $790 per square foot of land area, due to a recent partial transfer of these properties." This was based on publicly available information at the time the analysis was performed and reflects the intention of the acquisition of the site for development, as well as the analyst's view of the transaction in the context of then-current market conditions based upon applying accepted appraisal techniques. It should be noted that the 301 Mission development had not been approved at the time of this acquisition cost analysis.

The difference between Tables 5.6-1 and 5.6-2 reflects acquisition costs (plus premium, relocation and demolition costs) less proceeds from resale. The referenced mid-point costs are the mid-points of the ranges presented in Tables 5.6-1, 5.6-2 and 5.6-3.

Capital costs for the two Caltrain Extension Options included land acquisition and easement costs and were based on the types of construction to be used, the lengths/amounts of excavation required, and the costs to acquire and install the necessary train and station facilities (trackwork, train systems including communications and electrification, platforms, etc.). These costs were based on an evaluation of other similar projects across the country adjusted for the northern California setting. Construction phasing and impacts to business during construction are described and evaluated in Section 5.20 and 5.21.6 of the Draft EIS/EIR.

The change in the visual environment resulting from the two Caltrain Extension options is discussed in the Draft EIS/EIR in Section 5.16.3. As noted, given that both Caltrain Extension options would be underground, the primary visual impacts would be from the demolition of buildings, particularly those buildings deemed historic and contributors to the Second and Howard Street and Rincon Point/South Beach Industrial Warehouse District in Section 5.14, Historic and Cultural Resources. Visual effects from not developing the 301 Mission development are not an appropriate subject for this EIS/EIR.

Please see Response 3.1.2 regarding selection by the Transbay Joint Powers Authority of the Second-to-Main (rather than the Second–to-Mission) Caltrain Downtown Extension Option as the Locally Preferred Alternative. The commentor stated the following:

> *"the 301 Mission Street project could likely be modified in a feasible manner to accommodate the Terminal portion of the Transbay Project and the Second-to-Main alignment. This accommodation would involve a partial acquisition of the 301 Mission Street project site, significant construction coordination and additional construction costs."*

The Planning Commission approved the 301 Mission Street Project on July 31, 2003. At the project sponsor's request, the 301 Mission Street Project was modified to include an alternative that would accommodate the Second-to-Main Caltrain Downtown Extension Alternative. The 301

Mission Street EIR and project-related approvals and files are on file at the Planning Department, 1660 Mission Street, San Francisco.

4.0 PROJECT ALTERNATIVES – REDEVELOPMENT

Note: Comments 4.1.1 through 4.1.10 all concern public comments on the "Full Build" Redevelopment Alternative. One response is provided to all of these comments, and this consolidated response can be found following Comment 4.1.10.

4.1 SUPPORT FOR "FULL BUILD" REDEVELOPMENT ALTERNATIVE

4.1.1 AC Transit – Kathleen Kelly, Deputy General Manager, Service Development, December 20, 2002

"AC Transit supports the Environmentally Superior Alternative identified on Page S-27 of the EIS/EIR-- the West Ramp Transbay Terminal, Second to Main, Tunneling Option, and Full Build. We believe that the West Ramp alternative strikes an appropriate balance between the needs of bus circulation and the potential for redevelopment in the surrounding area. AC Transit supports redevelopment in the Terminal area as a way to generate both financing for the Terminal and ridership on our service."

4.1.2 M. Kiesling, Regional Alliance for Transit (RAFT), December 18, 2002

"The redevelopment portion of the project is an excellent example the synergy of land use and transportation. We fully support the Full Build redevelopment alternative. There is no more appropriate place in California, and very few in the country, for this intensity of development. It has been the policy of the City of San Francisco since the 1980's to encourage this type of development between Mission Street and the Bay Bridge. The emphasis on housing only enhances the benefit of the proposed redevelopment.

4.1.3 Architecture 21, Michael Kiesling, December 20, 2002

"Redevelopment is key to this project, from both a urban design and funding perspective. I support the Full Build Alternative, and would like to see it expanded to other properties in the immediate terminal area that have not yet been redeveloped, and any properties north of Harrison Street that might be needed for construction of the Caltrain extension."

4.1.4 SPUR – Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Toward these ends, our preferred set of options for this project are: ... Selection of a mixed-use development package scaled financially to the cost of the terminal, with proper consideration for urban design issues. This indicates the Full Build option."

4.1.5 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"For the record, here are San Francisco Tomorrow's preferred alternatives: ... Full Build Out. With careful planning and urban design and by minimizing the parking requirements, this area can be a model for building a dense but livable urban environment."

4.1.6 Margaret Okuzumi, BayRail Alliance, Speaker, 11/13/02 Public Hearing

"And then we support the full build, you know, that provides the most return to the project. It makes the most sense. We have this incredible nexus of public transit and land use, and we need to keep that very strong for this project."

4.1.7 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"Summary of our Recommendations: We strongly support the full build, West Ramp alternatives and bus storage facility location.

"Transbay Terminal Bus and TOD Components: We support the Full Build alternative to take advantage of this transit-rich, prime location. This project provides one of the most phenomenal opportunities for transit-oriented development in the country, and its potential should not go to waste. The affordable housing component will be a significant boost to San Francisco as well."

4.1.8 Richard Mlynarik, Speaker, 11/12/02 Public Hearing

"I think it's imperative the full development program be carried out. This is a premiere site to have transit-oriented development anywhere this side of New York City. It would be an abdication of San Francisco's responsibilities in the region and nationally to put up three- or four-story buildings. I think it's important to note this really is an integrated project. Transbay Terminal for bus service, Caltrain extension is what links them together. It's redevelopment which helps it work and helps the redevelopment work. So I think that's quite clear. This is documented. I encourage you to think of it this way."

4.1.9 Andrew Sullivan, Rescue Muni, December 20, 2002

"Rescue Muni supports the following Alternatives to the Project: … Full Build Out – we generally support as much Transit-Oriented Development around the site as possible to help increase ridership at the transit facility, and also to improve the project's ability to pay for itself.

4.1.10 Mark Duncan, Askmar, November 18, 2002

"Obtaining the maximum density in the immediate areas around the Transbay terminal makes good sense from a planning viewpoint. It also improves the economics and feasibility of the terminal, and reduces potential taxpayer liabilities."

Response 4.1.1 through 4.1.10. The Transbay Joint Powers Authority (TJPA) adopted in March 2003 the "Full Build" Alternative for redevelopment component of the Locally Preferred Alternative for inclusion in the Final EIS/EIR. The TJPA staff report for this action states the following in support of this selection.

> *"While this alternative may introduce moderate increases in visual and traffic impacts compared to the Reduced-Scope Alternative, these impacts appear to be far outweighed by the primary advantages of the Full Build Alternative – namely:*
>
> - *"It would provide for more intensive land use around the multi-modal transit hub, providing a model for transit oriented development, and*
>
> - *"It would produce more tax increment revenue and proceeds from the sale of parcels currently owned by Caltrans, providing more funds for the new terminal and Caltrain Downtown Extension.*
>
> *"In addition, the location of intense development next to a regional multi-modal transit center is likely to reduce the dependency of local residents on the automobile. Vehicular trips on a per-person or per-residence basis should be reduced. While this reduction cannot be readily quantified, it should reduce anticipated traffic impacts from the proposed development.*

Finally, many people commenting on the Draft EIS/EIR expressed their support for this alternative, citing similar reasons."

Please see Response 4.2.4 regarding expansion of the redevelopment area boundary.

4.2 REDEVELOPMENT AREA LAND USE/URBAN DESIGN/PARKING/ TRAFFIC

4.2.1 Transportation Solutions Defense and Education Fund (TRANSDEF), David Shronbrunn, President, December 20, 2002

"5-9: The Land Use analysis of the Redevelopment Project fails to evaluate the Project's regional land use benefits, which include preserving suburban open space (see 5-122).

"5-122: The land use intensities of the three alternatives listed here are not comparable, making comparisons of impacts invalid. The total development for each of the alternatives be at the ABAG Projections level. Suburban development on the fringes of the Bay Area must be correspondingly decreased. The work done for the Regional Agencies Smart Growth Strategies/Regional Liveability Project Smart Growth Alternative should be very helpful here. We suggest consulting ABAG for guidance as to where to reduce projected suburban development, because they are assembling the Projections for the Smart Growth Alternative. These alternatives then need to be plugged in when re-running the emissions and travel demand models (see 5-49 and 5- 120) and looking at open space consumed by suburban development (see 5-9).

"5-126: Provide additional mitigations for adverse impacts at seven intersections: (1) reduce maximum parking ratios permissible in the Project area, (2) require provision of City Car Share-type service for new development in the Project area and (3) increase local transit service to the Project Area. The best way to avoid congestion is to discourage driving and provide convenient transit. Without parking, the Project Area will not be a destination for autos."

Response 4.2.1 The co-lead agencies agree that concentration of intense land uses in the urban core, as would result from this Project, could provide an opportunity to reduce demand for land in the more suburban areas, but we recognize that this outcome is dependent on a number of factors – overall regional demand, life style preferences, availability and quality of public services and amenities, and housing and commercial lease affordability and competitiveness, to name a few. Overall regional effects of the Project on suburban land use patterns is beyond the scope of this EIS/EIR, but the implications of the intensification of land uses in the centers of the regions' urban areas has been and is expected to be the subject of future study at the regional land use and transportation planning agencies.

One of the proposed Project's goals is to increase both local and regional transit service to the project area so the commentor's suggestion number three would not be a mitigation measure. The Planning Department and Redevelopment Agency are currently examining the requirements for parking and the maximum allowable parking per use may change within the boundaries of the Redevelopment Plan Area when adopted. The recently released *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) state the following regarding parking requirements in the redevelopment area:

> *"Parking for all new residential development would be required to be below grade, with a maximum of one parking space per residential unit. Developers would be required to separate the cost of parking spaces from the cost of residential units and provide spaces for interested car-sharing programs on site." (Appendix F, Volume I, Final EIS/EIR).*

The standard methodology for transportation analysis is to look at three cases: (1) no project – future development and growth, consistent with ABAG forecasts but without the project; (2) project effects – with the project included with the baseline growth, and (3) Cumulative –

which in this case incorporated future growth along with the proposed planning efforts in the South of Market Area.

Because the travel demand forecasting for all three land use scenarios was done using the San Francisco County Transportation Authority's countywide model which is based on ABAG regional growth estimates, the land use development is consistent and comparable between the projected 2020 existing conditions, 2020 with project, and 2020 cumulative. It is only in the last case where the project forecasts exceeded the ABAG forecasts for San Francisco by about 2.8 percent. This results in a conservative projection for the analysis and may overstate the transportation impacts; however, it would be speculative to try to reduce a portion of the non-San Francisco growth to account for slight over-projection in San Francisco. The forecasting, as set out in the Draft EIS/EIR, is acceptable as a planning tool and for compliance with CEQA and NEPA.

4.2.2 James Wittmann Dear, November 18, 2002

"Overall, the Redevelopment District needs to have a variety of heights, mass, texture, and style. Please not another Embarcadero Center One, Two, Three, Four!"

Response 4.2.2 The redevelopment planning process for the proposed Transbay Redevelopment Project Area will include a rezoning of the publicly owned parcels in the area. The final Transbay Redevelopment Project Area Design for Development Vision will be the basis for this rezoning. The San Francisco Redevelopment Agency recently released the *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003). The draft envisions a mix of high- and low-rise buildings of varying masses on the publicly owned parcels. The redevelopment process will also create a set of design guidelines for development on the publicly owned parcels, and these guidelines will encourage a variety of textures and styles in the area.

4.2.3 Architecture 21, Michael Kiesling, December 20, 2002

"Redevelopment is key to this project, from both a urban design and funding perspective. I support the Full Build Alternative, and would like to see it expanded to other properties in the immediate terminal area that have not yet been redeveloped, and any properties north of Harrison Street that might be needed for construction of the Caltrain extension."

"It would also help the neighborhood if the need for the diagonal exit ramp leading to the intersection of Fremont and Folsom Streets could be re-assessed, as it reduces the development potential for the area by splitting a large lot and creating a dangerous 5-leg intersection."

"Urban Design Suggestions: As the project progresses in design, there are a few items that should be explored. The un-built phase of the Foundry Square project immediately south of the terminal on Howard Street, between First and Fremont, should be integrated into the terminal with mid-block pedestrian access through their building from their planned open space at the corner of the project. The proposed project to the north of the terminal at 301 Mission (between Fremont and Beale) should also be integrated with the project, providing pedestrian access to the mezzanine levels of the terminal. Additionally, auto and truck access to the underground parking should be developed jointly with the terminal development so that only one delivery/parking access point is need for the combined projects. This is key, as Muni will be running many routes on Beale and Fremont Streets to access their new terminal beneath the terminal. Extra driveways will cause conflicts with the Muni, other transit, and autos around the terminal.

"Finally, provision for on extension of Essex Street should be made beneath the highway ramp as far as First Street. By providing a second approach to the bridge from First, traffic on upper First Street, past Folsom, can possibly be limited to carpools, removing the queued afternoon traffic out of the redeveloping residential neighborhood."

Response 4.2.3 The redevelopment boundaries proposed in this Final EIS/EIR have been refined to incorporate additional potential redevelopment properties (please see Response 4.2.4). Redevelopment Agency staff is currently working with the California Department of Transportation (Caltrans) on the design of the proposed new Fremont Street exit ramp. Agency staff is proposing to redesign the ramp so that it would have reduced impacts on the development potential of the site on Folsom, Fremont, and First Streets.

Integration of surrounding planned projects, pedestrian ways, and truck access into the new Transbay Terminal will be evaluated as part of the future Transbay Terminal Design activities. The commentor's proposals will be forwarded to the terminal design team. Redevelopment Agency staff is exploring the possibility of extending Essex Street, but only within the proposed Project Area boundary. Outside of that boundary, the Agency will work with other public agencies to affect changes that would improve the proposed residential character of Folsom Street.

4.2.4 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"We also request that the redevelopment area be extended beyond the present boundaries to include additional parcels that will obviously benefit from the project. This includes the block between First, Second, Mission and Minna. It is immediately adjacent to the terminal, contains a large number of fragmented parcels, and is ripe for development.

"The Cornerstone project and 524 Howard are holes within the redevelopment area within the present terminal bus ramps on which construction has not proceeded. Should redevelopment take place on these parcels in the future, it will be in no small part due to the appeal and utility of the Transbay Terminal facility, and so it is appropriate for these to contribute to the overall redevelopment plan."

Response 4.2.4 The boundary for the proposed Project Area has been changed to include several parcels between Mission, Minna, First, and Second Streets as well as all of the "holes" in the previous boundary. Please see Figures 2.2-25 and 2.2-26, Volume I, in this Final EIS/EIR. The new boundary also removes several parcels on Second Street between Tehama and Harrison Streets from the proposed Project Area. The boundary was changed based on the co-lead agencies' analysis of the existing conditions on the parcels in question. Where there is substantial blight, vacant parcels, or development in the center of the proposed Project Area that is adjacent to blight and/or vacant parcels, the parcels in question were included in the new boundary. Development on the edges of the proposed Project Area that does not have conditions of blight was removed in the new boundary.

4.2.5 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Chapter 2, Description of Project Alternatives

- "Levels of Redevelopment, p. 2.43
  - o "How does the full build/reduced scope development scenarios relate to the two terminal proposals? The Loop Ramp Alternative has less land available for redevelopment and the

land will be under greater constraints than the West Ramp Alternative. Thus the EIS/EIR is inaccurate in not comparing development levels for each ramp alternative.
  - o "It would be useful to know what the proposed development levels mean in terms of FAR, building height, building separation, and relationship to height and bulk limits of the planning code. Do the development levels spelled out deviate significantly from what is permitted under current zoning?
  - o "There are significant differences between the development envisioned in Table 2.2-22 and the illustrative model shown in Fig. 5.16-3. Please clarify.
- "Levels of Redevelopment, Figure 2.2-22
  - o "Some of the development levels seem highly unlikely when compared to parcelization, adjacent land uses, etc. For instance:
  - o "Block #3718: it is difficult to imagine that the shape of the parcel as drawn will support the level of development illustrated.

Response 4.2.5 The full build and reduced scope development scenarios assume the amount of land available under the West Ramp alternative. Under the Loop Ramp alternative, less land would be available and therefore less development would occur.

The redevelopment planning process for the proposed Project Area will include a rezoning of the publicly owned parcels in the area. The final Transbay Redevelopment Project Area Design for Development Vision will be the basis for this rezoning and will be included in the redevelopment plan package that goes to Agency decision makers and the San Francisco Board of Supervisors as they move to adopt the redevelopment plan. The *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document includes development levels within those evaluated in the Draft EIS/EIR.

Figures 5.16-3, 5.16-4, and 5.16.5 in the Draft EIS/EIR have been replaced with a new Figure 5.16-3, Volume I, in this Final EIS/EIR. This figure provides a simulation of the locations of sites and potential scale of development as envisioned in the *Draft Transbay Redevelopment Project Area Design for Development Vision (*August 2003) produced by the San Francisco Redevelopment Agency. The new figure is designed to help visualize one possible development build-out scenario of the publicly owned parcels within the proposed Project Area. The heights, shapes, and bulk of the development shown in the figure are not meant to be an absolute portrayal of what will be built on these parcels but rather provide a sense of the scale of development associated with the current *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) plan. The Final EIS/EIR states, in referring to Figure 5.16-3, that the figure "is not an actual proposal but a representation of the types and levels of development..." and that "Actual development proposals would be defined and evaluated and undergo individual environmental review, *if necessary,* in subsequent steps of the redevelopment process *to make sure that the individual projects were covered.*"

The *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) currently envisions a mix of high- and low-rise buildings of varying masses on the publicly owned parcels. The development levels as shown in Table 5.1-1 do make changes as to what is permitted under existing zoning and height and bulk districts. Parcels formerly occupied by the Terminal Separator Structure and the Embarcadero Freeway are currently zoned Public (P). All current Public zoning would be changed to C-3 (Downtown Commercial) under either redevelopment scenario and, in a majority of cases, the height and bulk designations would be changed.

The co-lead agencies acknowledge that Block #3718 will be difficult to develop with its current parcelization. Redevelopment Agency staff is currently exploring options for assembling adjacent parcels to make the block more suitable for development.

4.2.6 William Blackwell, Architect, December 2, 2002

"Page 2-46, Redevelopment Scenarios. BART, Muni, Caltrain, and AC Transit stations, when fully inter-connected, will provide San Francisco with a regional commuter transit facility of unparalleled convenience in the heart of the downtown. Current market conditions not withstanding, the buildable parcels within a ten-minute walking distance of the Caltrain terminus, the Transbay Terminal, BART/Muni Montgomery and Embarcadero Stations, and even the Ferry Building would ideally be predominantly office space. Office space development within close proximity would give maximum reinforcement to the investment in a regional transit facility. Ten minutes, incidentally, equates to a walking distance of one-half mile at 3 mph, a dimension that should be adjusted for topography.

"The predominantly residential component proposed for both scenarios of the redevelopment activity is appealing because it addresses housing needs, but it has several disadvantages: (1) It displaces office space as outlined above, contributing to downtown sprawl, (2) It brings a new layer of pedestrian and vehicle traffic to an already congested downtown-moving vans, delivery trucks, more taxi and private cars, and on the sidewalks, more seniors, joggers, small children, baby carriages, and pets.

"Housing that will enable more people to live near where they work is an urgent necessity, but there are many parts of the City with residential amenities already in place – schools, shopping, parks and playgrounds – that are far better suited for residential development than is the heart of the downtown. These neighborhoods need only improved transportation to be close to the downtown area."

Response 4.2.6 The full build and reduced scope alternatives both include significant amounts of residential and hotel development. The final *Transbay Redevelopment Project Area Design for Development Vision* will be the basis for this rezoning and will be included in the redevelopment plan package that goes to Agency decision makers and the San Francisco Board of Supervisors as they move to adopt the redevelopment plan. The *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document includes development levels within those evaluated in the Draft EIS/EIR.

Under the current *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003), most of the proposed Project Area would be zoned to allow for commercial development, including all of the parcels immediately adjacent to the proposed new Transbay Terminal. The publicly owned parcels on Folsom Street, however, are currently envisioned as high-density residential development. Current market conditions, while dire for the office market, were not the basis for this decision. Addressing the city's and the region's housing crisis, making downtown San Francisco a more vibrant place, and providing outbound passengers to the proposed new Terminal and Caltrain Extension were major factors behind the decision to focus residential development on Folsom Street.

In addition, Folsom Street is immediately adjacent to the existing residential development in Rincon Hill and along the Embarcadero. In the City's long-range plans, Folsom Street is envisioned as a residential and retail boulevard linking existing and proposed residential development to the waterfront. So while commercial development can occur in most other parts

of the proposed Project Area, Folsom Street is currently proposed to be reserved for residential and retail development.

4.2.7 Reed H. Bement, December 9, 2002

"I am writing concerning the draft EIS/EIR for the above projects (hereafter "EIS"). My wife and I have lived on Folsom Street since 1992 and I am a member of the Transbay CAC. The comments which follow relate solely to the Redevelopment Project portion of the EIS.

"The EIS should contain as an additional alternative a proposal for development within or close to the existing height and bulk limits which prevail in the neighborhood of Folsom Street, namely 200-250 feet in height. The two alternatives presented involving buildings 350- 400 feet high are far higher than what presently exists and is allowed. One or more alternatives closer to what presently exists would provide the public and the decision makers with a clearer understanding of what is proposed and its impact.

"The EIS also needs to more fully take into account the combined impact of other projects and plans for the larger South of Market area involved, including the proposed rezoning of Rincon Hill, the two proposed projects for 300 Spear Street and 201 Folsom Street, the Cruise Ship facility, Mission Bay and the Ball Park. For example, although the EIS recognizes that more fire suppression personnel may be required, it does not quantify the need or discuss the financial implications of it.

"With the other proposed 35-40 story towers on the South Side of Folsom Street the need will be obviously even greater. These combined needs, financing, etc. need to be discussed. Similarly, the combined impact of the other projects with this Redevelopment Project needs to be taken into account in the discussion of such issues as traffic, parking, wind, shadows, air quality and visual impact. As to visual impact, it is particularly important that the other projects also be considered in that what is proposed for both sides of Folsom Street is clearly out of proportion to what presently exists and is allowed. What is proposed by these various projects combined, including the Redevelopment Project would drastically alter the character, views and light of the existing and still developing residential community along and close by Folsom Street. The impact of such a drastic change needs to be thoroughly explored in the EIS.

"I also note what would appear to be inconsistencies between Table 5.1-1 and Figures 5.1-2 and 5.1-3. In Table 5.1-1 the Height/Bulk District shown for Block 3739 for both the Full Build and the Reduced Scope Alternatives is 350-S. Figure 5.1-2, for the same block for the Full Build Alternative, shows 400-S for one part of the block and 350-S for the remainder. Figure 5.1-3 for the same block for the Reduced Scope Alternative shows 350/400-U. Similarly, for Blocks 3736, 3737 and 3738, Table 5.1-1 shows 400-S for the Reduced Scope Alternative while Figure 5.1-3 shows 350/400-U.

"The EIS also needs to consider how the needs of the combined project areas for schools, parks, supermarkets and other amenities will be met. With the Planning Department projecting 7750 more residential units than would otherwise be built under its proposed rezoning for the Rincon Hill Mixed Use District, plus over more than 5000 residential units approved for Mission Bay in addition to the 3400 to 4700 more units projected as a result of the present project, an additional population of at least 20,000 people more than would otherwise be expected would be living in this rather small area. The EIS needs to address how the needs of such a large population for parks, schools, retail and other amenities will be met.

"As the South of Market area is already where most all of the new housing in the City has recently been constructed and will continue to be constructed (e.g. Mission Bay), to allow an even greater percentage of the overall new construction for the City to occur there will adversely affect the quality of life for those who now or hereafter live and work in the area. The much higher density resulting from these projects should be specifically contrasted with the density of other residential areas of San Francisco to provide a meaningful discussion of what is proposed. The type of units to be offered and the anticipated price range need to be included in the EIS so that it can be determined whether there is a realistic need for such units in San Francisco. The large number of units presently available (e.g. Bridge View Towers, Yerba Buena Lofts), as well as those already approved or under construction (e.g. Mission Bay, 333 First Street, 325 Fremont Street, 200 Brannan) should also be factored into this evaluation.

"Over the past ten years a vibrant residential community has developed and continues to develop in the area along and nearby Folsom Street. The neighborhood is not a "clean slate" for someone to experiment on with a design considered appropriate for a theoretical or abstract urban neighborhood. The building of downtown-sized office buildings in this area which are out of proportion to the buildings presently in the area would destroy its intended and existing character. The EIS needs to present a full and fair disclosure and discussion of the many issues raised by this and the other projects mentioned previously so as to enable the public and the various governmental agencies involved to determine whether what is proposed is in the best interests of the neighborhood and the City."

Response 4.2.7 The CEQA Guidelines in Section 15126.6 call for an environmental document to describe "a range of reasonable alternatives to the project or to the location of the project, which would feasibly attain most of the basic objectives of the project. This document satisfies the requirements in NEPA and CEQA for analysis of a reasonable range of alternatives. An alternative such as described by the commentor would not attain most of the basic objectives as set out in Chapter 1 of the Draft EIS/EIR, which discusses the purpose and need for the Project.

The development scenarios are program-level conceptual plans designed to illustrate what could occur within the limits identified. Thus, while the Draft EIS/EIR does not identify lower height limits as an alternative, it does not preclude their consideration. A *Draft Transbay Redevelopment Project Area Design for Development Vision (Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document was recently released by the San Francisco Redevelopment Agency. The vision was developed through a series of public workshops attended by area residents and other interested persons. This process took into account the impacts of the proposed development on Rincon Hill, as reviewed in this EIS/EIR, to assure that no new significant shadow or visual aesthetic impacts on the character of the neighborhood would occur from the proposed development.

The environmental cumulative analysis in the Draft EIS/EIR does examine the combined impact of the proposed redevelopment scenarios with other projects as required by CEQA. For instance, in the traffic and parking analysis for all three components of the project as shown on Table 5.19-5, page 5-123, four conditions were examined – (1) existing conditions, (2) Year 2020 without the project, (3) Year 2020 with the project, and (4) Year 2020 Cumulative, which incorporated other projects proposed (at the time of the Notice of Preparation, i.e., April 2001) including the Rincon Hill rezoning, the South of Market Redevelopment Area Plan and the Mid-Market Redevelopment Area Plan. The transportation analysis for the Transbay Terminal/Caltrain Extension/Redevelopment Plan used the work done for the proposed projects at 300 Spear Street and 201 Folsom Street, as did the analysis for the Rincon Hill Rezoning project. This work was

done so as to be compatible with the analysis for the Mission Bay, the Ball Park, and the Cruise Terminal.

Table 5.1-1 has been updated as follows: The Height/Bulk District for the Reduced Scope Alternative for Assessor's Block 3739 has been changed to 400-U and all the bulk district classifications under the Reduced Height Alternative have been changed to "U." Additionally, Figure 5.1-2 has been revised to show the proposed 350-S height district on Assessor Block 3739.

For the visual impact analysis, as discussed in Section 5.16.6, Change to the Cityscape, and illustrated in Figures 5.16-3, one possible massing of the proposed buildings along with additional proposed development south of Folsom Street is evaluated and shown. Similar massing representations for the proposed project and other surrounding development were used for the wind and shadow analysis. The discussion of potential views, light and glare can be found on pages 5-100 through 5-104.

Each neighborhood in San Francisco is developed according to policies, and goals and in the context of growth envisioned in the San Francisco General Plan. On a citywide level, the General Plan's Community Facilities element establishes policies, and goals, as well as design and siting criteria for police, neighborhood centers, fire, library, public health, educational and institutional, wastewater and solid waste facilities. Area planning for neighborhoods such as the Transbay, Rincon Hill, and Mission Bay includes the provision of public services such as police or fire within or near each planning area. Although the overall development in the wider area is substantial as noted, the provision of public services would be developed (and funded through increases to the City's tax base) as individual buildings are constructed and a subsequent increase in demand for such services. The San Francisco Fire Department conducts strategic master planning for its facilities. However, at this time, no quantification of potential future financial needs is available. The SFFD would conduct a risk analysis to accurately determine the number of additional fire suppression personnel that are necessary to maintain an acceptable level of service.

The commentor is correct in stating that new housing is being constructed and being planned for the downtown/South of Market area. The "Citywide Action Plan for Housing" has as one of its components a "Downtown Neighborhood Initiative" which calls for a strong and stable housing supply in the downtown neighborhoods. This initiative would "encourage substantial new housing around downtown." New construction and the development of higher density housing than is in other areas of the City is not necessarily an adverse change as stated by the commentor, however, the downtown neighborhood would be different than other areas of the City by design.

As there is little available land in San Francisco to provide the approximate 20,000 new units of housing projected to be needed in the next 20 years, higher densities will have to be developed. When the Planning Department evaluated land availability and suitability for housing it was found that the Downtown/Mission Bay area had the highest potential for housing development.[2]

The units mentioned by the commentor as presently available will more than likely be occupied at the time the proposed new housing is constructed in the proposed redevelopment plan area. A reasonable estimate is that new housing would not be constructed within the Transbay project

[2] San Francisco Planning Department, Community Planning in the Eastern Neighborhoods - Rezoning Options Workbook, February, 2003.

area until 2008 to 2010, as much of the land to be transferred to the City from the State would be needed by Caltrans until that timeframe for the Bay Bridge retrofit project.

The Draft EIS/EIR on pages 7-7 and 7-8 discusses the local context for potential cumulative effects particularly in the area of traffic and notes that the 2020 Cumulative discussion contained in Chapter 5, Section 19.4, incorporated other plans that had been recently proposed at the time of the preparation of the environmental analysis, including the Rincon Hill Rezoning, South of Market Redevelopment Plan, and Mid-Market Redevelopment Area Plan. In the current work for the Community Planning in the Eastern Neighborhoods South of Market Area, the Planning Department is still looking at a number of options for zoning and height districts. All options include a continuation of mixed-use development where "opportunities for housing-both affordable, and market rate and for space for production, distribution and repair activities" will continue to exist.

The proposed Transbay Redevelopment Plan, the Rincon Hill Rezoning and the Downtown Neighborhoods Initiative are designed to provide a comprehensive strategy for strengthening the vitality of the downtown by encouraging a range and mix of housing opportunities to create balanced, livable neighborhoods in and around the downtown core. One of the objectives of the planning for the downtown area is to build on the role of the downtown South of Market area as a diverse and vital place. It envisions the area as a regional center of employment and culture which will build on the historic resources, businesses, cultural organizations and diverse residential population. The goal is to create a livable space with more people residing in the downtown area, a mix of uses and activities, and transit as a truly convenient and reliable alternative to driving.

The publicly owned parcels on Folsom Street are currently envisioned as high-density residential development, not high-rise office development. Current market conditions, while dire for the office market, were not the basis for this decision. Addressing the city's and the region's housing crisis, making downtown San Francisco a more vibrant place, and providing outbound passengers easy access to the proposed new terminal and Caltrain extension were the main factors behind the decision to focus residential development on Folsom Street.

In addition, Folsom Street is immediately adjacent to the existing residential development in Rincon Hill and along The Embarcadero. In the City's long-range plans, Folsom Street is envisioned as a residential and retail boulevard linking existing and proposed residential development to the waterfront. So while commercial development can occur in most other parts of the proposed Project Area, Folsom Street has been reserved for residential and retail development.

4.2.8 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"It is very difficult to analyze the redevelopment project based upon the data given. We understand that the analysis of Urban Design is not required for this document, but one purpose of this review should be to suggest guidelines and components to be included in the Urban Design Plan for the Redevelopment area. We ask that the following points be included or clarified in that process -and that the Urban Design Plan for the project be completed and widely circulated prior to its adoption concurrent with the redevelopment plan.

"1. Pedestrian enhancement should be a key component of the Urban Design Plan. This includes designing those elements that make circulation easier – wide sidewalks, comer bulbs – as well as determining the type of street wall that will be prevalent in the area.

"2. Does this plan envision recreating the system of alleys found elsewhere in SOMA, but which were lost when the freeway ramps were built? This document would seem to indicate that this is not the case, but we think it could have many advantages, including breaking up the large blocks, and providing quieter pedestrian thoroughfares.
"3. When will the height and bulk changes listed in Table 5.1-1 (page 5-5) be enacted? We suggest that the process await the preparation of the Urban Design Plan, which we understand is being undertaken now. Since several blocks of the Reduced Scope alternative actually feature taller height limits than the Full Build alternative, a plan could feasibly be adopted that uses a combination of height and bulk from the two alternatives to create the final Full Build alternative.
"4. The Urban Design Guidelines for this project need to include guidelines for reuse of historic fabric and contextual treatment of new buildings when they are juxtaposed with older buildings. The Redevelopment Plan should incorporate the historic preservation components of the General Plan, including Article 11 of the Planning Code.
"5. The new open spaces identified for the redevelopment area must be identified on a map somewhere in this document. Also, assumptions need to be made about the type and intensity of use that would be encouraged or expected at each location, and Design Guidelines developed to suit.
"6. If 1:1 parking is provided for the new residences in this new neighborhood, six to eight floors of parking will be needed for each building. This is a problematic design element. To avoid this problem, parking should be retailed separately from the residential units, and any parking provided must be placed below ground level. Also, as noted above, parking should be provided at a ratio considerably less than 1:1...

"The Redevelopment Area shows zero space allocated to parking. This doesn't seem realistic, so it must be an oversight. Please include this information in the project description. We trust that any parking provided will be minimal, and unbundled from the residential component. After all, one result of these projects will be the creation of perhaps the most transit-friendly neighborhood in the country. Including parking, especially at anything approaching a 1:1 ratio, would make a mockery of the project and make the creation of a desirable dense urban environment next to impossible...

"There is no mention of any parking whatsoever for the Redevelopment Area. Figure S-2 and 2.2-22 both give square footages for Hotel, Office, Retail, and Residential uses in this area, but no mention is made of parking. What assumptions were made for the purpose of review in this document? How would a significant reduction in the parking assumptions reduce the adverse traffic impacts determined by this document?

"If 1:1 parking is provided for the new residences in this new neighborhood, six to eight floors of parking will be needed for each building. This is a problematic design element. To avoid this problem, parking should be retailed separately from the residential units, and any parking provided must be placed below ground level. Also, as noted above, parking should be provided at a ratio considerably less than 1:1."

"Can you identify on a map the three new open spaces that will be created in the Redevelopment Area, and list the shadow impacts on these areas?

Response 4.2.8 The Redevelopment Agency is currently developing urban design guidelines for the area as part of its Redevelopment Project Area design for development public workshops and series of focus groups with the Transbay Citizens Advisory Committee and other members of the public.

The recently released *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document and the design guidelines include plans for pedestrian improvements and alleys take into account the historic fabric of the proposed Project Area. Open space is identified on maps in the *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document and shown in Section 2.2.4.2 and Appendix F, Volume I, of this Final EIS/EIR.

The proposed changes to the zoning and height and bulk districts would not take place until the official adoption of the proposed Transbay Redevelopment Plan. The new zoning would be based on the final Transbay Redevelopment Project Area Design for Development Vision. The current *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) plan includes a mix of heights, all within the range of the shadow and wind analysis conducted for the Draft EIS/EIR. The plan is expected to go to the decision makers before the end of 2003. Included in the materials that will accompany the proposed redevelopment plan for adoption will be the final Transbay Redevelopment Project Area design for development vision for the area.

The transportation analysis for this project forecasts traffic based on the number of housing units, the number of hotel rooms, and the square footages of office and retail space; therefore, a reduction in the number of parking spaces would not affect the projected traffic impacts for the Project. The potential for secondary environmental impacts as related to parking deficits has been evaluated in the EIS/EIR. Additionally, the square footages in the Draft EIS/EIR do not include parking because parking was not used in determining the land values and tax increment projections for the financial plan.

The assumed total development would include parking at a ratio of less than 1:1. The *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document and design guidelines address parking ratios. Unbundled parking and a plan to put all of the parking underground is part of the *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document and design guidelines.

The *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) plan includes two new neighborhood parks in the Transbay area (please see Section 2.2.4.2 and Appendix F, Volume I, of this Final EIS/EIR). These neighborhood parks will be located in zones where housing is focused and where no parks or open space currently exist: the residential zone framed by Main, Beale, and Folsom Streets and the mixed-use historic area east of Second Street. The parks will provide a mix of neighborhood open space and small scale recreation facilities similar to that found in many high-density San Francisco neighborhoods including North Beach, Russian Hill, and Telegraph Hill.

Shade and shadow diagrams for the Project are available for public review by appointment in case file 2000.048E at the Planning Department at 1660 Mission Street, San Francisco. Shade and shadow effects are evaluated in Section 5.1.3, Volume I, of this Final EIS/EIR.

4.2.9 Mary Anne Miller, San Francisco Tomorrow, Speaker, 11/26/02 Public Hearing

"San Francisco Tomorrow's very concerned about urban design and the overall impacts of this project on a part of the city that ought to be friendly to pedestrians. It surely is an opportunity for housing, retail, commercial as well as, of course, for this wonderful new terminal...

"San Francisco Tomorrow has this project, I mean, on a level of the approval as its highest priority. We need to do something about transit, transportation, regional transportation, etc.

But urban design, you figure, well, maybe the Redevelopment Agency is going to solve all your problems with urban design. However, you want to look for information in documents, really evaluating, as it says three projects, the Transbay Terminal, the Caltrain Extension, the Redevelopment Area.

"Let me take you to two pages in the whole document, pages 242 and 243, and they don't tell you much. They do talk about the Redevelopment Area a little bit. They say there's a full-build alternative and reduced-scope alternative. Then you go to the next two pages. You have a couple of fairly good graphics. You have a chart, anyway – you can't really read it from this – but there's a chart there on 244, and then there's one over here – which I find the most, it's an attempt at being informative. Here's the outline of the Redevelopment Area. But of course, it's so faded you nearly can't see it. All you can see is turquoise squares accompanied by areas that tell you how many housing units, how much this, and how much that. This is not an urban design evaluation. I don't know how I find out whether this is a good project or not. I looked in the back and saw a graphic. I was very hopeful when I saw it. Then I saw it's a computer simulation, here, this isn't coming to you.

"It's not adequate. If it were built that way, it would be a horror. And I think Redevelopment agreed with me when I talked with them on the phone."

Response 4.2.9 Please see Responses 4.2.7 and 4.2.8.

4.2.10 Jennifer Clary, President, San Francisco Tomorrow, Speaker, 11/26/02 Public Hearing

"One of the difficulties is the extent to which decisions are going to be made based on this EIR. We understand it's a redevelopment area. This is a program-level EIR, but rezoning will still occur based on this. Currently, there's nowhere for the design plan, no picture in the document saying where the FAR is and what it will look like. There are no shade diagrams. You don't understand what the shadow impacts are going to be in the area. There's no urban design plan yet. We understand Redevelopment is behind and that they'll engage someone soon. But we feel there has to be a process in the EIR to have that completed. Either you incorporate a requirement for it in the EIR with some specific requirements, or you recirculate the EIR later, once you have the urban design component completed."

Response 4.2.10 The commentor is correct in stating that this is a program-level EIR and the redevelopment program selected for analysis in the document was a program that was considered to be at the upper range of what the area could reasonably support and what had been evaluated in the previous study of the terminal and the surrounding area under MTC. This redevelopment program was then "translated" into massing scenarios for the proposes of performing the environmental evaluations.

In the Draft EIS/EIR on page 5-15 through 5-19, there is a discussion of the shade and shadowing that could be expected using the two massing scenarios for the two redevelopment alternatives. In the future as sites come up for redevelopment and the Redevelopment Agency receives actual proposals for each of the redevelopment sites, further evaluation will be necessary to see if what is being proposed falls within the massing scenarios as evaluated within the Draft EIS/EIR. If that future evaluation shows that the actual proposals are substantially different, further environmental analysis will be required at that time.

Shade and shadow diagrams for the Project are available for public review by appointment in case file 2000.048E at the Planning Department at 1660 Mission Street, San Francisco. Shade and shadow effects are evaluated in Section 5.1.3, Volume I, of this Final EIS/EIR.

Please also see Responses 4.2.7 and 4.2.8.

4.2.11 Onnolee Trapp, League of Women Voters, Speaker, 11/13/02 Public Hearing

"We are very happy to see that part of the project does include housing, especially affordable housing."

Response 4.2.11 Comment noted.

4.2.12 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Page 2-44, Table 2.2-7. There is a huge amount of office space (1,184,590 sq ft) being added to a part of the city in the Full Build alternative that already is mostly office, and the surrounding areas are expected to be developed mostly as offices.

"There is no discussion of the financial impact of NOT building the office space. Although proposed office space is considerably less than residential space, office space will bring many more people into the area, mostly by transit. Tax revenues for office space will be different than for residential space, so there will be multiple impact differences between the Full Build and Reduced Scope. If I were a San Francisco resident, I would want more discussion of this aspect.

"We endorse the inclusion of considerable residential space in the Redevelopment project surrounding the TBT, and the commitment to the affordable housing component.

"Page 5-126-136. Cumulative impacts at seven intersections would be considered adverse and unmitigable. Pedestrian congestion also results in LOS F for eleven corners and two crosswalks. These are serious impacts, and consideration should be given to how streets are used by private cars, commercial vehicles, etc. and to alternatives that limit commercial traffic to nonpeak times.

Response 4.2.12 As shown in Figure 2.2-22 in the Draft EIS/EIR on page 2-45, office space is proposed on only two of the potential redevelopment sites with the largest amount (787,280 sq. ft.) being on Assessors Block 3718 located between Mission, Howard, Main and Beale Streets. This location is adjacent to other existing office space and the Transbay Terminal itself. From a land use perspective, this site is well located for office space. The other site proposed for office is directly to the south on Assessors Block 3739 located between Howard, Folsom, Main and Beale Streets. On this site the lesser amount of office space (397,360 sq. ft.) would be accompanied by up to 1,465 residential units and 98,935 sq. ft. of retail. This was proposed so that there would be a mix of uses in the redevelopment plan area and that the more intense uses would be closer to the current office area and then transition to housing as one moves to the south.

While the full build and reduced scope alternatives both include significant amounts of office and hotel development, the publicly owned parcels on Folsom Street are currently envisioned as high-density residential development. Folsom Street is immediately adjacent to the existing residential development in Rincon Hill and along The Embarcadero. In the City's long-range plans, Folsom Street is envisioned as a residential and retail boulevard linking existing and proposed residential development to the waterfront. So while commercial development can occur in most other parts

of the proposed Project Area, Folsom Street has been reserved for residential and retail development.

The financial plan assumes that the development, including the office space, will be constructed over the course of the next two decades. The impact of not completing this development would be lower land sale proceeds and tax increment revenue. Thus, if any portion of the proposed redevelopment alternatives is not implemented over time, additional funding for the Transbay Transbay/Caltrain Downtown Extension Project would need to be found from other sources.

The Draft EIS/EIR on page 5-136 does find that in the year 2020, the Cumulative Conditions are projected to experience LOS F for eleven corners and two crosswalks, but the document adds that the Project itself does not cause the LOS F conditions and provides a set of pedestrian mitigation measures that could be implemented in response to these impacts.

The Planning Department, as part of the Citywide Action Plan-Downtown Neighborhoods Initiative, will be looking at a balanced range of transportation choices that will include additional ways to make the streets safe and attractive for those who chose to walk. When the planning effort is completed the outcomes will be implemented within the downtown neighborhoods. The *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document recently released by the Redevelopment Agency shows in more detail proposed pedestrian pathways and improvements to be implemented by the redevelopment plan (please see Section 2.2.4.2 and Appendix F, Volume I, of this Final EIS/EIR).

4.2.13 Greg Patterson, December 18, 2002

"There are many areas of the EIR that are not clear, and it doesn't specify or limit the kind of development and changes in several cases. This is very concerning, given the potential change to the entire development area, and the influence and political power of large developers whose interests are not necessarily in line with those of the city or its residents.

"Urban Design. The publication of this EIR/S is premature in a number of areas. Only the Caltrain Extension project is sufficiently realized and well developed at this time to warrant publication and comment in this EIR/S. However, impacts associated with the design of the Terminal and the design of the many buildings that will be constructed in the proposed Redevelopment Area which surrounds it are difficult to analyze since there is so little information available at this time.

"Redevelopment Area zoning and height and bulk limits would be widely different in the Full Build and the Reduced Scope scenarios making the impacts difficult to determine (see p. S-8 and Figure S-2 opposite). Furthermore, in a Redevelopment Area, the zoning and height-and-bulk limits can all be superseded. Since the Redevelopment Area has not yet been instituted, so even the boundaries of it as stated in the EIR/S might not be fixed. The City's Master Plan and Urban Design Plan are barely acknowledged in this document.

"Guidelines must be developed to guide the long-term efforts of architects and developers over the many years that the numerous sites within this Redevelopment Area will be under construction. A public process must guide the preparation of these Guidelines. Paramount among the issues that must be addressed in the Guidelines are: reuse of historic fabric and contextual treatment of new buildings when they are juxtaposed with older buildings. The EIR/S does not indicate whether Guidelines will be developed.

"With so little specificity regarding the Redevelopment Area in the EIR/S, what is shown as a design concept in Figure 5.16-4 on p. 5-101 and Figure 5.16-5 on p. 5-102 is misleading in this official document. These drawings were apparently developed for another project and have nothing to do with this Redevelopment Area about which so little is known. Placing these computer visualizations in this EIR/S document gives the false impression that considerable planning has gone into the guidelines for the Redevelopment Area. These drawings should be removed from the document. It should be acknowledged that so little is known at this time about the Redevelopment Area that the treatment of it in this document is inadequate even for consideration as Program EIR."

Response 4.2.13 The CEQA Guidelines acknowledge in Section 15004 that, "Choosing the precise time for CEQA compliance involves a balancing of competing factors." It goes on to say that EIRs should be prepared as early as feasible in the planning process. Because of the complexity of the multiple components of the Project, it was decided early on to do a Programmatic EIR for the Redevelopment component that would look at the impacts of two alternative redevelopment programs absent specific designs but that included massing scenarios for such analysis as shadow and wind.

Actual development proposals will come five to ten years after project adoption when the sites become available for their ultimate redevelopment. Many of the redevelopment sites are not going to be immediately available and will be used in the interim for other uses such as the continuing Caltrans retrofit project and as the Temporary Transbay Bus Terminal. In the future as the sites become available for development, additional evaluation will be done on the proposals to determine if the project falls within the envelope of impacts reviewed in this EIS/EIR and to determine if additional environmental analysis is necessary.

Page S-8 and Figure S-2 are from the Summary Chapter of the Draft EIS/EIR. Because it is a summary, there is a limit to the amount of material that can be discussed. Chapter 2 describes the two Redevelopment Alternatives in greater detail, while Chapter 4, pages 1 through 13 set out the existing conditions for land use and zoning. Chapter 5, pages 1 through 19 discuss the environmental consequences (impacts) of the changes in land use and zoning. These later chapters provide the detail that the commentor found lacking in the Summary chapter.

As part of the Draft EIS/EIR, a review was conducted to assess the Project's conformity with the following plans and polices which guide land use in the study area: (1) The San Francisco General Plan, with subsequent elements including the Urban Design Element; the Commerce and Industry Element; the Transportation Element; the Residence Element; and the Recreation and Open Space Element, and (2) Local area plans within the General Plan, including the Downtown Plan, the South of Market Plan, the Rincon Hill Plan, and the Northeastern Waterfront Plan.

Other policies were reviewed for the Project's compliance with respect to the policies and plans of adjacent San Francisco Redevelopment Agency plans. These include: (1) the Rincon Point-South Beach Redevelopment Plan, (2) the Yerba Buena Center Redevelopment Plan, and (3) the Mission Bay North Redevelopment Plan. The proposed development within the redevelopment plan area will be subject to the development restrictions of Proposition M.

As a part of this analysis, the consistency of the proposed Project was evaluated with respect to the General Plan's urban design goals and policies and policies related to specific Area Plans in and adjacent to the project area.

The proposed Project is not in conflict with policies contained in these documents. As stated in the Draft EIS/EIR (p. 2-42), the proposed Transbay redevelopment planning efforts represent a long-standing goal of the City and consist of a multi-phased planning process that includes adopting a formal redevelopment area and plan, new zoning and design guidelines for the district, and a capital improvement plan. The EIS/EIR therefore provides information on project impacts, but does not complete the plan.

Given that detailed information is not available at the present time regarding specific designs of individual buildings within the proposed redevelopment area, individual buildings cannot be evaluated with respect to the General Plan's established urban design guidelines. The Draft EIS/EIR does, however as noted above, provides a description of the environmental consequences resulting from rezoning and developing underutilized parcels and instituting new building massing requirements and height limits for the district. These effects are presented with respect to changes in views and changes in the cityscape, potential new sources of light and glare, as well as wind and shadow effects. The Design for Development document for the redevelopment area will provide new land use or zoning designations and design guidelines to control the development of the Transbay Terminal and the associated redevelopment of adjacent underutilized parcels. These design guidelines will ultimately be reviewed with respect to their consistency with the City's established urban design goals and policies and approved by both the San Francisco Redevelopment and Planning Commissions.

Please also see Responses 4.2.4, 4.2.5, 4.2.7, 4.2.8.

4.2.14 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"Land Use: (Page 2-44). The land use mix assumed is dominantly residential which would provide a desirable balance for the intense job center of San Francisco. The Full Build alternative also includes 1,184,590 square feet of office space...

- "If more office space than "Full Build" is built, consistent with current zoning, how would that affect traffic projections and air quality?"

Response 4.2.14 The environmental document evaluated two redevelopment alternatives, the Reduced Scope with no office and the Full Build with 1,184,590 sq. ft. of office use. If more office space than that evaluated in the Draft EIS/EIR were proposed, it would require additional environmental analysis and could lead to a supplemental or subsequent environmental document. Regarding air quality impacts from increased office space development, the one-hour carbon monoxide concentrations under Project conditions would range from 4.0 to 5.7 parts per million. Eight-hour carbon monoxide concentrations would range from 2.8 to 4.0 parts per million. The California Ambient Air Quality Standards for carbon monoxide is 20.0 parts per million for the one-hour period and 9.0 parts per million for the eight-hour period. Traffic would have to increase by more than twice the amount that was evaluated in the Draft EIS/EIR for carbon monoxide concentrations to exceed the State standards.

5.0 PROJECT ALTERNATIVES - PROPOSED NEW CALTRAIN ALIGNMENT AND TERMINAL LOCATIONS

5.1.1 Mark Duncan, Askmar, November 18, 2002

"Although Muni has no interest, there would be cost savings and reduced total overall environmental impact to the City of San Francisco if the depth of the trench was increased on Second Street from Townsend to Mission, to be sufficient to run Muni on an upper level, and heavy rail on a bottom level. (This would be instead of the proposed Third Street Muni underground line extension.) I would suggest that Muni could make a dogleg from Second down Mission, stopping at the Convention Center, and proceeding down Third for the remainder of the line as planned. In addition, it is my understanding that the mezzanine level of the Transbay terminal could accommodate Muni light rail trains, were this connectivity so desired, and this approach would enable this to happen."

Response 5.1.1 This alternative alignment would require several additional 90-degree turns for Muni's New Central Subway (NCS), and it would not enable the NCS to directly serve the Museum of Modern Art/Moscone Center area. Additionally, the Transbay Joint Powers Authority (TJPA) selected in March 2003 the Tunneling Option for the Caltrain Downtown Extension as the Locally Preferred Alternative. This Caltrain option would no longer be feasible for the commentor's alternative, in that it would require that both projects be constructed using cut-and-cover techniques. The cut-and-cover approach was rejected by the TJPA for a number of reasons including the more severe impacts on the community that is associated with cut-and-cover construction. Please see Response 3.2.1 through 3.2.14.

5.1.2 M. Kiesling, Regional Alliance for Transit (RAFT), December 18, 2002

"We would like to see a modified tunneled alternative studied, involving an alignment approximately 150' west of Second Street. This alignment will "further minimize impacts on historic structures, minimize the distance of mined tunneling by passing under many empty properties, and maximize the potential platform length at the Transbay Terminal."

"Specific revisions to these basic alternatives include:
- "Studying a tunneled alignment approximately 150' west of Second Street
- "Easing the Townsend-Second Street curve for higher-speed operation
- "Altering the throat of the terminal tracks for better operations."

"North of Brannan Street, the tunnel is running deep under the South Park neighborhood. Where it passes beneath the Bay Bridge approach, the opportunity exists for integrating any necessary emergency access and ventilation facilities within the bus storage facility. Between Harrison and Folsom Street, most of the tunnel is under empty properties. From Folsom Street to the intersection of Howard and Second Streets, the alignment is threaded between high rises, ending beneath a large parking lot at the intersection. Almost 60% of this "off-street" alignment is under empty lots or streets, and many of these properties are in public ownership as streets or parks.

"This alignment eliminates the need to acquire and demolish at least 3 properties along Second Street, 201, 205-15, and 217 Second Street. Additionally, since the angle of the tracks in the throat change, it should be possible to avoid 580-586 Howard Street. Three of these are significant historic buildings. This is shown in Figure 3.

"Once under Second Street, the alignment significantly benefits the operation of the terminal, in either the Second to Main or Second to Mission alternatives. The design allows the throat of the station to begin sooner, allowing longer platforms. Richard Mlynarik has provided comments showing a Second to Mission alignment. I will describe the simpler Second to Main (Terminal Basement Platforms) alignment in this document."

Response 5.1.2 In response to this comment, the co-lead agencies evaluated the proposed alternative generally running 150 feet west of Second Street. The co-lead agencies acknowledge that this alignment has several advantages, but the proposal would pass under two existing, low rise, brick buildings between Harrison and Folsom Streets. Within a portion of this block, the alignment would pass adjacent to two high-rise buildings, and the space between the two structures is only 63 feet wide – about the same width as the proposed Caltrain tunnel. It is the position of the co-lead agencies that construction of the tunnel in sandy soils below the groundwater table would pose an unacceptable risk to the foundations of existing buildings, and therefore this alternative is deemed to not be practicable. Additionally, the Second-to-Main and Second-to-Mission Caltrain Extension alternatives principally follow underneath street rights-of-way and therefore would not require the length and number of underground easements under private property (e.g., in the South Park neighborhood) and the associated risks that would be required for the commentor's proposed alignment.

5.1.3 Transportation Solutions Defense and Education Fund (TRANSDEF), David Shronbrunn, President, December 20, 2002

"TRANSDEF supports the detailed architectural comments of RAFT and Michael Kiesling. Due to the commentor's many years of involvement with the details of a Caltrain rail extension, we are confident that the alignments proposed therein deserve close study as additional alternatives to the two rail alternatives in the DEIS/R."

Response 5.1.3 Please see Response 5.1.2.

5.1.4 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"Summary of our Recommendations: The downtown extension configuration must be modified to accommodate high speed rail. Pursue a modified Second-to-Mission alignment, rather than the Second-to-Main alignment, as the preferred alternative for the downtown extension.

"At the other curves (at Townsend/Second and between Second and the Terminal), we believe that it is possible to make small adjustments to the alignments to reduce their curvature while impacting fewer buildings, where these do not impact long-term operational flexibility. For example, see Figure 3, attached."

"Currently, only the Second-to-Main alignment option has platforms long enough to accommodate HSR. However, the highly curved platforms in the Second-to-Main alignment are seriously flawed and ineffectual in their intended purpose of serving the extra long trains needed for HSR. The proposed curvature would result in unacceptably long gaps between train doors and platforms.

"Reduce Impacts to Multistory and Historic Buildings: At several places along the proposed route, we see opportunities to reduce costs and community impacts by adjusting the alignments to impact fewer buildings.

"We believe that it is possible to make adjustments to the Second-to-Mission alignment which will clearly establish it as the environmentally superior alternative that results in the fewest business and residence relocations and impacts the fewest historic buildings, while fully meeting the purpose and need for the project. In addition, we note that the Mission Street rail alignment eliminates the need for a third of the tunnel by virtue of extending the train mezzanine level to the corner of Mission and Beale; that savings should be taken into account in the rail alignment alternative analysis.

Response 5.1.4 Please see Responses 3.1.2 and 5.1.2.

5.1.5 William Blackwell, Architect, November 12, 2002

"EIS/EIR Figure 2.3-1, Alternatives Considered and Withdrawn, does not include my proposal. However, if it had been considered, I suppose that the objections would be similar to those given on page 2-50 for the Essex Street stub-end alignment that you pointed out after the SPUR meeting.

"In response to those particular objections, I note the following:

"Although the train platform is not directly under the terminal building, it is nonetheless an integral part of the multi-modal transit faculty. Passenger circulation by means of moving walkways and ease of transfer from one mode to another are probably the most attractive features of my plan. Caltrain commuters have direct links not only to the bus terminal but also to BART/Muni Metro at Montgomery Street, a connection that is not even in the consultant's plan. Transfer between AC Transit, Caltrain, and BART is frictionless. Greyhound passengers or BART SFO passengers transferring with luggage have a virtually effortless transfer via the moving sidewalks. Train levels are 25 feet below the surface rather than 50 feet. The plan has one bus level at the terminal that is 20 feet above the street, not two levels that are 40 and 60 feet above the street.

"Escalator travel is reduced by 50 per cent or more. Transfer to street level taxis, buses, limousines, and private cars right at the front door of the bus terminal is a major improvement that is also not in the consultant's plan.

"The orientation of my plan does not allow for trains to pass through the station to a storage track. Instead, three storage/by-pass tracks are provided at the station that are equally accessible to the two platform tracks. One train does not block another. Caltrain at present operates with 12 stub-end platform tracks without "tail" tracks.

"These yards are within two minutes of the stub-end and would be retained in my plan. They would be underground on one level, however, as would all tracks at Fourth & King.

"My research shows that train direction can be reversed without reducing operating efficiency. See the enclosed 'Notes.'"

"Although less grandiose than the proposed, my alternative plan for Caltrain extension is an economical approach that is worthy of consideration. If the terminal design follows consistently, it would have only three levels rather that the proposed 5½ levels and its cost would come down proportionately. This plan clearly benefits the commuter – thereby encouraging transit use – meets all of the requirements of Proposition H, and provides a level of rail service that is more than adequate for the foreseeable future."

Response 5.1.5 Mr. Blackwell has given considerable thought to his proposed station and train configurations. The alternative does not, however, meet the provisions of Section 2 of Proposition H, which states in part that, "As part of the extension of Caltrain downtown, a new or rebuilt terminal shall be constructed on the present site of the Transbay Terminal serving Caltrain, regional and intercity bus lines, Muni, and high speed rail..."

Additionally, as the commentor notes, the alternative proposal would involve a stub-end train station. While stub-end stations are operated throughout the country and world, the proposed tail tracks included with the refined Caltrain options offer substantial operating flexibility, particularly given that the number of tracks and platforms provided at the site of the Transbay Terminal are constrained by the terminal's site. The commentor's proposed alternative would also have fewer tracks and platforms than either of the refined Caltrain options, thereby reducing the station's capacity and efficiency even further. Finally, the proposed alternative would place the train tracks and other transit operators more distant from each other, reducing the convenience and time involved for transfers in the proposed multi-modal facility.

5.1.6 William Blackwell, Architect, December 2, 2002

"In a letter dated April 16, 2001, to Joan Kugler, EIR Project Manager, I suggested an alternative Caltrain extension plan coupled with underground pedestrian connectors and an efficient terminal design. This alternative offered significant advantages consistent with the primary purposes listed on page 1-1.

"Subsequently, I have amended that document to incorporate results of additional research, and am enclosing a revised version as Attachment No. 1. Many of my comments on this Draft EIS/EIR are with respect to material in this attachment, which, for purposes of identification, I am referring to as the "Blackwell Alternative.

"Attachment No. 2 adds research on reversing direction of Caltrains. Attachment No. 3 is a copy of my suggested alternate plan for the bus levels that was also included in my April 16, 2001, letter to Mrs. Kugler.

"Please give the material in these attachments the same weight and careful consideration that you give the comments listed herein by page number.

"A pedestrian concourse with horizontal passenger conveyors (Blackwell Alternative) from the Transbay Terminal to Montgomery St. BART station puts commuters closer to the center of District C-3E and, in conjunction with a Second Street rail platform, presents an opportunity for sublime pedestrian circulation. Moreover, Montgomery St. has the highest number of entries and exits of the Market Street BART stations (Page 3-8). These connecting links would obviously improve access to bus and rail services for a great majority of transit riders, a primary purpose of these projects (Sec. 1.1). See also Attachment No. 1.

"Page 2-9. Needlessly re-locating the bus levels 40 feet and 60 feet above the street level does not improve public access to bus service, a primary purpose of these projects (Page 1-1).

"Page 2-11. The West Ramp alternative itself should include an alternative that combines on one level the upper and lower bus levels proposed. See Attachment No. 3, a drawing that shows the same number of bus stations, turnout lane, turning radius, etc. on one level that are proposed for two levels. Electronic signboards at the foot of the escalators would let patrons know which of the two platforms to use, and there is no loss in AC Transit flexibility. In the Blackwell Alternative, this bus level would be at the 20-foot level, the west ramp elevation would remain

essentially as is, and retail would be partially on the street level and partially on the pedestrian concourse level below the street. See Attachment No. 1 for more detail.

"Page 2-36. (a) The Blackwell Alternative deletes the need to acquire 18 parcels of land and demolish eleven buildings for the HSR curve into the Terminal.

"Page 2-47. The reasons given for not renovating the existing terminal building tend to vanish in light of the Blackwell Alternative. Caltrain and high-speed rail are cleanly separated from the terminal; removal of the east bus ramp is still feasible. The single level plan shown in Attachment No.3 could be implemented on the existing bus level. An elegant new roof could be installed over the bus platform. The lower floors plus sub-level (now garage) of the existing terminal offer ample opportunity for revenue- generating joint development. A Minna Street underground concourse link to Caltrain at Second St. and thence to BART Montgomery is a simple addition. Opportunities for major improvements in space utilization, passenger circulation, signage, security, and safety are not precluded. Renovation would require the ablest architects and engineers, but it is certainly not out of the question.

"Page 5-94. The upper elevation drawing shows that the portion of the proposed terminal that crosses over both 1st and Fremont Streets begins about 20-feet above the street level and extends to the terminal roof height of 109-feet. The existing building also begins about 20-feet above street level but is only 40-feet high. The Blackwell Alternative would also have only one level (but of improved design) crossing these streets.

"More than any other single factor, size determines the quantity of materials required for a project. The 'Blackwell Alternative' effectively changes the design of the terminal from 5½ levels to 3 levels without curtailing services. As a first approximation, this is a 45 percent reduction in size that would reduce the consumption of building materials, and the energy required to manufacture and transport the materials, by a like amount. In this case, the opportunity to conserve natural resources and energy by size reduction is very substantial and might well be evaluated in an EIS/EIR concerned with environmental impacts."

"Page 1-28. Table does not show the street vacation procedure that is required for the taking from Minna Street of a ten foot strip (510 feet long) between 1st & Second Streets. Minna Street is only 35-feet wide. This encroachment is unnecessary. Attachment No. 3 shows an alternate one-level plan that accomplishes everything needed within the 155-foot width of the existing State property."

Response 5.1.6 Please see response 5.1.5. While placing the train station away from the terminal creates more flexibility regarding the bus terminal design, the proposal results in a substantially reduced capacity and efficiency for train operations, it reduces the efficiency and convenience for transfers at the new multi-modal facility given the placement of the train station away from the terminal, and it is not consistent with the provisions of Proposition H as passed by the voters of San Francisco in 1999.

5.1.7 Duane Morris, LLP, Oliver L. Holmes, November 24, 2002

"The following comments are submitted on behalf of a consortium of architects, engineers, urban planners and others (the "Consortium") interested in the successful development of the Project. As set forth in letters dated January 29 and February 1, 2002 (Attachments A and B), the Consortium submitted an alternative proposal ("Alternative") for the Project. Although the Consortium's proposal spelled out how the Alternative could save almost a billion dollars in construction cost and considerable time in completion of the Project, the Draft Report does not

address the Alternative. As set forth below, the Draft Report's failure to evaluate this viable alternative is a breach of the federal and state environmental review requirements for the Project.

“Moreover, given the significance of the Project for San Francisco and the entire Bay Area, it is essential that all reasonable alternatives be reviewed. This is particularly important today because the unusually high cost of constructing and financing the Transbay Terminal as proposed in the Draft Report is likely to doom any prospect of completing this critical link in Bay Area transportation for many years to come.

“AC Transit Dictated Site Selection
“The present Transbay Terminal was built in the 1930's to handle commuter trains from the East Bay. The long narrow terminal with its sweeping ramp structure was designed to accommodate multi-car trains using elevated tracks for easy connection to the lower deck of the Bay Bridge. When trains were removed from the bridge in the late 1950's, AC Transit started bus service to the terminal using the same ramps and station platforms previously used by commuter trains. AC Transit and other bus lines continued to use the terminal without significant alteration, but the 1989 Loma Prieta earthquake made it clear the aging terminal had to be replaced or substantially upgraded to meet modem seismic standards.

“In the early 1990's the City and County of San Francisco and other public agencies studied several alternatives. With the help of a Citizens Advisory Committee, the Main/Beale site next to the present terminal was picked as the best location for a new terminal. On March 4, 1996 the San Francisco Board of Supervisors approved the Main/Beale site as the preferred alternative. Preliminary designs were prepared for a Main/Beale terminal but AC Transit was not happy with the initial layouts. AC Transit then sued the City contending that the Main/Beale site was not adequate for its purposes and that only the present terminal location should be considered. In order to settle this litigation, the Board of Supervisors passed a resolution in February 1999 that backed away from the Main/Beale site and urged the "City and County of San Francisco to work expeditiously with AC Transit “to retain AC Transit bus service at the current Transbay Terminal site." As a result, the Draft Report only considers rebuilding the terminal at its present location.

“Penalties for Reusing Existing Site
“Reuse of the existing site, with its long narrow footprint and extensive elevated ramp structure, creates several problems for design of the new Transbay Terminal. For example, to accommodate AC Transit and the other bus lines, the proposed terminal will be as large or larger than the current terminal (approximately 1300 feet long, 165 feet wide, and almost 100 feet tall) – the equivalent of the Empire State building laid on its side. Like the old terminal, the new terminal will stretch over three major streets (and several alleys), blocking view corridors north and south, and together with connecting ramps dominate the surrounding neighborhood as much or more than the existing terminal. To counter the enormous scale of the new terminal, the exterior is designed as a largely transparent glass cage set in a steel frame. This high tech effort to create an attractive presence for the new terminal may be successful, but is likely to be substantially more expensive than a standard building exterior.

“Furthermore, the long narrow configuration of the terminal is inherently less efficient than a more square-shaped building. First, interior corridors must be added so passenger can get from one end of the terminal to the other-in this case an entire floor (the Concourse Level) is used as a pedestrian walkway connecting the ends of the bus terminal, and a second floor below ground (the Train Mezzanine Level) serves a similar function for train passengers. Transit buildings typically have more efficient centralized circulation areas where passengers walk fewer steps to

get to their train or bus. Second, long narrow buildings are inherently less efficient because they have a much higher ratio of exterior surface to interior floor space. The proposed terminal would have a perimeter of almost 3000 feet with floors of approximately 215,000 square feet. By comparison a building which is 400 by 600 feet has a perimeter of only 2000 feet but provides 240,000 square feet of space on each floor. In this example, the proposed Transbay Terminal is approximately 60% less efficient than the more compact terminal in terms of the interior floor space created per foot of exterior wall. This of course leads to large differences in construction cost per square foot, particularly in this case where the proposed exterior wall treatment is very expensive.

"The existing site is also a difficult place to put a rail terminal. At a width of 165 feet, the new terminal will accommodate only six train platforms. Moreover, the terminal can only be accessed on tight 500-foot radius curves and does not have room for straight platforms in excess of approximately 1000 feet. This presents problems for California's High Speed Rail Authority which has requested tracks with a radius of at least 650 feet on all curves and station platforms at least 1300 feet in length. The proposed terminal site is at best a marginal fit for high-speed rail, and clearly provides no expansion space for new rail service from the East Bay and beyond. As the Draft Report indicates, in the long run the large majority of terminal patrons will be train riders, especially when rail service to the East Bay becomes available. Unfortunately, the proposed design calls for an enormous investment in facilities for bus riders and comparatively little investment for rail passengers.

"Finally, reusing the old terminal site adversely impacts the Project's development prospects. The old terminal site along Mission Street has the highest development potential because height limits in that area are 400 to 500 feet providing the greatest density and value for development. However, the proposed terminal design precludes most development along Mission Street. Instead, the Draft Report proposes a substantial change in San Francisco's zoning, moving high rise development two blocks south along Folsom Street:

"'[The Project] would change the zoning... to allow for development of greater heights- up to a maximum of 400 feet on the north side of Folsom Street – 200 feet higher than is currently permitted.' (Report, p 5-97).

"It is unclear whether the City would allow this rezoning because to do so would permanently change the character of the neighborhood along Folsom Street. Without it, however, redevelopment would generate considerably less money to pay for the terminal.

"Advantages of Main/Beale Site
"The City and the Citizens Advisory Committee originally chose the Main/Beale site because it has several important advantages. One of the most obvious is that it is a largely vacant site on which a new terminal can be quickly constructed while the old terminal stays in operation. This eliminates the need to build a temporary terminal and ramp for use while the old terminal is tom down and rebuilt, thereby saving considerable time and tens of millions of dollars in construction cost. Most important, it is an efficient site on which to locate a new terminal because of the larger, almost square blocks between Main and Beale and Folsom and Mission. At 300+ feet in width, the site can accommodate up to 10 train platforms, including two 1300-foot long platforms required by high-speed rail with no sharp curves in the approaching track. It is closer to the Embarcadero Bart/Muni Station, making an underground pedestrian connection between the terminal and Bart/Muni feasible. Because of its North/South alignment the Main/Beale site requires shorter, less costly ramps to connect buses to the Bay Bridge, and a shorter tunnel connection for Caltrain. Finally, the Main/Beale site maximizes development along Mission Street

as called for by the City's Master Plan, and retains existing zoning along Folsom Street. Further details of the Main/Beale Alternative are provided in Attachment C.

"One and a Half Billion Dollars in Savings
"The Draft Report estimates the Transbay Terminal Project will cost approximately two billion dollars to construct and another billion to finance, or three billion dollars total. The Alternative is estimated to cost somewhat more than a billion dollars to construct, and perhaps another half billion to finance for a total cost of just over one and a half billion dollars. It is easy to see where the savings are:

"1. The Alternative avoids approximately $30 million in construction cost by eliminating the temporary terminal and ramps.
"2. Permanent ramps for the Alternative design are much shorter and simpler, saving $100 to $200 million, depending on which ramp design is selected for the proposed terminal at the existing site.
"3. The Alternative terminal is much more compact, reducing exterior size while preserving usable space within the building. Moreover, because the Alternative design has a smaller impact on the neighborhood (only a pedestrian bridge crosses one major street) there is less need for an expensive facade treatment. As a result, as much as $300 million can be saved in constructing the terminal building.
"4. Caltrain's connection to the terminal is shorter and easier, reducing costs for the rail portion of the project by approximately $200 million.
"5. The Alternative design allows development of more valuable land along Mission Street, increasing the project's total revenues by some $50 million.

"Finally, financing costs for the Alternative are greatly reduced, not only because construction costs are much lower to start with, but also because revenues would be available from development and other sources to pay approximately half these costs at the time of construction. As a result the total debt to be financed would be closer to half a billion dollars under the Alternative, versus a billion and a half-dollars under the project as proposed in the Draft Report.

"Limited Funds Available
"The higher cost of the terminal proposed in the Draft Report might be ignored if funds were readily available for the Project. However, just the opposite is true. As acknowledged in the Draft Report, a final financing plan cannot be offered at this time because sufficient sources of funding cannot be identified. The Draft Report suggests that future revenue sources may develop at state and local levels, but these are dependent on factors beyond the Project's control. The Draft Report also proposes to pay approximately twenty percent of total costs through Passenger Facility Charges (PFC's) of $2 to $3 per day collected from each commuter using the terminal – a novel concept for a local transit project – which would increase by fifty percent commute costs for a typical AC Transit rider. Finally, the Draft Report suggests approximately $600 million could be borrowed from the federal government under its TIFIA loan program, but it is unclear what additional source would be used to repay the TIFIA loan. In summary, the level of available funding is adequate for the Alternative but not for the three billion dollar project proposed in the Draft Report.

"Conclusion
"AC Transit's position is that it likes the current Transbay Terminal and sees no urgent need for change, except for a seismic upgrade to be paid for by the State. If forced to move, AC Transit will only approve a new facility that meets all its demands regardless of cost – a Taj Mahal for buses. The result is an enormous white elephant that is neither functional nor financeable, which

is perhaps the outcome intended by AC Transit from the outset. Fortunately, the environmental review laws that apply to the Project do not permit AC Transit to play dog-in-the-manger and frighten away competing alternatives with lawsuits and similar behavior.

"Instead, federal and state regulations require the consideration of all viable alternatives as a precondition to project approval. We therefore request the Alternative be fully evaluated prior to completion of the final Environmental Impact Statement/Environmental Impact Report for the Project."

Response 5.1.7 Federal guidance for preparing and processing environmental and 4(f) documents (Technical Advisory T6640.8A) which was followed in preparing the Draft EIS/EIR, states that a "draft EIS must discuss a range of alternatives, including all "reasonable alternatives" under consideration and those "other alternatives" which were eliminated from detailed study (23 CFR 771.123(c))." The Draft EIS should include "a concise discussion of how and why the "reasonable alternatives" were selected for detailed study and explain why "other alternatives" were eliminated."

The CEQA Guidelines Section 15126.6 also states that "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which feasibly attain most of the basic objectives of the project…" The section goes on to specifically say "An EIR need not consider every conceivable alternative to a project."

Chapter 2 of the Draft EIS/EIR and Chapter 2, Volume I, of this Final EIS/EIR have sections detailing the selected "reasonable range of alternatives" and include a section entitled "Alternatives Considered and Withdrawn."

The commentor's proposed alternative is inconsistent with Proposition H passed by the San Francisco voters in 1999, which states in Section 2 that, "As part of the extension of Caltrain downtown, a new or rebuilt terminal shall be constructed on the present site of the Transbay Terminal serving Caltrain, regional and intercity bus lines, Muni, and high speed rail…"

The commentor correctly notes that the placement of a new terminal on the block between Howard, Main, Folsom and Beale Streets (known as the Main/Beale site) was studied a number of years ago. Until February 1999, that site was the City's preferred location. As noted in the Draft EIS/EIR, Chapter 2, Section 2.3, "Alternatives Considered and Withdrawn" (page 2-47), in February 1999, the San Francisco Board of Supervisors passed a resolution repealing its prior endorsement of the Main/Beale site for a new terminal and urged the retention of the bus service at the current Transbay Terminal site. The resolution urged "the City and County of San Francisco to work expeditiously with AC Transit, the Metropolitan Transportation Commission (MTC) and Caltrans to retain AC Transit regional bus service at the current Transbay Terminal site."

In addition, a cooperative agreement transferring state-owned properties to the San Francisco Redevelopment Agency and the Transbay Joint Powers Authority (TJPA) has now been signed by the City and County of San Francisco, the TJPA, and Caltrans. This agreement prohibits use of the current terminal site for private development. Finally, it should be noted that the MTC study did generate a regional consensus among the participating agencies throughout the region (Caltrans, AC Transit, Golden Gate Transit District, Muni, the City and County of San Francisco, the Peninsula Corridor Joint Power Board, and SamTrans) for a new terminal on the site of the current Transbay Terminal.

Thus the alternative proposed by the commentor would be inconsistent with Proposition H and with the stated policies of the City and County of San Francisco Board of Supervisors. It could not be implemented under the provisions of the cooperative agreement transferring state owned property to the Redevelopment Agency and TJPA, and it would be counter to the regional consensus emanating from the 2000 MTC Terminal Study.

The existing terminal site has historically demonstrated an ability to accommodate a large volume of rail passengers as well as its suitability for bus operations. Combining these two modes and the opportunity for Muni subways, while preserving the large Main/Beale parcel for development are a few of the many reasons the existing site has been selected.

The proposed terminal and the existing terminal share the same general rectangular shape that has proven capable of serving 26 million passengers in the 1940s. The new terminal will have the capacity to serve an even greater number. The rectangular shape allows for multiple points of access from the street grid which in turn provides convenience to the commuter whose origins will vary as the areas develops. The concourse level serves both as a means of circulation as well as providing floor space for joint development opportunities. The long platform features a significant benefit for passengers: the ability to access multiple buses and bus lines from a single level. This creates a much better passenger terminal than one requiring passengers to constantly check from which platform the next bus departs. This is especially significant given that several AC Transit transbay bus lines "branch-out." From an operational perspective, the terminal is well-designed and functions well operationally, with adequate independent movement and passenger facilities.

The architectural design of the terminal is in the conceptual stage, but a current architectural goal incorporates the desire to optimize natural light sources as well as provide an inviting and exciting atmosphere that visually connects with the surrounding City – hence the concept currently under review.

The co-lead agencies have refined and enhanced the train station concepts to improve train operation efficiencies and lengthen the train platforms to better accommodate longer high-speed rail and commuter trains (please see Response 3.1.2). Early in the process, the California High Speed Rail Authority worked directly with suppliers of European and Japanese high-speed trains to identify acceptable curve radii. The co-lead agencies have met the identified minimum radius requirements for the train designs contained in the Draft EIS/EIR and for the recent refinements. Moreover, California High Speed Rail Authority staff participated in the review of the two refined options and concurred with the selection of the Second-to-Main Options as the train component of the Locally Preferred Alternative.

The commentor asserts that the location proposed by the commentor would increase revenues. Without any backup financial data, it is not possible to know what assumptions or baseline financial data is being assumed. While the veracity of the stated financial savings of the Main/Beale site is not known at this time, the commentor's financial analysis fails to acknowledge the reduction in development value on one of the most, if not the most, highly valued properties in the study area – namely the Main/Beale site.

The commentor's claim that shortening the project alignment could reduce project costs by $200 million looks only at one component of project costs. Without preparing a complete cost estimate for the proposed new alignment, and particularly without evaluating potential difficulties for the proposed alignment, the estimated savings are not considered particularly meaningful.

The co-lead agencies have continued to review opportunities for reductions in Project capital costs, and the costs have been successfully reduced from the Draft EIS/EIR by $147.3 million in 2003 dollars (please see Chapter 2, sections 2.2.1.9, 2.2.2.4, and 2.2.3.5). In addition, a value engineering task will be undertaken during the design phases of the Project, as shown in Figure 5.20-8, Volume I, of this Final EIS/EIR. Correspondingly, additional funding sources are being identified and proposed funding sources solidified. This Final EIS/EIR contains a refined financial plan reflecting these activities (please see the revised Chapter 6, Volume I, of this Final EIS/EIR). In response to this comment, the co-lead agencies have revised the PFC assumptions in the financial plan as shown in Chapter 6, Volume I, of this Final EIS. The plan assumes PFCs of $0.75 for Caltrain riders, $0.25 for AC Transit riders, and $2.00 for high speed rail patrons.

The commentor is correct in that both of the proposed redevelopment alternatives call for changes to the zoning and height and bulk districts. As the City is the project sponsor for the new terminal and the redevelopment plan, the zoning changes – including changes to the height and bulk districts – would be proposed as amendments to the planning code and zoning maps. In coordination with the Redevelopment Agency and this proposed Transbay Terminal Redevelopment Project, the Planning Department is rezoning Rincon Hill and revising the existing Rincon Hill area plan and surrounding areas South of Market as part of the Eastern Neighborhood Community Planning and Downtown Neighborhoods Initiative (including urban form, height, bulk, open space, streets, etc.) These policies and rezoning will be fully coordinated with and support the Transbay redevelopment.

6.0 CONSTRUCTION IMPACTS

6.1.1 U.S. Environmental Protection Agency, Lisa B. Hanf, Manager, Federal Activities Office, December 2, 2002

"While we have not identified environmental impacts requiring substantive changes to the document, we have identified opportunities for improving the air quality mitigation measures proposed during the construction phase of the project. Our comments are listed below.

"Air Quality - Construction
"The DEIS includes several excellent mitigation measures for air quality emissions generated during construction (p. 5-179). Because air quality impacts are of increasing human health and environmental concern, EPA recommends taking steps to reduce air quality impacts to the greatest extent possible. In addition to these mitigation measures, EPA strongly recommends that the Final Environmental Impact Statement (FEIS) address the following air quality issues:

- "Identify sensitive receptors in the project area, including transit users.
- "Include mitigation measures that detail how diesel emissions will be minimized for each phase of project construction, such as the use of electrically-powered equipment or alternative fueled machinery, where feasible. Where diesel-powered equipment is necessary, keep machinery well tuned and minimize unnecessary idling.
- "Address how traffic congestion related to project construction can contribute to increased levels of carbon monoxide, especially at already congested intersections.
- "Identify additional mitigation measures that will be implemented during high winds and smog alert days."

Response 6.1.1 Sensitive receptors within 500 feet of the proposed bus storage facility are identified in the supplemental air quality analysis.[3] These sensitive receptors include residences, parks, and schools (please see air quality section in the consolidated Response 2.7.1 through 2.7.38).

Given selection by the Transbay Joint Powers Authority of the Second-to-Main, Tunneling Option for the Caltrain Downtown extension as the Locally Preferred Alternative (LPA), sensitive receptors along the Caltrain Extension alignment subject to air emission impacts during construction would primarily be located in areas for which cut-and-cover construction is proposed. This includes along Townsend Street between Seventh Street and just east of Third, along Second Street from Folsom Street north to the Terminal, and along Main Street south of the terminal to Harrison Street. Only a limited number of sensitive receptors exist in these cut-and-cover areas, including one residential parcel along Townsend, a new hotel and residential development on Second Street north of Folsom to Howard Street, and residential development north of Howard Street on the east side just north of the curve leading into the terminal.

Current conceptual designs for the Transbay Terminal include a physical separation between bus patrons' waiting areas and bus loading area, with bus loading areas located in areas with natural open air circulation. This list has been added to the Construction Air Quality Section of the Final EIS/EIR.

[3] Terry A. Hayes Associates, LLC, *Transbay Terminal Improvement Project: Bus Access and Storage Supplemental Air Quality Impact Analysis,* March 2003.

Selection of the tunneling option as the LPA also substantially reduces the vehicular traffic impacts associated with the Caltrain extension construction compared to cut-and-cover option. Use of tunneling substantially reduces the need for street closures and detour routes.

Detour routes have been selected for the remaining cut-and-cover portions of the alignment, and haul routes have been identified for removal of building demolition and excavated materials. Haul routes were selected to minimize traffic impacts from truck movements (please see Section 5.21.2, Volume I, of this Final EIS/EIR.). Removal of the tunneling materials will principally occur near the Fourth and Townsend yard, which has direct access to the I-280 Freeway. Given the tunneling approach and the selection of haul routes to minimize traffic disruption, the effects on local traffic congestion are deemed to be minimal. Correspondingly, increases in localized vehicular air emissions resulting from construction vehicles will be minimal. During construction, it is anticipated that approximately 62 one-way truck trips per hour (or 31 round trips per hour) would occur under the worst-case scenario, i.e., a cut-and-cover Second-to-Mission option with all phases occurring simultaneously. Even under this worst-case scenario, this truck traffic would not change the level of service on the affected roadways. Thus, increases in pollutant emissions from construction vehicles would be minimal. Please note that the LPA includes the Second-to-Main tunneling option, which would have 20 percent less excavated material and would therefore have fewer trucks on the roadways during construction. For additional discussion regarding truck traffic impacts during construction, please see Section 5.21.2.1, Volume I, of this Final EIS/EIR.

The following mitigation measures designed to minimize diesel emissions during construction of the proposed Project have been added to the mitigation measures previously included in Section 5.21.9 of the EIS/EIR:

As part of the contract provisions, the project contractor would be required to implement the following measures at all project construction sites:

- *Minimize use of on-site diesel construction equipment, particularly unnecessary idling.*
- *Shut off construction equipment to reduce idling when not in direct use.*
- *Where feasible, replace diesel equipment with electrically powered machinery.*
- *Locate diesel engines, motors, or equipment as far away as possible from existing residential areas.*
- *Properly tune and maintain all diesel power equipment.*
- *Suspend grading operations during first and second stage smog alerts, and during high winds, i.e., greater than 25 miles per hour.*

6.1.2 Golden Gate Bridge District, Alan R. Zahradnik, Planning Director, November 19, 2002

"EIR Comments/Construction Impacts

- "District would appreciate if traffic control plans, cited on page 5-139, could also be developed in conjunction with District staff. All short- or long-term construction detours and street closures will affect traffic conditions and GGT schedule reliability. Ultimately any prolonged effects on schedule reliability and the continued availability of bus stops near TTT have the potential to decrease the attractiveness of GGT bus service as an alternative means of transportation to and from San Francisco.
- **"**Figure 5.20-8 (page 5-161) presents an estimated construction phasing for the TTT project. It estimates construction of off-site storage facilities and access ramps during the fourth and fifth years of construction. District requests construction of the off-site storage facility be

initiated as soon as possible after this site becomes available subsequent to Caltrans' seismic retrofit project in order to address GGT permanent midday storage needs in San Francisco."

Response 6.1.2 The request by GGT to participate in the development of street traffic control plans will be communicated to the planning and design team for the new terminal for coordination with other City agencies such as the Department of Parking and Traffic and ISCOTT (Interdepartmental Staff Committee on Traffic and Transportation). The construction schedule in this Final EIS/EIR has been revised (please see Figure 5.20-8 in Volume I). The schedule reflects the availability of the off-site bus storage site based on the construction schedule of Caltrans' Bay Bridge West Approach Seismic Retrofit Project.

6.1.3 James Wittmann Dear, November 18, 2002

"Construction impacts to streets (Table 5.21-3) do not address the mid-point access for construction of the tunnel on Second Street near Brannan Street mentioned in the last paragraph on page 5-155 (5.20.2)."

Response 6.1.3 Present plans for the proposed construction site at Second and Brannan Streets involve construction of a tunnel access shaft in Second Street north of the intersection of Second with Brannan Street. Excavation for the tunnel access shaft is expected to be 60 to 65 feet wide, requiring closure to through traffic for approximately one month of Second Street between Brannan Street and Bryant Street. After the excavation is complete, the shaft would be decked to allow two lanes open on Second Street at all times. The excavation will be positioned so that excavated material from the tunnel access shaft would be loaded onto trucks stationed along the northern edge of Brannan Street. The loaded trucks would then proceed westbound along Brannan Street to their designated disposal destination. This arrangement would allow three to four lanes of traffic to remain open on Brannan Street over the duration of tunneling. Every effort would be made to keep the duration of any full street closures very short and to have the work performed, to the extent possible, on weekends.

Through use of street decking at this site, it is anticipated that at least two lanes of traffic will be open along Second Street and three to four lanes of traffic open along Brannan Street during the weekdays, although complete closure of Second Street just north of Brannan Street may occur for a one-month shaft excavation period. Table 5.21-2 in Section 5.21.2.4, Volume I, of this Final EIS/EIR presents results of detours to Third Street that would result from construction closures of Second Street during the optional cut-and-cover operations. The results projected for Second Street in the blocks between Bryant and Brannan and Brannan and Townsend show that at least LOS D would be maintained on the detour during the PM-peak period. This would be the worst case for the total closure of Second Street. With at least one lane open in each direction on Second Street, thus serving local and through traffic during the primary construction condition for the tunnel option, the projected level of service level of service at the Brannon/Second intersection would be LOS D. No left turns would be permitted at the intersection during the periods of heavy traffic, requiring partial use of the detour to Third Street discussed in Section 5.21.2.4 of the Draft EIS/EIR and in Volume I of this Final EIS/EIR. On-street parking would be prohibited on the east approach/exit of Brannan Street during hours with construction activity and on the north approach/exit of Second Street for the duration of the use of the shaft.

6.1.4 Matthew Morrison, December 17, 2002

"I am a resident of 246 Second Street in San Francisco, and would like to make some comments on the draft EIR for the Transbay Terminal/Caltrain downtown Extension/Redevelopment Project.

I have lived on Second Street for 2 years, and I believe this project will bring many benefits to the area. However, I would like to make the following comments:

- "Please be aware that although there are many businesses in the area, there are also a number of residents. Too often in the past, construction projects have been given permission to operate at night, unaware that there are people living in the area. As the project progresses, I hope you'll keep in mind that this is a mixed-use neighborhood, and that people live here...
- "I hope you'll reconsider the location of one of the staging areas from Howard and Second. That is only half a block from 246 Second Street, and the noise, especially at night, will be extremely disruptive...
- "If it is necessary to close Second Street to all traffic, I hope there will be provisions made to provide parking to the residents who will not have access to their parking garage. This will be a major inconvenience...
- "There are a number of mentions of daily cleanup (such as watering down the dust and cleaning up contraction debris). However, a construction project of this size will greatly impact the buildings nearby, and I hope there is some provision for a through power washing and or painting of 246 Second after the project is completed, as I am sure its appearance will be adversely affected by the construction dirt and debris.
- "I understand that state-of-art building techniques will be used. However, I am concerned that all the digging and impact so near our building may weaken its foundation and potentially cause some problems during an earthquake. I hope the city is fully aware of the risks and is ready to mitigate any possible problems caused by the construction to the structural integrity of 246 Second Street.

"As the project progresses, I am sure there will be a number of issues that will arise. I sincerely hope that we can work together to make this project a success and that you will be sensitive the needs and concerns of the people who make this neighborhood their home."

"In section 5.21.10.1, there is a mention of noise measurements done at our building, which recorded a reading of 57dBa. However, this measurement was taken during evening rush hour-perhaps the noisiest time of day. At night the area is much quieter, and I hope a more accurate measurement of the noise levels will be taken and used as the basis for enforcing the noise ordinance."

Response 6.1.4 The co-lead agencies are aware that the Second Street corridor and area contains a mix of land uses, including residential areas as detailed in the EIS/EIR land use Sections 4.1 and 5.1, Volume I, of this Final EIS/EIR. Construction noise varies greatly depending on the construction process, type and condition of equipment used, and layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, which makes it difficult to accurately estimate levels of construction noise. Mitigation measures are outlined in Section 5.21.10.2, Volume I, of this Final EIS/EIR regarding construction noise mitigation. These measures will be made a part of the construction contracts to minimize the noise impacts during construction.

Access to parking garages and other driveways will be maintained during construction. Temporary closures of a few hours at a time to install piling, plating, and so on, will be coordinated in advance with driveway users and with provisions for emergency access.

An additional mitigation measure has been added to the Construction Air Quality, Section 5.21.9 of the Final EIS/EIR (Volume I) stating that, "Upon completion of the construction phase, buildings with visible signs of dirt and debris from the construction site shall be power washed

and/or painted (given that permission is obtained from the property owner to gain access to and wash and/or paint the property with no fee charged by the owner)."

The tunnel alignment passes close to the existing sidewalk at the referenced location. The construction of the shoring system will be designed with the objective of controlling ground deformations within tolerable limits. This type of construction is not unique to this Project. It has been used on many projects all over the world including downtown San Francisco. Technology is available that can provide adequate protection to the existing buildings, so that their structural integrity is not affected.

A series of proposed community outreach and communication procedures during construction are outlined in Section 5.20.1, including personnel strictly dedicated to construction period community outreach, an outreach office in the construction area, and dissemination of information in a timely manner regarding anticipated construction activities.

Noise measurements at 246 Second Street were used to estimate the 24-hour noise exposure using methods outlined in the Federal Transit Administration's noise analysis guidance manual. This estimating method accounts for the typical fluctuations in noise level over a day, and has been found to be accurate in estimating noise levels for an entire day.

6.1.5 Titan Management Group, Michael Alfaro, Vice President, December 12, 2002

"Construction Period Access: The Environmental Document states that if the cut and cover method of tunnel construction is utilized, there will be block-by-block closures on Second Street. A chart describing the driveways and streets temporarily blocked by construction mistakenly states that only a delivery entrance at the Clocktower would be blocked. Obviously, the Clocktower has not been provided with the detailed plans for the closure of the Second Street, but it would appear that a driveway entrance would be blocked as well. This driveway provides access to parking both in an exterior lot and in an underground interior lot. This driveway also provides emergency access/egress in the event of a fire or other emergency.

"The Environmental Document should correctly assess the impacts on the Clocktower. If the street closure will prevent access to parking, even temporarily, that impact must be fully mitigated.

"Construction Period Noise and Vibration: The Environmental Document presents a qualitative analysis of the noise impacts, and apparently concludes that the construction phase noise impacts would be significant. The mitigation measures that are proposed, however, are so vague and ambiguous as to be unenforceable. They include such things as "conduct noise monitoring," "conduct inspections and noise testing of equipment," "implement an active community liaison program." Specific quantitative noise limits should be stated for each period during the day.

"The Environmental Document states that noise waivers may be obtained to allow nighttime construction. It also states that "it is not anticipated that the construction documents would have specific limits on nighttime construction (page 5-185)." There will apparently be no limits on the use of jack hammers, hoe-rams and pile drivers before 10 p.m. This will significantly add to the nose in the area. Mitigation measures could easily be developed preventing the use of such extremely noisy equipment unless a specified standard of necessity were met.

"A meaningful noise mitigation program could do much better than this. It could set forth specific showings that must be made in order to justify nighttime construction. The proposed

mitigation measures contain none. It could set forth noise limits in the event nighttime construction is necessary. The proposed mitigation measures do not. It could prohibit the use of certain equipment at night. The proposed measures do not.

"The mitigation plans states that contractors will be required to "use equipment with effective mufflers." What is an "effective" muffler? This is so vague as to be meaningless. Additionally, there is often an electric alternative to diesel-powered equipment. There is no requirement to use electrically powered equipment when it is available.

"The Environmental Document acknowledges that construction vibration effects can damage historic buildings. It states that a study has been done showing that no damage will occur due to construction vibrations. This study is not presented, and so it is impossible to evaluate."

Response 6.1.5 The Transbay Joint Powers Authority adopted in March 2003 the tunneling option for the Caltrain Downtown Extension as the Locally Preferred Alternative for inclusion in this Final EIS/EIR. Closures of Second Street identified in the Draft EIS/EIR for the cut-and-cover Caltrain Extension option are therefore not anticipated to occur, and there would be no effects on the Clocktower's access from the selected tunneling option. Air emissions, noise and vibration, visual, safety, and other construction related impacts associated with the cut-and-cover construction option for the Caltrain Extension would not occur at the Clocktower location under the tunneling option. Moreover, the off-site bus storage facility noise walls would be constructed in advance of the construction of the permanent bus storage facility under the west approach to the Bay Bridge.

The construction noise would have to comply with the San Francisco noise ordinance. This ordinance provides limits on noise levels from construction equipment and recommends mufflers and shielding for some types of equipment. The document also states that the contractors would have to work with the Department of Public Works (that enforces the noise ordinance) to develop an acceptable approach to balancing interruption of the business and residential community, traffic disruptions, and minimizing the total duration of the construction.

Construction noise varies greatly depending on the construction process, type and condition of equipment used, and layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, making it difficult to accurately estimate levels of construction noise. A number of construction noise/vibration mitigation measures are outlined in the Section 5.21.10.2, Volume I, of this Final EIS/EIR and will be incorporated into the construction contracts to minimize noise and vibration impacts during construction.

Information on damage from construction activities is presented in the construction noise and vibration section of this Final EIS/EIR, Section 5.21.10, Volume I. Typical construction processes do not generate vibration levels high enough to cause damage, even to historic buildings.

Two activities that can generate high vibration levels are pile driving and controlled detonation. Recommendations are given for both these activities in the technical report. As stated in the Final EIS/EIR, pile driving should be done no closer than 250 feet from sensitive structures.

As noted above, under the tunneling option, construction of the Caltrain tunnel in the vicinity of the Clocktower would be underground and deep, and impacts therefore would not occur on the surface, other than possible temporary vibration impacts of controlled detonation, if needed for construction in this area. Given that the proposed tunnel in the vicinity of the Clocktower is deep, vibration impacts are expected to be minimal.

Controlled detonation may be required at some locations along the tunnel alignment, but there is no way to determine whether controlled detonation would be required in the vicinity of the Clocktower. If controlled detonation is required, it can be designed to control vibrations within acceptable tolerances. Also, such operations can be timed so as to have the minimum possible impact on residents. An appropriate level of monitoring would be implemented to verify that construction vibration is maintained at tolerable levels.

Controlled detonation would be monitored and make use of the guidelines related to size of the detonation, distance, and type of structure. Information regarding these controlled detonation guidelines is included in this Final EIS/EIR, Volume I, Section 5.21.10. Controlled detonation activities would be monitored so as not to exceed these guidelines.

6.1.6 S.J. Manufacturing, Inc., Seymour Jaron, December 6, 2002

"Given the project goes ahead with the tunneling option, my concerns are primarily of business disruption on Townsend and Second Streets, length of construction time and vibration of building during tunneling. These issues are not thoroughly addressed in the draft EIR, nor is adequate attention given to the underpinning process as part of the tunneling process. I would like to see more information on mitigation of dust, traffic, noise and timeframe. I would like more information regarding when the various components of the project might actually begin in order to plan accordingly for the future."

Response 6.1.6 Section 5.21 of the EIS/EIR discusses temporary construction impacts, including air emissions (5.21.9), traffic (5.21.2), and noise/vibration (5.21.10), along with other types of construction impacts, and provides proposed mitigation measures for these impacts. Section 5.21.6, Volume I, of this Final EIS/EIR discusses impacts to businesses during construction. Section 5.21.2.5 provides a community outreach mitigation program that would be implemented during the construction phases.

The Draft EIS/EIR indicates that underpinning would be used where deemed necessary to protect existing structures from potential damage that could result from excessive ground movements. The design of the tunnelling and the excavation procedures (and construction sequence), and the design of the temporary support system will be developed with the objective of controlling ground deformations within small enough levels to avoid damage to adjacent structures. Where the risk of damage to adjacent structures is too great, special measures may be implemented such as: (1) underpinning, (2) ground improvement, and/or (3) strengthening of existing structures to mitigate the risks.

The tunnel alignment passes under a number of old and settlement-sensitive structures in the vicinity of the intersection of Second and Townsend streets. Even though the tunnel will be excavated using the stacked drift method (see Section 5.20.2, Figures 5.20-6 and 5.20-7), and even though the tunnel will be excavated in the Franciscan Rock formation, the risk of potential adverse impacts of tunneling on the existing buildings must be assessed, because the rock cover over the tunnel is rather shallow. As part of the initial studies performed in 1996, preliminary plans were developed to protect/strengthen existing structures to mitigate the risk of adverse impacts of tunneling on existing structures. Underpinning, if it is deemed necessary, is one of the options for mitigating adverse effects of tunneling on the existing buildings. Underpinning involves modification of the foundations of the building so that the superstructure loads can be transferred beyond the zone of influence of tunneling. Underpinning may include internal strengthening of the superstructure, bracing, reinforcing the existing foundations, or replacing

the existing foundations with deep foundations that are embedded outside the zone of influence of tunneling.

Other alternatives, in lieu of underpinning, involve strengthening of the rock between the building and the crown of the tunnel. Grouting in combination with inclined pin piles can be used not only to strengthen the rock but to make the rock mass over the tunnel act as a rigid beam, which would allow construction of the tunnels with no adverse effects on the buildings that are supported on shallow foundations over the tunnel.

Preliminary plans for underpinning have been developed that allow cost estimates to be made for underpinning. During the detailed design phase of the Project, underpinning plans will be developed specific to each of the buildings that may require it. It is not necessary at this stage of the Project to develop detailed underpinning plans.

These issues will be addressed on a case by case basis, along the alignment, during the detailed design phase of the Project. The methodology that is proposed for the Caltrain Downtown Extension, i.e. to design the support system to control ground deformations within tolerances, and selectivity strengthen structures that may be too weak to resist even small deformations, was successfully used for the Muni Metro Turnback project, and should be effective for the Caltrain Downtown Extension Project as well.

A revised Figure 5.20.8, Volume I, of this Final EIS/EIR shows the anticipated construction activities schedule.

6.1.7 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Page 5-161, Figure 5.20-8. Construction period appears to be a little over four years. The longest activity is the construction of a cut and cover Subway Structure along Track Corridor or tunneling, which lasts 36 months. This is a long time for surrounding businesses and traffic disruption. The area will feel like a war zone.

"Page 5-167. The construction period is assumed to be two years for the Second-to-Main Cut-and-Cover Option. Is this for excavation only? (See Figure 5.20-8, which shows a 36-month period of construction.)

"Page 5-173-174. This section describes possible mitigation measures to offset the disruption to businesses and community during the construction period. These include onsite and field offices, an information line, signage, traffic management plans, street and sidewalk level decking, sidewalk design and maintenance, and construction site fencing. There is no discussion, however, of the financial impact to businesses during the construction period, and if compensation would be required for loss of business. See also 5-41.

"Page 5-182. "It is anticipated that subway construction would last for a total period of approximately three and a half to four years". This appears to conflict with the two-year period mentioned on page 5-166."

Response 6.1.7 Adoption in March 2003 by the Transbay Joint Powers Authority of the tunneling option rather than the cut-and-cover option for the Caltrain Downtown Extension component of the Locally Preferred Alternative will substantially reduce impacts during the construction phase for this Project, including impacts to local businesses. For the most part, businesses along the cut-and-cover segments (i.e., those remaining with the adopted tunnel

option) are not dependent on foot traffic for clientele, which are the types of businesses most affected by cut-and-cover construction. Affected businesses in these segments are predominantly offices, and vehicular and pedestrian access to these businesses would for the most part remain and be only temporarily disrupted during construction. The construction field office would coordinate these temporary disruptions with affected businesses. To the extent required and feasible, temporary access routes will be identified for any land use subject to potential long-term loss of access during construction. The discussion on pages 5-173 and 174 of the Draft EIS/EIR are mitigation measures that will be implemented during construction to keep the affected residents and businesses in the area of construction informed of the progress of the construction and which areas will be affected during certain time periods (Please see pages 199-200 of Volume I of this Final EIS/EIR). Thus, compensation to local businesses and residents that are not going to be acquired is not anticipated, given the efforts to assure access and minimize impacts for these businesses.

The discussion on page 5-41 of the Draft EIS/EIR regarding payments for business interruption, loss of goodwill and "nuisance" costs applies only when the property or an easement is being purchased and commercial and residential tenants and/or owner-occupants would have to be relocated by the City or Redevelopment Agency. These costs are included in the property acquisition costs estimates for the Project.

The construction schedule on Figure 5.20-8 has been refined in this Final EIS/EIR, Volume I, and text references to the construction period have been edited accordingly.

6.1.8 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"Pedestrian Access (construction): (page 5-175). '70 percent of pedestrians going to and from the terminal would have up to a four block longer walk than under the existing situation' during construction.

- "What effect is this expected to have on ridership during and after the construction period?
- "Are special mitigations for physically challenged riders needed (shuttle? attention to maintenance of curb cuts during construction?)"

Response 6.1.8 The four block walk to the temporary terminal is approximately 800 feet and is estimated to add four minutes of travel time. Frequent Muni bus connections will be available from the temporary terminal to Market Street. It is therefore anticipated that ridership may decline only slightly, if at all, during operations at the temporary terminal.

The Americans with Disabilities Act (ADA) will govern the design of the terminal and all associated permanent and temporary facilities. Demolition and construction work required to build the project will certainly require the rerouting of some pedestrian pathways, sidewalks and passages to maintain public safety. The final design and contract documents prepared for this work will include clear and thorough definition of ADA compliant surfacing, transitions, curb cuts and protection of users from contractor activities, openings, and excavations. Please also see response 2.8.3.

7.0 CAPITAL COSTS / FINANCIAL PLAN

7.1 CAPITAL COSTS/COST CONTROLS

7.1.1 San Francisco County Transportation Authority, Jose Luis Moscovich, Executive Director, December 19, 2002

"As mentioned above, we comment and pose questions in the areas of Value Engineering, Construction Phasing, Delivery Schedule, and Constructability with the aim of encouraging further exploration of cost reduction opportunities. We also provide specific comments about the proposed schedule. Our comments are as follows:

- "Since the Terminal is in the same location as the existing terminal and has practically the same footprint, was consideration given to using even a portion of the existing ramps? The southern ramp could be modified to provide access to the temporary terminal. Elevation differentials, if any, could be resolved relatively easily at this stage of design.
- "The cost summary for the Terminal, pages S-24 and 2-21, begs a few questions:
  - "The cost estimate needs to resolve some inconsistencies and include sufficient backup information to raise the level of comfort about its accuracy.
  - "The percentage allowed for soft costs, including design, insurance, mitigation and escalation is only 27% of construction costs. It is not clear whether the allowances for CM/Management, construction contingency, and management reserve are included in that percentage, since they do not appear to be accounted for elsewhere in the document. Percentage of soft costs varies from as low as 22.4% for Permanent Ramps to 53% for Bus Storage.
  - "Escalation is only to start of construction; industry practice is to escalate to mid-point of construction. Although it is possible that escalation may not be a major factor due to the early stages of project development and foreseen economic climate, and thus be absorbed by contingency reserves, the budget should address this, especially in light of the latest developments at the state level.
  - "At $22 M, the cost of the temporary terminal facility appears relatively high. This boils down to approximately $330/square foot, for what is essentially an at-grade parking lot with minimal amenities, in a lot that is already graded, paved, and in use as a bus storage facility.
  - "The cost for the temporary ramp is the same for both options even though the drawings on pages S-5 and S-6 show the temporary ramp to be much shorter for the Loop Ramp alternative. Is some of the cost of the temporary ramp for the West Ramp option being offset by the new off-ramp to be built by Caltrans?
  - "The estimate shows the Loop Ramp alternative to cost more than double ($315.8M vs. $153M) the West Ramp cost, even though the West Ramp option is double-decked and the Loop Ramp alternative is single-decked (including the West Ramp portion). Can the new Loop Ramp be combined with the new Caltrans off ramp to offset some of the costs for the Loop?
  - "The West Loop is described as having six levels, with four above ground, the Loop Ramp alternative is described as five levels, with three above ground, but the cost of both options is exactly the same. On page 2-17, figure 2.2-7 shows an elbow on the East end of the terminal (which presumably accounts for the cost differential between five and six levels), but the description of the option does not mention it or explain why this portion is necessary.

- "Page 2-11 shows the layout of the two top floors but not the other two above-ground floors or the two below ground. There is no drawing depicting the full footprint of the facility, showing the envisioned floor-by-floor space utilization plan.
- **"**Table S-I, on page S-17 indicates that the West Ramp alternative will accommodate an additional 35,000 passengers by providing 34 bus bays, but the Loop Ramp alternative will accommodate only 24,000 passengers by providing 51 bus bays, 17 bays more than West Loop. This statement needs clarification.
- "The description of the Terminal (page 2-9) mentions that 150,000 to 225,000 square foot of space will be provided on the Concourse Level for retail, entertainment, conference, educational, and cultural uses, but does not provide a conceptual breakdown between the various uses, or describe what types of tenants are envisioned overall (i.e.: supermarket, theaters, bookstores, video rental, restaurants, coffee houses, etc.). The description does not mention retail, entertainment, or other concession space on the other floors. Since retail and entertainment leases are tried-and-true revenue generators, space for these purposes should be maximized throughout the facility.

"The Cost Estimate for the Caltrain Extension is only escalated to the start of construction; industry practice is to escalate to mid-point of construction. Although it appears that there are sufficient contingency funds to absorb moderate escalation, the budget should be adjusted to reflect realistic escalation forecasts."

Response 7.1.1 Temporary ramps to the temporary terminal facility are no longer included as part of the Project (please see Response 2.6.1.) Access to the temporary bus facility will be on surface streets as shown in Figure 5.21-2, Volume I, of the Final EIS/EIR. Signal preemption for the buses will be employed where possible at intersections to speed the flow of buses to and from the temporary facility. This Final EIS/EIR reviews the impacts of this change in Section 5.21.1, (Volume I), and costs for the temporary ramp have been removed from the Project's capital costs. The existing eastern ramp will be removed as part of Caltrans' Bay Bridge West Approach Seismic Retrofit Project.

Construction costs (excluding soft costs) for the temporary terminal have been revised down from $15.5 million (as shown in the Draft EIS/EIR in year 2002 dollars) to $6.5 million in year 2003 dollars. To be conservative, this cost includes the complete repaving of the existing lots. This is based on the possibility that the temporary use will increase the loading on the existing pavement section requiring repaving. During final design, further investigation into the existing pavement will be performed leading to a final determination of what can be used and/or what will be repaved.

The conceptual terminal design has been revised to shift the terminal site to the west and eliminate the need for the facility to cross Beale Street. Please see Response 2.6.9. This has resulted in a reduced Transbay Terminal capital cost estimate. The permanent bus ramps have been reconfigured in response to this revised location for the new terminal and in response to Caltrans' comments regarding the ramp configurations in the Draft EIS/EIR. (Please see Comment and Response 2.6.1.) Capital costs for the permanent bus ramps have been revised to reflect this reconfiguration and are based on recent information for similar types of construction in the Bay Area. Construction costs (excluding soft costs) for the permanent ramps have been lowered from $125 million in year 2002 dollars (as shown in the Draft EIS/EIR for the West Ramp Alternative) to $24.4 million in 2003 dollars. The revised capital costs have been revised to reflect these changes.

Soft costs assumed in the Final EIS/EIR are now consistent between the line items and reflect the following breakdown: 25 percent construction cost contingency; 10 percent project reserve; and a 25 percent contingency that includes 10 percent for design costs, eight percent for construction management, and seven percent for owner costs.

Finally, capital costs are also now shown as year of expenditure costs by inflating the 2003 cost estimates to the actual year that the costs are anticipated to be incurred, thus providing the most accurate cost estimate that can be made at this point in the planning process.

Caltrans has awarded a construction contract for the west approach while the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project continues the environmental process. Caltrans' design has the buses exiting the Fremont Street off-ramp at the southern end of the Essex corridor. The remainder of the Fremont Street ramp is designed to provide sufficient width and geometry to accommodate the traffic and provide for the touchdowns at Fremont and Folsom Streets. In the long-term, inclusion of bus traffic further along the Fremont Street ramp would affect traffic capacity during commute hours.

Even though the number of floors differs for the two Transbay Terminal options, the portion of the Full Loop Option in question is necessary to accommodate the bus bays required by AC Transit and the other bus operators. The program space required by both alternatives is similar and therefore costs are similar. Detailed footprint designs for the Full Loop Alternative were not developed, given that the MTC Transbay study selected a terminal design virtually equal to the West Ramp Alternative prior to development of the detailed floor plans.

Street level of the terminal will include entry lobbies with vertical circulation, Muni and Golden Gate Transit bus bays, Greyhound package handling storefront, ticketing, joint development, paratransit and taxi curb and egress as well as some back of house program space. The concourse level, one level above the street, will accommodate joint development and public space with a small amount of building plant. The mezzanine level will serve rail with ticketing, waiting areas, baggage handling, operator back of house space, the potential for a Muni Third Street connection on the west end and building plant.

Commercial space allocations in the terminal will be subject to the economics of the time, but the co-lead agencies agree that revenue-generating uses should be maximized to the extent possible within the context of the overall intended transportation purposes of the new facility. Specific allocations will be defined during the design phases when revenue generation opportunities can be established with more certainty.

Table S-I and Section 5.19.1.2, Volume I, of the Final EIS/EIR have been changed to reflect that both the Full Loop and West Ramp would have a peak hour capacity of approximately 35,000 passengers. The 24,000 figure shown in the Draft EIS/EIR for the Full Loop Alternative represented demand rather than capacity.

7.1.2 San Francisco Muni, Jose Cisneros, Deputy General Manager for Capital Planning & External Affairs, December 17, 2002

"Figure 6.6-1, Capital Financial Plan: It may be unrealistic to assume that value engineering will reduce the cost of the Transbay Terminal Project by as much as $170 million, particularly in light of the inevitable pressure to add more to the project scope during the outreach process to affected communities and neighborhoods, and as required mitigation for construction phasing, etc; Muni has always found that project scopes tend to grow, rather than shrink, as more participants join the planning and implementation process. This is true in major rail corridors and

facilities projects, such as the Third Street LRT Project, K-Line/Ocean Avenue Project, L-Line Project, to name a few. However, a value-engineering process would be useful to identify items that are proportionally high in cost relative to their benefits, perhaps resulting in some savings. In any case an ample contingency should also be included as part of the project budget.

Response 7.1.2 The co-lead agencies appreciate Muni's advice regarding the potential for value engineering cost reductions. By carefully reviewing capital cost estimates and assumptions in the Draft EIS/EIR and by revising various aspects of the Project – e.g., elimination of the temporary bus ramp (please see Response 2.6.1) and shifting of the new Terminal site to the west (please see Response 2.6.9) – the Project capital cost estimates between the Draft and Final EIS/EIR have been reduced by $143.7 million (2003 dollars). Even though an additional, more detailed value engineering effort is still assumed to be undertaken as part of the Project's design phase (please see Figure 5.20-8, Volume I, of the Final EIS/EIR), the refined financial plan, as presented in Chapter 6 of Volume I no longer includes an assumed value engineering cost reduction amount.

7.1.3 Andrew Sullivan, Rescue Muni, December 20, 2002

"Reduce Costs to the Project.

"Consider building the tail tracks in conjunction with the California High Speed Rail project. We feel a stub-end terminal will suffice until traffic increases with the commencement of High Speed Rail service.

"Consider postponing the construction of the underground pedestrian path to the Embarcadero BART station. Though we strongly support this project, we feel it can be delayed until there is more traffic at the Terminal and new funding sources can be found.

"Consider postponing the below-ground train yard at Seventh and Townsend."

Response 7.1.3 Please see Responses 2.2.5 and 3.3.6.

7.1.4 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"Summary of our Recommendations:

- "Perform value engineering to identify ways to phase construction of less essential portions of the project to reduce required debt service.
- "Contain overall project cost by eliminating or postponing construction of underground tail tracks and storage yards and the underground pedestrian connection to Market Street; and by avoiding cut-and-cover construction wherever feasible."

Response 7.1.4 Please see Responses 2.2.5, 3.2.1, 3.3.6, and 7.1.2.

7.1.5 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Page 5-41. "The cost estimate does not include payments associated with business interruption, loss of goodwill, and "nuisance" costs associated with the construction of the extension, including loss of property access.

"Why aren't these costs included, or at least an estimate included? These were significant costs associated with some of the Peninsula grade separation projects."

Response 7.1.5 Please see Response 6.1.7.

7.1.6 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"Business Disruption: (Pages 5-41). 'The cost estimate does not include payments associated with business interruption, loss of goodwill, and "nuisance" costs associated with the construction of the extension, including loss of property access.' Why?"

Response 7.1.6 Please see Response 6.1.7.

7.1.7 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Similarly, the West Ramp and Loop Ramp alternatives show the same construction costs. Since the West Ramp is considerably shorter, the cost assumptions appear to be inaccurate."

Response 7.1.7 The West Ramp and Full Loop options have similar program space requirements that result in similar estimates for construction costs.

7.1.8 Ken Bukowski, Councilmember, City of Emeryville, Speaker, 11/12/02 Public Hearing

"Also I would hope that you would look at alternatives to building the expensive project before you. Maybe a lesser project would make it happen as opposed to this."

Response 7.1.8 It is expected that the decision as to whether or not to adopt and construct this Project will depend on the overall perceived benefits and anticipated costs as evaluated by the decision makers.

7.1.9 Eugene Bradley, Speaker, 11/13/02 Public Hearing

"I'm still a little bit caught up between the cut-and-cover and the tunneling. Traditionally tunneling can be very expensive and very dangerous, particularly if you're going underneath, as I understand, land, former salt, former mud that the area is now in. My concern is – is that I haven't seen any real cost controls. As much as I like this project, my own concern is – I don't want to see the cost of this project double like it has with the Bay Bridge."

Response 7.1.9 While the cost per linear foot of cut-and-cover construction is often less expensive than tunneling for most projects, the depth of excavation required, the anticipated utility relocation costs, the real estate acquisition costs, and the mitigation costs associated with cut-and cover make the overall estimated costs for the tunneling option lower than the estimated cut-and-cover costs for this Project. Cost monitoring and controls are expected to be an integral part of the implementation of this Project.

7.1.10 Jennifer Clary, President, San Francisco Tomorrow, Speaker, 11/26/02 Public Hearing

"Joan Kugler was very helpful. We met with her. She showed us documents. We dug in the boxes. I was looking for the analyses of hazardous materials. I found a 1995 analysis which had an estimate for $5 million for disposal of hazardous materials. I'm not sure yet because they haven't gotten back to me yet as to what kind of update they did for the purposes of this document. I know that they did no new soil testing. But I was hoping that based on other

projects in the area like Mission Bay and the ballpark that, that they have a better idea of the amount of soil removed and where it's going to have to disposed of, the level of toxicity in the soil."

Response 7.1.10 As noted, no additional soil exploration was performed for this study. The hazardous materials data bases were searched for new data, as noted in Section 5.15, Volume I, of the Final EIS/EIR. Section 5.21.15 of the EIS/EIR provides a listing and classification of 41 potential hazardous materials sites that may affect the Project. These sites are discussed and evaluated on a segment by segment basis in this section, and proposed mitigation is provided at the end of this section. Moreover, additional geotechnical and hazardous soil investigations are anticipated during the early stages of design.

7.2 FINANCIAL PLAN AND PROJECT DEVELOPMENT/SCHEDULE

7.2.1 San Francisco County Transportation Authority, Jose Luis Moscovich, Executive Director, December 19, 2002

"The Authority is the sponsoring agency for the project in the RTP and, as such, it has been required over the past year to submit capital and operating plans. Our main focus, therefore, in performing a review of the DEIR/DEIS, were the sections relating to costs, schedule and funding. Given the less than bright prospects for moving the City transportation funding at the state level, we tried to identify any areas where additional opportunities for cost reduction may be found. The Authority's on-call engineering services consultant, Cordoba/Zurinaga assisted us with many of the technical aspects of the review:

"With the recent developments in the State Budget, which now registers a $35 billion deficit, it has become clear that there will be schedule and funding impacts to transportation projects across California. In particular, there will be significant impacts to state sales tax-dependent sources like Prop 42, and the Governor's Traffic Congestion Relief Program (TCRP) which are tied to the General Fund. The cash problems in the State Highway Account, which date back some years now, will be further exacerbated. The Governor has already proposed nearly $2 billion in transportation program cuts, and the State Department of Transportation is even considering reneging on allocations already made by the California Transportation Commission. The schedule for this project will inevitably have to be re- examined in light of these troubled developments, as was the case for all projects included in the 2001 RTP.

"While the Authority Board has not taken a position yet, I will be proposing a strategy that advocates keeping San Francisco's key projects moving. This is indispensable if we are to compete well for funding at the federal level in this critical year of the reauthorization of TEA 21, and it is essential if we are to be ready to build these needed projects once the economy rebounds. Such a strategy will only work if we propose realistic schedules, which are scaled down to our ability to cash flow projects. A central element of that strategy will be the reauthorization of the local sales tax for transportation. The Authority is ready and eager to work with the City and County of San Francisco to ensure that such a strategy can be developed in the next few months.

"Regarding the funding assumptions in Chapter 6 (Section 6.6.3 on page 6-10), while they are generally consistent with the Authority's initial funding plan submitted to MTC, we note that Prop 42 revenues are not likely to materialize until well after 2008 (as originally anticipated) and that once they become available they will need to be prioritized by the Authority Board. It cannot be automatically assumed that all Prop 42 funds would go to a single project. The DEIR/DEIS should note in Table 6.6-1 and in Section 6.6.3 the need for an Authority policy action regarding these funds. We anticipate that the Countywide Transportation Plan, currently being prepared by the Authority will include recommendations for the use of Prop 42, as well as a specific funding amount proposed for this project out of the reauthorization of the sales tax...

"On page 5-139, the discussion of Final Design and Development of Construction Contracts, states that: "Final Design would in turn lead to determinations of construction contract packaging." Development of a Contracting Plan, with its two major components the Contracting Strategy and Contract Packaging Plan, is a task that needs to be performed before Final Design, not during or after, especially for a project of this magnitude. The Contract Packaging Plan should clearly delineate how and why the project is going to be broken down in different contracts, and the Contracting Strategy must address the delivery methods (i.e., Design-Bid-

Build, CM at-Risk, Design-Build, Fabricate-Install, Owner Supplied, etc.) for each contract. "Since these documents influence Final Design, they should be developed no later than during Schematic Design for the Extension and Design Development for the Terminal, earlier if at all possible. It is invaluable to go into Final Design with the road map that a properly developed Contracting Plan provides, with full knowledge of how the design is going to be broken down into contract packages, and how they are going to be delivered; not doing so almost invariably results in expensive and time-consuming re-packaging.

"The Construction Phasing shown on page 5-161 appears at first glance to be overly optimistic:

"The schedule indicates that construction will commence in July 2004 on the Terminal and January 2004 on the Caltrain extension, 19 months and 13 months hence, respectively. The construction of the temporary terminal and ramps is scheduled to commence 10 months from now. Considering that the DEIR/DEIS is in the review phase and design is in the conceptual stages, it is difficult to envision consultant selection, design development, final design, and contractor selection to be completed within that time frame. In addition, Real Estate acquisition would have to take place within the same time frame for construction to commence on January 2004. A reasonable duration for this work would be a minimum of two years (probably closer to three), provided a very aggressive and competent management team fast tracks the project.

"The schedule assumes that Caltrans will complete the new Fremont Street off-ramp in time for the temporary ramp to be constructed in the third quarter of 2003, which with information currently available, appears unlikely. In addition: there appear to be conflicts between the construction of the new Fremont ramp and the existing AC Transit ramp.

"The schedule provides for 36 months to construct the cut-and-cover section of the Caltrain Extension (same duration for tunnel alternative). This provides for an average production rate of approximately eight feet per day, which translates to a peak rate of sixteen feet per day for about 10 months of peak construction. Considering the section of the subway (some cuts are 100 feet deep, which have to be backfilled and compacted after the subway is constructed), construction methods, and location, the production rate, although achievable, is aggressive and requires for everything to go exactly according to plan, which is seldom the case in underground projects. In contrast the retained cut section, which is significantly easier (inside the existing yard, significantly less excavation, no street closures), is planned for the same production rate.

"The schedule provides for 39 months for demolition of the existing terminal and construction of the new terminal and permanent ramps. Based on cost, this schedule represents an average construction expenditure of approximately a million dollars per workday, peaking at two million dollars per day during the 11-month (approximate) peak construction period. In addition, demolition of the old terminal will be time-consuming due to the necessary asbestos abatement. The schedule although achievable, is unlikely and appears aggressive considering the site constraints.

"The aggressiveness of the schedule is in conflict with the availability of funds, even before considering the latest grim news from the state. The project would benefit from a more realistic schedule, where projected cash draw-downs are more in tune with the financial plan.

"Without the basis for the summary schedule provided in the document, it is difficult to fully assess its reliability. We stand ready to take a close second look as soon as a detailed schedule is provided to us."

Response 7.2.1 In response to the commentor's observations and to more current understandings regarding funding options and such related projects as the West Approach Seismic Retrofit Project, the Transbay Terminal/Caltrain Downtown Extension Project schedule has been revised in this Final EIS/EIR (please See Figure 5.20-8, Volume I). Eliminating the use of the existing bus ramps to serve the temporary terminal lessens the critical construction coordination with Caltrans' Fremont Street off-ramp project. Updates include starting the temporary terminal construction in mid-2005 with land acquisitions secured over the two years preceding start of construction. The duration to demolish the existing facility and construct the new terminal has been extended to 42 months. The revised schedule is for the adopted Locally Preferred Alternative (Please see Response 3.1.2), namely the West Ramp Transbay Terminal and Second-to-Main Tunnel Caltrain Extension.

The document has been revised to reflect that contract packaging will be determined early in the preliminary engineering phase. Please see Response 2.6.1 regarding the revised anticipated bus access to the temporary terminal.

A revised Project funding plan showing anticipated funding sources is provided in Chapter 6, Volume I, of this Final EIS/EIR.

The Project co-lead agencies agree that the financial strategy for implementing the Project must be robust. Accordingly, since the publication of the Draft EIS/EIR, the financial plan for the Project has been adjusted to reflect changes in potential funding sources. These changes include an adjustment in the project construction costs and schedule, revised tax increment revenue projections, adjustments to the net operating revenue associated with changes in the Project design, a re-evaluation of the availability of Proposition 42 funds, and the elimination of Proposition 51 funds.

The new financial plan includes other revenue sources including increased bridge tolls (Regional Measure 2 passed by Bay Area voters on March 2004), reauthorization of the San Francisco half-cent sales tax for transportation (Proposition K passed by San Francisco voters in November 2004), and a High Speed Rail Bond initiative. SB 1856, signed by the Governor in 2002, places this measure on the state ballot in November 2004.

While statewide and local sales tax revenues are currently lower than previously anticipated due to the current economic downturn, the sales tax revenue projections included in the Project financial plan are based on future conditions. In general, the revenue estimates have been provided by the public agency that will administer the sales tax, and are based on conservative assumptions about future financial conditions. In the case of the San Francisco Transportation Sales Tax Reauthorization, for example, the SFCTA conducted sensitivity analyses to project future sales tax revenues. Eighty-eight percent of the allocation to the Transbay Terminal is based on the agency's "conservative forecast" of sales tax revenues while the remaining 12 percent is based on the "medium forecast" that the agency describes as "most likely to materialize." (San Francisco County Transportation Authority, "New Transportation Expenditure Plan for San Francisco," adopted July 22, 2003, pp. 7 and 10.) None of the allocation to the Project is dependent upon the most aggressive sales tax revenue forecasts.

Given the current status of the State budget, Proposition 42 revenues to this project may not materialize. Accordingly, the revised project funding plan does not rely on Proposition 42 revenues. However, a category for "other" funding is included in the plan, and should Proposition 42 revenues become available, the amounts from other sources may be reduced.

Examples of "other" sources being pursued are federal transportation earmarks and additional local sales tax revenues.

7.2.2 San Francisco Muni, Jose Cisneros, Deputy General Manager for Capital Planning & External Affairs, December 17, 2002

"Muni has also developed some cost estimates for Muni operating and capital costs associated with the Transbay Temporary Bus Terminal, which were provided to MTC. Attachment C is a copy of the letter provided to MTC in March 2001 detailing both the capital and operating costs summarized below:

"Operating Costs: Muni estimated the additional annual operating and maintenance costs associated with the Temporary Transbay Terminal at just under $1 million in FY 2000 dollars. These costs are for added service on the 2, 5, 6, and 38/38L lines. Muni does not currently have funding in the operating budget for these increased costs, and a Transbay Terminal project-funding source will need to be identified to provide funds for Muni's operating budget while the Temporary Transbay Terminal is in operation.

"Capital Costs: Muni estimated the total capital cost for the Temporary Transbay Terminal at $5.7 million. This cost includes new trolley overhead, strain poles, and special work. It also includes the provision of a temporary street supervisor's office at the temporary bus facility and a temporary operator restroom for the 1-California trolley coach line at its terminal on Beale Street. The existing 1-line restroom on Howard Street will need to be removed when the Temporary Transbay Terminal facility is constructed. The terminal should also provide space for street supervisors and maintenance personnel to park their trucks. Muni does not currently have capital funding planned, programmed, or awarded for these costs, and a Transbay Terminal Project funding source will need to be identified to provide funds for Muni's capital costs for the Temporary Transbay Terminal.

"Section 6.6 – Funding Sources: Many of the funding sources listed in the funding plan are sources that provide funds to Muni or could provide funds to Muni, such as existing Bridge Toll funds, Bridge Toll third dollar increase, and Prop 42 funds. It is difficult to gauge from the information given if providing any of these funds to Transbay Terminal would mean that Muni would receive less funding. It would also be useful to know what funds would be used to guarantee the TIFIA loans. If any of these funds are funds that Muni could expect to receive, using them as a guarantee could affect Muni's access to the funds. It would be good to have more explanation of these issues in this section."

Response 7.2.2 Provision for the above-noted Muni improvements at the temporary terminal have been included in the capital cost estimates for the Project. The temporary terminal costs have also been revised (please see Response 7.1.1).

Section 5.21.1.2, Volume I, of this Final EIS/EIR has been revised to reflect the estimated operating and maintenance costs associated with the temporary terminal. It is anticipated that Muni operators, supervisors, and maintenance personnel would utilize the restrooms, parking, and office space that will be provided at the temporary terminal.

Although Muni may incur additional operating costs while a temporary terminal is used during the construction phase of the project, the new terminal will provide Muni additional off-street layover parking, improved passenger and driver amenities, and improved passenger transfers and connections to other transit services. Unlike other transit operators using the Transbay Terminal,

the Project financial plan does not include lease payments from Muni to defray the operating and maintenance costs of the terminal.

The planned use of capital funds for the Project from various sources would not reduce existing Muni revenues. The revised Project funding plan includes a variety of revenue sources. The regional discretionary funds for the project are identified in MTC's Regional Transit Expansion Policy (Resolution 3434), in the same manner that the Muni New Central Subway Project's funding plan is included in the RTEP. As such, these regional discretionary sources have been made available to specific projects and do not result in Muni receiving less funding. Similarly, other revenue sources, including increased bridge tolls (Regional Measure 2 passed by Bay Area voters on March 2004) and reauthorization of the San Francisco half-cent sales tax for transportation (Proposition K passed by San Francisco voters in November 2004) include expenditure plans listing specific projects, such as the Transbay Terminal and Downtown Extension Project and various Muni projects. Other potential sources such as future California High Speed Rail Bond (SB 1856) funds provide formula funds to certain transit operators, including Muni, and construction funds for high speed rail to the Transbay Terminal. These construction funds would not be available to Muni, but might be available for the Caltrain extension to the Transbay Terminal.

The funds used to repay the TIFIA loan are anticipated to include tax increment revenues from the redevelopment area, Passenger Facility Charge (PFC) revenues, and net operating income generated by leases within the terminal. These sources would be generated by and dedicated to the Project. Therefore, funds that would otherwise be allocated to Muni would not be used for the Project's debt servicing.

7.2.3 Valley Transportation Authority, James E. Pierson, Planning and Development Director, November 25, 2002

"VTA is one of the three member agencies that provide operating and capital funds for Caltrain service. In this role, we are impacted by actions that result in increased Caltrain costs. Therefore, our first several comments relate to the proposed financing plan for the project or related elements. We have the following comments:

"1. The electrification of Caltrain is a prerequisite for the Downtown Extension. Statements made on page 2-3 indicating otherwise, contending that dual mode locomotives could be procured to operate service on the downtown extension in the absence of electrification, at an additional cost of $235 million (in 2002 dollars), raises concern because:

"a. The Caltrain electrification project, which is still under environmental review, does not include dual mode locomotives as an option.

"b. No source of funds is identified for purchasing the dual mode locomotives or any associated increase in operations and maintenance costs. Given current economic conditions it is unlikely that the estimated $235 million increment to purchase these locomotives will be available from Caltrain, its member agencies or the State within the projected project development schedule.

"2. Funding and schedule assumptions regarding the electrification of Caltrain (e.g. assuming electrification between San Francisco and Gilroy will be implemented by 2006, assuming that electrification will be funded entirely with local sources) are very optimistic given the current status of the electrification project. A funding plan with committed resources has not yet been developed or endorsed for Caltrain electrification by the three Caltrain Joint Powers Board member agencies, who are each responsible for one third of the project costs. VTA, who has funding for our share of electrification in Measure A of 2000 (the extension of our current sales

tax that begins in 2006) has consistently indicated that these funds will definitely not be available prior to 2006 and it is highly unlikely that VTA funds will be available for the project prior to 2016.

"3. It appears that the project sponsors assume that the State of California-owned land required for the Transbay Terminal project, worth approximately $300 million, will be provided to the City and County of San Francisco by means of an administrative transfer at no cost to the project sponsors. The final document should address this assumption and the status of the property acquisition.

"4. The statement on page 6-6 that Caltrain anticipates operating 120 trains a day is very optimistic, given the current economy in the Bay Area. The current Caltrain service level of 76 weekday trains (a decrease from the 80 weekday trains in the previous year) is not expected to increase significantly between now and the estimated completion of the Transbay Terminal.

"5. The financial analysis in Chapter 6, particularly the funding source assumptions in Section 6.6, and as illustrated in Table 6.6-1 shows that the majority of funds needed for the project have not been secured, with most of the funding programs and the associated levels of funds not within the control of the project sponsors. The revenue assumptions are also very optimistic in terms of the amounts of funds and the schedule of their receipt. The FEIS should include a more detailed funding plan."

Response 7.2.3 A new funding plan for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project is provided in Chapter 6, Volume I, of this Final EIS/EIR. (Please see Response 7.2.1.) The plan acknowledges the potential need for funding of dual mode locomotives, should electrification of the Caltrain corridor not be scheduled for completion in advance of the completion of the Caltrain Downtown Extension. The extension is scheduled for completion and operation in 2011, as shown on Figure 5.20-8, Volume I, of the Final EIS/EIR.

The Peninsula Corridor Joint Powers Board (JPB) is in the process of developing the *Caltrain Strategic Plan 2004-2023.* This plan envisions three scenarios based on different funding assumptions. The three scenarios – Baseline, Enhanced, and Build-out – were presented to the Joint Powers Board at the June 2003 Board meeting. Electrification of the system is included in all three scenarios but with different timelines. Under the Baseline scenario, Electrification would be implemented by 2020; Enhanced, 2010; and Build-out as part of the California High Speed Rail Program. Implementation of a California High Speed Rail Program would require electrification of the Caltrain Corridor from San Jose to San Francisco.

As pointed out in the comment, the current Caltrain service has been reduced from 80 to 76 in 2003 due to the state of the economy. It is anticipated that this number will increase as the economy improves. By the year 2020, it is assumed that Caltrain will operate 132 trains daily instead of the 170 trains shown in the Draft EIS/EIR. Volume I of this Final EIS/EIR has been revised to reflect this assumed train service level.

The cooperative agreement that transfers state-owned lands to the Transbay Joint Powers Authority (TJPA) and the San Francisco Redevelopment Agency has been signed by the TJPA, the City and County of San Francisco, and Caltrans. The Cooperative Agreement transfers certain parcels to the City and County of San Francisco for purposes of building the Transbay Terminal project and certain other parcels including the terminal and associated ramps to the Transbay Joint Powers Authority. The Cooperative Agreement transfers the land administratively at no cost to the City and the TJPA. The agreement requires that the property itself or the sale proceeds

for the property be used to construction the Transbay Terminal Project intermodal bus and rail terminal. It will become effective following issuance by the Federal Transit Administration of a Record of Decision and signature by the California Transportation Commission.

Please see Response 7.2.1.

7.2.4 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"The key issues of financing and development raised in the EIS/EIR center on some fundamentals of the entire project's stated feasibility. As a redevelopment project, the importance of revenue from land sales gained by the removal of the eastern ramps segments and the later tax increment streams are clearly seen as essential to the viability of the project. However, no sufficient discussion is given to the pre-development financing of the project. Please explain the sources of project and construction money needed before the availability of revenues from land sales and tax increment.

"The analysis of the revenues from mixed-use development appears to be the same in both ramping alternatives. The West Ramp alternative will make available somewhat more land for mixed-use construction. More importantly, it consolidates a city block, making development options much more attractive and valuable. As a result, land sales and subsequent tax increment revenues should be significantly higher. Therefore, we believe the EIS/EIR's assumption that revenues are the same for the alternatives is inaccurate.

"Development Strategy: The EIS/EIR should clarify why the project is to be constructed all at once, and what procedures and environmental review will occur if that strategy is found to be infeasible and construction happens in stages."

Response 7.2.4 The design and planning portion of the Project is being funded via a federal grant from the Federal Transit Administration. The tax increment revenue estimates for the Full Build and Reduced Scope development scenarios in the Draft EIS/EIR incorrectly assumed the amount of land available under the Full Loop Option. As noted by the commentor, less land would be available under the Full Loop Option and less development would therefore occur. The tax increment estimates have been updated by the Redevelopment Agency for the Final EIS/EIR and are for the West Ramp Alternative, which was selected by the Transbay Joint Powers Authority as the Transbay Terminal component for the Locally Preferred Alternative. These new tax increment estimates are shown in the revised financial plan contained in Chapter 6, Volume I.

Figure 5.20-8, Volume I, shows the assumed construction schedule for which the refined financial plan in Chapter 6 was developed. Should funding not be available for the project cash flow needs, a revised schedule would need to be developed, the financial plan would need to be revised, and additional environmental review would be undertaken, if necessary. The additional environmental review would be needed if there were substantial changes to the environmental setting or impacts associated with the new schedule. The environmental review could take a number of forms, including a CEQA addendum, a federal reevaluation, or supplemental/ subsequent environmental documents.

7.2.5 Jim Haas, Speaker, 11/12/02 Public Hearing

"I want to make a comment on the larger question which relates to the money. And if you look on page 6-8, in the chart there, there is an item that is numbered number 8 which is about $600

million. The source of the funding is very vague, and includes such things as Proposition 51 which is defeated by state voters last week, and some other very problematic things. That $600 million hole is going to be hard to fill. Now, when this project came together in its present manifestation, San Francisco said in a fairly loud voice that we think this is so important that we're going to pay for a good deal of it. And therefore, I think we need to give thought, and this EIR needs to give thought to provide more local funds and cover that $600 million hole.

"The first thing I think needs to be addressed in that EIR is the current configuration of the Redevelopment District with the holes in it that deal with developed properties. This means that the increment for those six or seven holes are not going to be available for this project. There may be – let me also say that I think that we also need to consider, and this should be discussed in the EIR – is extending the district to the south to cover, particularly the two big parking lots on the south side of Folsom Street being contemplated for large numbers of housing units. That also could be a major source of tax increment for the area. And then, thirdly – I think this needs to be discussed in the EIR – that the tunneling does not in any way make it impossible for major developments to go forward. And there is one on Mission Street which I think needs to be addressed.

"Relating to the question of the demolition of buildings for the tunnel, particularly in the Historic District, again, the choice of demolishing all these historic buildings for cut-and-cover as opposed to tunneling should be fairly obvious here. The EIR does not agree that you could build over those parcels where there is no choice but that there has to be demolition. And we should have in the EIR some idea of what can be built."

Response 7.2.5 A revised Project funding plan is included in Chapter 6, Volume I, of this Final EIS/EIR. Please see Response 7.2.1. Revisions are proposed for the Redevelopment District Boundaries as discussed in Response 4.2.4.

In the area of the proposed Caltrain Extension east of Second Street, the *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) envisions low-rise development similar in scale and character to the existing development. If buildings are demolished due to cut-and-cover construction for the Caltrain Extension, the properties would be made available for development after the Caltrain construction is complete. The *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) plan envisions this area as a mixed-use historic district combining commercial and residential development. New development on vacant parcels following construction of the Caltrain extension would be a combination of privately-developed office, retail, and residential space that would be made available to existing owners and tenants as well as affordable housing projects developed with the assistance of the Redevelopment Agency. It is anticipated that the existing fine-grained parcelization will be maintained with predominantly new low-rise (6-8 story) buildings, although taller structures will be considered.

7.2.6 M. Kiesling, Regional Alliance for Transit (RAFT), December 18, 2002

"Furthermore, we strongly urge the redevelopment area be expanded to include undeveloped parcels in the center of the proposed redevelopment area, and undeveloped parcels adjacent to the terminal on the south side of Mission Street, east of Second Street. Any new development on these parcels will be greatly enhanced by the TTT project, and it seems fitting that a portion of that benefit be captured to aid the project.

Response 7.2.6 Please see Response 4.2.4.

7.2.7 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Chapter 6, general. The chapter lacks a cost/benefit analysis. The financial plan depends on several presently non-existing revenue sources (bridge tolls, gas tax, etc.), uncertain sales taxes, and revenues derived from the Redevelopment Project and Scope (not building proposed office space) and Full Build. There is no discussion of the financial impacts of NOT doing Full Build. This should be a major concern for San Francisco residents, city government, and all the transportation agencies involved.

"Page 6-1 to 6-8. Capital costs are estimated to range from $1.864-$2.095B for the rebuilt Transbay Terminal and Caltrain extension. Federal funding for the project (page 6-8, Table 6.6-1) is estimated at about $600-$700M. However, as discussed before, an approved Regional Transportation Plan and Transportation Improvement Program are required for federal funding, and at the current time, a lawsuit has delayed such approval for an indefinite period of time.

"Page 6-4, Table 6.3-1. A net surplus from additional fares of $2.76 per passenger is outlined to cover the cost of operating the Caltrain extension. These estimates are based on estimated ridership of 50,000 daily weekday riders, which may be overly optimistic. Current operations costs are exceeding revenue sources because of the steep decline in sales tax revenues and drop in ridership in 2002. Sales tax revenues from San Mateo County (per MTC's RTP, page 6-8, Table 6.6-1) are expected to provide $27M of capital costs as well. Are these figures realistic in the light of the current state of the economy?"

Response 7.2.7 The Financial Plan includes not only existing but anticipated future revenue sources. This is not an unusual approach to project financial planning at the preliminary planning stages of a project, given that revenue sources can be contingent on completion of the environmental process, they may be required to be programmed into long-range funding/project plans (e.g., the Regional Transportation Plan), they may require future referenda/voter approval (e.g., state-wide, regional, or local tax initiatives/measures), and they may depend on facility user fees or on other forms on future revenue streams such as tax increment financing. It should be noted that, since circulation of the Draft EIS/EIR, Regional Measure 2 (bridge toll increase) and Proposition K (continuation of San Francisco sales tax) have been passed by the voters.

Selection by the Transbay Joint Powers Authority of the "Full Build" Option for the Redevelopment component of the Locally Preferred Alternative was in part due to the fact that the "Reduced Scope" Option would generate reduced tax increment revenues for the Project, as noted by the commentor.

Lawsuits regarding the Regional Transportation Plan do not jeopardize the processing of environmental planning documents. The Transbay Terminal/Caltrain Extension Project is still included in the approved Regional Transportation Plan for purposes of this environmental document.

The $2.76 cited in Table 6.3-1 is the <u>average</u> fare for the new passengers attracted by the proposed extension, exclusive of any passenger facility fee. The projections estimate that the incremental revenue is adequate to cover the incremental operating cost of the extension. Please note that, overall, Caltrain fare revenue has never been able to cover the Caltrain operating costs. The recession has clearly made the situation worse, all the more evident in that it has lowered the amount of subsidy available as well. The expectation that the downtown

extension would cover its incremental operating costs reflects the high number of new passengers that the extension is estimated to attract. This estimate was based on several factors, including current (2001) and future (2020) population and job forecasts, current (2001) ridership, and the expected changes in train service and fares.

Even if the year 2001 Caltrain ridership looks high from today's perspective, this analysis matched it with the employment and population data for that same time period. Future increases were likewise keyed to ABAG projections of job and population growth between 2000 and 2020. In between years, such as beginning of the extension service in 2010, were extrapolated from 2000 and 2020 data. To the extent that the current recession still has the local economy "off track" in 2010 or even 2020, then the ridership forecasts could be too optimistic, but where the Bay Area will be in its economic cycle at those times is impossible to estimate beyond the basic assumptions on jobs and population given by ABAG *Projections 2000*, the accepted and required basis of all ridership forecasts.

The commitment of $27 million of San Mateo sales tax funds in MTC's Regional Transit Expansion Policy (Resolution 3434) was made in late 2001, when sales tax revenues were beginning to decline, so some erosion of the revenue source is included in the commitment made at that time. Further, the funding plan does not assume that the $27 million escalates over time. However, sales tax revenue is experiencing some growth and is likely to continue to grow over time. This growth should minimize or eliminate the impact of the economic downturn on San Mateo's commitment of $27 million to the project.

Please also see Responses 2.2.1, 7.2.1, and 8.1.1.

7.2.8 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"We understand that the funding stream for this project is extremely complex. It would seem prudent to design the project so that, if funding falls short, some aspects could be postponed without compromising the ability to build them later, once new funding sources are found. For instance, components that will be necessary primarily for high speed trains should be planned as part of this process, even though construction may not occur until new funding for that project has been allocated...

"Costs relative to benefits – More information in Chapter 6 seem necessary to support new regional revenue sources such as bridge toll money or a possible gas tax. The Caltrain extension and Transbay Terminal was included in MTC Track 1 plans with costs per new rider that were lower than most project proposals."

"Operating Costs: (Page 5-115). As operating costs are often the hardest to raise, the cost increases for AC for the West Ramp option seem large. Can the sources of additional cost be clarified?"

"(Page 6-4, Table 6.3-1). A net surplus from additional fares of $2.76 per passenger is outlined to cover the cost of operating the Caltrain extension. Is this realistic in the light of the current state of the economy?"

Response 7.2.8 Please see Responses 7.2.7 and 8.3.1. Operating costs for AC Transit were calculated on the basis of travel time and distance assumptions and were provided by AC Transit staff.

7.2.9 BayRail Alliance, Margaret Okuzumi, December 20, 2002

"Containing Overall Project Cost: We believe that it is important to reduce the capital cost of the initial terminal construction to the lowest possible, viable amount to reduce interest expenses. Because the Transbay Terminal project will obtain substantial revenues through its Passenger Facility Fee, it makes sense to defer some elements of the project until higher passenger volumes can help pay for them.

- "We recommend that you eliminate, or postpone building, the massive, below-ground- level train yard at Seventh and Townsend Streets. The storage space it would yield does not justify its exorbitant cost. In lieu of expensive underground stub-end tracks that can only be used for storage, we recommend building additional through tracks (i.e., four tracks south of the Mission Bay station as far to Sixteenth Street) to provide both additional operating flexibility (at peak congestion times) and off-peak train storage space.
- "Future operating scenarios will result in relatively fewer trains requiring mid-day storage. Money would be better spent excavating a much smaller amount of fill to create a Caltrain tunnel at Sixteenth and Common Streets to allow for grade-separated street crossings.
- "We recommend that you engage in value engineering to determine elements of the plan, which can be constructed at a later date without sacrificing required near-term operational flexibility or incurring large "retrofit" expenses. These elements should be designed but left unconstructed. One example of this is the tail tracks, which can be constructed at a later phase and funded as the need arises, since they are not required for the level of service planned near term. However, tail tracks should be designed into the plan, and any necessary rights-of- way and easements acquired if necessary. We estimate this will save $100-$150 million in immediate construction costs, and more when debt service is included.
- "Similarly, postpone constructing the underground pedestrian connection to BART. We ask that it be included in the project design, but this connection can be built at a later date when pedestrian volumes at the terminal increase."

Response 7.2.9 Capital cost reductions that have occurred since the Draft EIS/EIR have been incorporated into the Project's financial plan contained in Chapter 6, Volume I, of this Final EIS/EIR (please see Response 7.1.1). Additional cost evaluations will occur as part of the value engineering activity to occur early in the design phases, and cost control measures have been assumed as part of the overall Project.

The co-lead agencies acknowledge the BayRail Alliance's views regarding funding priorities and its suggestions regarding Project elements that may be deferred. As noted in Response 7.2.4, a revised construction schedule and funding plan are included in the Final EIS that could and will be adjusted in the future should the need occur. At this point, the co-lead agencies are not proposing deferral of any Project elements (with the exception of the underground pedestrian connection to BART) but rather are reviewing means by which the integrated project parts could be funded over a realistic time frame with existing and anticipated future funding sources. Please see Response 2.2.5 regarding the possible deferral of the underground pedestrian connection to BART.

7.2.10 William Blackwell, Architect, December 2, 2002

"Page 6-8, Table 6.6-1. I have been told that Proposition 42 can be expected to provide at most only $100 million for these projects, not the $600+ million shown. How is this shortfall to be made up?"

Response 7.2.10 A revised Project funding plan is included in Chapter 6, Volume I, of the Final EIS/EIR. Please see Response 7.2.1.

7.2.11 Tay C. Via, Coblentz, Patch, Duffy & Bass, LLP, December 20, 2002

"Pages 5-19 - 5-32. Displacements and Relocation. What are the funding sources for the property acquisitions listed in the charts, and when do these funds become available?

"The project is only in its initial stages of identifying potential funding sources, and the vast majority of funds are as of yet unsecured, but the document does not discuss funding feasibility or timing. The entire financial and feasibility analysis is meaningless without this information, particularly since factors such as the 'midpoint of real estate costs' are central to that analysis. The financial information drives phasing and its physical impacts, which is a fundamental component of the Project Description and impacts analysis."

Response 7.2.11 A revised Project schedule (which helps determine project cash flow needs) is shown in Figure 5.20-8, Volume I, of this Final EIS/EIR. A revised financial plan, showing anticipated costs and associated revenue sources (taking into account the schedule for anticipated costs and revenues) is included in this Final EIS/EIR in Chapter 6, Volume I.

7.2.12 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"Table S-5 appears to have an inaccurate entry (repeated on Table 6.6-1). The revenue generated by land sales and tax increment is the same for both the West Ramp and Loop Ramp alternative. But these two alternatives do not place the same amount of land into the Redevelopment Area – so these figures should be different for each alternative. This table (S-5, 6.6-1) also assumes a revenue stream from leverage lease transactions, with the footnote that 'Leveraged lease transactions are encouraged by the FTA as innovative financing mechanism.' Have the project sponsors considered as another 'innovative financing mechanism' the use of ground rents combined with sale of development rights, rather than land sales, to provide an inflation-proof revenue stream for the project?"

Response 7.2.12 Please see Response 7.2.4. Ground leases of the publicly-owned development parcels in the Transbay Project Area will be considered by the Redevelopment Agency as will other financing options. Currently, land sales are considered the most efficient option for treatment of the parcels given the potential to generate early funding for the overall Project. However, as the time for the development of the parcels gets closer, the state of the real estate market may reveal other options.

7.2.13 Peter Winkelstein, SPUR, Speaker, 11/26/02 Public Hearing

"There seem to be some mathematical, possible mathematical errors. For example, both of the alternatives show the same income from the sale of the abandoned Caltrans land which, of course, is impossible because in one case, there's a loop that uses a lot of the land. In the other, there isn't. Similarly, the tax increment financing is shown to be the same which again can't be the same because you can't develop as much with the loop ramp alternative."

Response 7.2.13 Please see Response 7.2.4.

7.2.14 Onnolee Trapp, League of Women Voters, Speaker, 11/13/02 Public Hearing

"And we have some concerns about the financial projections, especially if the full build is not done."

Response 7.2.14 Please see Response 7.2.7.

7.2.15 Arthur L. Meader, III, December 19, 2002

"Where is the money coming from for this 2-billion dollar project (the state budget deficit currently looks to be over $30 billion and the federal deficit is soon to follow this steep, upward curve, what with war and tax cuts)?"

Response 7.2.15 A revised Project funding plan showing anticipated funding sources is provided in Chapter 6, Volume I, of the Final EIS/EIR.

7.2.16 James M. Patrick, President, Patrick and Co., December 16, 2002

"How likely is this project to be funded given the current State of California funding crisis?"

Response 7.2.16 A revised Project funding plan showing anticipated funding sources is provided in Chapter 6, Volume I, of the Final EIS/EIR.

8.0 TRANSPORTATION/MODELING/TRAFFIC/PARKING

8.1 RIDERSHIP FORECASTS AND ASSUMED BUS AND RAIL TRANSIT SERVICES

8.1.1 Valley Transportation Authority, James E. Pierson, Planning and Development Director, November 25, 2002

"6. For the 2020 no action alternatives and project conditions, was the BART to Santa Clara extension assumed in the project network? If the BART to Santa Clara extension project was not included, how would ridership for the no project and project change if BART to Santa Clara is assumed?

"7. Please provide a description of the ridership-forecasting model that was used to produce the station-level Caltrain ridership estimates. In particular, describe consistency or inconsistency with the latest MTC regional models.

"8. In Table 3.1-14, under the 2020 Extension to the Transbay project alternative column, which land use assumptions are used for ridership estimates? Are these ridership estimates under 2020 cumulative conditions?

"9. Please provide the 2020 cumulative scenario estimates for Caltrain system ridership if not already included in Table 3.1-14.

"10. No mention of Caltrain system impacts outside of San Francisco are disclosed for either Santa Clara County or San Mateo County stations in the 2020 project or cumulative scenario conditions. For example, the document should identify project impacts such as park-and-ride space demand, platform capacity, and other impacts at existing core stations, particularly since ridership is shown to increase for virtually every station on the system. In addition, no increases beyond 170 trains are assumed for the no-project and project alternatives, yet ridership is estimated to increase substantially over levels estimated for the no-project. A description needs to be provided on the peak trainload impacts caused by the project alternative.

"11. It should be explained why ABAG Projections 1998 forecasts were used for year 2020 ridership estimates as opposed to the most recent regionally-adopted ABAG Projections 2000 forecasts."

Response 8.1.1 See response to comment 8.1.7 regarding Page 3-29, Table 3.1-15 (formerly Table 3.1-14) on BART to San Jose. Presumably, BART to Santa Clara would affect the No-Project and Project conditions about equally.

The ridership model was an incremental model originally developed for performing BART system planning by Manuel Padron & Associates. The model used incremental or pivot point techniques to account for changes in service area, level of service, and projected demographics, including proposed increases in development around the Transbay Terminal. It used 2001 conditions, including Caltrain ridership and corridor demographics, as a basis from which to estimate the effect on 2020 ridership of expanding service area with Transbay Terminal Station, increasing train levels and speeds, and changing fare structure. Because the model does not estimate transfers with other transit systems explicitly, the impacts on other transit systems were estimated from available projections by the San Mateo County model and the main MTC regional model. In contrast to the MTC regional models, the model is generally more accurate at the station level of ridership, but weaker in estimating the effects of major changes in other transit

systems. Hence, the incremental model projections were supplemented by data from the regional models for those effects. See below for a description of the expected effects on other transit systems.

The most detailed comparison of the incremental model with the MTC regional models has been with the San Mateo County model. Current "build" projections by the San Mateo County model for the Caltrain downtown extension were essentially identical to the incremental model's projected extension ridership in Table 3.1-15 (formerly Table 3.1-14) for both the total Caltrain ridership and the number of riders using the Transbay Terminal.

Additionally, the Federal Transit Administration has reviewed the ridership projection methodology and results produced for the Draft EIS/EIR and has found them to be reasonable.

The ridership forecasts in the Final EIS/EIR were modified to account for a projected level of 132 trains per day in 2020 instead of the previously analyzed 170 trains per day. The result was a decrease in daily ridership of one tenth of one percent, less than 200 daily ons and offs out of approximately 128,000 daily ons and offs projected for 2020. Because the 132-train concept would be concentrated in the peak periods with a maximum level of service while reducing service in the off-peak and evening periods, the projected ridership gain in the peak periods is projected to nearly compensate for the losses in the off-peak and evening periods, resulting in a negligible decrease in ridership compared with that presented in Table 3.1-14 of the Draft EIS/EIR. Thus the ridership numbers in this Final EIS/EIR have not been changed from those presented in the Draft EIS/EIR.

ABAG *Projections 1998* were not used in the ridership analysis. ABAG *Projections 2000* and, within San Francisco, the City and County of San Francisco (CCSF) projections for 2000 and 2020, were the basis for the ridership estimates. The current CCSF projections parallel the ABAG *Projections* and include a 2000 baseline as well as a 2020 baseline plus the anticipated effects of the Rincon Hill Rezoning, Mid-Market, SOMA, and Transbay projects. The project ridership included all of the cited projects, the 2020 cumulative condition, while the no-project ridership excluded the land use component of the Transbay Terminal project (cumulative minus Transbay Terminal).

Ridership projections were capped to avoid parking impacts in excess of those that would occur under the No-Project conditions, so no new impacts needed to be reported. Excess parking capacity at adjacent stations was assumed to be available for overflow from oversubscribed stations. Caltrain is planning a capital improvement program to expand parking to meet the long-term parking demand from expected ridership caused by improved train speeds and numbers of trains. Caltrain is also expanding and modernizing station platforms throughout its system to improve train operations and accommodate higher future ridership, particularly in San Mateo County. On a system-wide basis, the 2020 ridership is expected to grow as much from demographic change and increased service to 132 trains per day as from the downtown extension. Caltrain is preparing a long-range strategic plan that will address the station and line capacity issues resulting from this cumulative ridership growth.

Impacts of the downtown extension on other transit systems in 2020 were estimated as follows:

- BART ridership for the San Mateo County stations would decrease by 11 percent,
- SamTrans bus ridership would decrease by three percent,
- Muni ridership would decrease by four percent,
- VTA ridership would decrease by two percent, and

- No significant change was projected in ridership on Golden Gate Transit or AC Transit, although those systems might experience a slight increase due to the complementary nature of the Downtown Caltrain Extension.

Please note that these ridership losses for other transit systems result from Caltrain riders choosing to no longer transfer to these other providers or selecting the improved Caltrain service rather than the other service options to make the desired trip.

8.1.2 BART – Thomas E. Margro, General Manager, December 20, 2002

"In describing impacts on corridor transit patronage on page 5-119, the DEIR notes that the Transbay Terminal/Downtown Caltrain Extension Project would reduce future BART ridership primarily along the San Mateo County extension. However, the DEIR does not substantively analyze the potential ridership impacts on BART's transbay service, which currently handles over 140,000 trips daily. For instance, the DEIR only minimally discusses the situation on page 5-120, stating that the project 'would likely encourage transfers from Caltrain to AC Transit buses, thereby increasing AC Transit bus ridership.'

"For planning purposes, we would like the Final EIR to quantify potential system impacts on AC Transit and BART related to the improved Transbay Terminal. The Final EIR should also describe the assumed AC Transit transbay bus network and services levels used in the modeling process, as was done for SamTrans, Muni and Golden Gate Transit."

Response 8.1.2 The bus portion of the terminal is sized to meet a demand of about 6,000 peak hour transbay bus passengers by year 2020. This demand has been quantified in several studies including the 1991 San Francisco Bay Crossing Study, the 1996 Interstate 80 Corridor Analysis, the Transbay Terminal Concept Plan, and the July 2002 San Francisco Bay Crossings Study.

This latest study identified peak hour bus trips increasing from about 100 to about 160 and estimated that daily patronage in the Bay Bridge corridor would increase from about 20,000 to more than 43,000. This patronage is based on BART reaching capacity with some trips diverted to buses. The Transbay Terminal EIS/EIR used the information from the new Bay Crossing Study by reference; the Bay Crossing Study developed a complete transbay bus network for its modeling process. This Final EIS/EIR has been updated with the AC Transit information (Table 3.1-14).

Additional analyses of transfers between AC Transit and Caltrain performed in response to public comments suggested that extending Caltrain to the Transbay Terminal would not have a significant effect on the AC Transit ridership, although AC Transit might experience a slight increase in ridership due to the complementary nature of the Downtown Caltrain Extension. Likewise, no additional transfers to BART from Caltrain in downtown San Francisco were identified higher than 700 per day described in the Draft EIS/EIR. Please also see Response 2.2.1.

8.1.3 City and County of San Francisco; Traffic Engineering Division; Bond Yee, Deputy Director and City Traffic Engineer, Jack Fleck, Senior Transportation Engineer, Jerry Robbins, Transit Planner V, December 18, 2002

"Muni impacts – Assuming that the new developments do not build large parking lots, most trips to and from them will be by transit. Will there be a transit impact fee and is the fee adequate to offset service costs to Muni for the additional service required?"

Response 8.1.3 The City requires that all new office developments in the downtown C-3 zoning districts pay a transit impact fee of $5.00 per square foot to Muni before they are allowed to occupy their building. Muni over the years has accepted that fee as mitigation of transit impacts. Although the concept of charging a similar fee for retail and other land uses had been discussed, the transit impact fee is currently only applied against office use.

8.1.4 Transportation Solutions Defense and Education Fund (TRANSDEF), David Shronbrunn, President, December 20, 2002

"5-120: Because the expected most significant benefit of the Project is the synergy of bringing all the region's transit operators together at one location, it is especially important to evaluate the impact of this co-location on the ridership of each of the operators. It is not adequate to say that the Caltrain extension "would likely encourage transfers from Caltrain to AC Transit buses, thereby increasing AC Transit bus ridership." The increase in transit ridership should be evaluated for its impact on mode split, regional VMT and air emissions.

"5-135: Please explain the methodology used in developing the extraordinarily low projected Caltrain rider transfer rates to Muni Metro and BART.

"5-174: Because no additional parking or feeder transit service to Caltrain stations is assumed, it is clear that Caltrain patronage could increase significantly beyond projected levels, were these facilities to be added in the future. This is additional justification for the mitigations proposed at 3-25 above."

Response 8.1.4 Please see Responses 2.2.1, 8.1.1, and 8.1.2. The minimal nature of the expected increase in AC Transit bus ridership as a consequence of the train extension suggests that there would be no material additional change in mode split, regional VMT and air emissions beyond that reported overall in the Draft EIS/EIR. Transfers to Muni Metro and BART were based on a combination of regional model results and current data. Currently about three percent of Transbay Terminal users transfer to Muni Metro to complete their trip in the morning. The corresponding figure for transfers to BART is about two percent.

Increasing the level of parking at key stations where parking constrain ridership levels and improving transit access would generally give higher projections of increase Caltrain ridership. Caltrain is planning to expand station parking by about 3,000 spaces in the corridor under its capital improvement plan.

8.1.5 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Page 3-29 states that Caltrain ridership would increase from about 13,000 to 29,300 daily boardings and alightings at the San Francisco terminal if the terminal station would be moved from Fourth and Townsend to the Transbay Terminal site. Is this significant increase due solely to the extension of Caltrain or also to the development of new office, retail and residential uses in the immediate vicinity of the new terminal that is considered part of the project? Also, page 5-120 states that the Caltrain extension would result in a shift in SamTrans passengers, which seems to account for 2,000 passengers or 4,000 of the daily boardings and alightings. Please clarify.

"Page 5-118 identifies a shift in mode share with the Transbay Terminal/Caltrain Downtown Extension Project for work trips between San Mateo and Santa Clara Counties and San Francisco.

Is the shift due solely to the extension of Caltrain, or is it also partially due to development in the area associated with the Redevelopment Plan component of the project? Please clarify.

"Page 5-120: Please quantify the increase in transfers between Caltrain and AC Transit and Golden Gate Transit, or explain why they aren't quantified.

"Page 5-121: The reduction in person-hours of vehicle travel by seven percent seems high. What is the reduction in travel times based on? Was the significant development in the South of Market area considered?

"Page 5-136: Would it be possible to provide access to the pedestrian tunnel from street level? If so it would serve many more people than the 108 currently identified.

"Transbay Terminal Components: How can the Loop Ramp Alternative with almost double the number of bus bays handle only 68% of the passengers of the West Ramp Alternative?"

Response 8.1.5 The changed land use also affects the projections, but this effect is minimal in these projections compared with the expansion of the catchment area of the downtown Caltrain station as a result of its shift to the Transbay Terminal, more or less the center of downtown employment. The analysis assumes that Caltrain would gain about 2,000 current SamTrans passengers, almost all from the discontinuance of express service in the US 101 corridor. That would total about 4,000 boardings and alightings out of approximately 128,000 per day. The seven percent reduction applied to travel in the US 101/Caltrain Corridor. It did not account for increased delay in San Francisco due to the multiple South of Market developments. Please see the response to Comment 8.1.1.

As part of the design to occur during later stages of the Project, access from the street to the tunnel would be considered at various locations along the route. The Draft EIS/EIR is not correct regarding the number of passengers that could be accommodated with the Full Loop Alternative. Both terminal options would accommodate projected bus movements equally well, and this reference has been changed in Volume I of this Final EIS/EIR (please see Response 7.1.1).

8.1.6 Andy Chow, Director, BayRail Alliance, Speaker, 11/12/02 Public Hearing

"Regarding the EIR, it seems to me that the ridership for Caltrain could be higher. I think that the ridership has been somewhat conservative, and a little bit too strict in terms of their assumptions of the Caltrain service levels. I think that if they can play around with what kind of service levels that there is and possibly include high-speed rail, and maybe – perhaps, there will be much greater ridership, more than enough to justify the project. Now, the project projection does justify it. But I believe there will be more. Thank you."

Response 8.1.6 The methodology used for and the findings of the Caltrain Extension ridership forecasts used in the Draft EIS/EIR were recently reviewed by the Federal Transit Administrative and found to be reasonable. Also see response to Comment 8.1.1. Ridership numbers for the California High Speed Rail system are included in this Final EIS/EIR. The source for these numbers is the California High Speed Rail Business Plan (California High Speed Rail Authority, 2000).

8.1.7 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Page 1-17. Caltrain ridership data is already nearly 2 years old and reflect a period of peak ridership during a boom economy. There has been a 17% decline in weekday riders since October 2001 (Source: JPB agenda packet for 10/31/02 meeting). The mix of northbound and southbound riders has most likely changed as well.

"Page 1-19. Similarly, cited data for San Francisco employee residency and mode of work trips is quite dated, citing data from 1990 and 1995, respectively. Given the decline in Caltrain ridership since February 2001, Caltrain projections may be inaccurate.

"Page 1-24-25. Is the reduction of auto trips estimate based on the number of daily auto trips that take place before or after the Caltrain/BART connection in Millbrae is implemented? Since the base case (no project alternative) includes the BART extension to the San Francisco International Airport, the reduction should be based on the number of auto trips after the BART extension is in service, but that is not clear in the discussion. Please clarify.

"The estimated reduction in auto trips may be affected by the opening of BART service to Millbrae and the resulting connection with Caltrain, will give where northbound commuters will have the option of getting to downtown locations on BART."

"Pages 3-1 to 3-5. The discussion relating to Caltrain level of service and fare structure is dated. Current service is 76 trains on weekdays, with no service on weekends until March 2004 for construction of passing tracks and other upgrades of the signaling system, trackwork, and other improvements to allow for "Baby Bullet" express service. An average 10% fare increase took effect in July 2002. One-way fares now range from $1.50 to $7.25, and discounted midday "offpeak" fares no longer apply. Caltrain ridership is currently well under 35,000 weekday trips.

"Page 3-28. Caltrain ridership projections with 170 trains/day sound almost too optimistic. An increase to 50,000 riders/day from the current ridership figures of around 30,000 riders is even more optimistic than the stated 35,600 daily trips in February 2001.

"Page 3-29, Table 3.1-14. Why do daily Caltrain boardings at Millbrae decrease in 2020 with the downtown extension (5,948) compared to No Project (8,370)? There is no discussion of possible impact on Caltrain ridership of a BART extension to San Jose. It was noted on page 1-19 that drive-alone rate is highest (44%) from South Bay to SF, with lowest transit mode (37%) while East Bay to SF is 55% transit.

"Page 3-30, Table 3.1-15. The title of this table is misleading, since it includes trips from Redwood City to Concord and from Oakland to San Carlos, which clearly must include BART and Muni segments. It does not appear to include the addition of the Baby Bullet service."

"Page 5-118. Linked transit trips for the region increase by 10,000/day. This is good, but is really only a little over 1% of the total. The discussion on increase in Caltrain ridership is vague, and contains no discussion of cost/rider.

"Page 5-119. The predicted 9% decline in BART ridership in San Mateo County is cause for concern for county taxpayers who will be responsible for BART losses in that corridor. (See comment about page 3-29.) This sounds like it will be difficult to get beyond an operating deficit in the BART/SamTrans agreement. What is the financial equivalent? Will the expected decline in SamTrans expenses offset the BART losses?

"Page 5-135. Estimates of Caltrain and AC Transit transfers to BART and Muni based on a 2001 survey found 5% of riders would make such a transfer. However, only half of the AC riders are assumed to use the underground tunnel, which translates to 2.5% of AC Transit riders because the AC Transit loading area is aboveground. All Caltrain riders making the transfer are assumed to use the underground tunnel because the Caltrain platform is underground. Therefore, based on 10% of 50,000 daily Caltrain riders disembarking at the downtown terminal, (see page 3-6) there would be 5% of 5,000, or 250 potential roundtrip users of an underground tunnel from Caltrain to BART or Muni. Based on 15,205 daily AC Transit riders, (see page 3-15) 2.5% or 380 AC Transit riders would use the underground tunnel. In addition, 108 pedestrian trips are expected to be diverted from the Fremont and Mission Streets intersection. This appears to add up to 738 daily users of an underground tunnel. Is this correct? It would have been helpful if a table were included that adds up these estimates.

"Page 5-107. Elimination of SamTrans routes to downtown is of concern to coastside commuters. Coastside locations, such as coast towns Daly City, Pacifica, would be better served (they say) by continuation of bus service to downtown San Francisco, not by feeder to BART or Caltrain.

Response 8.1.7 Please see Responses 2.4.11 and 7.2.7. The data on the journey to work, employee residency, and mode of work trips from the 2000 U.S. Census has yet to be made available to update the referenced data. The estimated reduction of auto trips assumes the existence of the Caltrain/BART connection in Millbrae. The discussion of pages 3-1 to 3-5 regarding the current Caltrain level of service and fare structure has been updated in Volume I of this Final EIS/EIR. For the Final EIS/EIR, Caltrain ridership has been modeled to reflect 132 trains per day in the Year 2020, as shown in Caltrain's current Strategic Plan. This assumed reduction in service results in a reduction primarily of off-peak trips, given that the number of peak-period trains is maximized under the 132-train scenario.

The decrease of Caltrain boardings at the Millbrae Station reflects the anticipated effect of fewer riders transferring to and from BART at Millbrae with the advent of the downtown extension. The extension of BART to San Jose was not analyzed by this model, and ridership for the BART extension to San Jose is currently under review by FTA.

Since the current Caltrain service does not go to downtown San Francisco, the use of Muni is implicit in all trips to downtown San Francisco. Table 3.1-15 has been annotated to make explicit the use of Muni for connecting to downtown San Francisco and BART for connecting to the East Bay. The times quoted in the table did assume the addition of Baby Bullet service, but reflected the <u>average</u> trip time during the peak period, not just those on the Baby Bullet express service. The latter was assumed to take 49 minutes between San Jose and San Francisco, with four intermediate stops. Baby Bullet trip time from Palo Alto to San Francisco was assumed to be 31 minutes, with two intermediate stops. This contrasts with local service, which was assumed to require 76 and 51 minutes, respectively, for those trips in 2020. The "average" time on the train for those trips was estimated to be 62 and 40 minutes, respectively.

Page 5-118 of the Draft EIS/EIR discusses impacts to corridor transit ridership, not Caltrain per se. Please refer to Subsection 3.1.6.1 and 3.1.6.2 for a discussion of Caltrain ridership. Cost per rider is used to evaluate projects competing for funding under the FTA "New Starts" program. This Project is not pursuing New Starts funding.

The proposed Project has a multiplicity of goals, including reducing travel time for existing Caltrain passengers as well as attracting new passengers. Please note that the Federal Transit

Administration (FTA) has been phasing in a new measure of benefit for rail projects competing for "New Starts" funding. This measure, known as "user benefit," is intended to capture all aspects of benefit that a project would generate for travelers. Examples of these benefits include: a faster transit trip for existing transit users; avoidance of costly parking charges in the central business district, and the value of having an additional attractive option to driving or carpooling.

The projected decline in BART riders from the Caltrain Downtown Extension would consist primarily of Caltrain riders originally attracted to BART from Caltrain with BART's extension to Millbrae. With the downtown Caltrain extension, a portion of these former Caltrain riders are expected to switch back to Caltrain.

It is anticipated that ridership on both BART and Caltrain will be reviewed and adjustments in service levels would be made as needed to balance revenue and expenses. The BART/SamTrans Comprehensive Agreement provides for the two agencies to "work together on a regular basis to review revenue, expense and patronage data and, based thereon, to jointly determine actions to be taken to maximize ridership, minimize expense and generate net operating surpluses."

The purpose of analyzing the impact of the underground connection between the Transbay Terminal and BART was not to determine the number of people who would use the tunnel, but to determine the effect on intersection level of service in the peak 15-minute period. The conclusion in Section 5.19.6.1, Volume I, of this Final EIS/EIR has been changed to say, "A total of 108 pedestrian trips are expected to be diverted from the Fremont and Mission Street intersection during the 15-minute peak period." The section has been modified in this Final EIS/EIR to clarify the analysis.

The 108 15-minute peak period pedestrian trips diverted from the Fremont & Mission intersection were calculated by adding together people expected to use the tunnel from the following generators:

- Pedestrians generated by the redevelopment
- Pedestrians traveling to/from AC Transit, including those transferring to/from BART or Muni
- Pedestrians traveling to/from Caltrain, including those transferring to/from BART or Muni

For each group, the following factors were used to determine the number that would potentially use the underground terminal:

- Peak hour ridership on AC Transit or Caltrain in 2020, converted to peak 15-minutes
- The percentage of transfer activity between modes
- The percentage accessing each mode as pedestrians
- The percentage anticipated to otherwise use the Fremont & Mission intersection, based on the direction pedestrians travel to/from the terminal per the SFTA model
- The percentage estimated to use the underground tunnel versus streets.

At the present time, SamTrans does not anticipate elimination of routes outside of the Caltrain corridor with implementation of the Caltrain Downtown Extension. The SamTrans express bus routes considered for elimination (to which page 5-107 of the Draft EIS/EIR refers) would be in the Caltrain corridor, not on the coastside. Improving Caltrain service is independent of transit access from the coastside.

8.1.8 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"On pages 1-17, 1-19 ridership from a boom period and mode split from 1990 and 1995 are used. In Chapter 3, Caltrain level of service and fare structure does not reflect recent changes.

- "How does the recent drop in ridership with economic decline affect projections? Will ridership shifts shown on Page 3-29, Table 3.1-14 and on page 5-119 (decreased Millbrae boardings) fiscally impact SamTrans?
- "Do projections take into account BART to San Jose service?
- "Are Baby Bullet travel times included in Page 3-30, Table 3.1-15/could they be? Include note that East Bay travel times include other transit providers.

"Reduction of auto trips: (Page 1-24-25). It appears from the chart that the primary cause of projected Caltrain ridership increases is the improvement in travel time due to Caltrain improvements, with additional substantial travel time savings after the Extension. Does the estimate take into account an operating BART extension to the San Francisco International Airport? What if Caltrain is not electrified by 2006?"

Response 8.1.8 Please see Responses 7.2.3 and 8.1.7.

8.1.9 Onnolee Trapp, League of Women Voters, Speaker, 11/13/02 Public Hearing

"It's not entirely clear how many train cars could unload at one time and at what speed, what space between trains, that sort of thing, from the drawings in the book. The previous several years ago go-around had a little more explicit information, so I was looking for that this time and not finding it."

Response 8.1.9 Please see Response 3.3.1.

8.1.10 Ken Bukowski, Councilmember, City of Emeryville, Speaker, 11/12/02 Public Hearing

"Another concern is that when BART to San Francisco Airport is completed, that Caltrain will lose ridership. We have to be careful here. We want to keep the viability of this terminal so we don't lose it."

Response 8.1.10 Please see Reponses 8.1.7.

8.2 TRAFFIC IMPACTS/DESIGN

8.2.1 California Department of Transportation, Timothy C. Sable, District Branch Chief, December 20, 2002

"Traffic Operations: Page 3-35 (section 3.2.4): Regarding conversion of High Occupancy Vehicle (HOV) ramp operations from Sterling Street to Essex Street. It is not clear how this would benefit motorists unless the City has plans to provide useful HOV bypasses on city streets approaching the ramp that function at least as well as what currently exists at Sterling Street. Also, since Essex Street feeds a full lane onto the Bridge, it may be necessary to reduce this to a merge with the First Street on-ramp traffic (as it was pre-Lorna Prieta earthquake) if changed to HOV operation because of the necessity of keeping the lane full in order to maximize the capacity of the Bridge.

"Page 3-35 (section 3.2.4): "Harrison Street would be restriped to one-way westbound from First Street to Third Street". This would have a significant impact on the operation of a number of intersections, particularly at Second Street/Harrison Street and Second Street/Bryant Street. It would also remove one of the primary directions of approach to the Essex Street on-ramp. Has this modification been considered in the reported levels of service of these intersections?"

Response 8.2.1 As noted on page 3-34 of the Draft EIS/EIR, these street improvements are planned by the City and County of San Francisco and not part of the proposed Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. The projects were assumed as part of the No-Project Alternative and included in the traffic modeling.

8.2.2 City and County of San Francisco; Traffic Engineering Division; Bond Yee, Deputy Director and City Traffic Engineer, Jack Fleck, Senior Transportation Engineer, Jerry Robbins, Transit Planner V, December 18, 2002

"Level of Service Comments: For the most part, the transit operations which this project serves will operate on grade separated facilities – AC Transit on ramps and Caltrain underground. Therefore, the traffic impacts from the Terminal itself should not be too significant. SamTrans, Golden Gate Transit, and Muni operate on surface routes, so they will be affected by traffic generated from the redevelopment project. With regard to these new developments, the City policy of not building large parking garages with new buildings should help prevent these buildings from generating large volumes of traffic. In fact, considering that most of the land to be developed is currently occupied by parking lots, the total net increase in traffic generation should be minor. Therefore, we have a question about the sentence on page 5-125, which states, 'The Terminal/Extension Project would result in a substantial increase in vehicle trips to and from new developments.' How was this calculated?

"Table 3.2-1 on page 3-34 does show numerous intersections operating at traffic LOS F, particularly on 1st Street. This congestion is due to queuing for the Bay Bridge in the PM peak. In fact the actual conditions are somewhat worse than shown on this table. Our observations show that traffic backs up on 1st Street at least to Market Street about half the time during the PM commute periods. This percentage has fluctuated since the 1989 Loma Prieta earthquake from about 30% to 70% depending on various factors including the state of the economy. This queuing condition is not likely to change, but it could get worse, e.g. the back-up could be every night. The City deploys Parking Control Officers to keep intersections open, and we have re-routed buses to help them avoid getting stuck in the queue.

"On page 5-124 the report lists 7 intersections as having adverse impacts due to the project. An additional six intersections are listed on page 5-125 as having adverse impacts under cumulative conditions. Of these 13 adversely impacted intersections, 11 are part of the Bay Bridge queue. We agree with the suggestion on page 5-126 that funding for the SFgo program could be a useful mitigation effort. The SFgo program will provide improved traveler information so that drivers will be aware of the queuing and possibly change plans to adjust to it, prior to starting their trip. In addition, SFgo will have traffic monitoring cameras that can be used to dispatch parking control officers in a timely fashion when the queue begins to form.

"The other two intersections with adverse affects – Beale/Howard and Fremont/Howard are not part of the queue. Therefore, we would like to see mitigations to improve operations here. It appears that the intersections along Fremont Street were only looked at in the PM peak hour. This street is more congested in the AM peak than the PM peak due to the Fremont Street off-ramp from the Bay Bridge, so the report probably is not looking at the worst case impacts.

Response 8.2.2 The San Francisco County Transportation Authority (SFCTA) countywide travel demand model was used to develop the travel forecasts for cumulative development and growth in the region, as well as to determine the travel demand associated with the project. The model determines the future travel demand and the origin/destination and travel mode (auto, transit, walk and bike) for each trip, and assigns those trips to the transportation network.

Although individual projects in the Transbay Terminal area may not provide enough parking to meet their demand and may displace existing parking facilities, the model assumed that parking would be available throughout the area, although the parking would have a high cost. As a result, the Model did predict an increase in the transit mode share in the future. If sufficient parking were not provided within the Transbay Terminal area, however, additional drivers may shift to transit, which would result in a reduction in the traffic volumes projected from the model and as analyzed for the project. For this and other environmental documents, the projection of vehicle trips is a function of the type and amount of various planned land uses and not directly related to parking availability so that the analysis in the EIS/EIR is by its nature conservative and comparable to other San Francisco environmental documents.

The poor weekday PM peak hour operating conditions at the intersections of Howard/Beale and Howard/Fremont in the future would be directly related to operations of the San Francisco-Oakland Bay Bridge. Currently, there is a high volume of traffic traveling on Beale Street to Howard Street to First Street to access the bridge from the downtown area. With the future development in the Transbay Terminal area, in conjunction with the general increase in traffic volumes throughout the downtown, the number of vehicles using this route is anticipated to increase by the year 2020, resulting in the levels of service indicated in the report. Due to the configuration of these intersections and the queued conditions, no feasible mitigation measures were identified. Additional, explanatory text has been added to the traffic Section 5.19.4, Volume I, of the Final EIS/EIR to acknowledge traffic congestion due to queuing for the Bay Bridge.

In general, intersection operating conditions during the weekday morning commute period are less congested than during the evening commute period. During the PM peak hour, there are severely congested conditions throughout the area, resulting from queues from the Bay Bridge on-ramps. Although there are higher volumes on some streets in the morning, such as Fremont Street leading from the Bay Bridge off-ramp to the financial district, the queued conditions are contained on the freeway and intersection operations are generally unconstrained. As a result, any congestion is local and directly related to operations at specific intersections (e.g., at the

intersection of Fremont/Howard associated with morning carpool drop-off). This EIS/EIR evaluates the PM peak conditions as being those that could have the highest potential for adversely affecting the surrounding area as a result of this Project.

8.2.3 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Autos and Parking, Page 5-122: Why does Table 5.19-4 have Existing plus Project conditions, while the text header is Baseline plus Project? This is somewhat confusing. 2020 Baseline plus Project seems understandable and indicates that it is not a true Existing (2002) condition.

"Page 5-123: What does the shading on Table 5.19-5 represent? Some of the "adverse effect" intersections are shaded, but not all. Were some missed?

"Page 5-126: The EIS expects there to be 7 intersections with "adverse and unmitigable" traffic impacts. The only improvement proposed is that the City may request developers to contribute to the new Integrated Transportation Management System program. Since developer participation is not mandatory and this system has not yet been implemented, what evidence is there that it might ameliorate these specific traffic impacts?"

Response 8.2.3 The terminology in the text and tables of this Final EIS/EIR clarify that it is the 2020 Baseline Plus Project and 2020 Cumulative conditions that are being addressed. The shading was originally meant to designate only the intersections that degraded to Level of Service (LOS) E or F. Impacts on intersections already at LOS E or F that did not change the level of service required review by the Department of Parking and Traffic to determine if there was an adverse impact. For consistency, all adverse impacts are now shaded and so noted in Table 5.19-5, Volume I, of this Final EIS/EIR. The contribution to the proposed Integrated Transportation Management System (ITSM) cannot be required as a mitigation measure because this separate EIS/EIR is not the decision-making document for application of this system. As more projects make contributions to the ITMS, it is expected to be implemented by the City Department of Parking and Traffic.

8.3 TRANSIT IMPACTS

8.3.1 Transportation Solutions Defense and Education Fund (TRANSDEF), David Shronbrunn, President, December 20, 2002

"3-25: The high existing peak period transit capacity utilization indicates a need for mitigation for the increased passenger demand resulting from the Project. Please evaluate the impact of increased use of the Terminal on the need for additional Muni service, to maintain acceptable service standards. Note, for example, on 5-114 how the ground level loading area will operate near capacity for existing levels of transit service. Determine locations for loading for the full complement of transit service needed to adequately serve the new Terminal.

"3-26: Verify that the capacity utilization numbers in Table 3.1-13 are comparable. Describe the capacity utilization service standards for the other transit operators.

"3-28: The asserted 140% increase in 3.1.6.1 is incorrect.

"3-48: The discussion is unnecessarily complicated by the inclusion of BART patrons that did not use the Terminal in the AM. Because they are irrelevant to any useful conclusions, they should be deleted.

"5-115: Please provide an explanation for why operating costs for AC Transit will increase beyond existing levels.

"5-119: Include the Muni and other transit operator cost savings in a comprehensive analysis of Fiscal and Economic Impacts.

Response 8.3.1 Please see Response 2.6.2. For all of the transit operators in Table 3.1-13, capacity refers to the total number of seats provided for all runs during the PM peak period (typically 5:00 – 6:00 pm). These figures are based on the operator's capacity standards as identified in their Short Range Transit Plans, which are accepted by the Metropolitan Transportation Commission. MTC's acceptance of the SRTP standards by definition creates compatibility on a regional basis. Consequently, the capacity utilization numbers are comparable. To make the EIS/EIR data comparable, only passenger seats were used for analyses in terms of ridership/capacity. Section 3.1.6.1, Volume I, has been revised to note that Caltrain ridership is expected to grow by 40 percent system wide.

Both alternatives for a new Transbay Terminal include a design option of a pedestrian underpass between the Transbay Terminal and the Embarcadero Muni Metro/BART Station. The volumes of passengers transferring between the transit services at the Transbay Terminal and BART may be an important factor in evaluating the merits of the underground passageway. Consequently, this discussion has been retained in this Final EIS/EIR.

Transit operating costs are evaluated in Section 5.19.1. Operating costs for AC Transit were calculated on the basis of travel time and distance assumptions. Table 5.19-2, Volume I, has been corrected to show a comparison of existing AC Transit operations for the various design options. The estimated 40 percent increase in AC Transit costs results from the increased deadheading to the off-site bus storage facility. Please see Response 2.6.7.

8.3.2 James Dear, Speaker, 11/12/02 Public Hearing

"We are also concerned about the transit impacts for the residents in the nearby area. Document says 125 will be canceled, the 45, the 30, the 10, and all we get is a central subway. As far as I read, we're going to have a stop on Third and King, and, and then again at Moscone Center. Three blocks either way. I count four bus lines. It doesn't seem that San Francisco is friendly for the people living in the immediate area."

Response 8.3.2 This comment is referring to the proposed New Central Subway Project rather than the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. The commentor should forward his comments to Sue Olive, Tennis Tsa, or John Thomas at Muni.

8.3.3 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"Bus Service Suspension: (Page 5-107). Elimination of SamTrans routes to downtown is of concern to coastside commuters. Would suspension of service lengthen commutes from locations such as Pacifica?"

Response 8.3.3 The travel time on SamTrans Line DX Pacifica – San Francisco between the Linda Mar Shopping Center and the Transbay Terminal is 47 minutes. Without the Line DX, Pacifica's coastline residents could take SamTrans Line 110 from Linda Mar Shopping Center to the Daly City BART Station and make a timed transfer on the Richmond BART line to the Embarcadero BART Station. The total travel time on this alternative route would be 52 minutes, including transfer time. Please also see Response 8.1.7.

8.3.4 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Page 5-115. This looks like a huge cost increase for AC Transit for the West Ramp option, which is the lowest overall cost option in all other respects. Is this increase based on the increased mileage required for offsite storage?"

Response 8.3.4 Please see Response 8.3.1.

8.3.5 William Blackwell, Architect, December 2, 2002

"Page 1-10. The one-mile "gap" will be partially erased for those Caltrain riders who transfer to BART at Millbrae.

"Page 1-11. I don't have a copy of an August 1996 ridership report by Charles River Associates, but a later report by the High-Speed Rail Authority* put the loss at 110,000 annual riders (not 200,000) if HSR is terminated at Fourth & Townsend. Assuming weekend and holiday travel at 70 per cent of normal, this loss is only 332 riders per workday. The same report places the cost of HSR extension to the Transbay Terminal site at $270 million, which would be an incredible amount to pay for a net gain of only 332 daily riders-less than one half of one per cent of the total riders.

"Simply providing long- and short-term parking spaces at Fourth & Townsend would probably increase San Francisco HSR riders by double or triple that number.

"*California High-Speed Rail Authority "Revised Staff Recommendations for VHS Route Adoption" July 14, 1999, page 14, stated that "By terminating the Peninsula VHS routing at the 4 &

Townsend Station site, about $270 million can be saved in construction costs while reducing the length of the system by less than one mile... ridership and revenue for long-distance travelers would only be slightly less than the Transbay Terminal alternative... 110,000 less riders per year which leads to $4 million less revenue per year." Total annual riders was 23.1 million at that time, and now is projected to be 36 million."

Response 8.3.5 The commentor's use of the term "partially" is correct. Riders who transfer at the Millbrae Intermodal Station would save about four minutes (with an additional cost of $2.50) compared with the current Caltrain trip. By comparison, the Transbay Terminal Station would save downtown Caltrain riders about 14 to 15 minutes.

Ridership estimates for high speed rail varied depending on whether they were at the conservative end to produce revenue projections for the business plan or higher levels for calculating environmental impacts, so there can be valid differences. The California High Speed Rail Authority notes that actual ridership could be at least twice that shown for the conservative revenue projections, and these higher estimates are used to evaluate impacts in the Tier 1 EIS/Program EIR currently under public review for the California High Speed Rail Program. In fact, the legislation (SB 1856) placing the high speed rail program on the state ballot states that the first phase shall be "Between San Francisco Transbay Terminal and Los Angeles Union Station."

Provision of parking for high-speed rail patrons could be more achievable in the Fourth and Townsend area, but the area is currently constrained by new development for the Mission Bay Development. Parking over the train yard may be achievable but would be costly. Given the City of San Francisco's "Transit First" policy, the preferred mode of arrival for high-speed rail patrons at a San Francisco high-speed rail terminal is by transit, taxi, or kiss-and-ride.

8.4 PARKING

8.4.1 Titan Management Group, Michael Alfaro, Vice President, December 12, 2002

"The Clocktower has entered into an agreement with Caltrans to lease the parking lot off Harrison Street behind Marathon Plaza. This lease will run from the completion of the Western Approach Seismic Repair until December 31, 2038.

The Environmental Document should analyze whether any of the ramp alternatives would have an impact on this lot and mitigate any impacts that may occur.

"The Clocktower has entered into an agreement with Caltrans to use the parking lot at Second and Harrison until completion of the western approach Seismic Repair. This lot is identified for future redevelopment. The timing of that redevelopment is not stated. No potential development of that site should interfere with the Clocktower's ability to use that lot in accordance with its agreement with Caltrans."

Response 8.4.1 The commentor refers to the parking lot behind the Marathon Plaza building and asks for an analysis of impacts on this parcel due to the Loop Ramp versus the West Ramp Alternative. In particular, the commentor asks about impacts on a claimed agreement between the Clocktower and Caltrans to lease this parcel until 2038. Caltrans and the Clocktower have an agreement regarding the lot at the corner of Second and Harrison Streets as a result of impacts from Caltrans' West Approach Seismic Retrofit Project. That agreement will provide parking facilities to the Clocktower during and after completion of the West Approach Project to the year 2038.

Both ramp alternatives would use approximately the same configuration near these two parking lots for bus access to the terminal and bus storage areas. (See Figures 2.2-1 and 2.2-7 in the Draft EIS/EIR). There are no differing impacts to either lot from the Loop Ramp versus the West Ramp Alternative. Even if temporary closure of the parking lot behind Marathon Plaza is required for construction of the ramps, that closure would not affect the Clocktower's agreement with Caltrans over the lot at the corner of Second and Harrison Streets.

9.0 CULTURAL/HISTORIC RESOURCES

9.1.1 Charles Edwin Chase, AIA, Executive Director, San Francisco Architectural Heritage, December 4, 2002

"New Transbay Terminal – The DEIS/DEIR does not provide for a preservation alternative for the removal of the existing Transbay Terminal Building, a contributing resources to a National Register eligible property. The two alternatives represent a total replacement of the building and ramp system, which are listed as contributing elements to National Register eligibility. We believe this is inconsistent with federal requirements, which stipulates special efforts be made to protect historic sites. We disagree that a prudent and feasible alternative cannot be designed that would minimize harm to the known historic resources.

"Caltrain Extension from Fourth & Townsend Streets to a New Terminus below the proposed New Transbay Terminal – The two extension alternatives indicate the preferred 'cut and cover' construction method and alternatively, 'tunneling' south of Folsom Street. Tunneling would reduce the adverse effect of loss of contributing resources to the San Francisco South End Historic "VI" District and Rincon Point/South Beach Historic District, and minimize the Project's impact on known contributing historic resources.

"In all cases, retention of the three structures at Howard and Second Street were determined infeasible. Significant subway construction in other major metropolitan cities including New York and Washington DC was accomplished without removal of existing buildings of greater magnitude than those within the proposed tunnel alignment.

"In addition there are several technical issues contained within the DEIS/DEIR which require we would like to call to your attention.

"Section 4.16.6 – This section references the classification of historic resources identified in Article 11 of the San Francisco Planning Code. The DEIS/DEIR lists Category II rated buildings as both significant and contributory and does not reference Category III buildings. This is inconsistent with Article 11 of the code.

"Section 5.14.3.4 –
"1. Mitigation measures are identified which include recordation. The DEIS/DEIR states: 'The mitigation measures identified above are suggested measures; actual measures will be set forth in the MOA. Although recordation eliminates one adverse effect of demolition, the loss of historical information, it does not present the tangible loss of historically significant properties." We believe this to be an inaccurate statement. Previous court decisions have stated that recordation is not a sufficient mitigation to reduce the level of effect below adverse.
"2. Page 5-91 references The Foundation for San Francisco's Architectural Heritage. The legal name of the referenced organization is San Francisco Architectural Heritage."

Response 9.1.1 Please see Section 8.6.1 of the EIS/EIR, Comment 2.9.1 from Caltrans, and Response 2.9.3. Section 8.6.1 of the EIS/EIR notes that construction of a Caltrain Downtown Extension – as directed by Proposition H passed by the San Francisco Voter in 1999 – would require demolition of the existing terminal. No reasonable alternative appears to exist for bringing Caltrain into the existing terminal. Additionally, the retrofit of the existing terminal would not allow for provision of high-speed rail service (please see Response 2.9.3), also a requirement of Proposition H and an intended purpose of this Project. Finally, as noted in Comment 2.9.1, the existing terminal still requires upgrades to meet ADA and building codes.

The subject of effects analysis for the Transbay Terminal and other historic properties and mitigation of those effects is addressed in two documents: (1) a Finding of Effect (FOE), and (2) a Memorandum of Agreement (MOA). The FOE has been prepared because the Project is expected to have an effect on one or more historic properties. This document applies the Criteria of Adverse Effect [36 CFR 800.5(a)(1) and (2)] to the historic properties identified in the survey reports and determines whether the Project will have "no adverse effect" or an "adverse effect" on those properties. The document describes the individual effects that are expected to occur to each historic property. A summary of the FOE is provided in Volume I of this Final EIS/EIR in Sections 5.14, and the FOE is incorporated into this Final EIS/EIR by reference.

The MOA, shown in Appendix G, Volume I of this Final EIS/EIR establishes what will be done to mitigate the adverse effects to historic properties as identified in the FOE. This document presents the individual components of the mitigation strategy that will be implemented to mitigate, avoid, or reduce adverse effects. Several types of mitigation are included, such as preparation of an archeological treatment plan, recordation documents, a salvage plan, interpretive displays, and educational material.

Consistent with this comment, the tunneling option for the Caltrain Downtown Extension was selected by the Transbay Joint Powers Authority in March 2003 as the Locally Preferred Alternative for purpose of this Final EIS/EIR, thereby substantially reducing the effects of the extension on historic properties (please see Response 3.2.1).

It is true that many projects have been completed successfully in other metropolitan cities by tunnelling under existing properties. The success of tunnelling depends to a great degree on the ground conditions. In the area of Second and Howard Streets, the soils are exceptionally soft and weak, and the excavations required would be very wide to provide for multiple tracks leading into the train terminal. It would be technically feasible to construct a single tunnel or perhaps twin bores under a building. However, in the vicinity of Second and Folsom Streets it is not considered practicable to open so many tunnels so close to each to accommodate the multiple tracks planned for this portion of the Project. Please also see Reponses 3.2.4.

The typographical error on page 4-48 of the Draft EIS/EIR in Section 4.16.6, Historic and Cultural Resources, has been corrected. The second to last sentence on the page now reads as follows: "Categories I and II are considered significant buildings, while Categories III and IV are designated as Contributory Buildings."

Section 5.14 has been rewritten in this Final EIS/EIR, Volume I, to note that mitigation does not "eliminate" an adverse effect, nor reduce it to "below adverse" levels. The Final EIS/EIR has been changed to use the legal name of the referenced organization as the San Francisco Architectural Heritage.

9.1.2 Mary MacDonald, President, Oakland Heritage Alliance, December 5, 2002

"The Oakland Heritage Alliance is particularly concerned about the loss of the Transbay Terminal because this National Register eligible property is a regional resource as part of the San Francisco Oakland Bay Bridge. However, Oakland Heritage Alliance recognizes that although the Transbay Terminal has served its purpose well in the past, it cannot accommodate an intermodal station which would include a below grade train station and so needs to be replaced by a new structure at the present site that would a landmark of the future. This is the ideal location for a regional transportation hub that will afford efficient transit connectivity.

"However the mitigations for the loss of this historic resource are inadequate. We urge a thorough documentation of the building itself and its role as part of transportation history. The information should be available to the public in a usable, interesting form. A prominent space should be allocated in the new building for a permanent exhibition. In fact, a Bay Area Transportation Mini-Museum could be accommodated in the terminal with this as a permanent exhibit. And the very solid comfortable oak benches, which are beloved by bus riders, should be reused in the new facility."

Response 9.1.2 Please see Response 9.1.1. A prominent space will be identified during the design phase of the terminal for an exhibit regarding historic resources.

9.1.3 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Page 5-75. How will impacts on the Bay Bridge structure be mitigated, also with respect to NRHP?

"Page 5-91. Regarding mitigation of loss of historic structures: The first option of listed Relocation is extremely unlikely. Recordation, Interpretive Display, and Salvage seem practical, but how much do these options really compensate for the loss, and how is such loss calculated?"

Response 9.1.3 Please see Response 9.1.1. Please also see Response 9.1.7 regarding the feasibility for relocation of historic structures. As noted in the response, such mitigation would be very difficult.

The co-lead agencies understand that these historic structures are valuable cultural resources, and Project planning has included substantial efforts to preserve them to the extent possible, while still meeting the purpose and need of the Project. Under CEQA, the application of recordation does not reduce the impact to a less than significant level and does not in an of it self mitigate for the loss of these resources. The degree to which proposed mitigations compensate for the loss of these resources is a subjective determination, and the co-lead agencies do not feel that such a loss can be calculated, at least in a quantitative sense. The Finding of Effect (FOE) document incorporated into Volume I of this Final EIS/EIR (in Sections 5.14, 7, and 8) discusses the effects that the loss of these structures would have.

9.1.4 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"Historic Context: The consideration that the existing terminal cannot perform its original function safely is persuasive but the mitigation for loss of historic structures is too vague. 'Dynamic continuity' is a creative concept that needs more contextual specificity to be a mitigation.

- "What mitigations are likely to be included "Memorandum of Agreement"? (What is previous Redevelopment Agency practice in comparable cases?)

"Are any of the other historic buildings to be removed also seismically unsafe?"

Response 9.1.4 See response to comment 9.1.1, above, specifically regarding the preparation of an MOA. The types of mitigations in the MOA, as shown in Appendix G of Volume I of the Final EIS/EIR includes, but are not limited to: archival quality recordation of existing building and features, permanent on-site interpretive exhibit; museum exhibit;

documentary videography; salvage, and design features for the new buildings and structures. The Redevelopment Agency has used these techniques successfully in other redevelopment areas. At this stage of the Project, it is not within the scope of this EIS/EIR to evaluate the safety of existing structures under seismic conditions, as this is not germane to the building's removal. ..

9.1.5 California Department of Transportation, Timothy C. Sable, District Branch Chief, December 20, 2002

"Cultural Resources: Page 1-28 (Table 1.2-4) should be revised to include the required legislative approval under California Public Resources Code Section 5027 (see additional information below)."

"Page 2-47 (section 2.3.1.1) describes one of the alternatives, "Renovation of Existing Transbay Terminal and Associated Structures," which was considered but withdrawn. This alternative precludes underground rail, but instead would require construction of elevated rail structures for Caltrain or high-speed rail access. According to the DEIR, this alternative was withdrawn because the anticipated seismic strengthening would preclude the project goal of revenue-generating development. The fact that the Transbay Transit Terminal and the ramps are National Register-listed properties calls for a more substantive discussion regarding the possibility of preserving the properties.

"Page 5-75 (section 5.14.3.1) should address California Public Resources Code Section 5027, which states, "Any building or structure that is listed on the National Register of Historic Places and is transferred from state ownership to another public agency shall not be demolished, destroyed, or significantly altered, except for restoration to preserve or enhance its historical values, without the prior approval of the Legislature by statute. This section applies to any building or structure transferred from state ownership to another public agency after January 1, 1987."

"Section 5.14.3.5 should additionally evaluate the effects of demolition of the ramps and Transbay Transit Terminal on the San Francisco-Oakland Bay Bridge.

"Page 5-91 (section 5.14.3.5) discusses potential mitigation. Because the project would have effects on the San Francisco-Oakland Bay Bridge, any Historic American Buildings Survey/Historic American Engineering Record documentation on the Transbay Transit Terminal and ramps should be filed additionally with the Department. Additionally, if the Department no longer owns the Transbay Transit Terminal, the "Interpretive Display" would be the responsibility of the project proponents, not the Department. Opportunities for collaborating with the Department on the completion of mitigation tasks for effects to the San Francisco-Oakland Bay Bridge should be investigated."

Response 9.1.5 Please see Response 9.1.1. The Findings of Effect (FOE) has be added to Section 5.14.3.5, and Chapters 7 and 8, Volume I, of this Final EIS/EIR and includes a discussion of the effects of the demolition of the ramps and Transbay Terminal to the San Francisco-Oakland Bay Bridge as an historical resource. Table 1.2-4 and Section 5.14 have been revised for this Final EIS/EIR to reflect the required legislative approval. In accordance with California Public Resources Code Section 5027, the Transbay Terminal and terminal loop ramp, as NRHP-eligible structures that would be transferred from state (Caltrans) ownership to another public agency (the Transbay Joint Powers Authority) may not be demolished without the prior approval of the California Legislature. The California Legislature has considered the importance of proceeding with the Transbay Transit Terminal project and has granted a specific exemption to

State Law prohibiting the demolition of historic structures with the following language: "the Legislature hereby approves demolition of the Transbay Terminal building at First and Mission Streets in the City and County of San Francisco, including its associated ramps, for construction of a new terminal at the same location, designed to serve Caltrain in addition to local, regional, and intercity bus lines, and designed to accommodate high-speed passenger rail service." (AB 812, 2003)

Response 9.1.5 Assembly Bill 812 (Yee), currently pending in the state legislature, addresses this requirement. It is understood by the co-lead agencies that mitigation would be the responsibility of the Project.

9.1.6 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Historic/ Cultural Resources (Sections 4.165.14 & 7.2)
"Section 5.14.2, Archaeological Resources, Mitigation: By stating that mitigation measures for both archaeological and architectural resources would be set forth in an MOA, the EIS/EIR is deferring the mitigation. Per CEQA Section 15126.4(a)(B): "Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way." Deferring mitigation to a future MOA without setting performance standards in the EIS denies the public its opportunity to provide input on the proposed mitigation, and makes the EIS inadequate.

"Section 5.14.3.3, Redevelopment Components: The conclusion that neither of the redevelopment alternatives would have an adverse impact on historic properties does not seem correct. Since the intention of creating a redevelopment area would be to encourage and facilitate new development in the designated area, there could be an increased likelihood that historic resources located within the area would be altered or demolished. The EIS should identify protections against such impacts.

"Section 5.14.3.4, Affected Properties:

- "Please note that the 670-680 Second Street building has been altered in recent years and converted to an office building. As such, the structure no longer appears as depicted in this document. A Negative Declaration was prepared by the City of San Francisco for the alterations to this property.
- **"**Section 5.14.2 refers to mitigation for architectural resources, but its mitigations are about archaeology. There should be a separate section on mitigation of architectural resources. See our comments about adequacy in Section 5.14.2, above. Providing a list of types of measures and stating that these are merely suggestions is not adequate. It should be stated here which, if any, of these mitigation measures would have the potential to reduce impacts to a less than significant level and whether such a conclusion would be different for different buildings.
- **"**Please explain what is meant in the last sentence of Section 5.14: "... recordation eliminates one adverse effect of demolition..." Since demolition means the total loss of a building and results in a significant unavoidable impact for an historic resource under CEQA, how does recordation eliminate one adverse impact?

"Section 7.2, Unavoidable Significant Adverse Effects Under CEQA: This section should list which buildings and districts would be significantly impacted under each alternative. The lack of clarity of the Historic and Cultural Resources section makes this doubly important."

Response 9.1.6 The Draft EIS/EIR states in Section 5.14.1 that known or potential historic-era archaeological sites exist in the Project's footprint, and that there are areas with high historic archeological sensitivity. Given that the Project area is covered with urban development or pavement, it is not possible to determine the precise locations for these resources. The mitigation measure in the EIS/EIR is therefore to establish, as the Project's design progresses, a comprehensive research design and treatment plan for archeological resources prepared by a qualified consultant. The Research Design/Treatment Plan will be consistent with the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37) and take into account the ACHP publication, Treatment of Archaeological Properties: A Handbook (ACHP 1980), and SHPO guidelines.

The Research Design/Treatment Plan will include, at a minimum:

- An Historical Context for the Area of Potential Effects for Archaeological Resources (APEAR).
- Research Context for the APEAR.
- Testing/Data Recovery Plan that will specify, at minimum:

    - The properties or portion of properties where evaluation and/or data recovery are to be carried out;
    - The properties, if any, that will be affected by the Undertaking but for which no data recovery will be carried out;
    - The manner in which inadvertent discoveries will be treated;
    - The methods to be used for data recovery, with an explanation of their relevance to the research questions/themes;
    - The methods to be used in cataloguing, analysis, data management, and dissemination of data;
    - The proposed disposition of recovered materials and records, including discard and deaccession;
    - The manner in which any human remains and associated/unassociated funerary objects, including those of Native American or Native Hawaiian origin, will be treated;
    - The security procedures to be undertaken to protect the archeological testing/data recovery site from vandalism, theft, or unintended damage;
    - The final report summarizing, describing and interpreting the results of testing/data recovery;
    - The measures to be undertaken to ensure curation of recovered data determined to have appropriate research potential.
    - Research Design/Treatment Plan Review

TJPA will submit the Research Design/Treatment Plan to all parties to the MOA for a thirty (30) calendar day review following receipt of the Plan, and will take any review comments into account, revise the Research Design/Treatment Plan accordingly, and notify any party whose comments were not incorporated into the Plan.

This is a typical approach to these types of urban projects. It has been added to this Final EIS/EIR, Volume I, in Section 5.14.2, Archaeology Resources Mitigation, and is included in the MOA (Appendix G, Volume I of the Final EIS/EIR).

The redevelopment of parcels for the proposed Transbay redevelopment plan area is limited to the publicly owned parcels and a few small private holdings within the publicly owned parcels. The public parcels do not have any historic structures on them and the small private holdings are not historic resources. The redevelopment plan does not call for redevelopment by acquiring

private parcels. If private owners are encouraged to redevelop their own properties, they would have to pursue their own environmental and historic clearances as any private development is not a part of the proposed redevelopment plan.

The building at 670-680 Second Street has been renovated since the time of its last evaluation; nevertheless, it retains its status as a contributing element of a National Register District in the OHP Historic Property Datafile for San Francisco County as updated through January 2003. A current photograph has been provided in Section 5.14, Volume I, of this Final EIS/EIR. This Final EIS/EIR now provides better distinction between the archeological and historic architecture mitigation measures.

The specific adverse effects to historic properties are identified in the Finding of Effect (FOE) document produced under Section 106. A summary of the Finding of Effect Document is provided in this Final EIS/EIR in Section 5.15, Volume I, and the FOE incorporated by reference. Unavoidable adverse effects under CEQA are shown in the CEQA Findings Chapter 7.

9.1.7 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"As shown in the attached Figure 1, San Francisco Tomorrow advocates reviewing the track alignment at Second and Howard Streets for opportunities to reduce the number of historic buildings that are endangered.

"The mitigation measures on Page 5-91 should be clarified. How will the feasibility of relocation of historic buildings be determined? The comment about the scarcity of open land in San Francisco is inappropriate; the fate of an historic building should be determined not by its destination, but by the properties of the building itself. This mitigation measure needs to be corrected and clarified.

"Why isn't an option included for preserving all or part of the buildings in place? A study should be made of the possibility of saving buildings that might otherwise be demolished during construction of the Caltrain Downtown Extension by means of bracing, underpinning, or other means of support. What is the possibility of preserving at least the facade of one or more of the endangered buildings?"

Response 9.1.7 Please see Response 5.1.2. The feasibility of relocating one or more of the historic buildings will depend on the structural condition of each individual building. Until the structural and foundation plans are reviewed and evaluated, it is not possible to make a commitment that any of the existing buildings can be safely relocated. The logistics of moving buildings in the streets of downtown San Francisco would require not only an exceptionally detailed level of planning but also consideration of physical constraints that may preclude relocating the buildings to vacant lots. The presence of overhead structures such as at Howard and Fourth Street, and at Howard between First and Second Streets would make it impossible to transport the buildings beyond these physical constraints. Similarly it would not be possible to transport the buildings under I-80 to reach the vacant lots in the Mission Bay Area.

Underpinning and bracing are not considered effective means of preserving the subject buildings because of the large size of the underground opening anticipated. It is not economical or practical to construct a structural system that can have sufficient span to transfer the building loads beyond the limits of the required excavations.

It is not considered practicable to preserve the building façades in what is expected to be a very busy and congested construction site. Preservation would require moving the façades off-site, storing them for the duration of construction, and returning them to the site after completion of construction. The technical and economic feasibility of this option can be evaluated during detailed design.

Lifting the buildings off their foundations, moving them to a storage site, and then returning them to the original site can also be evaluated during detailed design. The most significant factor is to find a site that is accessible without having to pass under an existing overhead crossing such as the various Transbay Terminal connectors, I-80, and the footbridge at Fourth and Howard Streets.

9.1.8 Greg Patterson, December 18, 2002

"There are, however, some areas of the EIR that are clear and pose a threat to the history and character of the city. As it stands, many of the historical buildings on the north-west side of Howard Street at Second Street would be demolished (and possibly replaced with parking structures). Once torn down, historical buildings will not come back, and an important character and personality of the city will be lost. This is our neighborhood, and part of San Francisco's unique character will be lost through these demolitions.

"Historic Fabric. In the three historic districts that are affected by the layout of the rail lines, a number of buildings which contribute greatly to these districts would be demolished under the cut-and-cover alternative. Even under the tunneling alternative, a number of buildings at the corner of Second Street and Howard Street would be lost. The geologic study, which would reveal whether tunneling is not only possible but economically feasible, is not yet complete. It may be argued that it is not possible to support structurally a tunnel under the Second and Howard corner since the tracks here would have to cover a wider area in order to accommodate rail track-switching.

"However, an alternative route underground should be studied to see whether it is possible to alter the tunnel alternative slightly in order to save more of the historic resources at Second and Howard. See the example provided (Mlynarik) which shows a fine-tuning of the route at this corner in order to preserve more of the threatened buildings. In any case, a strategy could be developed to remove the subject buildings or parts of them. For historic integrity of the buildings in these districts, the front facades of the threatened buildings could remain propped and stabilized in place while the tunneling is going on, and reconstructed afterwards. In this scenario, only those parts of buildings which must be removed would be removed.

"The more difficult, and less desirable, solution would be to have the three contributory buildings at Second and Howard relocated during construction and then moved back. The EIR/S states that this could be done if a place were found to put the structures. The preservation of all the threatened buildings should be required to be listed as a mitigation measure for the consideration of the decision makers and sites for temporary location should be found.

"Some of the historic resources are well described (Chapter Five, pp.5-71 to 5-91) but curiously the present Transbay Terminal Building is not shown graphically or described in this section."

Response 9.1.8 The desire to preserve historic resources played an important role in the decision to select the tunneling option for the Caltrain Downtown Extension as the Locally Preferred Alternative (LPA) – please see Response 3.2.1 through 3.2.14 – which will preserve 10 historic buildings that would have been demolished under the cut-and-cover option that was not

selected for the LPA. Please see Response 3.2.4 for the reasons that the structures on Howard Street need to be demolished.

Numerous alignments have been reviewed against the train design criteria to minimize impacts to historic structures and to the community in general. Please see Section 2.3, Alternatives Considered and Withdrawn, of the EIS/EIR, Volume I, and the numerous responses to comments in this Volume II of the Final EIS/EIR regarding alternative alignments, for example.

The description of the Transbay Terminal building and ramps is included with the other resource descriptions in Chapter 4, Volume I, specifically Sections 4.16.6.1 and 4.16.6.2 of this Final EIS/EIR. Chapter 5 presents impacts to the resources described in Chapter 4, and the effects to the terminal and ramps are described in Sec. 5.14.3.4. Photographs of the existing Transbay Terminal and ramps have been added to this section.

10.0 PUBLIC OPEN SPACE/PARKS/VISUAL IMPACTS

10.1.1 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"Please add a map of the Redevelopment Area that includes the size and location of the open spaces listed on Page 5-39."

Response 10.1.1 A map showing anticipated land uses, including open space under the current Draft *Transbay Redevelopment Project Area Design for Development Vision* (August 2003) is included in the Final EIS/EIR, Volume I, as Figure 2.2.27. Please see Section 2.2.4.2, Figure 2.2-26, and Appendix F of the Final EIS/EIR, Volume I, for a discussion regarding the provision of open space and parks under the redevelopment plan.

10.1.2 James M. Patrick, President, Patrick and Co., December 16, 2002

"I found no plans for any use of the properties that were acquired and demolished once the project was completed. Has any consideration been given to parks and/or public areas or will the land be sold to the highest bidder?"

Response 10.1.2 Please see Response 10.1.1. The Agency is currently developing plans for the land to be acquired for the Project. Some of it will be converted to open space after it is no longer needed for the transportation improvements. Other land will be developed as affordable housing. Still other land will be sold to developers in conformity with the Agency's *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document and design guidelines. The Agency's draft August 2003 document and design guidelines will be finalized before the redevelopment plan is adopted. Please see Section 2.2.4.2, Volume I, of this Final EIS/EIR for additional discussion of the reuse of property.

10.1.3 James Wittmann Dear, November 18, 2002

"I live in the project area. The neighborhood needs parks. I am concerned that an opportunity to establish a park where my dog can play will be lost. Especially, when I read that all that is foreseen in the Redevelopment are 'two new "green" open spaces.' What does this "'green" open space' mean? (5.5.1 [p. 5-39])."

Response 10.1.3 The *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document released by the San Francisco Redevelopment Agency describes proposed new open space and includes maps with proposed locations of the open space. Please see Section 2.2.4.2, Figure 2.2-26, and Appendix F of the Final EIS/EIR, Volume I.

It is important to remember that this is a downtown neighborhood and will not be able to accommodate the amount of open space that currently exists in other neighborhoods. However, the *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document envisions dedicating more than one acre out of the nine acres of available public land in the proposed Project Area to open space, and the vision includes streetscape improvements including widened sidewalks that feature open space amenities, especially on Beale, Main, and Spear Streets. That is, the total effective open space would be greater that just the addition of traditional "green park space." The *Draft Transbay Redevelopment Project Area Design for Development Vision* document also includes plans for leveraging public resources for the creation of additional open space both within and adjacent to the proposed Project Area.

10.1.4 James Dear, Speaker, 11/12/02 Public Hearing

"We have an opportunity for open space, for parks. We live in a lot of concrete there. I don't see a lot of green space proposed, especially for dogs and such like that."

Response 10.1.4 Please see Response 10.1.1, 10.1.2, and 10.1.3.

10.1.5 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"Land Use: (Page 2-44). The land use mix assumed is dominantly residential which would provide a desirable balance for the intense job center of San Francisco. The Full Build alternative also includes 1,184,590 square feet of office space...

"The open space and community services assumed to suffice should be related to the amount of housing to be built. Does San Francisco have relevant standards or precedents?"

Response 10.1.5 The City of San Francisco does not have formally adopted standards pertaining to the provision of open space on a district-wide level. However, there are requirements and standards for private open space connected with housing and publicly accessible open space associated with downtown (C-3) office space. Section 139 of the City Planning Code states that office uses in the C-3 districts shall pay $2.00 per square foot to the Downtown Park Special Fund to create parks and recreational facilities in the central business district. The City's General Plan contains a Recreation and Open Space element that describes different classifications of public open spaces in San Francisco including the areas which they serve (Citywide, District, Neighborhood and Sub-neighborhood), and provides goals and policies for these service areas. Moreover, the General Plan's Downtown Area Plan contains a set of guidelines for downtown open space that details the types of open space appropriate for downtown, and includes a listing of the preferred design elements.

The Transbay Redevelopment Plan will have its own set of requirements for providing open space (please see Response 10.1.1). The San Francisco Recreation and Park Department owns and manages over 3,300 acres of open space in the City and County of San Francisco. The combined City, state, and federal property permanently dedicated to open space totals approximately 4,090 acres, or 5.5 acres per 1,000 San Francisco residents. This is about half the established standard set by the National Park and Recreation Association (NPRA), which calls for 10 acres of open space per 1,000 population in cities. Given the City's existing development patterns, high population density, and small land mass, achieving the NPRA standard will likely never be possible (personal communication as cited in Case No. 1999.233E, Recreation and Park Department, Robert McDonald, 2003). The City attempts, however, to increase the per capita supply of open space whenever possible through the creation of new plazas and opens spaces such as those included in the proposed project. Please also see Responses 10.1.1, 10.1.2, and 10.1.3

10.1.6 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Visual & Aesthetic Issues, Summary Project Description, p. S-3: No-project alternative: There is no discussion of the need to seismically upgrade the existing Transbay Facility. Wasn't the expense of doing this one of the main reasons for rebuilding the facility?

"Section 5.16, Visual and Aesthetic Environmental Consequences and Mitigation Measures. The minimal graphic representation of the Loop Ramp Alternative makes it difficult to gauge its visual and aesthetic impacts.

"5.16.1 No-project alternative, p. 5-92, 93:
- "The existing terminal would require extensive seismic renovations. There is no discussion of the negative aesthetic impacts this could have.
- "Do continued existence of the bus ramps contribute to declining levels of maintenance and investment in surrounding properties, and therefore constitute a future negative aesthetic impact?

"5.16.2 Transbay Terminal, p. 5-93:
- "Figure 5.16.2 does not clearly show the difference between the west ramp (stacked) and the loop ramp (split) scenarios. It shows existing and stacked ramps only.
- "Model of Potential Redevelopment Sites and Scale, Fig. 5.16.3, p. 5-99: Please provide evidence of the likelihood that developers would propose high-rise projects, especially residential high-rise development, in such close proximity to one another as shown in the illustration.

"5.16.5 Changes to Scenic Views and Vistas
- "The loss of views mentioned in the report is not illustrated. Are these lost views from existing buildings, or from public spaces and streets? If the former, then it should be noted that the new development will replace these views with an equal or greater number.
- "On page 5-98, the report states that the spacing between the new towers in the redevelopment area would be greater than is typical north of Market, but the model illustrated in Fig. 5.16-3 seems to show towers spaced as close or closer than the north of Market St. condition.

"5.16.6 Change in the Cityscape: Illustrations 5.16.4 and 5.16.5 do not show the views that are "more differentiated as the stepping up of development heights towards downtown is realized. The views as illustrated are much more monolithic and undifferentiated than described, especially in Fig. 5.16-5. Better illustrations would be helpful.

"Summary Table, p.S-16, Visual/Aesthetics Impact Category:
- "No-Build Alternative: Will this alternative have additional visual impacts due to requirements that existing facilities need to be seismically upgraded?
- "Transbay Terminal Components:
  - "Because there are no supporting illustrations of the Loop Ramp Alternative, other than a site plan diagram, it is not possible to evaluate the visual/aesthetic impacts of this scheme.
  - "Based on the illustrations and text provided, it is clear there are significant differences between the two terminal alternatives. The West Ramp Alternative replaces a single-deck loop ramp with one double-decked ramp; how does this make the ramps "less visually intrusive"? How does the Loop Ramp Alternative enhance views? Views from where?"

"Chapter 2, Description of Project Alternatives: In general, the almost complete lack of illustrations of the Loop Ramp Alternative make meaningful analysis of the visual and aesthetic impacts of this scheme impossible.

"Redevelopment Components: There are two redevelopment alternatives; it seems highly unlikely that the two alternatives will have the same visual impact. Does the text in the table refer to both schemes?"

Response 10.1.6 Please see Caltrans Comment 2.9.1 and Response 9.1.1.

The West Ramp Alternative would consist of permanent stacked bus ramps that would connect the Bay Bridge to the Transbay Terminal. These ramps would be in approximately the same position as the existing Transbay Terminal ramps which run roughly parallel to Essex Street from the bridge to the terminal, but would not require any additional ramp segments on the eastern side of the terminal. Conversely, the Loop Ramp Alternative would construct a one-way loop of bus circulation with direct connections to the Bay Bridge on both the east and west sides of the terminal. The ramp segments of the Loop Ramp Alternative would run along Essex Street to the terminal and then loop around east of the terminal just past Beale Street, then follow Clementina Street westward and reconnect to the loop just north of Folsom Street. The visual nature of the Loop Ramp would be similar in its location to the current ramp structure for the existing terminal, although with new ramps leading to the facility.

In contrast to the West Ramp Alternative, which would facilitate bus circulation on a stacked ramp system, the Loop Ramp Alternative would require additional land area dedicated to ramp segments, and as discussed on page 5-2 of the Draft EIS/EIR. This alternative could "continue to be seen by some as a barrier in the district, walling off uses inside the loops from uses outside." These additional ramp segments would be visible looking into or outside of the district from Beale and Howard Streets. The West Ramp Alternative would enhance views by reducing the overall land area in the district dedicated to elevated ramp structures.

Additional seismic renovation of the existing structure would principally affect its interior. The text regarding Figure 5.16-2 has been changed for the Final EIS/EIR to note that it provides a visualization of the stacked ramps proposed under the West Ramp Alternative.

The existence of bus ramps do contribute to declining investment in the surrounding area. This was one of the key reasons for selection of the West Ramp Alternative as the Transbay Terminal component of the LPA. Under the West Ramp Alternative, some of the ramps would be removed altogether. The redevelopment plan includes significant funding for pedestrian improvements and the creation of new open space, including space underneath the west ramps to the Transbay Terminal. The space underneath these ramps could be programmed for such active uses as basketball and handball courts, as well as landscaping and public artwork.

Please see Response 4.2.5 regarding Figures 5.16-3, 5.16-4, and 5.16-5 in the Draft EIS/EIR. New development proposed as part of either the Full Build or Reduced Scope alternatives would result in the loss of some existing skyline views across the district from new buildings. Public view corridors along streets would be largely preserved by new development that would create an orderly and uniform street wall (e.g., on Folsom Street) and would require setbacks of upper-level building masses... The *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document refines the building form and development program from what is presented in the Draft EIS/EIR so as to minimize impacts on important public views by reducing the number of towers, widely spacing towers, and deliberately locating them to avoid casting too much shadow on new and existing parks and streets. Further sculpting of the height proposal likely will include lowering of heights along alleyways to create an appropriate scale and allow sunlight based on the width of the street.

For clarification, the text on in the Summary of this Final EIS/EIR now reads as follows (underlining refers to new text): "Under either alternative, Folsom St. building heights would be taller than existing. Provisions for development would help protect views, preserve open space,

and enhance the pedestrian environment. Under the Full Build Alternative, buildings may be broader and shorter, with setbacks preserved. Under the Reduced Scope Alternative, buildings would be taller and more slender, preserving more of the existing views."

Certainly, the No-Project Alternative would result in visually different development within the Transbay Terminal Area. As long as the current buildings would continue to exist in the district, the visual character of the area would not necessarily improve. If there were to be development with the area, it would conform to existing zoning and not the Redevelopment Area's *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003), rezoning, or revitalization efforts. The No Project Alternative would not establish a redevelopment area, and would thus not meet project objectives of alleviating blight and revitalizing the Transbay Area by replacing the district's existing deteriorating buildings with a coordinated redevelopment program. There is the potential that if no action is taken, buildings could continue to deteriorate and could cumulatively affect the overall image of the neighborhood, particularly if such buildings do not meet the requirements of the City's Unreinforced Masonry Building (UMB) Ordinance. The UMB Ordinance requires existing unreinforced structures (buildings containing load-bearing walls constructed of either brick, adobe, stone or mortar without steel reinforcement) to be strengthened within specific frames (through 2007), or face demolition.

The UMB Ordinance specifies time limits in which retrofitting work must occur. At present, there are approximately 500 remaining UMBs in the City, with approximately 22 UMBs identified in the study area. Of these 22 buildings, 14 have applied for a retrofit permit, and the remaining eight would most likely be demolished. If the existing buildings were to be demolished by private entities and new buildings constructed, these would be required to meet the City's design guidelines; such development, though meeting the guidelines, would likely be less coordinated or integrated across the area than under the proposed project.

In the context of the major potential construction of up to 7.6 million square feet of new development, including high-rise buildings, within nine city blocks, the visual differences from the Loop Ramp Alternative versus West Ramp Alternative would generally be minor. Additionally, views of the ramps themselves would principally be limited to adjacent streets and from the windows of upper levels of private buildings.

11.0 PUBLIC UTILITIES / SERVICES

11.1.1 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"Please include information on the increased volume of sewage that would be expected at full build-out, and the corresponding increase in CSOs (combined sewer overflows) into Mission and Islais Creeks."

Response 11.1.1 The Project area is served by the San Francisco combined sewer system, that handles both sewage and stormwater runoff. The Project would meet any wastewater pre-treatment requirements of the San Francisco Public Utilities Commission as required by the San Francisco Industrial Waste Ordinance. No new sewer construction other than hook-up would be needed because the Project site is already served by existing sewer infrastructure. Furthermore, since stormwater runoff contributes greatly to the total flow and the various aspects of the Project sites are already paved, the project would a minimal effect on the total wastewater volume discharged to the combined sewer system. The Project would add a small incremental amount that most likely would not result in additional CSOs into Mission and Islais Creeks.

11.1.2 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Page 4-21. Response times for Fire Department are not given. This important statistic is kept by all fire departments, and should be readily available.

"Pages 5-36 and 5-37. It is highly interesting that the increased demands for fire and police services could be met by 'reorganizing existing staff.' Does it follow that either these services are currently overstaffed or that service will be understaffed when the proposed development takes place?"

"Page 5-70. The paragraph about communications is very inconclusive. Viability of redevelopment for both offices and residences depends greatly on the availability of telephone utilities, and the statement by Pacific Bell that it would take many years to complete relocation is very unsettling.

"Page 5-106. There are concerns that dependence on only PG&E or Hetch Hetchy source of electricity seems risky both in terms of supply and cost, unless SF is willing to make a deal regarding its Hetch Hetchy power. The report vaguely hopes that deregulation will alleviate these problems."

Response 11.1.2 Additional discussion and analysis of police, fire, energy, and public utilities has been added to Sections 5.4 and 5.12, Volume I, of the Final EIS/EIR in response to this comment. The co-lead agencies will explore all avenues prior to relocating expensive utilities. Selection of the tunneling option for the Caltrain Downtown extension for the Locally Preferred Alternative will reduce necessary utility relocations, as compared to the cut-and-cover option. It should also be noted that construction of the Caltrain Downtown extension component of the project would likely take several years to complete. The information that Pacific Bell (subsequently renamed to SBC Communications, Inc.) has provided is preliminary and, as stated on page 5-70 of the Draft EIS/EIR, would require an in-depth study to determine specific construction required to relocate existing communication lines. However, there is no indication

that such relocation is not possible or would result in adverse environmental effects. Please also see Comment and Response 3.2.1.

11.1.3 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"Emergency Services: (Page 4-21). Response times for Fire Department are lacking. Will response times be affected? What is potential for loss of communications as in BART to airport project?

"Power: (Page 5-106). The implication that reliance on city or PG&E electricity is a problem to be alleviated by deregulation needs some explanation.

"Land Use: (Page 2-44). The land use mix assumed is dominantly residential which would provide a desirable balance for the intense job center of San Francisco. The Full Build alternative also includes 1,184,590 square feet of office space...

"The open space and community services assumed to suffice should be related to the amount of housing to be built. Does San Francisco have relevant standards or precedents?"

Response 11.1.3 Please see Response 11.1.2. Please see Responses 10.1.2 and 10.1.3 regarding open space. Please see Response 10.1.5 regarding community service standards.

11.1.4 Jennifer Clary, President, San Francisco Tomorrow, Speaker, 11/26/02 Public Hearing

"There are water impacts for this project. Whenever you increase the density of an area, there's increased pressure on our sewer system. We feel that needs to be weighted in this document."

Response 11.1.4 Please see Response 11.1.1 and 11.1.2.

12.0 FISCAL/ECONOMIC IMPACTS

12.1.1 Transportation Solutions Defense and Education Fund (TRANSDEF), David Shronbrunn, President, December 20, 2002

"5-49: An analysis of the tax and other economic implications of a operational Project is glaringly absent. The Project should have strikingly positive net benefits to the San Francisco and regional economies. Increases in retail sales and employment should be estimated, along with increases in the taxes reported in Table 5.6-5."

Response 12.1.1 The Project is expected to have many tax and other economic benefits to the City and County of San Francisco and the region. However, it is not practical, within the scope of this EIS/EIR to project these benefits quantitatively. Such projections would involve estimates of the economic development impacts of the project, including enhanced development opportunities, prospective positive impacts in land values, and increased tourism to San Francisco and associated spending, as just a few examples. Projections of such impacts at this stage in project planning would be speculative and, as such, are not readily quantifiable. Hence the figures reported in Table 5.6-5 conservatively look only at the readily quantifiable adverse economic effects of the project.

13.0 SAFETY AND SECURITY IMPACTS

13.1.1 James Wittmann Dear, November 18, 2002

"Car-boosting and homeless encampments are quality-of-life issues for the street. The proposed Off-Site Bus Storage Facility between Perry and Stillman and Second and Fourth Streets is under the jurisdiction of the Transbay Terminal. Will transit agency police patrol the lot, or will SFPD? Did the police union agree that by reorganizing existing staff no additional officers would be needed? I am concerned that the police will be spread thin and crime will increase on Stillman St. (5.4.2.2) and (5.4.4.2)."

Response 13.1.1 The question of who will patrol the off-site storage bus facility will be part of the lease negotiations. The Transbay Joint Powers Authority will work closely with the San Francisco Police Department (SFPD) on this matter and, if appropriate, the California Highway Patrol. SFPD recommends a security plan for development of bus and other vehicle storage on the lots fronting Stillman Street. To reduce the possibility of crime and vandalism and the ability of transient populations to gain access to the facility, the SFPD recommends that the bus storage area be fenced to provide controlled access to the parking area (personal communication, Lt. Al Pardini, San Francisco Police Planning Division, July 2, 2003). As discussed in Response 2.7.9, portions of the bus storage facility will be enclosed by a noise wall, aiding in the provision of the site's security and the security of the surrounding area.

14.0 SEISMIC IMPACTS

14.1.1 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Page 5-68. "Rapid rail repair" is the recommended mitigation for seismic impacts to surface tracks, but there is no mention of mitigation for tunnel collapse at the portals, where the subway depth is in Bay mud, or prevention of damage. What would happen to a train traveling exiting from the subway at the time of seismic motion?"

"Page 5-67. Bay mud goes down 100 feet and is the worst seismic hazard for amplified ground motion."

Response 14.1.1 Bay mud and Bay mud at considerable depth are common conditions at various locations in the Bay Area. Bay mud combined with seismic activity requires greater attention by geotechnical and structural engineers than more robust soil conditions. However, the number of major infrastructure facilities built on bay mud and planned to be constructed on Bay mud demonstrates that the necessary engineering knowledge and skill is in service to provide safe and reliable facilities.

The tunnels will be designed following state-of-the-art procedures that will allow the tunnels to remain intact and minimize structural damage to repairable levels. There is considerable evidence worldwide demonstrating that tunnels generally perform better than surface structures during earthquakes. The design of the Muni Metro Turnback project in an area of deep bay mud provides an excellent precedent that can be followed, or improved upon, for designing the tunnels and portals in bay mud so that they can resist safely the seismic design forces.

Design of the tunnels and portals would be consistent with standards of practice that require protection of life and, where practical, facilities in a major seismic event. The soil type and extent will be considered in the design of all Project facilities. Use of the stacked drift tunneling approach for the tunnel portions through fractured rock is designed to eliminate the potential for tunnel collapse.

15.0 AIR QUALITY / BUS EMISSIONS AT NEW TERMINAL

15.1.1 BAAQMD, William C. Norton, Executive Officer/ APCO, November 21, 2002

"We have some concerns about the localized exposure of transit riders at the Terminal to diesel particulate emissions from buses serving the terminal... The Terminal alternatives are unique in the Bay Area because they would place a high concentration of diesel buses and their emissions in close proximity to a large number of people on a daily basis. Diesel particulate emissions have been identified as a source of Toxic Air Contaminants (TAC) and are a suspected carcinogen. To determine whether the proposed project or its alternatives would result in a significant air quality impact, we are requesting that the Final EIR evaluate the exposure of transit riders at the Terminal to diesel particulate emissions from buses. The analysis should consider the daily volume and emissions of buses on the street accessing the Terminal and the proximity of buses to transit riders. The Air District's CEQA Guidelines threshold for a significant air quality impact is breached when the probability of contracting cancer for the Maximally Exposed Individual exceeds 10 in one million. If your evaluation of the proposed project or its alternatives results in a significant air quality impact, we request that the impact be mitigated. Mitigation from exposure to diesel particulate might include measures to reduce emissions such as establishing maximum idling times, use of cleaner burning fuels, retrofitting bus fleets and use of low emission buses. Mitigation measures to reduce exposure of transit riders to diesel particulate emissions might include ventilation of bus exhaust and separation of buses from transit riders through building design or operations."

Response 15.1.1 During early conceptual design phases of the terminal alternatives, the design team recognized the potential for adverse health effects associated with diesel emissions. The West Ramp Alternative bus decks were specifically designed to separate the buses and the passengers with a glass partition and operable doors therefore minimizing exposure to bus emissions. The conceptual design calls for the doors to be open only for unloading and loading passengers, with bus patrons queuing inside the enclosed area.

15.1.2 California Department of Transportation, Timothy C. Sable, District Branch Chief, December 20, 2002

"Air Quality: Page 5-52, Section 5.7.2.2: In view of the fact that there is an existing carbon monoxide (CO) exceedence shown at First and Howard Streets, the CO microscale study must address the construction year CO levels as well as the year 2020. Higher emission levels in the build year would result in higher CO levels. As it stands now, the document does not clearly show that the project does not worsen an existing exceedence.

"Page 5-54: The reasoning regarding the PM-10 impacts of the project, while acceptable for the regional impacts, needs further analysis regarding microscale PM-10 impacts. Localized PM-10 impacts could be caused by a larger number of vehicles drawn to the facility, even though regional trips have been reduced. The Federal Register states that PM-10 methodology is not yet available for microscale PM-10 calculations. Some other qualitative reasoning for microscale impacts would be appropriate."

Response 15.1.2 As discussed in the EIS/EIR, Volume I, CO concentrations are expected to be lower in year 2020 than under existing conditions due to stringent state and federal mandates requiring lowering vehicle emissions from individual vehicles. Although traffic volumes would be higher in the future, both with and without implementation of the proposed project, increases in traffic volumes and associated emissions are expected to be offset by an increase in

cleaner-running cars on the road. Thus, CO concentrations from future traffic in the construction and build-out years are projected to be lower than existing conditions.

The supplemental air quality analysis[4] for the proposed off-site bus facility estimates PM_{10} concentrations at sensitive receptors within 500 feet of the facility. As noted in Section 5.7.3, Volume I, of the Final EIS/EIR, the incremental increase in PM_{10} concentrations would not exceed the California Ambient Air Quality Standards.

15.1.3 Transportation Solutions Defense and Education Fund (TRANSDEF), David Shronbrunn, President, December 20, 2002

"4-29: On July 23, 2002, the US Court of Appeals for the 9th Circuit issued a stay of MTC's mobile source emissions budget, pending review of a challenge to its adequacy. This triggered a second conformity lapse, which is still in place as of the date of this letter. In addition, the SIP's Negative Declaration of Environmental Impact is facing challenge in Superior Court. If successful, the SIP approval would be vacated.

"5-49: The air quality analysis must evaluate the regional emissions reductions that result from the increased use of bus transit and the corresponding decrease in auto travel.

"5-49: The air quality benefits of the Redevelopment Project must be identified here. This will occur through correction of the definition of alternatives on 5-122 (see below).

"5-121: A 20% decrease in peak hour delay is very significant. Please verify that this is reflected in the air quality analysis. It should also be highlighted as one of the benefits of the Project."

Response 15.1.3 A conformity lapse would not prohibit the completion of the environmental process for this Project. The co-lead agencies note that an intended purpose of the proposed Project is to increase transit ridership and correspondingly reduce regional vehicular emissions.

The air quality analysis in this EIS/EIR addresses regional emissions reductions that result from the increased use of public transit and the corresponding decrease in auto travel. Table 5.7-1 shows regional emissions reductions predicted as a result of the implementation of the proposed Caltrain Downtown Extension. The regional emissions reductions were based on projected increase in transit ridership and the decrease in the number of vehicle miles that would result from the increase in transit ridership.

The air quality analysis reflects traffic volumes generated by the Project's traffic analysis. When estimating pollutant concentrations from vehicular traffic, any decrease in peak hour delay would already be reflected in the air quality analysis. As discussed, pollutant concentrations would be lower in year 2020 when compared to existing conditions during peak hour conditions.

The commentor correctly notes that the proposed redevelopment component of the Project would result in the intensification of land uses in the urban core and the placement of higher intensity land uses near a regional, multimodal transit center, which could well result in an overall reduction in regional vehicular travel, and correspondingly, a reduction in regional air emissions. The 20 percent decrease in peak hour delay is reflected in the air quality analysis.

[4] Terry A. Hayes Associates, LLC, *Transbay Terminal Improvement Project: Bus Access and Storage Supplemental Air Quality Impact Analysis,* March 2003.

15.1.4 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Pages 5-54. The discussion about the Regional Transportation Plan applies to the situation before the lawsuit mentioned under comment about page 2-3 was upheld. At the current time, the outcome is uncertain, and federal funding for all projects not already underway is frozen."

Response 15.1.4 Please see Response 15.1.3.

15.1.5 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"Land Use: (Page 2-44). The land use mix assumed is dominantly residential which would provide a desirable balance for the intense job center of San Francisco. The Full Build alternative also includes 1,184,590 square feet of office space.

- "If more office space than "Full Build" is built, consistent with current zoning, how would that affect traffic projections and air quality?"

Response 15.1.5 Please see Response 4.2.14.

16.0 HAZARDOUS MATERIALS

16.1.1 California Department of Transportation, Timothy C. Sable, District Branch Chief, December 20, 2002

"Hazardous Materials: Section 4.17 - There is no discussion of the potential for encountering asbestos and lead during building demolition. This should be included, to be consistent with the rest of the section, which discusses potential problems during construction. The project appears to be away from veins of asbestos-bearing serpentine rock. However, if this source has not already been considered, then it would be prudent to take a closer look, particularly for the Caltrain extension.

"Section 4.17.2.2 - Vehicle exhaust should also be included as a potential source of lead contamination. In areas outside the historic fill limit and industrial sites, lead contamination shows up as a surficial zone of one to two feet in depth, depending on soil type and traffic volume."

"Hazardous Materials: Section 5.21.9 - Asbestos should also be discussed in this section since there are Bay Area Air Quality Management District (BAAQMD) rules regarding asbestos removal and building demolition. The USEPA National Emission Standards for Hazardous Air Pollutants regulate asbestos during demolition and removal. BAAQMD has the delegated authority to enforce these regulations.

"Section 5.21.11 - Does State Water Resources Control Board Order No. 99-08-DWQ apply to projects in San Francisco even though storm water runoff goes to the combined sewer system? If so, a Storm Water Pollution Prevention Plan would need to be prepared for the project. Will the project depend solely on the combined system as its sediment control practice? If not, some of the management practices listed in the Air Quality section would also minimize sediment removal from the site. Secondary containment and spill contingency should also be addressed for fuels and other liquid pollutants that will be used during construction.

Response 16.1.1 Page 5-195 through 5-197 in Section 5.21.15, Construction Hazardous Materials Impacts of the Draft EIS/EIR, discuss the potential for encountering asbestos and lead during building demolition and the appropriate mitigation. Handling of fuels and other liquid pollutants during construction along with appropriate mitigation are also discussed on these pages of the Draft EIS/EIR.

Serpentine rock is known to be present in some areas of the City. The currently available geologic information is not sufficient to make a determination whether serpentine rock may be encountered along the project alignment. During construction, as part of the health and safety plan, arrangements will be made for detecting the presence of serpentine rock, and for safely disposing the rock offsite, if serpentine is encountered. Current City ordinance requires that, where hazardous wastes are found in excess of state or federal standards, the project would be required to submit a site mitigation plan (SMP) to the appropriate state or federal agency(ies) and to implement an approved SMP prior to the issuance of any building to be permitted.

PM_{10} consists of very small particles (particles that are less than 10 microns in diameter) floating in the air, including lead. The supplemental air quality analysis analyzed PM_{10} concentrations at sensitive receptor locations of the proposed bus storage facility. The analysis took into consideration vehicular traffic on nearby roadways. As discussed, PM_{10} concentrations at sensitive receptors are not anticipated to exceed the California Ambient Air Quality Standards.

Additionally, the phase-out of leaded gasoline between 1978 and 1987 due to federal and state laws reduced overall inventory of airborne lead by nearly 95 percent. Thus, lead found in PM_{10} generated by vehicle exhaust would not have a significant impact on sensitive receptors.

Water removed from the tunnels and excavations, including groundwater and storm runoff, will be temporarily stored in sedimentation tanks. If pollutants are present such as hydrocarbons, further treatment may be required on-site. However, in the past, normal practice for most construction projects in the City, including the Muni Metro Turnback project, has been to dispose water removed from tunnels and excavations (after it has been treated to remove sediment) into the City's storm water system. It is anticipated that the same procedure would be used for the Transbay Terminal/Caltrain Downtown Extension Project, too.

17.0 NOISE / VIBRATION

17.1.1 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"Sound walls: there is a mention somewhere in the report that sound walls are required. Are they required on the ramps? If so, this is a major impact that is not illustrated in the document."

Response 17.1.1 As noted in Section 5.8.6 of the Draft and Final EIS/EIR, noise barriers are deemed necessary for the portions of the perimeter of the AC Transit and Golden Gate Transit off-site mid-day bus storage facilities. Barriers are also proposed for the bus ramps within the AC Transit storage area, but not for the other ramps.

17.1.2 Titan Management Group, Michael Alfaro, Vice President, December 12, 2002

"Vibration Impacts: The Environmental Document states that "the highest levels of ambient ground-borne vibration were measured at the Clock Tower (sic) building at Bryant and Second Streets. Both exterior and interior vibration was measured. The exterior location was on the sidewalk relatively close to the street. Even at this location, the highest vibration levels were only slightly above what can be perceived by most humans." (Page 4-32).

"The vibration analysis that was performed showed that vibrations would exceed the impact threshold for residential land uses in the hallway of the Clocktower even with mitigation in the form of a resilient track system. The vibration analysis included projections for 4 additional locations in the Clocktower. Those projections show that vibrations would be very close to exceeding the impact threshold.

"The Environmental Document, however, concludes with respect to the Clocktower: "Projected vibration levels exceed the impact threshold only at the hallway site, and therefore no mitigation is indicated." In itself, this is a questionable conclusion since the hallway itself is part of the residential use.

"Moreover, vibrations are already a significant problem at the Clocktower. This is apparently because of the building's proximity to the elevated freeway structure. We are very concerned about any vibrations in addition to the ones already experienced. An analysis of the impacts of the project on the Clocktower must include an analysis of the impacts of the project in addition to the impacts already experienced. The explanation of the vibration analysis does not indicate that this has been done. The Environmental Document also indicates that there are some significant qualifications on the vibration analysis.

"In light of the qualifications on the vibration analysis and in light of the results showing that the impact threshold has been exceeded in the hallway and showing that impacts elsewhere are close to the impact threshold, the analysis that has been done should be regarded as a screening level analysis. The results indicate that a more specific and detailed analysis should be performed. Any analysis should include indicate the vibrations that would be experienced if vibrations from the train occurred at the same time as serious vibrations from the freeway.

"The Clocktower believes this analysis is legally required. Additionally, if this analysis is not performed and if there is damage to the Clocktower residents or to the building from vibrations, a failure to have performed this analysis could have profound legal consequences."

Response 17.1.2 The noise and vibration impacts from train operations in the tunnel are described in the noise and vibration Sections 4.7 and 5.8, Volume I, of this EIS/EIR. Because the train would be operating in a tunnel, there are no noise impacts to the outside environment associated with train operations.

As noted in the EIS/EIR sections, noise and vibration measurements were conducted at a number of locations in the Clocktower building. The ambient vibration levels measured at the Clocktower were at or below the level of perception for most humans (approximately 65 VdB). Existing vibration levels measured inside the Clocktower building are even lower than this. The ambient vibration measurements were conducted to provide a basis for comparison with the projected levels associated with the Project and to assess the existing vibration environment. The ambient vibration levels do not influence either the vibration criteria or the impact assessment.

The detailed vibration analysis conducted was based on the Federal Transit Administration (FTA) vibration assessment method. The FTA method only evaluates impacts for project sources of vibration, and existing vibration sources are not a part of the analysis. The vibration analysis conducted at the Clocktower meets all FTA requirements for a detailed vibration assessment. Vibration annoyance impact has been identified and mitigation has been recommended.

A five-decibel safety factor was incorporated into the calculations of vibration and the projections of impact to take into account the potential for variations in conditions that could potentially lead to higher than projected vibration levels. The 5-decibel safety factor provides a level of conservatism in the projections.

With the recommended vibration mitigation measures, the vibration levels (with a 5-decibel safety factor) are projected to be only slightly above the impact criterion. After mitigation, groundborne noise impact at 388 Townsend Street and vibration impact at the Clocktower Building would still exceed the impact threshold by one decibel. This level of impact would not constitute a substantial adverse change requiring further mitigation, in terms either of Federal Transit Administration or CEQA guidelines. The next level of mitigation that would be effective would be to install floating slab under the Caltrain alignment trackage for 600 to 800 feet on either side of each building (at an estimated construction cost of approximately $1,000 per linear foot), which would add installed costs approaching one million dollars or more per building. Such high mitigation costs would not be a prudent and reasonable expenditure to eliminate the last one decibel of impact at these two sites.

The FTA guidance manual is clear on the reasonable and feasible nature of mitigation, for both noise and vibration.

Section3.2.4 states:

"The Federal Transit Administration does not have a specific noise mitigation policy embodied in a regulation..... In conjunction with FHWA, FTA has issued a regulation implementing NEPA which sets out the agencies' general policy on environmental mitigation. There, it states that measures necessary to mitigate adverse impacts are to be incorporated into the project and, further, that such measures are eligible for Federal funding when FTA determines that ' ...the proposed mitigation represents a reasonable public expenditure after considering the impacts of the action and the benefits of the proposed mitigation measures.'"

Section 11.4 states:

"For the areas where the impact criteria may be exceeded, review potential mitigation measures and assemble a list of feasible approaches to vibration control. To be feasible, the measure, or combination of measures, must be capable of providing a significant reduction of the vibration levels, at least 5 dB, while being reasonable from the standpoint of the added cost."

It is important to note that this criterion is for human annoyance only, not damage. Damage criteria for this type of building are significantly higher than the annoyance criterion. Vibration from train operations is projected to be more than 20 VdB below the most stringent damage criterion for the most fragile types of buildings.

17.1.3 Elizabeth Carney, Nov. 26, 2002

"What are the impacts during tunnel operation: of vibration, from exhaust, from noise from the operation of the trains must be studied in detail, as the EIR fails to even recognize the hallway as a part of the residence."

Response 17.1.3 Please see Reponses 17.1.2.

17.1.4 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Page 5-62. Storage yard noise will not be limited to engine noise, as this discussion seems to imply. Simply moving large pieces of equipment generates noise, as well as associated activities. To state that no mitigation will be necessary seems far-fetched. Additionally, light sources from this site may be intrusive to surrounding uses.

"Page 5-64, Table 5.8-6. Vibration impacts are worse than noise impacts, with little reduction from mitigation using resilient track system."

Response 17.1.4 The Caltrain storage facility is proposed to continue to operate at the current site of the Fourth and Townsend yard. As noted, various operations at this site generate noise, but the yard has existed at this site for nearly 100 years. Except for the continuation of train activities at the yard site, the Project would be predominantly in a tunnel. For the tunnel portions, there is virtually no noise impact from train operations.

There are only a small number of vibration and ground-borne noise impacts, but with a resilient track system, most impacts are mitigated. There are only two locations where the vibration or ground-borne noise levels are slightly above the criteria, and that is including a 5-decibel safety factor in the calculations.

18.0 EIS / EIR PROCESS

18.1.1 State Clearinghouse, State of California, Governor's Office of Planning and Research, November 19, 2002

"The State Clearinghouse submitted the above named Joint Document to selected state agencies for review. The review period closed on November 18, 2002, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act."

Response 18.1.1 Please see Comment 18.1.2 below regarding letters received following this Clearinghouse notice.

18.1.2 State Clearinghouse, State of California, Governor's Office of Planning and Research, December 23, 2002

"The enclosed comments(s) on your Joint Document was(were) received by the State Clearinghouse after the end of the state review period, which closed on November 18, 2002. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final document.

"The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project."

Response 18.1.2 The comments received after the end of the state review period have been included in this Volumes II and III of this Final EIS/EIR, and responses to the comments received are included in this Volume II.

18.1.3 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

Page 2-3. Electrification of Caltrain by 2006 is highly unlikely. Revenue reductions and budget shortfalls caused Santa Clara Valley Transportation Authority (VTA) to decline to fund its $2.3M share of funding the DEIR for the electrification project in FY 2002-2003. Sources of federal funding were identified, but those are frozen until a lawsuit against EPA's approval of the 2001 Regional Transportation Plan is resolved. It is very unlikely therefore that the environmental review process will be completed in 2003."

Response 18.1.3 Please see Response 7.2.3.

18.1.4 Titan Management Group, Michael Alfaro, Vice President, December 12, 2002

"We have also stated our concerns at the Public Hearing April, 2001, and in writing, requesting a study of the Effects of Emissions the many residences and businesses. Those comments are all incorporated by reference in these comments.

"We are concerned that public health and safety needs are not being met, and we are considering legal action. We feel we have been ignored in the process. The Clocktower Lofts

Owners Association is not even on the distribution list for information. Please correct that omission."

Response 18.1.4 Please see the combined Response 2.7.1 through 2.7.38, "Air Quality Assessment" Section. The Clocktower Lofts Owners Association has been added to the distribution list and has received the Final EIS/EIR, Volumes I and II. A CD version of Volume III is available upon request or is available for review by appointment at the San Francisco Planning Department, 1660 Mission Street.

18.1.5 William Blackwell, Architect, November 12, 2002

"The EIS/EIR Notice states that reasonable alternatives will be reviewed and evaluated in the EIS/EIR. Despite Joan's explanation that the wording of the notice was misleading, it is my understanding that CEQA guidelines as well as federal statutes require an appropriate response. Otherwise, why ask for citizen participation?

"EIS/EIR Figure 2.3-1, Alternatives Considered and Withdrawn, does not include my proposal. However, if it had been considered, I suppose that the objections would be similar to those given on page 2-50 for the Essex Street stub-end alignment that you pointed out after the SPUR meeting."

Response 18.1.5 Please see Responses 5.1.5 and 5.1.6.

18.1.6 William Blackwell, Architect, December 2, 2002

"Page 2-49, Alternatives Considered and Withdrawn, does not include the Blackwell Alternative described in Attachment No.1. This is a carefully researched and reasonable alternative that was submitted within the public comment period prior to commencement of this Draft EIS/EIR."

Response 18.1.6 Please see Responses 5.1.5 and 5.1.6.

18.1.7 Greg Patterson, December 18, 2002

"A complete EIR for the Redevelopment Area should be produced as a separate, later document, or possibly a Supplemental EIR, that is recirculated for public comment, when the planning has evolved and can be studied. The chart of proposed square footages mounted on a faded, microscopic, unreadable block diagram (Figure S-2 on p. S-9) makes the Redevelopment even more unknowable. Acceptance of this document's treatment of the Redevelopment Area in this EIR/S as an adequate environmental evaluation under CEQA could be readily challenged."

Response 18.1.7 CEQA Guidelines acknowledge in Section 15004 that, "Choosing the precise time for CEQA compliance involves a balancing of competing factors." It goes on to say that EIRs should be prepared as early as feasible in the planning process. Because of the complexity of the multiple components of the Project, it was decided early on to do a Programmatic EIR for the redevelopment component of the proposed Project. NEPA also authorizes use of "tiering" (Section 1508.28) for "coverage of general matters in broader environmental impacts statements ... with subsequent narrower statements or environmental analyses (... or ultimately site-specific statements)." NEPA notes that tiering is appropriate when the sequence of statements or analysis is: ... "From a program, plan, or policy environmental impact statement to a program, plan, or policy statement or analysis of lesser scope or to a site-specific statement or analysis."

The Draft EIS/EIR evaluated the impacts of two alternative redevelopment programs that did not have specific designs for each site that was a part of the programs. The Draft EIS/EIR studied massing scenarios to evaluate such potential impacts as visual, shade, shadow, and wind. For other typical areas such as traffic and air quality, the Draft EIS/EIR projected population, density, and land use mixes for the programs and analyzed the potential impacts of the projected programs.

CEQA Guidelines Section 15168 (California Code of Regulations, Title 14). A programmatic EIR has numerous benefits including:

- *Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action.*
- *Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis,*
- *Avoid duplicative reconsideration of basic policy considerations*
- *Allow the lead agency to consider broad policy alternatives and program wide mitigation measure at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts.*
- *Allow reduction in paperwork.*

In addition, since release of the Draft EIS/EIR, the Redevelopment Agency has released for public review the *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document. Contents of this draft are summarized in Section 2.2.4.2 and Appendix F, Volume I, of the Final EIS/EIR. The draft vision and EIS/EIR sections provide more detail regarding the currently proposed redevelopment plan for the area. The co-lead agencies have analyzed these refinements and such analysis is provided in Chapter 5 of this Final EIS/EIR. The overall analysis concludes that the refinements do not raise any substantial new adverse issues or impacts, and, in accordance with CEQA guidelines 15088.5, there is no need to recirculate the Draft EIS/EIR.

It is estimated that actual development proposals for the public parcels will come five to ten years after project adoption when the sites become available for their ultimate redevelopment. Many of the public parcel redevelopment sites are not going to be immediately available and will be used in the interim for other uses such as the continuing Caltrans Retrofit Project and as the temporary transbay bus terminal. In the future, as the sites become available for development, additional evaluation on the potential for effects on the environment will be done on the proposals by the Redevelopment Agency for a particular site. If additional environmental analysis is necessary pursuant to CEQA, it will be completed by the Redevelopment Agency prior to any subsequent approval actions for the particular site or project.

18.1.8 Elizabeth Carney, Speaker, 11/26/02 Public Hearing

“Monica DuClaud had to go back to work. She asked me to speak for her. She wanted me to tell you she's quite concerned about putting the bus depot in the area of Stillman and Second Street where we all live in the Clocktower which is 461 Second Street. And that she also wanted me to mention that the complexity of tunneling, the cut-and-cover plan really requires more of our study and analysis than we in the Clocktower have had a chance to make. There's 127 families that live in that building. And we've only recently, by accident, kind of, learned that this analysis

process is going forward. As a result, we're hoping that the comment period could be extended while we take the opportunity to look and see what are the impacts on our building.

"And I wanted to tell you a small story. In the early 1900s, there was something called the Second Street Cut. The idea was that they were going to make the hill, at Rincon Hill, a little bit flatter, so it was much easier to bring wagons from Market and Mission down to the Bay. And the politicians got together and made a plan for doing that, and did so. They made a big cut in Second Street. Shortly after that happened, the houses that were on Rincon Hill fell off the hill. And that was the end of development for Rincon Hill for a very long time. So we're hoping that the planning process can have enough careful study and analysis at the beginning of the process that these kinds of futures will be something we don't repeat again. Thank you."

Response 18.1.8 At the request of the public and the Planning Commission hearing on November 26, 2002, the comment period was extended to December 20, 2002.

18.1.9 Andrew Littlefield, Speaker, 11/26/02 Public Hearing

"I'm a resident of 461 Second Street, on the board of directors of the homeowners association. We would like to request an extension in terms of the deadline associated with written responses to the EIR associated with this agenda item. Unfortunately, this EIR was only brought to our attention merely two weeks ago. It's a complex, comprehensive EIR. We would like to provide the appropriate response, particularly as today, these were a number of people very concerned with regards the impact of the diesel fumes, and the air quality inside their homes. What we'd like to request is a delay or a postponement of the deadline for written comment to January 30th, 2003."

Response 18.1.9 Please see Response 18.1.8.

18.1.10 Arthur Meader, Speaker, 11/26/02 Public Hearing

"So I would ask that you again allow us additional time for comments, and to respond what is a complex issue involving matters of science. We're not engineers. And we need to at least have an opportunity to hire people to address these issues. Thank you very much."

Response 18.1.10 Please see Response 18.1.8.

18.1.11 Elizabeth Carney, Nov. 26, 2002

"This project is complex and the issues require more time to study. Now that we, as residents, understand how complex, we need more time to consult experts and analyze these issues. We think that a better project will result in the future if we take the additional time now to take more comments from residents and businesses. Also a new draft EIR should be prepared and circulated for comment because impacts on environment (e.g., Diesel emissions) have not been presented and analyzed...

"As we have just received the 500 page EIR/EIS document, there has not been time to study, consult experts and analyze all of the effects of the proposed plan on the Clocktower Building and neighborhood. Please extend the public input comment period, it will enrich the final solution."

Response 18.1.11 The air quality effects of the Project were analyzed for the Draft EIS/EIR and the results were reported in Section 5.7 of the EIS/EIR. The analysis found that there were no violations of the more stringent California Ambient Air Quality Standards CAAQS. In response

to comments made on the air quality analysis in the draft document, additional air quality analysis[5] was performed (please see the combined Response 2.7.1 through 2.7.38, "Air Quality Analysis" and Section 5.7.3, Volume I, of the Final EIS/EIR). Results of this additional analysis also found no violations of federal or state standards and therefore no substantial adverse impacts.

The CEQA standard for requiring a new Draft EIR are set out in CEQA Guidelines Section 15088.5 (California Code of Regulation, Title 14). This section states that it would be a new significant environmental impact that cannot be mitigated or substantial changes resulting in new significant environmental effect that cannot be mitigated that would require recirculation or a subsequent or supplemental draft EIR.

Please see Response 18.1.8.

18.1.12 J. R. Capron, November 8, 2002

"I represent the owners of 25 Stillman Street and 35 Stillman Street. I am writing to request an extension of the public comment period for the Transbay Terminal DEIS/EIR. Further, I am requesting that you require a more in-depth analysis of the negative impact to the area of the proposed Bus Storage Area along Stillman and Perry Street. I am informed that several people, and possibly many more, who requested to be notified when the EIS/EIR was published, never received notification. My clients were not notified although their names were on the circulation list. They found out about it weeks later through a chance conversation with a friend. The public needs more time to respond... Because of the impending deadline for the public comment period, please respond to me in writing by November 1Fourth regarding extending the public comment period and including a more in-depth analysis of the proposed bus storage area site alternatives."

Response 18.1.12 Please see Response 18.1.8. The co-lead agencies gave the required public notice for the Draft EIS/EIR for the Project. CEQA Guidelines (California Code of Regulations Title 14) Section 15087 states that public notice of the availability of a draft environmental document be given by at least one of the following methods: (1) publication in a newspaper of general circulation in the project area; (2) posting on and off the project site; and (3) direct mailing. For this project, the City did all three and sent notices to all property owners within the project area and within 300 feet of the project boundary as required by the San Francisco Administrative Code Chapter 31.

Note: Comments 18.1.13 through 18.1.24 all concern a request for extension of the public review period on the Draft EIS/EIR. One response is provided to all of these comments, and this consolidated response can be found following Comment 18.1.24.

18.1.13 Pamela Duffy, representing 301 Mission Development, Speaker, 11/26/02 Public Hearing

"Off my agenda, but I do think with a project of this complexity, which at least as suggested has this kind of impact on a small community could withstand another couple of months for people to get comfortable with the document."

[5] Terry A. Hayes Associates, LLC, *Transbay Terminal Improvement Project: Bus Access and Storage Supplemental Air Quality Impact Analysis,* March 2003.

18.1.14 San Francisco Planning Commissioner Kevin Hughs, 11/26/02 Public Hearing

"And with respects to a request for extension, I don't see any harm. I would lean towards, you know, an additional two weeks, on, on extension; I think January 30th is a little far out, far away. But I believe that an additional two weeks would not unduly impact the Department."

18.1.15 Planning Director Gerald Green, 11/26/02 Public Hearing

"Your suggestion at this stage is to extend the written comment period for two weeks?"

18.1.16 San Francisco Planning Commissioner Kevin Hughs, 11/26/02 Public Hearing

"Correct; right."

18.1.17 Planning Director Gerald Green, 11/26/02 Public Hearing

"I'm wondering whether that is the consensus of the commission that you'd like to see additional time for written comments... I'm not sure what two weeks will generate in terms of new or additional comments, but it is, it is going to affect the timeline. But nonetheless, it's your call. You are going to have to feel comfortable that the document is adequate before you're served by it."

18.1.18 San Francisco Planning Commissioner Michael Antonini, 11/26/02 Public Hearing

"I personally would vote not to extend. I would like to see what the other commissioners feel on this item."

18.1.19 San Francisco Planning Commissioner Bill Lee, 11/26/02 Public Hearing

"I can go halfway. Extend it for one week."

18.1.20 San Francisco Planning Commissioner Sue Lee, 11/26/02 Public Hearing

"I would support a two-week extension."

18.1.21 San Francisco Planning Commissioner Kevin Hughes, 11/26/02 Public Hearing

"I would support a two-week extension."

18.1.22 Planning Director Gerald Green, 11/26/02 Public Hearing

"We're going to extend it to – what I hear the commission saying, we're going to extend it to December 20th to provide more comments. And we'll go from there."

18.1.23 San Francisco Planning Commissioner Michael Antonini, 11/26/02 Public Hearing

"Okay, very good, Director Green. So it's extended until December 20th."

18.1.24 SPUR, Jim Chappell, President, November 13, 2002

"SPUR has assembled a working group to comment on the Transbay EIR/EIS and we look forward to sending our written comments to you. We find the document to describe the impacts one of the most complex projects the city has seen. Given that the new Planning Commission has yet to schedule a hearing, SPUR requests that the comment period be extended an additional

forty five days (until after the December holiday season) so that we may thoroughly analyze and comment on the document. We believe that this additional time would be valuable for other commentors and is appropriate given the length of gestation time of the project."

Response 18.1-13 through 18.1.24 At the request of the public and the Planning Commission hearing on November 26, 2002, the comment period was extended to December 20, 2002.

18.1.25 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"San Francisco Tomorrow would like to express its appreciation to the Planning Commission and to Director Gerald Green for granting an additional two weeks to prepare comments on this important and complex project. We understand that the preparing agencies are working under considerable constraints in preparation of this document, and hope that our comments will make the document more complete and easier to understand."

Response 18.1.25 Comment noted.

18.1.26 Arthur L. Meader, III, November 22, 2002

"Thanks also for the extensive advance notification. At least with projects such as the Third Street rail line I get periodic mailers, which are very helpful. I have yet to hear peep one from your office or any other agency involved in this deal."

Response 18.1.26 Comment noted.

18.1.27 Francis and Janice Mathews, December 19, 2002

"Notices and Responses: We are concerned about the lack of notice of meetings, the lack of response to our initial input at the scoping meeting and follow-up letters. Although we were on the "distribution list" for the EIR, we did not receive it and had to call to get a copy after finding out that it was available through a chance conversation with a friend.

- "If you have not already done so, please add us to your list for notices of all meetings regarding the Transbay Terminal and any other meetings that deal with the Bus Storage Site, the Second St. Caltrain connection and the Third St. rail.
- "Please send us the "Response to Comments" that addresses our letters and other letters submitted for the Transbay Terminal EIR/EIS
- "We would like our buildings to be included in the analysis of any other issues of the Transbay Terminal and related projects (i.e. Bus Storage, Second or Third St. rail projects) brought up by others regarding our neighborhood (Second St., Third St., Fourth St., Stillman St. and Perry St. as well as Howard St.)"

Response 18.1.27 The Draft EIS/EIR was sent to the distribution list as shown in the document. The co-lead agencies will forward the request to be on the mailing list for the Third Street Project to Muni. Francis and Janice Mathews are on the Project mailing list. This Volume II along with Volume I of the Final EIS/EIR has been mailed to Francis and Janice Mathews. A CD version of Volume III is available upon request or is available for review by appointment at the San Francisco Planning Department, 1660 Mission Street.

18.1.28 Elizabeth Carney, Nov. 26, 2002

"We request to be placed on the notice list for all documents, proceedings and for a copy of the 'Response to documents' when prepared."

Response 18.1.28 Elizabeth Carney is on the Project mailing list, and Volume II along with Volume I of the Final EIS/EIR has been mailed to Ms. Carney. A CD version of Volume III is available upon request or is available for review by appointment at the San Francisco Planning Department, 1660 Mission Street.

18.1.29 Bruce W. Barnes, Barnes Equipment Company, December 16, 2002

"We request advance notice for all meetings regarding the Transbay Terminal Project and any other meetings addressing the temporary and permanent bus storage facility locations and analysis."

Response 18.1.29 Bruce W. Barnes is on the Project mailing list, and Volume II along with Volume I of the Final EIS/EIR has been mailed to Mr. Barnes. A CD version of Volume III is available upon request or is available for review by appointment at the San Francisco Planning Department, 1660 Mission Street.

18.1.30 Oliver L. Holmes, Duane Morris LLP, December 6 2002

"On November 26, 2002, this office filed public comments on the above reference project with your office. This letter will serve as formal notification of a change of address for our office. Any future correspondence with regard to the Transbay Terminal Project or our public comments should be directed to my attention at: Duane Morris LLP, One Market, Spear Tower, Suite 2000 San Francisco, CA 94105-1104."

Response 18.1.30 The commentor's address has been revised on the Project's mailing list.

18.1.31 U.S. Environmental Protection Agency, Lisa B. Hanf, Manager, Federal Activities Office, December 2, 2002

"When the FEIS is completed, please send one copy to me at the address above (Mail Code: CMD-2). If you have any questions or comments, please feel free to contact me or Nova Blazej, the primary person working on this project. Nova Blazej can be reached at 415-972-3846 or *blazej.nova@epa.gov*."

Response 18.1.31 Ms. Blazej at US EPA has been sent this Volume II along with Volume I of the Final EIS/EIR. A CD version of Volume III is available upon request or is available for review by appointment at the San Francisco Planning Department, 1660 Mission Street.

19.0 EIS / EIR OVERALL CONTENT / CORRECTIONS

19.1.1 California Department of Transportation, Timothy C. Sable, District Branch Chief, December 20, 2002

"Cultural Resources: Pages 4-48 through 4-60 (section 4.16.6) and pages 5-75 through 5-77 (section 5.14.3 through 5.14.3.4), and Section 8: the DEIR text throughout these sections is inconsistent regarding the National Register of Historic Places status of the Transbay Transit Terminal, and the Bay Bridge approach and bus ramps. As of 2000, the Transbay Transit Terminal and the ramps have been "listed" on the National Register, as contributors to the San Francisco-Oakland Bay Bridge, and are no longer considered to be merely "eligible" for the National Register. Tables 4.16-1,5.14-1, and 8.4-1 also should clarity the National Register status as listed as contributors, or 1D, rather than 2 or 2S2.

"Air Quality: Page 4-29 and 5-53: The TIP information should be updated to reflect the latest TIP/RTP information.

"Right of Way (ROW): Page S-8, and Figure S-2, discussing various development levels, should mention the fact that these parcels are currently State-owned, and that the transfer of ownership is the subject of ongoing negotiations with the State, and the subject of a cooperative agreement. Additionally, approximately 1/3 of the Block #3737 will be permanently occupied by the Folsom Street leg of the Fremont Street off-ramp. This is repeated in various figures throughout Chapter 5."

"Related Projects: Chapter 1, Section 1.4, titled "OTHER RELATED PROJECTS," does not mention the upcoming San Francisco-Oakland Bay Bridge (SFOBB) West Approach Seismic Safety Project, as-year, $225 million project, which will be impacted by the proposed Transbay Transit Terminal project. Of specific concern is the impact of the Caltrain Extension's construction activities directly underneath the west approach structure with its new pile foundation system.

"Chapter 5, Section 5.21.1.1: The second paragraph should address the impacts on the staging of the SFOBB West Approach Seismic Safety Project, the Department's intention to build a temporary on-ramp during the first stage of the project to accommodate bus access to the east loop, and the Department's commitment to retrofitting the east loop of the existing Transbay Transit Terminal. The geometric and structural feasibility of this proposal is also questionable.

"Parking: Chapter 3, Section 3.3, page 3-36, paragraph 2: The Department does not manage parking lots. State-owned lots are leased to private vendors, usually through short-term leases."

Response 19.1.1 The San Francisco-Oakland Bay Bridge was listed in the Register on August 13, 2001, according to the National Park Service's National Register Information System (NRIS) and the Historic Property Data File maintained by OHP. The bridge is listed as a "structure," not as a "district" in the NRIS database, while the OHP list shows it as a 1D, or district. In both listings, the bridge does have several contributing elements, including the ramps and terminal building. The bridge and its contributing elements were identified as historic properties in the survey report. The Finding of Effect (FOE) addresses Project effects on these properties. Corrections have been made to the cultural resource sections (4.16 and 5.14) for the sake of clarity and consistency.

The Air Quality Sections 4.6.3 and 5.7.3, Volume I, of the Final EIS/EIR reflect the latest TIP/RTP information.

Page S-8 and Figure S-2 have been changed to reflect the status of the transfer of state lands and the content of the cooperative agreement for land transfer signed by Caltrans, the Transbay Joint Powers Authority, and the City and County of San Francisco.

The San Francisco-Oakland Bay Bridge (SFOBB) West Approach Seismic Retrofit Project has been added to the Related Projects Section 1.4, Volume I, of this Final EIS/EIR.

Proper design and monitoring of the west approach structure and adjacent soils will allow for the construction of a tunnel along the proposed Caltrain alignment. As part of the design of the tunnels, the project team will obtain and review available foundation plans for adjacent structures, including the pile foundations for the west approach structure. The tunnelling work will be planned and executed in a manner that it can control potential impacts on adjacent structures within acceptable tolerances. Mitigation measures, if necessary, can be developed to protect existing adjacent structures. The project will obtain the necessary permits from Caltrans to cross under the west approach.

Section 3.3, Volume I, of the Final EIS/EIR has been revised to note that Caltrans does not manage parking lots but rather leases the State-owned property to private vendors, usually through short-term leases. Please also see Response 2.6.1.

19.1.2 Golden Gate Bridge District, Alan R. Zahradnik, Planning Director, November 19, 2002

"EIR Comments/Permanent Storage for Golden Gate Transit (GGT)

- "Table S-1 (page S-17), under the Transit Operations/No-Project Alternative heading, should mention that a permanent storage facility for GGT is not provided under this scenario. Similarly, under Transit Operations/Full Loop Ramp Alternative heading, it should be mentioned that a permanent storage facility is provided for GGT.

"EIR Comments/GGT Service in San Francisco

- "Figure 1.2-4 (page 1-15) incorrectly illustrates GGT bus service on Folsom and Howard streets. Since 1997, GGT "Civic Center" service has operated on Mission Street. (Figure 3-1 on page 3-2 is correct.) With the anticipated relocation of its midday storage facility from Main and Beale streets to Eighth and Harrison, GGT is planning to resume revenue service on Folsom and Howard streets. District Planning Department staff will provide the exact routing of bus service in the South of Market area as soon as it becomes available.
- "Page 3-20 and Table 3.1-11 (page 3-22) of the DEIS/DEIR should make the following clarifications concerning GGT Basic Service in San Francisco.
  - o "GGT Basic Service generally operates every day and nearly 24 hours per day
  - o "Route 10 operates only on weekends in San Francisco; Routes 30 and 90 operate only on weekdays.
- "Figure 3.1-6 (page 3-21) does not show GGT Route 67 and Route 69 correctly. Route 69 is a ferry shuttle route that serves San Francisco Ferry Terminal and the Financial District. Route 67 is a ferry shuttle route that serves San Francisco Ferry Terminal and the Civic Center.
- "Information on page 3-20 of the DEIS/DEIR should be updated to include the current District one-way adult cash fares.

Weekday Fares	
Golden Gate Transit transbay bus	$2.65 -$5.65
Golden Gate Ferry; SF to Sausalito	$5.60
Golden Gate Ferry; SF to Larkspur	$3.25
Weekend/Holiday Fares	
Golden Gate Transit transbay bus	$2.65 -$5.65
Golden Gate Ferry; SF to Sausalito	$5.60
Golden Gate Ferry; SF to Larkspur	$5.60

- "Table 3.1-11 (page 3-22) should be revised to include the following clarifications concerning GGT bus service in San Francisco (as of September 2002):
  - "Route 90 has two (not one) southbound trips that serve the Transbay Terminal area.
  - Route 72 has headways that vary between 14 and 55 minutes (not one peak period trip).
- "Page 3-23 should not describe District sponsored Club Bus services from Napa and Sonoma County to San Francisco as "Regional Paratransit" service. These are subscription commute bus routes that serve the Transbay Terminal via bus stops on Mission Street. As of March 2001, the Napa Valley Commute Club operates one southbound and one northbound trip during the peak period. As of October 2002, the Valley of the Moon Commute Club operates two southbound and two northbound trips during the peak periods.

  "Regional Paratransit services to TTT include services correctly described on page 1-8 of the DEIS/DEIR.

- "Page 3-49 should acknowledge that most GGT buses and all Golden Gate ferries are equipped to transport bicycles.

"EIR Comments/Miscellaneous Issues

- "Page 1-25 describes membership of the Transbay Joint Powers Authority (JPA). DEIS/DEIR should acknowledge that this District is an ex-officio member of the JPA."
- "It appears the restriping of Fremont Street traffic lanes between Mission Street and Market Street, described on Page 3-35, has already been implemented. In addition, tracks for the former F-Market Muni have been removed.

"EIR Comments/West Ramp Alternative

- "Fourth paragraph of page 5-114 cites GGT 'commuter service would also be able to use the new mid- block boarding area. Golden Gate Transit's basic service... would continue to load and alight passengers along Fremont Street between Mission and Howard.' This description of GGT service is not accurate and needs to be revised. Page 5-136 describes potential GGT operations as a result of the mid-block boarding area. There doesn't appear to be consistency between GGT operations described on page 5-114 and 5-136. Nevertheless, the following describes probable GGT operations with the new mid-block boarding area and can be incorporated into the DEIR:
  - "Basic Service: Inbound GGT Basic Service buses, which operate on Mission Street, would terminate in front of TIT on Mission Street (as they do presently). The proposed TIT mid-block boarding area would be used as the first revenue stop by outbound GGT Basic Service buses.
  - "Financial District Commute Service: Inbound GGT Financial District Commute Service buses would serve TIT by the current bus stop on First Street, between Market and Mission streets, and would not likely be affected by any of the TIT alternatives. Outbound Commute Service would be affected by the location of the off-site bus storage facility and elevated ramps mentioned previously. In the event of a direct connection between the off-site

facility and Fremont Street, GGT commute buses would serve TIT with existing bus stops on Fremont Street.

Response 19.1.2 Table S-1 has been changed to note that no Project facilities would be provided under the No-Project Alternative (which includes the off-site bus storage facility). Figure 1.2-4, Volume I, of the Final EIS/EIR has been revised to correctly illustrate GGT bus service on Folsom and Howard Streets. Section 3.1.2.4, Volume I, of the Final EIS/EIR has been revised to reflect the clarifications on GGT Basic Service. Table 3.1-11 shows the service hours on GGT basic service as well as the restriction of Route 10 service to weekends only and Routes 30 and 90 on weekdays only. Figure 3.1-6, Volume I, of the Final EIS/EIR has been revised to reflect the fact that Routes 67 and 69 are no longer in service. Information regarding GGT's one-way adult cash fares has been updated for the Final EIS/EIR.

Table 3.1-11, Volume I, of the Final EIS/EIR has been revised to include the following clarifications concerning GGT bus service in San Francisco (as of September 2002):

- Route 90 has two (not one) southbound trips that serve the Transbay Terminal area.
- Route 72 has headways that vary between 14 and 55 minutes (not one peak period trip).

Section 3.1.3.2 in Volume I, of the Final EIS/EIR has been retitled, "Special Commuter Services" and the text has been changed regarding these services. The Final EIS/EIR acknowledges that most GGT buses and all Golden Gate ferries are equipped to transport bicycles.

Ex-officio members can be added to the TJPA only by following a specific procedure in the TJPA by-laws. The Mayor has appointed a member of the GGBTHD Board to the TJPA and that member represents the City. However, this seat does not make GGBTHD an ex-officio member. Section 3.2.4 has been revised to reflect the fact that the restriping on Fremont has already been implemented and the tracks removed for the F line. Section 5.19.1.1, Volume I, has been revised to accurately reflect the GGT basic and commuter service operations.

19.1.3 San Francisco Muni, Jose Cisneros, Deputy General Manager for Capital Planning & External Affairs, December 17, 2002

"Pages 1-26 and 2-4 to 2-5, and Table 2.1-1:

- "The elevated Central Freeway, US 101, connects 1-80 with Fell and Oak Streets. This will be rebuilt and retrofitted only south of Market Street. The portion north of Market Street will be torn down and replaced by the new Octavia Blvd.
- "The Third St. LRT Project Initial Operating Segment (IOS) is expected to be open for full service in 2005; an early partial opening may occur in late 2004.
- "The Central Subway is expected to be in service in 2012, not 2009.
- "The Ferry Bus Terminal was a "relocation" project in anticipation of hotel construction, not an "expansion", and was completed in Fall 2001.
- "Muni's F-Line Historic streetcar service opened for service from Castro/Market Streets along the Embarcadero to Fisherman's Wharf in March 2000, and currently carries approximately 20,000 riders per day. Muni's E-Line station improvements on the Embarcadero and King Streets for historic streetcar service between Fisherman's Wharf and Fourth/King Streets will be under construction in 2003."

"Specific Comments – Page 1-28, Table 1.2-4: The SF Parking & Traffic Commission and SF Public Transportation Commission were merged into the SF Municipal Transportation Agency (MTA), effective July 2001. MTA approval is required for municipal public transit route

realignments, surface street changes, traffic operation changes, traffic control measures, and on-street parking changes.

"Page 2-4 -Section 2.1.2 Muni Facilities and Related Bus Service: The Third St. LRT Project Initial Operating Segment (IOS) is expected to be in full revenue service in 2005. The Central Subway is expected to be in service in 2012, not 2015.

"Page 2-4 -Section 2.1.5 Roadway and Street Improvements: The elevated Central Freeway will no longer connect with Oak and Fell Streets. It will be removed north of Market Street and replaced with the new Octavia Boulevard. The reference to a new King Street access roadway at Fifth Street into Mission Bay should be clarified, as to whether or not this roadway extends only south of King Street across Mission Creek, or whether it is intended to cross the Caltrain alignment.

"Page 2-15 - Figure 2.2-6 -Transbay Terminal Off-Site Bus Storage Ramp Link: This drawing contains a faint dashed line that is labeled "Possible Future Light Rail Connection", but the line is shown to come from the east, apparently from the Bay Bridge. Clarify what this line is intended to represent.

"Pages 3-2, Figure 3-1 Transit Network in the Project Area; and 3-12, Figure 3.1-2 Muni Service at the Transbay Terminal

- "Muni service in the Project Area is not adequately represented on this map, particularly the service that currently serves the Transbay Terminal from First Street, as well as the service that continues south on First to Howard (the 1 O-line), and goes north on Fremont from Folsom (the 1 O-line). While this service is correctly depicted in Figure 3.1-2, it should also be shown in Figure 3.1.
- "The station depicted at Fourth and King Streets in the middle of King Street is the Muni Metro station named "Fourth & King/Caltrain" station, not the Caltrain Station.
- "The map in Figure 3.1, as well as others in the EIS/EIR, has a significant highway omission in the base map. It fails to show the touchdown ramps from 1-280 to/from King Street in the vicinity of Fifth Street. The primary access to and from I-280 is now via King Street.

"Section 3.1.5 - Future Rail Transit and Bus Service - Pages 3-26 through 3-28: This section should also include a discussion of potential future high-speed rail (HSR) service to the Transbay Terminal, including projections of the number of riders expected to use the terminal. HSR could add significant numbers of users to the terminal, and should be considered. In addition, this EIS/EIR should be reviewed with California High Speed Rail staff, if this has not already been done.

"Section 5.19.3.2: It is not a correct assumption that both the 30-Stockton and 45-Union would be rerouted along Mission Street after the Caltrain extension is in place. One of those lines will still continue to serve Fourth and Third Streets between Market and Townsend, and will be extended into Mission Bay. The other line will likely be terminated in the vicinity of Yerba Buena Center. It is questionable, however, if the Caltrain Extension would be the triggering event to truncate one of these lines in the Yerba Buena area. It is more likely that the construction of Phase 2 (New Central Subway) of the Third Street LRT line would be the event that would cause Muni to truncate one of these lines."

Response 19.1.3 Chapter 3, Volume I, of the Final EIS/EIR has been changed regarding the elevated Central Freeway, the Third Street Muni Metro Project Initial Operating Segment (IOS), the New Central Subway, the Ferry Bus Terminal, Muni's F-Line Historic streetcar service,

and the merger of the San Francisco Parking and Traffic Commission with the San Francisco Public Transportation Commission (MTA). The reference to a new King Street access roadway at Fifth Street into Mission Bay has been clarified regarding its extension.

The title shown for the station depicted at Fourth and King Streets in the middle of King Street has been changed on Figure 3-1, Transit Network in the Project Area. No station is shown on Figure 3.1-2. Subsection 3.1.5.8 has been added to the Final EIS/EIR, Volume I, to reflect the proposed California High Speed Rail Program. The omission of the King Street on- and off-ramps from I-280 has been corrected on all maps in the EIS/EIR. The document has been revised to reflect Muni's qualifications on rerouting the 30-Stockton and 45-Union. Volume I of the Final EIS/EIR includes a revised Figure 2.2-6.

19.1.4 City and County of San Francisco; Traffic Engineering Division; Bond Yee, Deputy Director and City Traffic Engineer, Jack Fleck, Senior Transportation Engineer, Jerry Robbins, Transit Planner V, December 18, 2002

"Casual carpools – Page 3-43. The evening casual carpool queues have been affected by the closing of Beale Street under the Bay Bridge for security purposes. I'm not sure that the description in this section is accurate any more."

Response 19.1.4 The description in the Draft EIS/EIR regarding the evening casual carpool queues is still correct.

19.1.5 Transportation Solutions Defense and Education Fund (TRANSDEF), David Shronbrunn, President, December 20, 2002

"... we are pleased to note that the quality of the DEIS/R is consistent with the quality of the project. The DEIS/R is comprehensive, thoughtful, detailed and well- edited. The preparers are to be congratulated.

"Recognizing that no document is perfect, TRANSDEF appreciates the opportunity to provide the following comments, which are keyed to page numbers: S-7 and elsewhere: The reference to Mission Boulevard appears to refer to Mission Street.

"S-27: While the Summary contains a description of the Environmentally Superior Alternative, a more extended discussion in the body of the DEIS/R would be useful.

"1-28: The Project will also need MTC and federal DOT approvals.

"2-11: It appears that the location of the lower bus level exit ramp on the drawing is incorrect, as it conflicts spatially with the entry ramp to the upper bus level.

"5-95: The Figure legend should be "stacked" not "staked."

Response 19.1.5 The Environmental Superior Alternative identified in the Draft EIS/EIR was adopted by the Transbay Joint Powers Authority as the Locally Preferred Alternative, which is described and evaluated in some detail throughout Volume I of the Final EIS/EIR. MTC has already included the Project in the Regional Transportation Plan. However, it will not be a permitting agency. The Federal Transit Administration is one of the co-lead agencies for this document.

The geometrics of the entry and exit ramps have been developed to be consistent with accepted roadway and bus facility designs. The lower level exit ramp is below the upper level entry ramp. The figure legend has been changed to "stacked."

19.1.6 SPUR, Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"There is no illustration 5.16-6 in the draft plan.

"Page 5-122: The methodology that the Planning Department used for determining adverse effect at the study area intersections should be up front before Table 5.19-4."

Response 19.1.6 The commentor is correct. The reference to Figure 5.16-6 has been removed from Volume I of the Final EIS/EIR. The format of this environmental document is different from other documents because it is a joint NEPA/CEQA document, satisfying the requirements of both the federal and State environmental laws. The CEQA significance thresholds for transportation can be found in Chapter 7 on pages 7-4 and 7-5. A short description of the methodology used to determine adverse effects has been inserted just before the Table 5.19-4.

19.1.7 Tay C. Via, Coblentz, Patch, Duffy & Bass, LLP, December 20, 2002

"The DEIS must be revised to include a more thorough analysis of the Second-to-Mission alignment, both to comply with NEPA and CEOA, and to properly identify for decisionmakers and the public its significant impacts.

"Transbay DEIS/DEIR Comments: The DEIS/DEIR does not meet its burden as a disclosure document because the Project Description for the Second-to-Mission alignment lacks information required by law. Impacts from that alignment, including those related to the 301 Mission Street project, [The 301 Mission Street project is a reasonably foreseeable project and the DEIS/DEIR must analyze it. See C.C.R. Title 14, Section 15130(b)(1)(B)] are absent from the document or are inadequately analyzed. This is a particularly glaring deficiency given the high burden of Alternatives analysis under NEPA for an EIS. The NEPA Alternatives analysis has been called the 'lynchpin' of an EIS, requiring 'substantial treatment' in the document. See, e.g., 40 C.F.R.§ 1502.14. The analysis also disregards substantial adverse impacts of the Second-to-Mission alignment – information that is critical to the decisionmakers' evaluation of the preferred alternative. Our specific comments on this and other issues are provided below.

"5. Pages 2-48-2-53. Alignments Considered and Withdrawn. The text describes a number of Caltrain Extension alignments that were considered and withdrawn. Among the reasons for withdrawal are operational issues based on platform location (page 2-50), potentially substantial noise, traffic, air quality and other construction impacts (page 2-51), increased capital operating costs and reduced operating efficiencies (page 2-52) and impacts of a long tunnel on the real estate above (page 2-53). The Second-to-Mission alignment shares each of these impacts, none of which is discussed in the DEIS/DEIR. Each of these impacts must be analyzed, and the Second-to-Mission alignment must be similarly rejected as infeasible.

"Also absent from this discussion is any analysis of relevant Downtown Plan policies related to land use. By way of example, see Objectives 7 (expanding housing supply Downtown) and 13-16 (urban form). The Second-to-Mission alignment is inconsistent with these policies with respect to its 301 Mission Street site impacts.

"The Land Use section purports to analyze wind and shadow impacts. Despite the enormous scope of the project, the DEIS/DEIR does not follow the City's standard format and in fact provides far less information than would normally be included in a Downtown project analysis. For example, the shadow discussion makes conclusory impacts statements, without including any quantitative information or graphics to support or explain the conclusions. The 301 Mission Street development is a foreseeable project that must be included in these analyses.

"9. Pages 5-44 -5-49. Fiscal Impacts. The statements regarding fiscal impacts are conclusory and unsupported by evidence as they relate to the Second-to-Mission alignment. The DEIS/DEIR discusses right-of-way acquisition in Tables 5.6-2 and 5.6-3. The basis for the Fiscal Impacts analysis is indecipherable, as only general reference is made to the Sedway Group, First American Real Estate Solutions, Comps Inc. and Marshall Valuation Service information. Again, how were these numbers generated? How can there be no supporting documents? The DEIS/DEIR must include specific references and background documents that support these numbers and conclusions to provide a road map for decisionmakers as to how these conclusions were reached. Those documents should also be included in the Appendix.

"11. Pages 5-69 - 5-70. Utilities. The statements regarding utilities impacts are conclusory and unsupported by evidence as they relate to the Second-to-Mission alignment. With the substantial excavation of Mission Street that would be required, clearly there would be substantial utilities impacts that are not analyzed here.

"13. Pages 5-109 - 5-137, Transit, Traffic and Parking, Including During Construction. The statements regarding transit, traffic and parking (including during construction) are conclusory and unsupported by evidence as they relate to the Second-to-Mission alignment. This section contains no analysis of transit, traffic and parking impacts associated with that alignment. Due to the vague Project Description, it is difficult to identify or assess those impacts. However, at a minimum, they include substantial disruption to Mission Street (a General Plan Transit Preferential Street) while construction occurs at that location. Construction would presumably progress block-by-block along Mission Street, over a long period of time, with no street parking during construction and significant potential for disruption of Muni operations both above and below grade. The impact of these closures would be substantial and must be discussed.

"14. Pages 5-138 - 5-187. Construction Impacts. The DEIS/DEIR is inadequate in its description of the impacts of demolition, underpinning, surface rail line and station construction and support of adjacent structures that would be required for the Second-to-Mission alignment. These topics receive scant mention on pages 5-144 and 5-148 with no impacts discussion. On page 5-166, the text states that construction traffic 'could potentially result in temporary delays.' The Table on page 5.20-8 suggests that the schedule for both alignments is the same; this analysis appears to ignore impacts from the closure of Mission Street west of Beale Street. The limited nature of the impact is unsupported by analysis, particularly with respect to street closures necessary for construction of the Second-to-Mission alignment. Why is Mission Street west of Beale Street omitted from the analysis? Impacts to this section of Mission Street (including 301 Mission Street) must be addressed in terms of driveways blocked during construction, on-street parking removal, impacts to businesses, utilities relocation and construction noise and vibration.

"Table 5.20-4 estimates the amount of excavation materials. Given the extent of excavation required under structures at the terminus of Mission Street, the numbers for the Mission Street alignment are not credible. Even if these numbers were accurate, the Second-to-Mission

alignment would involve about 10% more excavation. How is this accounted for in the financial analysis? Again, all of this information must be provided.

"15. Chapter 6. Fiscal Analysis. The DEIS/DEIR does not identify specific source documents or make those documents available to the public. For example, where is the cited but undescribed Seifel Consulting and Nancy Whelan Associates tax increment analysis? Specific information regarding that information and acquisition, relocation, resale, and mid-point of real estate costs are essential to adequate analysis, but we are advised they do not exist. The acquisition costs associated with the Second-to-Mission alignment have been significantly underestimated, as have the costs of business disruptions and tax revenue loss. On page 6-8, the tax increment assumptions remain constant for all scenarios. Clearly, there would be a substantial difference between the two alignments in light of impacts on the 301 Mission Street project. The Tables on pages 6-4 and 6-8 must both be revised to account for increased operating expenses for the two platforms and separate tracks in the Second-to-Mission alignment. Finally, the analysis does not account for the costs of acquiring City subsurface land – is the City donating this land, and, if not, what is the acquisition cost?"

Response 19.1.7 Please see Responses 3.5.2 and 3.5.3. A detailed evaluation of the Second-to-Mission Caltrain Extension Alternative is contained in the various environmental categories in Chapter 5 of the EIS/EIR. This analysis satisfies the requirement of NEPA and CEQA.

The analyses for cumulative impacts did take into account future development at the 301 Mission site as necessary for the evaluation of the environmental impacts that the Project would cause. The Second-to-Mission Caltrain Alternative would not preclude the development of the 301 Mission Street parcel; what it would perhaps mean is that the precise preferred development that the 301 Mission Street project sponsor was proposing would have to be changed to accommodate the Caltrain extension. Therefore, the environmental document for the 301 Mission Street development does include alternatives to the proposed 301 Mission Street project that accommodate both Caltrain extension alternatives.

Reasons are provided in Section 2.3, Volume I, of the Final EIS/EIR for withdrawal of various alignments, but issues and impacts associated with the Second–to-Mission option were not sufficient to warrant its withdrawal. The Second-to-Mission Caltrain extension option was not, however, selected as the Locally Preferred Alternative (please see Response 3.1.2). Section 5.12 reviews the impacts to utilities from the Project and notes the utilities under Mission Street. Text addressing these closures of Mission Street has been added to the Final EIS/EIR document.

The Caltrain operating costs are based primarily on the operating time and distance between the Fourth and Townsend Station and the Transbay Terminal. The effect of platform configuration on operating costs has not been considered at this level of conceptual design. As this is a City-sponsored project, there would be no acquisition costs for the use of City subsurface rights-of-way. The tax increment projections for the financial plan assume only the tax increment from the publicly owned parcels. The 301 Mission Street development is on a privately owned parcel and thus is not included in these projections.

Shade and shadow diagrams for the Project are available for public review by appointment in case file 2000.048E at the Planning Department at 1660 Mission Street, San Francisco. Shade and shadow effects are evaluated in Section 5.1.3, Volume I, of this Final EIS/EIR. The excavation amounts have been revised in Section 5.20, Table 5.20-4, Volume I, of the Final EIS/EIR.

The Draft EIS/EIR indicates that underpinning would be used where deemed necessary to protect existing structures from potential damage that could result from excessive ground movements. The design of the tunnelling and the excavation procedures (and construction sequence), and the design of the temporary support system will be developed with the objective of controlling ground deformations within small enough levels to avoid damage to adjacent structures. Where the risk of damage to adjacent structures is too great, special measures may be implemented such as: (1) underpinning, (2) ground improvement, and/or (3) strengthening of existing structures to mitigate the risks. These issues will be addressed on a case by case basis, along the entire alignment, during the detailed design phase of the project. The methodology that is proposed for the Caltrain Downtown Extension, i.e. to design the support system to control ground deformations within tolerances, and selectivity strengthen structures that may be too weak to resist even small deformations, was successfully used for the Muni Metro Turnback project, and should be effective for the Caltrain Downtown Extension project as well.

The fiscal impact analysis was conducted by Sedway Group as a subconsultant working on the Draft EIS/EIR. In conducting this analysis, Sedway Group used standard methods and procedures. All such analyses were conducted in a conservative manner, using commonly accessible data sources. There are two tables associated with the fiscal impact analysis – Tables 5.6-4 and 5.6-5. Please note that comments regarding Tables 5.6-2 and 5.6-3 (which include Marshall Valuation Service and Comps Inc. as data sources) are not relevant to the fiscal impact analysis (which starts with section 5.6.2.3 on page 5-44). Response 3.5.3 addresses concerns regarding these tables.

Where source materials for the fiscal impact analysis are not cited in the text or tables, the assumptions were generated by Sedway Group based upon industry standards and the firm's professional experience. The source materials are maintained in Sedway Group's files and referenced in the text and associated tables where appropriate. Summary information is provided in the text to streamline the presentation and facilitate reader comprehension.

The presentation of figures in the Draft EIS/EIR is very transparent, such that the reader can replicate the analysis using the base information presented in the text. All tax rates are cited and, where not common knowledge, sourced. Moreover, sources are generally tied to the associated data, or can be readily deduced. For example, very specific rather than general reference is made to First American Real Estate Solutions as the source for the assessed valuation of the properties for property tax estimation purposes (see footnote 6 on page 5-45). The aggregate property valuations for each alternative are clearly presented in the text. First American Real Estate Solutions is also the source for the square footage estimates by land use presented in Table 5.6-4. Industry standards were the basis for the square feet per employee estimates for each land use as well as taxable retail sales per square foot. In contrast, County Business Patterns for 1999 produced by the U.S. Bureau of the Census was the source for the base average annual wage used as a basis for estimating payroll tax revenue as cited in footnote 9 on page 5-46.

19.1.8 Titan Management Group, Michael Alfaro, Vice President, December 12, 2002

"Figure 4.1-1(b) setting forth Existing Land Uses erroneously fails to identify the parking lot at Second and Harrison or the parking lot beneath the existing Harrison Street off-ramp. That figure also identifies the Clocktower as residential, whereas it is a live/work building."

"Chapter 4.18 fails to identify the tower containing the clock on the Clocktower Building as a visual resource or as part of the visual character of the area. The Clocktower is one of the most significant and well-recognized landmarks in the area."

Response 19.1.8 Figure 4.1-1(b) has been revised to include surface parking uses on those lots. Existing land use characterizations for Figure 4.1-1(a) and 4.1-1(b) do not include a category for mixed-use. In this case, the "residential" category should be understood to include live-work uses.

19.1.9 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Pages 4-14 and 4-17, Tables 4.2-1 and 4.2-4. The total number of households in Census Tract 176.02 is listed as 257 in Table 4.2-1 and as 1952 in Table 4.2-4. Which is correct?"

"Page 5-50, Table 5.7-1. This table represents some very sloppy work. It is bogus math, and seriously misrepresents the air pollution reductions. For example, 329 pounds/day of ROG equals approximately a ton a week for a 7-day week (59 tons per year), or 1650 pounds per week for a 5-day workweek (43 tons per year), NOT 51,702 tons per year. Data should be verified before inclusion.

"Page 5-112. The sentence "The West Ramp Alternative would increase the number of bus bays from 32 to 30 bays along and provide..." does not make sense."

Response 19.1.9 Both tables in Section 4.2 of the Draft EIS/EIR are correct. As shown, the tables are for different time periods. The emission reductions shown in Table 5.7-1 in the column labeled "Reduction in Emissions (tons per year)" have been corrected. The sentence on page 5-112 of the Draft EIS/EIR has been corrected to read, "The West Ramp Alternative would increase the total number of bus bays from 32 to 48, with 30 on the AC Transit level and another 18 on the upper bus level.

19.1.10 Bernie Choden, November 16, 2002

"CEQA law permits a challenge of the fiscal feasibility necessary to assure mitigation of environmental concerns. Are there sufficient economic means to pay for the necessary mitigation depending upon what is proposed? Are the mitigation concerns sufficient to deal with cumulative impacts?

"It is not only that this EIR/EIS document does not specify how to pay for mitigations, this document doesn't say what the needed mitigations are (as the document should have done in Chapters V and VI). For example, this document cites traffic impacts as immitigable and, yet, does not acknowledge the impact of unmitigated traffic impacts on the cost of doing business or living in this area. The document does not cite other economic and environmental mitigation needs of adjacent business and residential uses that now exist or would be exacerbated or be created by the project. Vaguely, this document says that there may be an examination of these issues after the approval of this document. Mitigation is an essential component of an EIR; without identification of mitigation need and mitigation measures, this document is not certifiable.

"Mitigation revenue resources appears almost solely dependent on project internal subsidies from tax increments. Tax increments, alone, are the least advantageous means of repaying public investment for this high environmental impact.

“Almost a third of redevelopment increments are directed by law to go to school districts off the top.

“Secondly, the inflationary cap on increments is 2%; that means that the value of a dollar now will be only $0.50 later given normative rates of inflation. It also means that developers receiving tax increment assistance now will be paying off that assistance 10 years from now will do so with dollars worth half as much.

“To provide adequate long-term mitigation revenues, I strongly suggest the project use of ground rents from public land ownership underlying the entire redevelopment project as the best means of paying (a) for the project, (b) mitigating environmental design and social impacts and, (c) controlling future design and development. The reasons are:

”1. Market rate development prospects remain relatively high despite a national economic downturn. Mid-level and high-end rents in the City continued to inflate above 10% last year. A ground rent of a normative 3% on the value of development would only add 0.5% to the operators' annual cost of a project, definitely too little to discourage investment in this premier market. (Regardless of what you've heard)
”2. Ground rents (G.R) remain in constant dollars unlike tax increment dollars. They will still be worth a real dollar years from now.
“3. Front-end money will come from the sale of development rights just at it would, and almost in same amount, from the sale of the title to the land.
“4. The R.A. would receive the equivalent of tax increments (possessory interest taxes) anyway in addition to GR. As a result, the R.A. (and city) would receive, initially, four times as much cash flow as from T.I. only.
“5. Further, the use of G.R. would be much more flexible than for TI, such as the ability to match it to developer incentives and operators underwriting (think non- profits).
“6. The value of G.R. would increase with value of investments. The developers would be able to go in cheap and payout when they were profitable.
“7. Contracts regarding G.R. could control the design and operations of the project as the most efficacious legal means of protecting the public investment and the future design of the terminal area. We should look to the Embarcadero Center as a good design example of how to provide residential uses within a high intensity commercial area.

“I request an economic study directed toward the means and amount of cash flow from the project needed to provide environmental mitigation. Necessarily, approval of the terminal should be contingent how the redevelopment economics shapes up, particularly regarding other city resource needs and, in particular, the provision of a high quality, high-density residential environment within and adjacent to the project. Design isn't just about how the environment looks; it is also about how it works far into the future.

“My experience with the Martin Luther Towers project in the Western Addition #1 Redevelopment Area challenges the assumption that the Redevelopment Agency can be trusted to mitigate the Terminal's environmental impact. In the MLT situation, the RA stated that it would be selective as to what project areas it would honor regarding contractual obligations between the Agency and a beneficiary should the project become deactivated. The Terminal project, therefore, requires an objective environment monitor (as in the Mission Bay Project) who can ensure enforcement of the R.A.'s public contractual obligations regarding development and mitigations.

"Summary:
"This city needs improved rail transit access, but this proposal requires the integration of rail transit design with the design of the other uses necessary to make this project:

"1. An integral, attractive and beneficial part of the city.
"2. A means to pay for the project and its environmental impact measures

"This document spends so much effort describing the transit project that, apparently, there is little space and effort applied to identifying and providing a clear list of mitigations, their costs, how to pay for mitigation, who will be responsible, and how implementation will be monitored.

"This is not, as presented, a certifiable EIR/EIS document."

Response 19.1.10 The EIS/EIR, Chapter 5, Environmental Consequences and Mitigation Measures, contains feasible mitigation measures to reduce and avoid significant effects for both project specific and cumulative adverse impacts. Under CEQA, feasible means "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

The Draft and Final EIS/EIR, Chapter 7, Section 7.2, provide a list of unavoidable significant adverse effects that cannot be mitigated to a level of less-than-significant. In such a case, Section 15093 of the CEQA Guidelines states that, if the mitigations are not available to avoid or substantially lessen project impacts, the agency shall adopt a "Statement of Overriding Considerations" detailing how the economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects. A Statement of Overriding Considerations will be part of the approval documentation at the time of project adoption.

While there may be costs from unmitigable traffic impacts of the Project on residents and businesses, there are also ongoing costs to commuters using Caltrain because of the delays and uncertainties of traveling between the current Caltrain terminus and downtown. In the future, BART capacity may constrain economic vitality within San Francisco if AC Transit does not have more terminal capacity. Additionally, provision of transit oriented development near the proposed multi-modal transit facility should provide economic benefit to those residing in the Transbay Terminal Area. The environmental document quantifies the transportation aspects of not replacing the Transbay Terminal with those of the proposed Project. It is a decision making document for balancing these needs.

The amount of the statutory pass-throughs for school districts and other taxing agencies applied to tax increment revenues is approximately 20 percent. This has already been factored into the tax increment projections in the financial plan.

A revised Project funding plan is included in Chapter 6, Volume I, of the Final EIS/EIR. The tax increment revenue in the funding plan is reported in escalated dollars to account for inflationary effects.

The anticipated costs associated with environmental mitigations are included in the Project cost estimates. In addition, the financial plan includes a contingency fund to cover unanticipated Project costs, including environmental mitigations.

Ground leases will be explored as a possible option for some of the publicly owned parcels within the proposed Project Area. However, the sale of the land provides the obvious advantage of upfront capital to help defray the cost of the new terminal and Caltrain extension. Sale of development rights will not generate as much revenue, since developers will factor in the cost of the ground lease. Also, if the public sector retains ownership of the land, the land itself would not generate any tax increment revenue. Any possessory interest tax would have to be paid by the Redevelopment Agency itself, thus negating its benefit for the proposed Project Area. Finally, ground leases would be more difficult to finance for developers and this factor would need to be offset with lower initial rents. However, there are some advantages to a ground lease, namely that the Agency could retain more control over the development.

The *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) document provides the Agency's plan for constructing public open space and other environmental mitigations related to the development in the Project Area (please see Responses 10.1.1, 10.1.2, and 10.1.3).

19.1.11 League of Women Voters of the Bay Area, Doris Maez, North San Mateo County League of Women Voters, Onnolee Trapp, South San Mateo County League of Woman Voters, Eva Alexis Bansner, President, December 5, 2002

"Air Quality: (Page 5-50, Table 5.7-1). Protection of air quality is a very important benefit of transit oriented development. Bad math discredits findings."

Response 19.1.11 Please see Response 19.1.9.

19.1.12 William Blackwell, Architect, November 12, 2002

"SB 1856 does specify the Transbay Terminal as the ultimate destination for HST but, according to Rod Diridon, the $9 billion bond issue is only enough for the LA to San Jose portion. In spite of the commitment to downtown San Francisco, Section 1 (e) allows the Authority to set the limits of the route without extending to San Francisco. Diridon said that an additional $2 billion is needed to bring HST up the peninsula."

Response 19.1.12 The co-lead agencies have not received any capital cost estimates regarding high-speed rail.

19.1.13 William Blackwell, Architect, December 2, 2002

"Page 2-50. The Essex St. stub-end technical analysis is erroneous on several counts. Caltrain at present operates successfully with sub-end, not "pass through" tracks. Storage/by-pass tracks can also be provided at the stub-end. Reversing train direction is routinely done now and, in any case, does not present an operating problem that would impact schedule. Most northbound and southbound trains will make station stops at both Fourth & Townsend and at the downtown terminus. See Attachment No. 2. Internal passenger circulation (with, for example, horizontal passenger conveyors) can be as clear and elegant as in the proposed, better even because the tracks do not need to be so far underground. The paragraph does not address the advantages of separating Caltrain extension form the Transbay Terminal Improvement Project.

"Page 5-93, bottom paragraph - Assuming similar sleek structural designs for the one- level ramp, the stacked ramps illustrated in Figure 5.16-2 would not be less visually obtrusive than a single ramp. (The title of the simulated drawing is confusing - should be" looking NW on Howard St. from about Second Street")

"As in Figure 6.16-2, a simulated visual comparison should be shown that illustrates the significant adverse impact of the proposed design on the views up and down on both 1st and Fremont Streets.

"Page 5-159. Table 5.20-4 shows 658,100 cubic yards of excavation materials for the terminal, but Table 5.21-1 on page 5-168 shows only 125,000 cubic yards for the terminal and a very low truck volume. Why the discrepancy? At 2,500 cubic yards per workday (180 trucks) this trainbox excavation will take about one year. The Blackwell Alternative deletes this requirement for a very deep and costly train box excavation.

"Other: Conservation of Natural Resources and Energy – This item is not included in the Draft EIS/EIR but might be significant enough to be included."

Response 19.1.13 Please see Responses 5.1.5 and 5.1.6. The commentor accurately notes that the current Caltrain Station at Fourth and Townsend is a stub-end station. It should be noted that this station currently has 12 tracks and six platforms for train storage, staging, and passenger loading and unloading as well as additional train storage areas. This number of tracks and platforms is not possible at the new terminal, nor is this number proposed under the commentor's recommended station layout. The proposed tail tracks are therefore important for train operations and staging given the more limited number of tracks and platforms for the new station. Additionally, the tail tracks allow for trains to leave the station and be stored without interfering with incoming trains, and return quickly to the platform when needed for revenue service.

The EIS/EIR provides the reasons that the stacked ramps are viewed as less visually obtrusive. Specifically the Draft EIS/EIR states in Section 5.16 that "the proposed ramps would occupy considerably less area than the existing ramps, and would be split, breaking up the mass of the ramps and allowing views between the two new ramp sections. Although the new decks would be approximately 30 feet tall, they would be less visually intrusive due to their uniform appearance and minimal supporting structures." The caption on Figure 5.16-2, Volume I, of this Final EIS/EIR has been corrected to read, "View from Howard Street near First Street Looking Southwest."

The new facility would span both First and Fremont Streets, as does the current facility. Thus no new visual intrusion would be introduced by the new facility for these streets, and visual simulations have not been prepared for these views.

The excavation amounts have been revised in Section 5.20, Volume I, of this Final EIS/EIR. Section 5.18 of Volume I reviews the Project's impacts related to energy, while Section 5.22 discusses the irreversible and irretrievable commitment of resources.

Note: Comments 19.1.14 through 19.1.18 all concern the graphics contained in the Draft EIS/EIR. One response is provided to all of these comments, and this consolidated response can be found following Comment 19.1.18.

19.1.14 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"The maps in this document are difficult to read and would benefit from the addition of directional arrows. Also, relevant street names are often omitted, again making it difficult to pinpoint locations. Please consider remarking these maps to make them clearer to the reader...

"Project Description – It would be extremely helpful if this section would include a map or maps of the entire project area with the three projects delineated on those maps. The current document has no overview of the combined projects."

19.1.15 Greg Patterson, December 18, 2002

"Graphic Description of the Project. The route of the Caltrain Downtown Extension rail layout through the city (Figures 2.2-9 through 2.2-17) is shown in nine separate maps, each of which has a different compass orientation and none of which has a North arrow. One overall location map should have been shown in smaller scale as a key to the position of each of these map sections. The only guidance one has is the "match lines." Street names are absent and have to be supplied using an automobile route map from one's glove compartment. This reader had to have Figures 2.2-9 through 2.2-17 Xeroxed and then pasted together the map segments along the match lines, resulting in a snake-like collage of angled map juxtapositions that can only be folded by an original artist. While acknowledging that this project is a complex one extending over many blocks, there are better means of presentation to make it legible for readers."

19.1.16 League of Women Voters, Sarah Diefendorf and Tuesday Ray, Co-President, League of Women Voters of San Francisco, November 22, 2002

"Figures 2.2-9 to 2.2-21. The varying orientation (with respect to the north) of the reproduced maps from map to map is extremely difficult to follow. A large map that connected all the components would be very helpful.

"Page 2-45, Figure 2.2-22. This Figure and Table 4.1-1 on page 4- 10 are helpful in conceptualizing the project.

"Figures 5.2-1 to 5.2-6. The varying orientation of these maps with respect to north is difficult to follow."

19.1.17 Mary Anne Miller, San Francisco Tomorrow, Speaker, 11/26/02 Public Hearing

"We, after all, are just members of the public. So we are trying to discover, in fact, whether we can understand this project's graphics. I went to the Xerox shop. And I tried to paste together 13 drawings. And I don't even think I've got it right. Otherwise, you don't find the project described graphically. You see certain drawings in there, schematics; they don't say if it's the existing or the proposed. Some of them tell you it's one of the alternatives. But this was kind of fun to do. I recommend it to you. Go home, Xerox it, paste it together. On the match lines, I found one drawing missing. Drawing number 205 is just sort of not there. So I couldn't complete my little patchwork there. But it was helpful to do the patchwork on the effort here in order to understand what buildings will be demolished...

"We have three historic districts, one a national registered historic district... There are no graphics that will help you to take the very well-evaluated historic resources that are in Chapter 5, I believe. And you can't take them and go find them on a map. So you have to paste together another series of things, and highlight with your yellow highlighter or whatever you want to do where those buildings are to be demolished. And you have to find the street labels, the north arrows to get all this right. So the graphics are really flawed. I don't want to belabor that."

19.1.18 San Francisco Planning Commissioner Kevin Hughs, 11/26/02 Public Hearing

"I believe we should look at the graphics; the graphics do not fit, if they do not have a good working relationship with preceding, succeeding graphics, then we might review that. Certainly should include shadow impacts."

Response to Comments 19.1.14 through 19.1.18. The plan/profile maps for the proposed Caltrain Downtown extension were developed following standard Caltrain and FTA conventions for such maps, i.e., the alignment runs horizontally along the map with a profile underneath, thus producing varying directional orientations. A north arrow is provided on each of these drawings.

In response to these comments, a summary graphic of the Caltrain Downtown extension, Figure 2.2-9, has been added to Volume I of the Final EIS/EIR. This graphic shows the full Caltrain Downtown extension and the anticipated types of construction. Figure 2.2-23 shows the Caltrain Extension in the immediate Transbay Terminal area and includes revisions to the alignment made since the Draft EIS/EIR.

The anticipated "Full Build" and "Reduced Scope" redevelopment levels and locations are shown in Figure 2.2-25, while the proposed redevelopment land use contained in the *Draft Transbay Redevelopment Project Area Design for Development Vision* (August 2003) is shown on Figure 2.2-26. The Finding of Effect (FOE) contains a map showing historic structures and is available for review by appointment at the San Francisco Planning Department, 1660 Mission Street.

The city's zoning maps are available on-line and may be useful in responding to this comment by adding an overall graphic to show the various districts and properties in the project area. See "Zoning Map of the City and County of San Francisco, Sheet 1PD," at http://www.sfgov.org/planning/index.htm.

19.1.19 San Francisco Tomorrow, Jennifer Clary, President, Norman Rolfe, Transportation Chair, December 20, 2002

"The numerous studies that have been done in this area have produced an intimidating amount of information. Many reports are cited and summarized in this document. Many more reports which were key to the development of these proposals have been left out. The limitations on the size of this document may make this necessary, but the result is that more information is left out than included. We recommend therefore that the FEIR/FEIS include as an appendix a bibliography of all of the source material for these projects."

Response 19.1.19 A Bibliography has been included in Volume I of the Final EIS/EIR as Appendix E.

19.1.20 Mary Anne Miller, San Francisco Tomorrow, Speaker, 11/26/02 Public Hearing

"In trying to decide, whether – you go from one alternative to another. You have three of the National Historic Register sites that will be lost in one alternative. You have 13 in another alternative. This was told me by the planner, Joan Kugler, who is not here today. We met with her to try to get clarification on this document. It's very hard. She brought in cardboard boxes – literally two, and she had several more in her cubicle – of the background reports that had been done for this EIR. Now, you know, I said to her, 'Well, Joan, couldn't we have a bibliography so

we can ask you in the future. This project is going to take 8 years, maybe another 20 with the Redevelopment Area; couldn't we have a bibliography with only one sentence of paragraph of the EIR?'

"There's not a reference, footnotes, no bibliography. So we're just looking for -- how can the public access the information? How can you access the information to make the best possible decision?"

Response 19.1.20 Please see Response 19.1.19.

20.0 ONGOING PLANNING COORDINATION

Note: Comments 20.1.1 through 20.1.5 all concern the coordination with other agencies for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. One response is provided to all of these comments, and this consolidated response can be found following Comment 2.1.5.

20.1.1 California Department of Transportation, Timothy C. Sable, District Branch Chief, December 20, 2002

"The Transbay Transit Terminal project will require much coordination between all entities involved, and we look forward to working with you on this important transportation facility."

20.1.2 BART – Thomas E. Margro, General Manager, December 20, 2002

"A well designed Transbay Terminal and Caltrain extension project could significantly enhance regional transit options. If San Francisco is to retain its prominence in the Bay Area, it is important to maximize the effectiveness of transit projects linking San Francisco with its neighbors.

"Since the proposed Transbay Terminal and Caltrain extension are intended to facilitate travel between the East Bay, San Francisco and the Peninsula, there is clearly a mutual and potentially complementary relationship between this project and BART. We are particularly interested in the interface between the Transbay Terminal and BART in Downtown San Francisco, connectivity, and facilitating long-term regional rail opportunities."

"We hope the Final EIR will provide for ongoing coordinated planning efforts among BART, the U.S. Department of Transportation, the Federal Transit Administration, the City and County of San Francisco, Caltrain, and the San Francisco Redevelopment Agency. As we develop a better understanding of future needs, we are especially interested in identifying underserved regional markets where the Transbay Terminal could provide additional capacity that complements the existing rapid transit network. In evaluating proposed services, BART would like to work with you to coordinate capacity analysis, ridership forecasting and service planning efforts... Beyond the environmental process, we would also like to work with project sponsors in the future to help design transbay services that distribute transit resources efficiently and improve access to underserved areas."

20.1.3 San Francisco Muni, Jose Cisneros, Deputy General Manager for Capital Planning & External Affairs, December 17, 2002

"Muni will be happy to work closely with the project designers as this project moves forward, and we look forward to playing an integral role in the city's efforts to implement this project."

20.1.4 California Department of Toxic Substances Control, Guenther W. Moskat, Chief, Planning and Environmental Analysis Section, October 9, 2002

"The Department of Toxic Substances Control (DTSC is in recent receipt of the environmental document identified above. Based on a preliminary review of this document, we have determined that additional review by our regional office will be required to fully assess any potential hazardous waste related impacts from the proposed project. The regional office and contact person listed below will be responsible for the review of this document in DTSC's role as a Responsible Agency under the California Environmental Quality Act (CEQA) and for providing any necessary comments to your office – Barbara Cook Site Mitigation Branch, 700 Heinz Avenue,

Suite 200, Berkeley, California 94710. If you have any questions concerning DTSC's involvement in the review of this environmental document, please contact the regional office contact person identified above."

20.1.5 Lynn Bunim, Executive Director, SBC Pacific Bell, November 19, 2002

"If you have any questions regarding this matter, or need specific information about our underground facilities, please contact Bob Pickard, our Public Works Coordinator."

Response 20.1.1 through 20.1.5 The co-lead agencies look forward to a continued working relationship with the California Department of Transportation, BART, and Muni on this Project. Ms. Cook (California Department of Toxic Substances Control) and Mr. Pickard (SBC Pacific Bell) have been added to the list of contacts for this Project.

21.0 SUPPORT FOR THE PROJECT

Note: Comments 21.1.1 through 21.1.20 all concern the support for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. One response is provided to all of these comments, and this consolidated response can be found following Comment 21.1.20.

21.1.1 AC Transit – Kathleen Kelly, Deputy General Manager, Service Development, December 20, 2002

"The Transbay Terminal is an extremely important facility for AC Transit. It is our only stop in San Francisco and serves thousands of riders daily. As the demand for travel to San Francisco grows, and other transportation modes reach capacity, we expect ridership to Transbay Terminal to increase. However the current facility is badly in need of modernization so that it can function better for both bus operations: and riders. Therefore, AC Transit hopes to see a new Transbay Terminal and associated ramps constructed at the earliest possible date... As you know, AC Transit has been working on this project for many years. We look forward to completion of environmental review and early implementation of the project."

21.1.2 San Francisco County Transportation Authority, Jose Luis Moscovich, Executive Director, December 19, 2002

"As it is well known, the Authority has been a steadfast supporter of the project, and it played a key role in the negotiations leading to the inclusion of the Transbay Terminal/Caltrain Downtown Extension in the Regional Transit Expansion Policy (Resolution 3434) adopted last March by the Metropolitan Transportation Commission as part of the 2001 Regional Transportation Plan (RTP)."

21.1.3 SPUR – Michael Alexander, Chair, SPUR Transbay EIS/EIR Working Group, December 20, 2002

"SPUR has always advocated for the integration of land use and transportation. SPUR has long supported extension of Caltrain to the Transbay Terminal. As downtown expands to the south, rebuilding an obsolete hub for commuter transit, improving connections to BART, adding High-Speed Rail and surrounding the new terminal with a new mixed-use community that is friendly to pedestrians and non-motorized travel will be essential to the city's continued viability and livability... Please accept these comments with our support for the project and mutual interest in seeing this great opportunity for San Francisco realized for the broadest benefit for our city and the region."

21.1.4 Peter Winkelstein, SPUR, Speaker, 11/26/02 Public Hearing

"I'm here representing SPUR, San Francisco Planning and Urban Research Association, and the Culture and Urban Policy Committee. We are reviewing this EIR, and we'll submit written responses next week. And I just want to say today that SPUR has been involved with this project in the transbay area very actively for many years. And we support the project very strongly. We also support the preferred alternatives that Mr. Rolfe just pointed out to you. And we feel that in general, the EIR is an adequate EIR.

21.1.5 Margaret Okuzumi, BayRail Alliance, Speaker, 11/13/02 Public Hearing

"I'm speaking on behalf of BayRail Alliance. We strongly support the Transbay Terminal project. And as some of you may know, we raised a massive lobbying campaign to get the governor to transfer the land --for the state to transfer the land to make this project possible."

21.1.6 Margaret Okuzumi, BayRail Alliance, Speaker, 11/12/02 Public Hearing

"I am speaking on behalf of BayRail Alliance, a grassroots riders groups with members throughout the Bay Area, particularly concentrated along the Caltrain line from San Francisco to Gilroy. Our organization strongly supports the Transbay Terminal project, including the Caltrain Downtown Extension, and we're very pleased those projects are moving forward and making progress.

21.1.7 Andy Chow, Director, BayRail Alliance, Speaker, 11/12/02 Public Hearing

"I personally support this proposal to, for new Transbay Terminal, and a new station for Caltrain, and a new extension. This project is really unique in a way that instead of relying on City – instead of subsidizing the cities of redevelopment which unfortunately some other projects in this Bay Area are kind of like. The land use supports the project. Whatever development process came from the government, can use to expand transportation. This is what it is. This is reality in other countries, where they have intensive land use. Integration of transportation needs to happen in San Francisco. It is about time.

21.1.8 M. Kiesling, Regional Alliance for Transit (RAFT), December 18, 2002

"Over the past decade we have witnessed a wide range of official actions on the TTT. Initially, the city wished to completely remove the terminal and ramps, putting hundreds of buses on th7e congested SOMA streets. As studies began on the Caltrain extension, some quite interesting alternatives were proposed, including running train down the middle of SOMA streets and even on Market Street.

"The DEIR that has grown out of the last decade of debate is supported by RAFT. We have concerns with some details of the project, but overall the projects described meet the transportation and planning goals that RAFT has supported and lobbied for over the last decade."

21.1.9 Tom Dillon, Speaker, 11/12/02 Public Hearing

"I just think that the rebuilding of Transbay Terminal or a transit terminal will be absolutely wonderful. I think that Caltrain needs to be – speedier trains. The whole system needs to be much speedier. We live a rapid-moving world. Going around down to San Jose in a one-hour trip is just too long. I'm looking forward tremendously to the high-speed connection between Los Angeles and San Francisco, and I hope they utilize the absolutely best technology which we have."

21.1.10 Jeff Carter, Speaker, 11/13/02 Public Hearing

"I too support this project and the Caltrain downtown extension. It's been studied to death, and we need to get it done as quickly and as efficiently as possible.

21.1.11 Michael Kiesling, Speaker, 11/12/02 Public Hearing

"I've been involved in this project for quite some time also. Over the last decade, it's been refreshing in the last couple of years to see San Francisco take a role in this and conduct a professional study that's coming up with real answers and solutions into finding out how the project can be built and finished. In the past, if you followed this study, there were a lot of strange little studies that went along with this that had diesel trains running down Brannan Street or down Market Street. It's good to see the Commission and the city working to get the synergy of redevelopment in the transbay area, and bring transportation from the East Bay and peninsula together in one place. I agree with many of the previous speakers. We have an ability to clean up almost every property that has been languishing down there for a long time. The Transbay

Terminal has anguished over what has been going to happen to it for about 30 years now. Also, it's important to remember like the previous speaker said that this is probably the premiere opportunity in this Country for the fusion of land use and transportation. And we're lucky that we're able to take some of the profits coming from development, the opportunity to develop the land there to work on the terminal to show when it comes time to get the funding in line that San Francisco is making a large contribution to this project locally."

21.1.12 Andrew Sullivan, Rescue Muni, Speaker, 11/12/02 Public Hearing

"We have been in favor of this project for many years, and so we are speaking on behalf of the project largely as written in the EIR, though of course we would like to urge the project team to pursue opportunities for cost reduction where it doesn't lead to reduction in service quality.

"We think it is a very, very important project for the region at large. It serves the commuter population and makes the Caltrain more useful, but it also serves the high-speed rail service that has to terminate in Los Angeles to be useful. California high-speed rail running from the Transbay Terminal, the Grand Central Terminal for San Francisco would be much more useful if it terminated in L.A.

"We are pleased the terminal design has been put in place to lead. A lot of years went into planning Grand Central Terminal a century ago in New York City. We're still benefiting from it today. It makes sense to repeat that experience here...

"A very good job. We'd love to see this terminal get built for San Francisco with all deliberate speed.

21.1.13 Andrew Sullivan, Rescue Muni, December 20, 2002

"As strong supporters of this project, we are very excited that this project is finally moving forward after years of delay."

21.1.14 Jim Haas, Speaker, 11/12/02 Public Hearing

"I have been a member of many other committees, Transbay, CAC, and actually four prior committees to that. So I've been involved in this close to 15 years. I've seen an EIR be stopped and begin again, so it gives me great satisfaction to be here and see that it's almost at the completion stage."

21.1.15 Eugene Bradley, Speaker, 11/13/02 Public Hearing

"But for the most part, I am for this project with the concerns that I had stated. Thank you."

21.1.16 Norman Rolfe, Speaker, 11/12/02 Public Hearing

"Generally, we support these projects – want to see them go ahead. But there are some modifications we're going to suggest."

21.1.17 Adrian Brandt, Speaker, 11/13/02 Public Hearing

"I just want to speak in support of the whole project and the plan..."

21.1.18 Transportation Solutions Defense and Education Fund (TRANSDEF), David Shronbrunn, President, December 20, 2002

"TRANSDEF is very pleased with the DEIS/R for this exceptional project. The comments we raise here mostly seek full documentation of the regional benefits of the Project. We believe that the Bay Area needs to understand how beneficial this project will be."

21.1.19 Richard Mlynarik, Speaker, 11/12/02 Public Hearing

"Our organization has been involved in 16 regional transit issues, including marginally on the Transbay Terminal, for over a decade now. We're extremely pleased at the direction that process has taken. Something that needs to be borne in mind when you have people up here having a love fest about how promising the Environmental Draft Report is, this is largely the outcome of an over-two-year Metropolitan Transportation Commission happened with the cooperation of Caltrain, Caltrans and from City Redevelopment. I think that's part of the reason that we're heading in the right direction. This isn't just one document, but an outcome of a great deal of study by a great number of individuals...

"I think it's important to note we have potentially an excellent project here. I look forward to you, and the city, and other agencies working to see it come to fruition."

21.1.20 U.S. Environmental Protection Agency – Lisa B. Hanf, Manager, Federal Activities Office, December 2, 2002

"EPA is highly supportive of the project goals to reduce vehicle miles traveled, reduce vehicle emissions, and to provide expanded transportation choices. We look forward to the successful implementation of this project. In our review of the document, we found that the DEIS sufficiently addresses the environmental impacts of the proposed alternatives. EP A has rated this document LO, Lack of Objections. This rating applies to all project options."

Response 2.1.1 through 2.1.20 The co-lead agencies acknowledge the support of the Project from Ms. Kelly and AC Transit; Mr. Moscovich and the San Francisco County Transportation Authority; Mr. Alexander, Mr. Winkelstein and SPUR; Ms. Okuzumi, Mr. Chow, and the BayRail Alliance; Mr. Kiesling and RAFT; Mr. Dillon; Mr. Carter; Mr. Sullivan and Rescue Muni; Mr. Haas; Mr. Bradley; Mr. Rolfe; Mr. Brandt; David Shronbrunn and TRANSDEF; and Mr. Mlynarik. The co-lead agencies acknowledge US EPA's support of the project goals to reduce vehicle miles traveled, reduce vehicle emissions, and to provide expanded transportation choices.

SCH No.95063004
City Project No. 2000.048E

VOLUME III

TRANSBAY TERMINAL / CALTRAIN DOWNTOWN EXTENSION / REDEVELOPMENT PROJECT

in the City and County of San Francisco

FINAL ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL IMPACT REPORT AND SECTION 4(f) EVALUATION

WRITTEN PUBLIC COMMENTS AND PUBLIC HEARING TRANSCRIPTS ON THE

DRAFT ENVIRONMENTAL IMPACT STATEMENT/ DRAFT ENVIRONMENTAL IMPACT REPORT AND DRAFT SECTION 4(f) EVALUATION

by the

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION

and the

CITY AND COUNTY OF SAN FRANCISCO,
PENINSULA CORRIDOR JOINT POWERS BOARD, AND
SAN FRANCISCO REDEVELOPMENT AGENCY

March 2004

Written Public Comments and Public Hearing Transcripts on the Transbay Terminal/Caltrain Downtown Extension/ Redevelopment EIS/EIR

INTRODUCTION

The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) was released for public review on October 4, 2002. Notice of availability of the Draft EIS/EIR was published in the *San Francisco Independent* newspaper and posted at the Planning Department. 550 newsletters were sent to the mailing list announcing the availability of the Draft EIS/EIR, and a letter was sent directly to property owners whose properties could be directly affected by the Project. Fifty 11"X17" posters were posted throughout the Project area, including along Second Street. Notices were sent to all property owners within 300 feet of the project boundary as required by the San Francisco Administrative Code Chapter 31.

Enclosed are the written public comments and public hearing transcripts on the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Draft Environmental Impact Statement/ Environmental Impact Report.

Written Public Comments and Public Hearing Transcripts on the Transbay Terminal/ Caltrain Downtown Extension/Redevelopment Project

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I. Federal Agencies

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

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December 2, 2002

Paul E. Maltzer, Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103

Dear Mr. Maltzer:

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the **Transbay Terminal / Caltrain Downtown Extension / Redevelopment Project**, in San Francisco, California (CEQ Number: 020417, ERP Number: FTA-K54028-CA). Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations (40 CFR Parts 1500-1508) and Section 309 of the Clean Air Act.

The Federal Transit Administration (FTA), City and County of San Francisco, Peninsula Corridor Joint Powers Board, and the San Francisco Redevelopment Agency jointly propose a three-part project: 1) a new, multi-modal Transbay Terminal on the site of the existing Transbay Terminal, 2) extension of Caltrain from its current San Francisco terminus at Fourth and Townsend Streets to a new underground terminus underneath the proposed new Transbay Terminal, and 3) establishment of a Redevelopment Area Plan with related development projects, including transit-oriented development on publically owned land in the vicinity of the new Transbay Terminal. In addition to the No Action Alternative, two alternatives are under consideration for each of the major project components. A preferred alternative is not identified.

EPA is highly supportive of the project goals to reduce vehicle miles traveled, reduce vehicle emissions, and to provide expanded transportation choices. We look forward to the successful implementation of this project. In our review of the document, we found that the DEIS sufficiently addresses the environmental impacts of the proposed alternatives. EPA has rated this document **LO, *Lack of Objections*.** This rating applies to all project options. Please see the attached *Rating Factors* for a description of our rating system.

While we have not identified environmental impacts requiring substantive changes to the document, we have identified opportunities for improving the air quality mitigation measures proposed during the construction phase of the project. Our comments are listed below.

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Air Quality – Construction

The DEIS includes several excellent mitigation measures for air quality emissions generated during construction (p.5-179). Because air quality impacts are of increasing human health and environmental concern, EPA recommends taking steps to reduce air quality impacts to the greatest extent possible. In addition to these mitigation measures, EPA strongly recommends that the Final Environmental Impact Statement (FEIS) address the following air quality issues:

- Identify sensitive receptors in the project area, including transit users.
- Include mitigation measures that detail how diesel emissions will be minimized for each phase of project construction, such as the use of electrically-powered equipment or alternative fueled machinery, where feasible. Where diesel-powered equipment is necessary, keep machinery well tuned and minimize unnecessary idling.
- Address how traffic congestion related to project construction can contribute to increased levels of carbon monoxide, especially at already congested intersections.
- Identify additional mitigation measures that will be implemented during high winds and smog alert days.

We appreciate the opportunity to review this DEIS. When the FEIS is completed, please send one copy to me at the address above (Mail Code: CMD-2) . If you have any questions or comments, please feel free to contact me or Nova Blazej, the primary person working on this project. Nova Blazej can be reached at 415-972-3846 or *blazej.nova@epa.gov*.

Sincerely,

Lisa B. Hanf, Manager
Federal Activities Office

cc: Jerome Wiggins, FTA

II. State Agencies

Department of Toxic Substances Control

Edwin F. Lowry, Director
1001 "I" Street, 25th Floor
P.O. Box 806
Sacramento, California 95812-0806

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

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October 9, 2002

Joan Kugler
FTA, City of S.F. Caltrain, and SFRA
1660 Mission Street, Fifth Floor
San Francisco, California 94103

Re: Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project

The Department of Toxic Substances Control (DTSC) is in receipt of the environmental document identified above. Based on a preliminary review of this document, we have determined that additional review by our regional office will be required to fully assess any potential hazardous waste related impacts from the proposed project. The regional office and contact person listed below will be responsible for the review of this document in DTSC's role as a Responsible Agency under the California Environmental Quality Act (CEQA) and for providing any necessary comments to your office:

Barbara Cook
Site Mitigation Branch
700 Heinz Avenue, Suite 200
Berkeley, California 94710

If you have any questions concerning DTSC's involvement in the review of this environmental document, please contact the regional office contact person identified above.

Sincerely,

Guenther W. Moskat, Chief
Planning and Environmental Analysis Section

cc: Barbara Cook
Site Mitigation Branch
700 Heinz Avenue, Suite 200
Berkeley, California 94710

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December 20, 2002

SF-80-5.56
File #SF080094
SCH #95063004

Mr. Paul E. Maltzer
Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103

Dear Mr. Maltzer:

Transbay Terminal / Caltrain Downtown Extension/Redevelopment Project -
Draft Environmental Impact Report (DEIR)

Thank you for including the California Department of Transportation (Department) in the environmental review process for the above-referenced project. We have reviewed the Draft Environmental Impact Report for construction of a multi-modal Terminal on the site of the present Transbay Transit Terminal, and have the following comments to offer:

1. Seismic Condition

As the owner/operator of the Transbay Transit Terminal, the Department has participated in ongoing regional discussion regarding relinquishment of the Terminal to a Joint Powers Authority (JPA) for replacement. The Department determined that until the facility was transferred to the JPA, the Department would need to evaluate seismic risk and acceptability levels. After an evaluation by the Department's consultant, the Office of the State Architect (OSA), the Department entered into and completed various interim seismic upgrade projects from 1993 to 1999 to mitigate the most extreme seismic risks.

Between 1993 and 1999, OSA completed three seismic retrofit projects, costing approximately $15 million. Prior to commencement of any of the seismic upgrade work the building was classified approximately at risk Level V. After completion of the final phase of the seismic upgrade work, the risk level was reduced to between Level III and Level II.

2. Terminal Deficiencies

Because regional consensus pointed to the Terminal's demolition and replacement, the Department and the Metropolitan Transportation Commission (MTC) recommended that major construction deficiencies be deferred, except on a case-by-case situation. Some of the projects recently undertaken are the completed ventilation project in the West Garage, a mechanical evaluation of the elevator and escalators, and the development of a PS&E (Plans, Specifications & Cost Estimates) to remedy an Americans with Disabilities Act (ADA)-deficient restroom and drinking fountain in the center unit.

Some of the remaining major deficiencies at the Terminal include the fire sprinkler systems; the lack of ADA-accessible bus platforms and exit routes; plumbing and electrical service to meet the Uniform Building Code (UBC); and a list of general renovation work that would need to be completed if the existing Terminal were to

be designated for full service.

3. Cultural Resources

Page 1-28 (table 1.2-4) should be revised to include the required legislative approval under California Public Resources Code Section 5027 (see additional information below).

Page 2-47 (section 2.3.1.1) describes one of the alternatives, "Renovation of Existing Transbay Terminal and Associated Structures," which was considered but withdrawn. This alternative precludes underground rail, but instead would require construction of elevated rail structures for Caltrain or high-speed rail access. According to the DEIR, this alternative was withdrawn because the anticipated seismic strengthening would preclude the project goal of revenue-generating development. The fact that the Transbay Transit Terminal and the ramps are National Register-listed properties calls for a more substantive discussion regarding the possibility of preserving the properties.

Pages 4-48 through 4-60 (section 4.16.6) and pages 5-75 through 5-77 (section 5.14.3 through 5.14.3.4), and Section 8: the DEIR text throughout these sections is inconsistent regarding the National Register of Historic Places status of the Transbay Transit Terminal, and the Bay Bridge approach and bus ramps. As of 2000, the Transbay Transit Terminal and the ramps have been "listed" on the National Register, as contributors to the San Francisco-Oakland Bay Bridge, and are no longer considered to be merely "eligible" for the National Register. Tables 4.16-1, 5.14-1, and 8.4-1 also should clarify the National Register status as listed as contributors, or 1D, rather than 2 or 2S2.

Page 5-75 (section 5.14.3.1) should address California Public Resources Code Section 5027, which states, "Any building or structure that is listed on the National Register of Historic Places and is transferred from state ownership to another public agency shall not be demolished, destroyed, or significantly altered, except for restoration to preserve or enhance its historical values, without the prior approval of the Legislature by statute. This section applies to any building or structure transferred from state ownership to another public agency after January 1, 1987."

Section 5.14.3.5 should additionally evaluate the effects of demolition of the ramps and Transbay Transit Terminal on the San Francisco-Oakland Bay Bridge.

Page 5-91 (section 5.14.3.5) discusses potential mitigation. Because the project would have effects on the San Francisco-Oakland Bay Bridge, any Historic American Buildings Survey/Historic American Engineering Record documentation on the Transbay Transit Terminal and ramps should be filed additionally with the Department. Additionally, if the Department no longer owns the Transbay Transit Terminal, the "Interpretive Display" would be the responsibility of the project proponents, not the Department. Opportunities for collaborating with the Department on the completion of mitigation tasks for effects to the San Francisco-Oakland Bay Bridge should be investigated.

4. Hazardous Materials

Section 4.17 - There is no discussion of the potential for encountering asbestos and lead during building demolition. This should be included, to be consistent with the rest of the section, which discusses potential problems during construction. The project appears to be away from veins of asbestos-bearing serpentine rock. However, if this source has not already been considered, then it would be prudent to take a closer look, particularly for the Caltrain extension.

Section 4.17.2.2 - Vehicle exhaust should also be included as a potential source of lead contamination. In areas outside the historic fill limit and industrial sites, lead contamination shows up as a surficial zone of one to two feet in depth, depending on soil type and traffic volume.

Section 5.21.9 - Asbestos should also be discussed in this section since there are Bay Area Air Quality Management District (BAAQMD) rules regarding asbestos removal and building demolition. The USEPA National Emission Standards for Hazardous Air Pollutants regulate asbestos during demolition and removal. BAAQMD has the delegated authority to enforce these regulations.

Section 5.21.11 - Does State Water Resources Control Board Order No. 99-08-DWQ apply to projects in San Francisco even though storm water runoff goes to the combined sewer system? If so, a Storm Water Pollution Prevention Plan would need to be prepared for the project. Will the project depend solely on the combined system as its sediment control practice? If not, some of the management practices listed in the Air Quality section would also minimize sediment removal from the site. Secondary containment and spill contingency should also be addressed for fuels and other liquid pollutants that will be used during construction.

5. Air Quality

Page 4-29 and 5-53: The TIP information should be updated to reflect the latest TIP/RTP information.

Page 5-52, Section 5.7.2.2: In view of the fact that there is an existing carbon monoxide (CO) exceedence shown at First and Howard Streets, the CO microscale study must address the construction year CO levels as well as the year 2020. Higher emission levels in the build year would result in higher CO levels. As it stands now, the document does not clearly show that the project does not worsen an existing exceedence.

Page 5-54: The reasoning regarding the PM-10 impacts of the project, while acceptable for the regional impacts, needs further analysis regarding microscale PM-10 impacts. Localized PM-10 impacts could be caused by a larger number of vehicles drawn to the facility, even though regional trips have been reduced. The Federal Register states that PM-10 methodology is not yet available for microscale PM-10 calculations. Some other qualitative reasoning for microscale impacts would be appropriate.

6. Right of Way (ROW)

Page S-8, and Figure S-2, discussing various development levels, should mention the fact that these parcels are currently State-owned, and that the transfer of ownership is the subject of ongoing negotiations with the State, and the subject of a cooperative agreement. Additionally, approximately 1/3 of the Block #3737 will be permanently occupied by the Folsom Street leg of the Fremont Street off-ramp. This is repeated in various figures throughout Chapter 5.

7. Proposed Bus Storage

In Chapter 2, Figure 2.2-5, the feasibility of providing a parking double-deck under the I-80 structure is not clear.

The impacts of the proposed bus storage under Interstate 80 (I-80) between Stillman, Perry, 2nd and 4th Streets are not adequately addressed in the DEIR. The West Ramp Alternative displaces AC Transit and Golden Gate Transit bus storage from current locations on the Terminal East Loop and the surface lot at Main, Beale, Folsom and Howard Streets, respectively. The Project includes a direct ramp connection between the proposed storage facilities and the new Terminal. The Noise and Vibration portions, as well as the Air Quality portions of Table S-1 do not address the impacts of the proposed bus parking underneath the I-80 structure on the residences and businesses on Stillman and Perry Streets.

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the Regional Air Quality Board and/or Association of Bay Area Governments (ABAG) addressing the impacts of the proposed use on air quality based on the Bay Area Air Quality Assessment Model.

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The Transbay Transit Terminal project will require much coordination between all entities involved, and we look forward to working with you on this important transportation facility. Should you require further information or have any questions regarding this letter, please call Paul Svedersky of my staff at (510) 622-1639.

Sincerely,

Timothy C. Sable

TIMOTHY C. SABLE
District Branch Chief
IGR/CEQA

c: Gregoria Garcia, State Clearinghouse

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse

Gray Davis
Governor

Tal Finney
Interim Director

RECEIVED
NOV 2002
PLANNING DEPT

November 19, 2002

Joan Kugler
FTA, City of S.F., Caltrain, and SFRA
1660 Mission Street, Fifth Floor
San Francisco, CA 94103

Subject: Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project
SCH#: 1995063004

Dear Joan Kugler:

The State Clearinghouse submitted the above named Joint Document to selected state agencies for review. The review period closed on November 18, 2002, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
(916)445-0613 FAX(916)323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 1995063004
Project Title Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project
Lead Agency Peninsula Corridor Joint Powers Board

Type JD Joint Document

Description The proposed project has three major components: the construction of a multi-modal Terminal on the site of the present Terminal (that would be demolished) at Mission and First Streets; an underground extension of Caltrain commuter rail service from its current San Francisco terminus at Fourth and Townsend Streets to a new terminus underneath the proposed new Transbay Terminal; and establishment of a Redevelopment Area Plan with related development projects, including transit-oriented development in the vicinity of the new multi-modal Transbay Terminal. The proposed Redevelopment Area would generally be bound by Mission, Main, Spear, Folsom, Essex, I-80, Second and Minna Streets. Other subordinate components of the project include a temporary bus terminal facility at Beale and Folsom Streets to be used during construction of the new Transbay Terminal; a new, permanent off-site bus storage/layover facility; reconstructed bus ramps leading to the new Transbay Terminal; and a redesigned Caltrain storage yard.

Lead Agency Contact

Name Joan Kugler
Agency FTA, City of S.F., Caltrain, and SFRA
Phone 415-558-5983 **Fax**
email
Address 1660 Mission Street, Fifth Floor
City San Francisco **State** CA **Zip** 94103

Project Location

County San Francisco
City San Francisco
Region
Cross Streets Mission, Main, Spear, Folsom, Essex, Harrison, Second
Parcel No. Multiple
Township **Range** **Section** **Base**

Proximity to:

Highways U.S. 101,I-280,I-80
Airports
Railways SF Muni,Caltrain, and BART
Waterways San Francisco Bay
Schools
Land Use Mix of light industrial, warehousing/distribution, commercial office, retail, live-work, and residential uses and surface parking lots. Currently zoned P (Public), C-3-S (Downtown Support District), C-3-0 (Downtown Office District), and S-3-0 (SD) (Downtown Office District: Special District). General Plan and its elements, including the Downtown Plan, the South of Market Plan, and the Rincon Hill Area Plan.

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Economics/Jobs; Fiscal Impacts; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply; Growth Inducing; Landuse; Cumulative Effects; Other Issues

Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Game, Region 3; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 4; Air Resources Board, Transportation Projects; Regional Water Quality Control Board, Region 2; Department of Toxic Substances Control; Native American

Note: Blanks in data fields result from insufficient information provided by lead agency.

Heritage Commission; Public Utilities Commission; State Lands Commission

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Date Received 10/04/2002 ***Start of Review*** 10/04/2002 ***End of Review*** 11/18/2002

Note: Blanks in data fields result from insufficient information provided by lead agency.

Gray Davis
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse

Tal Finney
Interim Director

December 23, 2002

Joan Kugler
FTA, City of S.F., Caltrain, and SFRA
1660 Mission Street, Fifth Floor
San Francisco, CA 94103

Subject: Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project
SCH#: 1995063004

Dear Joan Kugler:

The enclosed comment (s) on your Joint Document was (were) received by the State Clearinghouse after the end of the state review period, which closed on November 18, 2002. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (1995063004) when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Senior Planner, State Clearinghouse

Enclosures
cc: Resources Agency

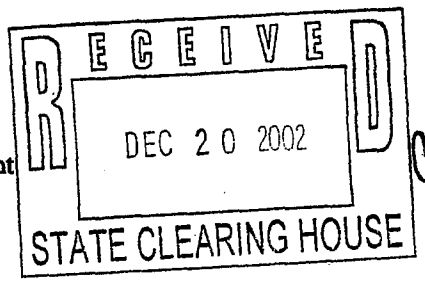
STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
P. O. BOX 23660
OAKLAND, CA 94623-0660
(510) 286-4444
(510) 286-4454 TDD

Flex your power!
Be energy efficient!

December 20, 2002

SF-80-5.56
File #SF080094
SCH #95063004



Mr. Paul E. Maltzer
Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103

Dear Mr. Maltzer:

Transbay Terminal / Caltrain Downtown Extension/Redevelopment Project - Draft Environmental Impact Report (DEIR)

Thank you for including the California Department of Transportation (Department) in the environmental review process for the above-referenced project. We have reviewed the Draft Environmental Impact Report for construction of a multi-modal Terminal on the site of the present Transbay Transit Terminal, and have the following comments to offer:

1. Seismic Condition

As the owner/operator of the Transbay Transit Terminal, the Department has participated in ongoing regional discussion regarding relinquishment of the Terminal to a Joint Powers Authority (JPA) for replacement. The Department determined that until the facility was transferred to the JPA, the Department would need to evaluate seismic risk and acceptability levels. After an evaluation by the Department's consultant, the Office of the State Architect (OSA), the Department entered into and completed various interim seismic upgrade projects from 1993 to 1999 to mitigate the most extreme seismic risks.

Between 1993 and 1999, OSA completed three seismic retrofit projects, costing approximately $15 million. Prior to commencement of any of the seismic upgrade work the building was classified approximately at risk Level V. After completion of the final phase of the seismic upgrade work, the risk level was reduced to between Level III and Level II.

2. Terminal Deficiencies

Because regional consensus pointed to the Terminal's demolition and replacement, the Department and the Metropolitan Transportation Commission (MTC) recommended that major construction deficiencies be deferred, except on a case-by-case situation. Some of the projects recently undertaken are the completed ventilation project in the West Garage, a mechanical evaluation of the elevator and escalators, and the development of a PS&E (Plans, Specifications & Cost Estimates) to remedy an Americans with Disabilities Act (ADA)-deficient restroom and drinking fountain in the center unit.

Some of the remaining major deficiencies at the Terminal include the fire sprinkler systems; the lack of ADA-accessible bus platforms and exit routes; plumbing and electrical service to meet the Uniform Building Code (UBC); and a list of general renovation work that would need to be completed if the existing Terminal were to

be designated for full service.

3. Cultural Resources

Page 1-28 (table 1.2-4) should be revised to include the required legislative approval under California Public Resources Code Section 5027 (see additional information below).

Page 2-47 (section 2.3.1.1) describes one of the alternatives, "Renovation of Existing Transbay Terminal and Associated Structures," which was considered but withdrawn. This alternative precludes underground rail, but instead would require construction of elevated rail structures for Caltrain or high-speed rail access. According to the DEIR, this alternative was withdrawn because the anticipated seismic strengthening would preclude the project goal of revenue-generating development. The fact that the Transbay Transit Terminal and the ramps are National Register-listed properties calls for a more substantive discussion regarding the possibility of preserving the properties.

Pages 4-48 through 4-60 (section 4.16.6) and pages 5-75 through 5-77 (section 5.14.3 through 5.14.3.4), and Section 8: the DEIR text throughout these sections is inconsistent regarding the National Register of Historic Places status of the Transbay Transit Terminal, and the Bay Bridge approach and bus ramps. As of 2000, the Transbay Transit Terminal and the ramps have been "listed" on the National Register, as contributors to the San Francisco-Oakland Bay Bridge, and are no longer considered to be merely "eligible" for the National Register. Tables 4.16-1, 5.14-1, and 8.4-1 also should clarify the National Register status as listed as contributors, or 1D, rather than 2 or 2S2.

Page 5-75 (section 5.14.3.1) should address California Public Resources Code Section 5027, which states, "Any building or structure that is listed on the National Register of Historic Places and is transferred from state ownership to another public agency shall not be demolished, destroyed, or significantly altered, except for restoration to preserve or enhance its historical values, without the prior approval of the Legislature by statute. This section applies to any building or structure transferred from state ownership to another public agency after January 1, 1987."

Section 5.14.3.5 should additionally evaluate the effects of demolition of the ramps and Transbay Transit Terminal on the San Francisco-Oakland Bay Bridge.

Page 5-91 (section 5.14.3.5) discusses potential mitigation. Because the project would have effects on the San Francisco-Oakland Bay Bridge, any Historic American Buildings Survey/Historic American Engineering Record documentation on the Transbay Transit Terminal and ramps should be filed additionally with the Department. Additionally, if the Department no longer owns the Transbay Transit Terminal, the "Interpretive Display" would be the responsibility of the project proponents, not the Department. Opportunities for collaborating with the Department on the completion of mitigation tasks for effects to the San Francisco-Oakland Bay Bridge should be investigated.

4. Hazardous Materials

Section 4.17 - There is no discussion of the potential for encountering asbestos and lead during building demolition. This should be included, to be consistent with the rest of the section, which discusses potential problems during construction. The project appears to be away from veins of asbestos-bearing serpentine rock. However, if this source has not already been considered, then it would be prudent to take a closer look, particularly for the Caltrain extension.

Section 4.17.2.2 - Vehicle exhaust should also be included as a potential source of lead contamination. In areas outside the historic fill limit and industrial sites, lead contamination shows up as a surficial zone of one to two feet in depth, depending on soil type and traffic volume.

Section 5.21.9 - Asbestos should also be discussed in this section since there are Bay Area Air Quality Management District (BAAQMD) rules regarding asbestos removal and building demolition. The USEPA National Emission Standards for Hazardous Air Pollutants regulate asbestos during demolition and removal. BAAQMD has the delegated authority to enforce these regulations.

Section 5.21.11 - Does State Water Resources Control Board Order No. 99-08-DWQ apply to projects in San Francisco even though storm water runoff goes to the combined sewer system? If so, a Storm Water Pollution Prevention Plan would need to be prepared for the project. Will the project depend solely on the combined system as its sediment control practice? If not, some of the management practices listed in the Air Quality section would also minimize sediment removal from the site. Secondary containment and spill contingency should also be addressed for fuels and other liquid pollutants that will be used during construction.

5. Air Quality

Page 4-29 and 5-53: The TIP information should be updated to reflect the latest TIP/RTP information.

Page 5-52, Section 5.7.2.2: In view of the fact that there is an existing carbon monoxide (CO) exceedence shown at First and Howard Streets, the CO microscale study must address the construction year CO levels as well as the year 2020. Higher emission levels in the build year would result in higher CO levels. As it stands now, the document does not clearly show that the project does not worsen an existing exceedence.

Page 5-54: The reasoning regarding the PM-10 impacts of the project, while acceptable for the regional impacts, needs further analysis regarding microscale PM-10 impacts. Localized PM-10 impacts could be caused by a larger number of vehicles drawn to the facility, even though regional trips have been reduced. The Federal Register states that PM-10 methodology is not yet available for microscale PM-10 calculations. Some other qualitative reasoning for microscale impacts would be appropriate.

6. Right of Way (ROW)

Page S-8, and Figure S-2, discussing various development levels, should mention the fact that these parcels are currently State-owned, and that the transfer of ownership is the subject of ongoing negotiations with the State, and the subject of a cooperative agreement. Additionally, approximately 1/3 of the Block #3737 will be permanently occupied by the Folsom Street leg of the Fremont Street off-ramp. This is repeated in various figures throughout Chapter 5.

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In Chapter 2, Figure 2.2-5, the feasibility of providing a parking double-deck under the I-80 structure is not clear.

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Sincerely,

Timothy C Sable

TIMOTHY C. SABLE
District Branch Chief
IGR/CEQA

c: Gregoria Garcia, State Clearinghouse

III. Regional Agencies

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

ALAMEDA COUNTY
Roberta Cooper
Scott Haggerty
(Vice-Chairperson)
Nate Miley
Shelia Young

CONTRA COSTA COUNTY
Mark DeSaulnier
Mark Ross
Gayle Uilkema

MARIN COUNTY
Harold C. Brown, Jr.

NAPA COUNTY
Brad Wagenknecht

SAN FRANCISCO COUNTY
Chris Daly
Leland Yee
(Vacant)

SAN MATEO COUNTY
Jerry Hill
Marland Townsend
(Secretary)

SANTA CLARA COUNTY
Randy Attaway
(Chairperson)
Liz Kniss
Julia Miller
Dena Mossar

SOLANO COUNTY
John F. Silva

SONOMA COUNTY
Tim Smith
Pamela Torliatt

William C. Norton
EXECUTIVE OFFICER/APCO

November 21, 2002

Paul Maltzer, Environmental Review Officer
San Francisco, Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103

Subject: Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project
Draft Environmental Impact Report (DEIR)

Dear Mr. Maltzer:

The Bay Area Air Quality Management District (District) has reviewed your agency's DEIR for the Transbay Terminal Project. The project would replace the existing outdated terminal with a new multi-modal transit facility. The proposed project's Caltrain extension to the terminal, improved bus service, and transit-oriented redevelopment of the surrounding area will help to improve regional transit and thereby reduce air pollution. However, we have some concerns about the localized exposure of transit riders at the Terminal to diesel particulate emissions from buses serving the terminal. We also believe that the DEIR does not adequately address pedestrian and bicycle access between the Terminal and nearby destinations.

The Terminal alternatives are unique in the Bay Area because they would place a high concentration of diesel buses and their emissions in close proximity to a large number of people on a daily basis. Diesel particulate emissions have been designated by the California Air Resources Board as a Toxic Air Contaminant (TAC) and are a suspected carcinogen. To determine whether the proposed project or its alternatives would result in a significant air quality impact, we are requesting that the Final EIR evaluate the exposure of transit riders at the Terminal to diesel particulate emissions from buses. The analysis should consider the daily volume and emission characteristics of the bus fleet accessing the Terminal and the proximity of buses to transit riders. The Air District's CEQA Guidelines threshold for a significant air quality impact is breached when the probability of contracting cancer for the Maximally Exposed Individual exceeds 10 in one million. If your evaluation of the proposed project or its alternatives results in a significant air quality impact, we request that the impact be mitigated. Mitigation from exposure to diesel particulate might include measures to reduce emissions such as establishing maximum bus idling times, use of cleaner burning fuels, retrofitting bus fleets and use of low emission buses. Mitigation measures to reduce exposure of transit riders to diesel particulate emissions might include ventilation of bus exhaust and separation of buses from transit riders through building design or operations.

We believe that if the Terminal is to function optimally as a multi-modal facility then the design of the building and the surrounding redeveloped area must improve access

to pedestrians and bicyclists. The DEIR indicates that the future project scenarios would significantly increase the number of pedestrians on sidewalks and at intersections in the vicinity of the Terminal and result in a significant impact. The measures in the DEIR to improve pedestrian access appear insufficient to mitigate the impacts to less than significant. We request that the FEIR consider improving pedestrian access by expanding the sidewalks and narrowing street widths in the vicinity of the Terminal. The DEIR also indicates that future project scenarios would result in an almost ten-fold increase in bicyclists in the vicinity of the Terminal. To integrate bicycling with the multi-modal Terminal, we recommend that the Project link planned bicycle routes along Howard and Second Streets with the Terminal. Once inside the Terminal, bicyclists should be able to easily connect with buses and trains or have the option of on-site storage, such as a bike station.

If you have any questions regarding these comments, please contact Joseph Steinberger, Senior Environmental Planner, at (415) 749-5018.

Sincerely,

William C. Norton
Executive Officer/APCO

WN:JS

cc: BAAQMD Director Chris Daly
BAAQMD Director Leland Yee

IV. Local Agencies

MEMORANDUM

Date: December 18, 2002

To: Joan Kugler
Planning Department

Through: Bond Yee, Deputy Director and City Traffic Engineer

From: Jack Fleck, Senior Transportation Engineer
Jerry Robbins, Transit Planner V

Subject: Transbay Terminal EIR

These are our comments on the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Draft EIS/EIR/Section 4(f) Evaluation dated October, 2002 (the Report).

Level of Service Comments

For the most part, the transit operations which this project serves will operate on grade separated facilities—AC Transit on ramps and Caltrain underground. Therefore, the traffic impacts from the Terminal itself should not be too significant. SamTrans, Golden Gate Transit, and Muni operate on surface routes, so they will be affected by traffic generated from the redevelopment project. With regard to these new developments, the City policy of not building large parking garages with new buildings should help prevent these buildings from generating large volumes of traffic. In fact, considering that most of the land to be developed is currently occupied by parking lots, the total net increase in traffic generation should be minor. Therefore, we have a question about the sentence on page 5-125, which states, "The Terminal/Extension Project would result in a substantial increase in vehicle trips to and from new developments. . ." How was this calculated?

Table 3.2-1 on page 3-34 does show numerous intersections operating at traffic LOS F, particularly on 1st Street. This congestion is due to queuing for the Bay Bridge in the PM peak. In fact the actual conditions are somewhat worse than shown on this table. Our observations show that traffic backs up on 1st Street at least to Market Street about half the time during the PM commute periods. This percentage has fluctuated since the 1989 Loma Prieta earthquake from about 30% to 70% depending on various factors including the state of the economy. This queuing condition is not likely to change, but it could get worse, e.g. the back-up could be every night. The City deploys Parking Control Officers to keep intersections open, and we have re-routed buses to help them avoid getting stuck in the queue.

On page 5-124 the report lists 7 intersections as having adverse impacts due to the project. An additional six intersections are listed on page 5-125 as having adverse impacts under cumulative conditions. Of these 13 adversely impacted intersections, 11 are part of the Bay Bridge queue. We agree with the suggestion on page 5-126 that funding for the SFgo program could be a useful mitigation effort. The SFgo program will provide improved traveler information so that drivers will be aware of the queuing and possibly change plans to adjust to it, prior to starting their trip. In addition, SFgo will have traffic monitoring cameras that can be used to dispatch parking control officers in a timely fashion when the queue begins to form.

The other two intersections with adverse affects—Beale/Howard and Fremont/Howard are not part of the queue. Therefore, we would like to see mitigations to improve operations here. It appears that the intersections along Fremont Street were only looked at in the PM peak hour. This street is more congested in the AM peak than the PM peak due to the Fremont Street off-ramp from the Bay Bridge, so the report probably is not looking at the worst case impacts.

It is not clear that the LOS calculations account for increased pedestrian volumes at intersections like First/Mission and Fremont/Mission. These intersections used to be much more congested in the pre-BART era when there were more pedestrians going to and from the TBT at peak hours. Does the report include the impact of increased ped crossings?

Additional comments

Muni impacts – Assuming that the new developments do not build large parking lots, most trips to and from them will be by transit. Will there be a transit impact fee and is the fee adequate to offset service costs to Muni for the additional service required?

Casual carpools - Page 3-43 – The evening casual carpool queues have been affected by the closing of Beale Street under the Bay Bridge for security purposes. I'm not sure that the description in this section is accurate any more.

Bicycles - Page 3-49– DPT is proposing to add bike lanes on Howard Street from Fremont Street to 5th Street. Bike lanes are already installed on Howard from 5th to 11th.

Page 5-138 – The plan for 105 bike storage spaces is good, but there should be a provision for additional space if needed. We do expect large increases in bike riders as bicycle facilities continue to improve in San Francicso.

Size of the terminal - Page 5-111 – "The new terminal will accommodate 35,000 rail and bus passengers during the peak hour. This is 11,000 more passengers than the 24,000 passengers projected for peak hour demand in 2020. The current peak hour passenger flow at the existing Terminal is 10,000 passengers." This raises a concern about overbuilding. Currently the Transbay Terminal is larger than it needs to be. If the new terminal is even larger, there will be a lot of empty space. Could some of that space be

used for storage of buses? Are there interim/back-up plans in case the large ridership projections do not materialize?

Caltrain - Figure 2.2-11/12 – Currently Caltrain uses Townsend Street for moving its trains during the day. This impacts the City's use of the street for bikes/parking/ sidewalks/etc. Will this use of Townsend be discontinued with the new Caltrain alignment. If so, this is a positive impact.

If you have any questions about this report, or need further information, please contact me at 554-2344 or at jack_fleck@ci.sf.ca.us

San Francisco County Transportation Authority

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December 19, 2002

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Paul E. Maltzer, Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Ste 500
San Francisco, CA 94103

Subject: Comments on the Draft Environmental Impact Report/Statement and Section 4f Evaluation for the Transbay Terminal/Caltrain Downtown Extension Project

Dear Mr. Paul Maltzer:

Thank you for the opportunity to comment on the subject DEIR/DEIS. As it is well known, the Authority has been a steadfast supporter of the project, and it played a key role in the negotiations leading to the inclusion of the Transbay Terminal/Caltrain Downtown Extension in the Regional Transit Expansion Policy (Resolution 3434) adopted last March by the Metropolitan Transportation Commission as part of the 2001 Regional Transportation Plan (RTP). The Authority is the sponsoring agency for the project in the RTP and, as such, it has been required over the past year to submit capital and operating plans.

Our main focus, therefore, in performing a review of the DEIR/DEIS, were the sections relating to costs, schedule and funding. Given the less than bright prospects for transportation funding at the state level, we tried to identify any areas where additional opportunities for cost reduction may be found. The Authority's on-call engineering services consultant, Cordoba/Zurinaga assisted us with many of the technical aspects of the review.

With the recent developments in the State Budget, which now registers a $35 billion deficit, it has become clear that there will be schedule and funding impacts to transportation projects across California. In particular, there will be significant impacts to state sales tax-dependent sources like Prop 42, and the Governor's Traffic Congestion Relief Program (TCRP) which are tied to the General Fund. The cash problems in the State Highway Account, which date back some years now, will be further exacerbated. The Governor has already proposed nearly $2 billion in transportation program cuts, and the State Department of Transportation is even considering reneging on allocations already made by the California Transportation Commission. The schedule for this project will inevitable have to be re-examined in light of these troubling developments, as will be the case for all projects included in the 2001 RTP.

While the Authority Board has not taken a position yet, I will be proposing a strategy that advocates keeping San Francisco's key projects moving. This is indispensable if we are to compete well for funding at the federal level in this critical year of the reauthorization of TEA 21, and it is essential if we are to be ready to build these needed projects once the economy rebounds. Such a strategy will only work if we propose realistic schedules, which are scaled down to our ability to cash flow projects. A central element of that strategy will be the reauthorization of the local sales tax for transportation. The Authority is ready and eager to work with the City and County of San Francisco to ensure that such a strategy can be developed in the next few months.

Moving the City.

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José Luis Moscovich
EXECUTIVE DIRECTOR

Regarding the funding assumptions in Chapter 6 (Section 6.6.3 on page 6-10), while they are generally consistent with the Authority's initial funding plan submitted to MTC, we note that Prop 42 revenues are not likely to materialize until well after 2008 (as originally anticipated) and that once they become available they will need to be prioritized by the Authority Board. It cannot be automatically assumed that all Prop 42 funds would go to a single project. The DEIR/DEIS should note in Table 6.6-1 and in Section 6.6.3 the need for an Authority policy action regarding these funds. We anticipate that the Countywide Transportation Plan, currently being prepared by the Authority will include recommendations for the use of Prop 42, as well as a specific funding amount proposed for this project out of the reauthorization of the sales tax.

As mentioned above, we comment and pose questions in the areas of Value Engineering, Construction Phasing, Delivery Schedule, and Constructability with the aim of encouraging further exploration of cost reduction opportunities. We also provide specific comments about the proposed schedule. Our comments are as follows:

1) Since the Terminal is in the same location as the existing terminal and has practically the same footprint, was consideration given to using even a portion of the existing ramps? The southern ramp could be modified to provide access to the temporary terminal. Elevation differentials, if any, could be resolved relatively easily at this stage of design.

2) The cost summary for the Terminal, pages S-24 and 2-21, begs a few questions:

   - The cost estimate needs to resolve some inconsistencies and include sufficient backup information to raise the level of comfort about its accuracy.

   - The percentage allowed for soft costs, including design, insurance, mitigation and escalation is only 27% of construction costs. It is not clear whether the allowances for CM/Management, construction contingency, and management reserve are included in that percentage, since they do not appear to be accounted for elsewhere in the document. Percentage of soft costs varies from as low as 22.4% for Permanent Ramps to 53% for Bus Storage.

   - Escalation is only to start of construction; industry practice is to escalate to mid-point of construction. Although it is possible that escalation may not be a major factor due to the early stages of project development and foreseen economic climate, and thus be absorbed by contingency reserves, the budget should address this, especially in light of the latest developments at the state level.

   - At $22 M, the cost of the temporary terminal facility appears relatively high. This boils down to approximately $330/square foot, for what is essentially an at-grade parking lot with minimal amenities, in a lot that is already graded, paved, and in use as a bus storage facility.

   - The cost for the temporary ramp is the same for both options even though the drawings on pages S-5 and S-6 show the temporary ramp to be much shorter for the Loop Ramp alternative. Is some of the cost of the temporary ramp for the West Ramp option being offset by the new off-ramp to be built by Caltrans?

   - The estimate shows the Loop Ramp alternative to cost more than double ($315.8M vs. $153M) the West Ramp cost, even though the West Ramp option is double-decked and the Loop Ramp alternative is single-decked (including the West Ramp portion). Can the new Loop Ramp be combined with the new Caltrans off ramp to offset some of the costs for the Loop?

   - The West Loop is described as having six levels, with four above ground, the Loop Ramp alternative is described as five levels, with three above ground, but the cost of both options is

exactly the same. On page 2-17, figure 2.2-7 shows an elbow on the East end of the terminal (which presumably accounts for the cost differential between five and six levels), but the description of the option does not mention it or explain why this portion is necessary.

3) Page 2-11 shows the layout of the two top floors but not the other two above-ground floors or the two below ground. There is no drawing depicting the full footprint of the facility, showing the envisioned floor-by-floor space utilization plan.

4) Table S-1, on page S-17 indicates that the West Ramp alternative will accommodate an additional 35,000 passengers by providing 34 bus bays, but the Loop Ramp alternative will accommodate only 24,000 passengers by providing 51 bus bays, 17 bays more than West Loop. This statement needs clarification.

5) The description of the Terminal (page 2-9) mentions that 150,000 to 225,000 square foot of space will be provided on the Concourse Level for retail, entertainment, conference, educational, and cultural uses, but does not provide a conceptual breakdown between the various uses, or describe what types of tenants are envisioned overall (i.e.: supermarket, theaters, bookstores, video rental, restaurants, coffee houses, etc.). The description does not mention retail, entertainment, or other concession space on the other floors. Since retail and entertainment leases are tried-and-true revenue generators, space for these purposes should be maximized throughout the facility.

6) Once the facility is completed, and with the inclusion of high-speed rail service, the terminal will serve significantly more long-distance and non-commuter passengers. Although most passengers will take advantage of the multiple transit connections available at the site and others will walk, it is expected that a portion of them will be served by private transportation. It is not clear from the information offered what provisions are contemplated, if any, for bicycles, taxi stands, or private vehicle pick-up and drop-off areas, as well as short-term waiting areas (The entry-level drawing on page 2-10 only shows buses). Is it to be understood that private vehicles picking up passengers are going to wait in a holding pattern driving around the terminal? If so, what provisions are being made to handle the traffic?

7) It appears that the design of the Terminal does not provide for the future development of a Muni Metro station. Since the current plan for the Geary Corridor calls for a station at the Transbay Terminal, the design should accommodate its inclusion, or at least not foreclose on its future development.

8) On page 5-94 the design concept shows a very attractive but complicated roofline. Considering that tall buildings will surround the terminal, and that as a result the perspective view of the building as shown on Figure 5-16.1 is not probable, has consideration been given to a more easily constructible (and therefore less expensive) roof that provides some of the same functionality? Furthermore, has the potential for additional development above the terminal itself, for retail or other uses, been seriously considered?

9) Also on page 5-94, the bottom drawing shows what appear to be cars and other vehicles in two underground levels adjacent and to the left of the Caltrain station with a large (approx. 170 feet) three-level atrium space above it. There is no mention of this space in the project description, although apparently it is also shown on the plan on page 2-10. Is it part of the Terminal or is it a representation of the adjoining private sector development envisioned for that space?

10) On page 2-37, the description of the Caltrain tunneling option states, "...tunneling appears to be feasible only for that portion of the alignments between Townsend Street and Folsom Boulevard". The section between Folsom and the Terminal, as well as the tail tracks out to Main Street can also be tunneled if soil stabilization methods such as grouting are used for the sand and mud sections.

The Muni Metro Turnback project demonstrated that tunneling could be performed successfully in unstable soils next to the bay. The advantages of tunneling are many:

- Reduced utility conflicts, and reduced likelihood of disruption to services (see page 5-152, first paragraph)
- Minimized disruption to businesses and the general public (see impacts of cut-and-cover on neighborhoods and businesses on page S-20)
- Reduced noise levels
- Minimized need for street closures
- Minimized need for street reconstruction
- Reduced amount of haul-truck trips and associated traffic congestion, dust, and mud by significantly reducing the amount of excavation and backfill (see page 5-167)
- Reduced number of buildings that have to be purchased for demolition purposes only

Given the potential benefits of tunneling, including the possibility of cost reductions, maximizing its use should be considered further.

11) The Cost Estimate for the Caltrain Extension is only escalated to the start of construction; industry practice is to escalate to mid-point of construction. Although it appears that there are sufficient contingency funds to absorb moderate escalation, the budget should be adjusted to reflect realistic escalation forecasts.

12) On page 5-139, the discussion of Final Design and Development of Construction Contracts, states that: "Final Design would in turn lead to determinations of construction contract packaging". Development of a Contracting Plan, with its two major components the Contracting Strategy and Contract Packaging Plan, is a task that needs to be performed before Final Design, not during or after, especially for a project of this magnitude. The Contract Packaging Plan should clearly delineate how and why the project is going to be broken down in different contracts, and the Contracting Strategy must address the delivery methods (i.e.: Design-Bid-Build, CM at-Risk, Design-Build, Fabricate-Install, Owner Supplied, etc.) for each contract. Since these documents influence Final Design, they should be developed no later than during Schematic Design for the Extension and Design Development for the Terminal, earlier if at all possible. It is invaluable to go into Final Design with the road map that a properly developed Contracting Plan provides, with full knowledge of how the design is going to be broken down into contract packages, and how they are going to be delivered; not doing so almost invariably results in expensive and time-consuming re-packaging.

13) The Construction Phasing shown on page 5-161 appears at first glance to be overly optimistic:

- The schedule indicates that construction will commence in July 2004 on the Terminal and January 2004 on the Caltrain extension, 19 months and 13 months hence, respectively. The construction of the temporary terminal and ramps is scheduled to commence 10 months from now. Considering that the DEIR/DEIS is in the review phase and design is in the conceptual stages, it is difficult to envision consultant selection, design development, final design, and contractor selection to be completed within that time frame. In addition, Real Estate acquisition would have to take place within the same time frame for construction to commence on January 2004. A reasonable duration for this work would be a minimum of two years (probably closer to three), provided a very aggressive and competent management team fast tracks the project.
- The schedule assumes that Caltrans will complete the new Fremont Street off-ramp in time for the temporary ramp to be constructed in the third quarter of 2003, which with information

currently available, appears unlikely. In addition, there appear to be conflicts between the construction of the new Fremont ramp and the existing AC Transit ramp.

- The schedule provides for 36 months to construct the cut-and-cover section of the Caltrain Extension (same duration for tunnel alternative). This provides for an average production rate of approximately eight feet per day, which translates to a peak rate of sixteen feet per day for about 10 months of peak construction. Considering the section of the subway (some cuts are 100 feet deep, which have to be backfilled and compacted after the subway is constructed), construction methods, and location, the production rate, although achievable, is aggressive and requires for everything to go exactly according to plan, which is seldom the case in underground projects. In contrast the retained cut section, which is significantly easier (inside the existing yard, significantly less excavation, no street closures), is planned for the same production rate.

- The schedule provides for 39 months for demolition of the existing terminal and construction of the new terminal and permanent ramps. Based on cost, this schedule represents an average construction expenditure of approximately a million dollars per workday, peaking at two million dollars per day during the 11-month (approximate) peak construction period. In addition, demolition of the old terminal will be time-consuming due to the necessary asbestos abatement. The schedule although achievable, is unlikely and appears aggressive considering the site constraints.

- The aggressiveness of the schedule is in conflict with the availability of funds, even before considering the latest grim news from the state. The project would benefit from a more realistic schedule, where projected cash draw-downs are more in tune with the financial plan.

Without the basis for the summary schedule provided in the document, it is difficult to fully assess its reliability. We stand ready to take a close second look as soon as a detailed schedule is provided to us.

15) On page 6-8 of the Financial Analysis, Table 6.6-1 has a line item for Value Engineering, which reduces the overall cost of the project by 10 percent. There is no mention of the timing of the Value Engineering efforts. In order to derive the most benefit of Value Engineering, it needs to take place now, and the budgets revised accordingly, before design proceeds any further. If design is allowed to proceed without revising the budgets, costly redesign fees will be incurred, spending funds that could otherwise be used for scope items.

The rest of the document appears to be thorough and well-researched. I would like to thank the Planning Department for its role in generating a major environmental document like this, under budget and schedule constraints. Should there be questions about the funding-related issues in this letter, please contact Maria Lombardo at 522.4802. Engineering questions will be addressed by Paul Ward, who is reachable at 522.4808.

Sincerely,

José Luis Moscovich
Executive Director

cc: Authority Commissioners
J. Kugler – DCP
M. Ayerdi - MOED
MEL, PW, FR

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V. Transit Providers Agencies

RECEIVED Date: December 20, 2002
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AC Transit

Alameda-Contra Costa Transit District
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Kathleen Kelly
Deputy General Manager
Service Development

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December 20, 2002

Paul Maltzer
Environmental Review Officer
San Francisco Planning Department
1660 Mission St., Suite 500
San Francisco, Ca. 94103

Re: Transbay Terminal Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) comment on the EIS/EIR for Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project

Transbay Terminal is an extremely important facility for AC Transit. It is our only stop in San Francisco and serves thousands of riders daily. As the demand for travel to San Francisco grows, and other transportation modes reach capacity, we expect ridership to Transbay Terminal to increase. However the current facility is badly in need of modernization so that it can function better for both bus operations and riders. Therefore, AC Transit hopes to see a new Transbay Terminal and associated ramps constructed at the earliest possible date.

AC Transit supports the Environmentally Superior Alternative identified on Page S-27 of the EIS/EIR--the West Ramp Transbay Terminal, Second to Main, Tunneling Option, Full Build. We believe that the West Ramp alternative strikes an appropriate balance between the needs of bus circulation and the potential for redevelopment in the surrounding area. AC Transit supports redevelopment in the Terminal area as a way to generate both financing for the Terminal and ridership on our service.

We are aware that some property owners and residents in the Second St.& I-80 area have raised concerns about the bus storage planned under the freeway there. They have raised concerns about both air quality and traffic impacts. AC Transit sees this bus storage site as a critical and integral part of the project that should not be changed. By providing dedicated ramps from the bus storage site to the Terminal, AC Transit can quickly and reliably move buses from one to the other. If our buses had to operate from another storage site to the Terminal, which required the use of often congested Downtown San Francisco streets, this would substantially increase our running time and operating cost.

We also believe that the air quality and traffic concerns are misplaced. The air quality concern is based on an obsolete image of highly polluting diesel buses. Modern clean diesel buses eliminate all but a small fraction of former emissions. In addition, the buses would only be running at the storage site for a few minutes per day. The number of cars that currently use the site is larger than the projected number of buses, so that the existing cars also have air quality impacts. The bus storage facility and ramps could actually improve traffic in the area. The storage sites are currently used as parking lots for automobiles,

which access the lots via city streets. By creating dedicated ramps and removing on street trips, traffic congestion could actually ease.

In reviewing the draft EIS/EIR, the Planning Committee of AC Transit's Board of Directors raised some concerns. One concern was that the Purpose and Need statement contained on page S-1 did not make any mention of improvements for passengers. We propose that the following language be added to the listing of needs addressed by the project: "Improve the Terminal as a place for passengers and the public to use and enjoy."

They also discussed the potential pedestrian tunnel connecting the Terminal and BART/Muni Metro at Market St. Our view is that this tunnel would help improve the Terminal as a multi-modal transit hub. However, AC Transit is more concerned with building the Terminal and bus facilities in a timely fashion. Therefore, we would suggest that the tunnel to Market St. be built if and only if there are sufficient funds available to complete both the basic project and the pedestrian tunnel. If funds are insufficient, Transbay Terminal could be designed and built in a way that allows the tunnel to be constructed at a later date.

As you know, AC Transit has been working on this project for many years. We look forward to completion of environmental review and early implementation of the project.

Yours Sincerely,

Kathleen Kelly
Deputy General Manager
Service Development

Cc: Ken Scheidig
Jim Gleich
Joe Schlenker
Greg Hunter
Tina Konvalinka
Nathan Landau

BART
30 YEARS OF SERVICE YEARS OF PRIDE

SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT
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December 20, 2002

Paul E. Maltzer, Environmental Review Officer
City and County of San Francisco
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1660 Mission Street, Suite 500
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JOEL KELLER
PRESIDENT

PETER W. SNYDER
VICE-PRESIDENT

THOMAS E. MARGRO
GENERAL MANAGER

RE: Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Draft Environmental Impact Report (DEIR).

Dear Mr. Maltzer:

DIRECTORS

DAN RICHARD
1ST DISTRICT

JOEL KELLER
2ND DISTRICT

ROY NAKADEGAWA
3RD DISTRICT

CAROLE WARD ALLEN
4TH DISTRICT

PETER W. SNYDER
5TH DISTRICT

THOMAS M. BLALOCK
6TH DISTRICT

WILLIE B. KENNEDY
7TH DISTRICT

JAMES FANG
8TH DISTRICT

TOM RADULOVICH
9TH DISTRICT

Thank you for the opportunity to comment on the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Draft Environmental Impact Report (DEIR).

As the operator of a rail network that extends into four counties, BART supports improved regional transit mobility. Last year, BART spearheaded a regional planning effort involving the Metropolitan Transportation Commission (MTC) and transit operators from throughout the region. BART staff and directors have also investigated opportunities to expand service with transit modes other than traditional BART technology. A well-designed Transbay Terminal and Caltrain extension project could significantly enhance regional transit options. If San Francisco is to retain its prominence in the Bay Area, it is important to maximize the effectiveness of transit projects linking San Francisco with its neighbors.

Since the proposed Transbay Terminal and Caltrain extension are intended to facilitate travel between the East Bay, San Francisco and the Peninsula, there is clearly a mutual and potentially complementary relationship between this project and BART. We are particularly interested in the interface between the Transbay Terminal and BART in Downtown San Francisco, connectivity, and facilitating long-term regional rail opportunities. Please consider the following comments:

- Pedestrian Connection to Embarcadero BART/Muni Metro
  The current surface connection between the Transbay Terminal and the Embarcadero BART/Muni Metro Station, which is described as "convenient" on page 1-16, is actually quite challenging. The description should be revised to illustrate the physical inconvenience of this connection more accurately, specifically referencing the distance, number of street crossings and elevation changes required to transfer between systems.

  Pages 2-36, 2-37 and 5-118 reference a pedestrian tunnel underneath Fremont Street to connect the Transbay Terminal with the Embarcadero BART/Muni Metro Station. If designed appropriately, such a connection could facilitate transfers between regional systems by removing conflicts between surface traffic and transit patrons, shortening transfer times, and reducing elevation changes. BART has recommended this connection in our Embarcadero Station Access Plan, released earlier this year.

We are concerned that the pedestrian linkage is not sufficiently described or analyzed in the DEIR. Page 5-119 states that only 700 transfers per day are estimated to occur between BART and Caltrain in Downtown San Francisco (only 2% of Caltrain riders, as indicated on page 5-135). Given the existing traffic volumes on the Bay Bridge and Highway 101 corridors, we believe this may be an underestimate and would like the Final EIR to provide a justification for this number. In addition, the EIR should be revised to describe the connection's "footprint" (including the width, height and depth of the proposed tunnel) and include a diagram illustrating its configuration. Besides reducing street-activating foot traffic, underground passageways may pose security concerns if they are underutilized and poorly designed. The EIR should discuss security-enhancing features such as retail activity, clear sightlines and cameras, and patron amenities. Additionally, the EIR should include and analyze a moving sidewalk option to shorten transfer times, reduce the frequency of missed connections, and improve convenience for senior citizens, people with disabilities, and patrons with luggage.

We recognize that funding may not be sufficient initially for an underground passageway. Consequently, a clearly-defined aboveground connection should be added as an alternative and analyzed in the Final EIR.

- Impacts on Current Transit Patronage

In describing impacts on corridor transit patronage on page 5-119, the DEIR notes that the Transbay Terminal/Downtown Caltrain Extension Project would reduce future BART ridership primarily along the San Mateo County extension. However, the DEIR does not substantively analyze the potential ridership impacts on BART's transbay service, which currently handles over 140,000 trips daily. For instance, the DEIR only minimally discusses the situation on page 5-120, stating that the project "would likely encourage transfers from Caltrain to AC Transit buses, thereby increasing AC Transit bus ridership".

For planning purposes, we would like the Final EIR to quantify potential system impacts on AC Transit and BART related to the improved Transbay Terminal. The Final EIR should also describe the assumed AC Transit transbay bus network and services levels used in the modeling process, as was done for SamTrans, Muni and Golden Gate Transit. Beyond the environmental process, we would also like to work with project sponsors in the future to help design transbay services that distribute transit resources efficiently and improve access to underserved areas.

- Connectivity with Other Rail Services

Page 2-4 references Muni's future Third Street Light Rail/Central Subway project. It is our understanding that the light rail line is planned to cross the Caltrain alignment in the vicinity of the existing Caltrain terminal at 4th and King, but that there are multiple options being considered for that area. Please indicate in the Final EIR both in text and on a map how the light rail line will interface with the relocated 4th/King Caltrain Station. For safety and security reasons and to minimize transfer times, it would be preferable if the stations were located adjacent to each other so that patrons do not have to cross streets or walk long distances unnecessarily.

- Future Rail Options

The Proposed Project includes expanded layover facilities for transbay buses within the reconfigured Transbay Terminal, with the potential for an additional transbay rail connection over the long-term. Implicit is an assumption that buses will be relied upon to accommodate most of the ridership growth in the transbay corridor, with rail options to be considered in

the future should funding materialize. Buses can add capacity immediately at a relatively low cost and are a key component of the transit network. However, growth is ultimately limited by roadway congestion and seating. The DEIR should more extensively consider the opportunities and limitations of different modes both in the transbay corridor and in the sizing and design of the terminal itself.

BART and the recent MTC Bay Crossings Study recognize that additional transbay rail capacity may be necessary in the future to accommodate ridership growth. As described on page 2-36, both the Second-to-Main and Second-to-Mission Caltrain Extension alternatives "could also be extended as a separate, independent project at some time in the future, to a San Francisco-to-Oakland cross-bay alignment for commuter rail and/or high speed trains". The DEIR should be revised to show how either alternative would be able to facilitate a second Transbay crossing. In particular, the Final EIR needs to clarify how the Second-to-Main alternative, which is oriented towards the South Beach district, could be extended across the bay.

In addition to the Transbay corridor, there are opportunities for rail expansion within San Francisco and elsewhere. For example, rapid transit along the Geary corridor has been contemplated for many decades. Potentially such a service could be linked with a future transbay rail crossing via the Transbay Terminal, which would increase transbay capacity and improve links between the East Bay and the northern half of San Francisco. However, it appears that the Transbay Terminal facility has not been designed for future rail service outside of the Peninsula and East Bay corridors. Regardless of current funding limitations, long-term expansion should not be precluded by the facility design. The DEIR should be revised to show how future rail projects, particularly in the Geary corridor, could interface with the Transbay Terminal facility.

We hope the Final EIR will provide for ongoing coordinated planning efforts among BART, the U.S. Department of Transportation, the Federal Transit Administration, the City and County of San Francisco, Caltrain, and the San Francisco Redevelopment Agency. As we develop a better understanding of future needs, we are especially interested in identifying underserved regional markets where the Transbay Terminal could provide additional capacity that complements the existing rapid transit network. In evaluating proposed services, BART would like to work with you to coordinate capacity analysis, ridership forecasting and service planning efforts.

Thank you again for the opportunity to comment on the DEIR for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. We look forward to working in partnership with to improve regional transit opportunities.

Sincerely,

Thomas E. Margro
General Manager

November 19, 2002

GOLDEN GATE BRIDGE
HIGHWAY & TRANSPORTATION DISTRICT

Mr. Paul E. Maltzer
Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103

Dear Mr. Maltzer:

Re: **Draft Environmental Impact Statement/Draft Environmental Impact Report (DEIS/DEIR) for the Transbay Transit Terminal/Caltrain Downtown Extension Project/Redevelopment Project**

Golden Gate Bridge, Highway and Transportation District (District) has reviewed the above-referenced document and offers the following comments as they pertain to District transit services near the Transbay Transit Terminal (TTT) area.

General Comment

- District concurs with the primary objectives of the Transbay Terminal/Caltrain Downtown Extension/ Redevelopment Project (Project) to improve public access to bus and rail services, modernize the Transbay Terminal, and reduce non-transit vehicle usage.

EIR Comments/Permanent Storage for Golden Gate Transit (GGT)

- DEIS/DEIR (pages S-1 and 1-1) describes the many transit benefits achieved by this Project. Equally important, however, is the project's inclusion of a permanent storage/layover facility for regional bus operators. This facility will continue to allow GGT to provide level of service and schedule reliability for its customers. Although passenger amenities are important for the general public, the ability for GGT to maintain level of service and schedule reliability are critical to the attractiveness and success of GGT bus service in San Francisco. Page 1-2 should also acknowledge the operational benefits provided for regional bus operators by this Project.

- A permanent midday storage facility is very critical to the retention of successful GGT bus service in San Francisco. District recommends that the bus storage and bus access ramps proposed by this Project be identified as a priority transit improvement that could be advanced independently in the event the Project is delayed.

- Table S-1 of DEIS/DEIR (page S-10) states that mitigation of displaced public parking by bus parking will be accommodated with a "parking deck" under the freeway between 3rd Street and 4th Street. This table should clarify that bus parking at grade level is the higher priority and public parking could co-exist onsite on a deck.

- Table S-1 (page S-17), under the Transit Operations/No-Project Alternative heading, should mention that a permanent storage facility for GGT is not provided under this scenario. Similarly, under Transit Operations/Full Loop Ramp Alternative heading, it should be mentioned that a permanent storage facility is provided for GGT.

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EIR Comments/Bus Access Ramps

- Figures 2.2-5 and 2.2-6 (pages 2-14 and 2-15) present the proposed off-site bus storage facility for GGT and AC Transit, and the direct access bus ramps connecting the off-site storage facility with TTT and Fremont Street. Although District appreciates incorporation by this Project of a permanent storage facility that it has sought since 1972 (i.e., when GGT began transbay bus service from Marin and Sonoma counties into San Francisco), there are some issues the DEIS/DEIR does not appear to address.

  1) The GGT off-site facility between 3rd Street and 4th Street is not shown to be directly connected to the ramp system proposed to TTT. The lack of a direct ramp from the GGT bus storage area makes this off-site facility completely vulnerable to weekday evening traffic congestion on 3rd Street. District strongly suggests that the feasibility of a direct ramp, as provided for the AC Transit off-street storage facility, be further investigated.

  2) The direct access ramp to Folsom Street is labeled on Figure 2.2-6 as a "possible future" connection. District strongly suggests that any potential lack of this connection as part of the Project is a serious shortfall. The absence of a direct connection between the off-site storage facility and Fremont Street would make GGT bus services in San Francisco totally dependent on evening peak period traffic conditions on surface streets. Potential congestion will decrease GGT schedule reliability and would likely require GGT to acquire a new staging facility near TTT.

EIR Comments/Street-Level Facility

- Figure 2.2-2 (page 2-10) presents proposed street-level facilities for GGT and San Francisco Municipal Railway (MUNI). A single 13-foot lane for bus boarding, although adequate from passenger and bus loading viewpoints, may prove problematic from an operating perspective should a bus become disabled in the 13-foot lane and a by-pass lane is not provided. To mitigate this operational concern, District recommends the DEIS/DEIR mention either a drop-off area for bus passengers at either the near side of the street-level facility on Beale Street or in front of the new TTT on Mission Street.

EIR Comments/Temporary Bus Terminal

- Page 2-20 discusses the proposed temporary bus terminal. It states GGT "would be allocated three bays on the curb." DEIS/DEIR should clearly state whether these bays are located on the Beale Street contraflow lane between Howard and Folsom streets.

EIR Comments/GGT Storage at 8th and Harrison Streets

- Page 2-18 correctly states that the current GGT midday storage facility, which presently occupies the site of the proposed temporary terminal, requires "a new site . . . to be identified." GGT is presently in the process of relocating its midday storage facility from the Main/Beale site to a leased lot at 8th Street and Harrison Street. This relocation should be accomplished in March 2003.

EIR Comments/GGT Service in San Francisco

- Figure 1.2-4 (page 1-15) incorrectly illustrates GGT bus service on Folsom and Howard streets. Since 1997, GGT "Civic Center" service has operated on Mission Street. (Figure 3-1 on page 3-2 is correct.) With the anticipated relocation of its midday storage facility from Main and Beale streets to 8th and Harrison, GGT is planning to resume revenue service on Folsom and Howard streets. District Planning Department staff will provide the exact routing of bus service in the South of Market area as soon as it becomes available.

- Page 3-20 and Table 3.1-11 (page 3-22) of the DEIS/DEIR should make the following clarifications concerning GGT Basic Service in San Francisco.

  1) GGT Basic Service generally operates every day and nearly 24 hours per day.

  2) Route 10 operates only on weekends in San Francisco; Routes 30 and 90 operate only on weekdays.

- Figure 3.1-6 (page 3-21) does not show GGT Route 67 and Route 69 correctly. Route 69 is a ferry shuttle route that serves San Francisco Ferry Terminal and the Financial District. Route 67 is a ferry shuttle route that serves San Francisco Ferry Terminal and the Civic Center.

- Information on page 3-20 of the DEIS/DEIR should be updated to include the current District one-way adult cash fares.

Weekday Fares	
Golden Gate Transit transbay bus	$2.65 - $5.65
Golden Gate Ferry; SF to Sausalito	$5.60
Golden Gate Ferry; SF to Larkspur	$3.25
Weekend/Holiday Fares	
Golden Gate Transit transbay bus	$2.65 - $5.65
Golden Gate Ferry; SF to Sausalito	$5.60
Golden Gate Ferry; SF to Larkspur	$5.60

- Table 3.1-11 (page 3-22) should be revised to include the following clarifications concerning GGT bus service in San Francisco (as of September 2002):

  1) Route 90 has two (not one) southbound trips that serve the Transbay Terminal area.

  2) Route 72 has headways that vary between 14 and 55 minutes (not one peak period trip).

- Page 3-23 should not describe District sponsored Club Bus services from Napa and Sonoma County to San Francisco as "Regional Paratransit" service. These are subscription commute bus routes that serve the Transbay Terminal via bus stops on Mission Street. As of March 2001, the Napa Valley Commute Club operates one southbound and one northbound trip during the peak period. As of October 2002, the Valley of the Moon Commute Club operates two southbound and two northbound trips during the peak periods.

  Regional Paratransit services to TTT include services correctly described on page 1-8 of the DEIS/DEIR.

- Page 3-49 should acknowledge that most GGT buses and all Golden Gate ferries are equipped to transport bicycles.

EIR Comments/Paratransit and Taxi Services

- DEIS/DEIR should mention that a new TTT should be designed to provide a street level paratransit transfer location adjoining the primary taxi zones as well as the ground level terminal facilities between Fremont Street and First Street. Enclosed is an October 24, 2000 letter from the Partnership Transit Coordination Committee to Metropolitan Transportation Commission (MTC) pertaining to many design-

related issues. It is offered for your information.

- There is very little information in the DEIS/DEIR pertaining to taxi service to and from the new TTT. This issue may be critical from street level activity, terminal space allocation, and traffic congestion viewpoints. Since taxi service may potentially become a significant mode of access to and from TTT with the introduction of high-speed rail service (albeit a separate future project), District recommends that taxi service to and from TTT be discussed in the DEIS/DEIR.

EIR Comments/Ferry Building

- Page 4-52 attributes the decline in use of the Ferry Building "to almost nothing" as being a result of electric trains over the Bay Bridge. The DEIS/DEIR should recognize that the decrease in ferry transportation described only reflects travel to and from the East Bay. Overall decline in ferry transportation to the Ferry Building is primarily attributed to construction of the Bay Bridge (for East Bay communities) and the Golden Gate Bridge (for North Bay communities).

  The DEIS/DEIR should acknowledge the current growth in ferry transportation at the Ferry Building and its status as a regional transportation facility.

EIR Comments/Miscellaneous Issues

- Page 1-25 describes membership of the Transbay Joint Powers Authority (JPA). DEIS/DEIR should acknowledge that the this District is an ex-officio member of the JPA.

- It appears the restriping of Fremont Street traffic lanes between Mission Street and Market Street, described on Page 3-35, has already been implemented. In addition, tracks for the former F-Market Muni have been removed.

EIR Comments/TTT Alternatives

- Page 5-2 describes Impacts Common to Both Transbay Terminal Alternatives. It states how GGT and AC Transit buses would be stored on a lot on Harrison Street between Second and Fourth Streets. It is not clear whether the lot described is referring to the proposed off-site storage facility bounded by 2nd, Perry, 4th and Stillman streets. It is also not clear, based on description of the Loop Ramp Alternative (see pages 2-14 and 2-15) whether an off-site facility will be provided for GGT.

- Table 5.19-1 (page 5-110) summarizes the two TTT and No Project Alternatives in terms of bus operational differences. It compares bus storage locations, travel times, and travel distances for the alternatives. This table raises the following questions as they pertain to GGT bus operations.

  Bus Storage: This table indicates bus storage for the Full Loop Alternative will occur on the on-site ramps and off-site storage lot. Please specifically identify where storage would occur for GGT buses.

  Travel Distances: Estimated travel distances are provided for AC Transit. Travel distances for GGT buses should also be provided.

  Travel Times: Estimated travel times are presented for AC Transit operations. Estimated travel times for GGT operations should also be presented.

EIR Comments/West Ramp Alternative

- Page 5-111 clearly describes how AC Transit would operate between the off-site storage facility and TTT. It states, "AC Transit buses would operate independently of local traffic between the Bay Bridge, the storage area, and the Transbay Terminal. Direct connections would be provided on elevated ramps. . .." Other than reference to the storage facility for GGT buses, no reference is made to how GGT buses would operate between the off-site storage facility and the beginning of revenue service on Fremont Street. As part of consensus building and planning efforts with MTC, there was considerable discussion of providing GGT buses with ramps that would also permit buses to operate independently of local traffic. District staff had understood that ramps connecting the off-site storage facility and Fremont Street would be provided. These ramps would assure GGT level of service and schedule reliability and potentially reduce operating costs. This is also true in light of traffic-related impacts discussed in Chapter 5 of this document (see comments below).

- Page 5-111 does not clearly describe features of the West Ramp Alternative for GGT bus operations. It cites Muni and Golden Gate Transit bus operations, patron entry, ticketing, and joint development. DEIS/DEIR should clearly identify features and specify the benefits for GGT of this TTT Alternative.

- Page 5-113 notes "a direct connection between the Terminal and the surface streets was determined to be unnecessary for bus operations." District staff has repeatedly mentioned during consensus building and planning process with MTC that the current street access to TTT and access from Second Street south of Harrison Street via the elevated ramps requires an additional two miles of deadhead travel for GGT. District requested that a design option consider direct access from city streets to the terminal be investigated at the outset of this project. For example, District staff suggested a contraflow lane be considered on the Fremont Street off-ramp as a potential low-cost design option.

- Second paragraph of page 5-114 cites "any significant expansions in Muni or GGT capacity would require the staging of buses at an alternate location." How much expansion by Muni or GGT would trigger this additional staging? Where would this additional staging be located?

- Fourth paragraph of page 5-114 cites GGT "commuter service would also be able to use the new mid-block boarding area. Golden Gate Transit's basic service . . . would continue to load and alight passengers along Fremont Street between Mission and Howard." This description of GGT service is not accurate and needs to be revised. Page 5-136 describes potential GGT operations as a result of the mid-block boarding area. There doesn't appear to be consistency between GGT operations described on page 5-114 and 5-136. Nevertheless, the following describes probable GGT operations with the new mid-block boarding area and can be incorporated into the DEIR:

  Basic Service: Inbound GGT Basic Service buses, which operate on Mission Street, would terminate in front of TTT on Mission Street (as they do presently). The proposed TTT mid-block boarding area would be used as the first revenue stop by outbound GGT Basic Service buses.

  Financial District Commute Service: Inbound GGT Financial District Commute Service buses would serve TTT by the current bus stop on First Street, between Market and Mission streets, and would not likely be affected by any of the TTT alternatives. Outbound Commute Service would be affected by the location of the off-site bus storage facility and elevated ramps mentioned previously. In the event of a direct connection between the off-site facility and Fremont Street, GGT commute buses would serve TTT with existing bus stops on Fremont Street.

- Page 5-116 makes reference to a change in GGT operating costs following construction of the off-site

storage facility. EIR should refer to upcoming relocation of GGT's midday storage to the 8th and Harrison Street site (effective March 2003) to determine the new site's affect on GGT operating costs

EIR Comments/Loop Ramp Alternative

- Page 2-18 of the DEIS/DEIR describes bus storage for the Loop Ramp Alternative to occur on the (elevated) bus ramps for TTT. DEIS/DEIR does not specifically mention whether bus storage for GGT is provided, although Figure 2.2-7 (page 2-17) indicates "Additional Bus Storage (under Bay Bridge Approach)." The description of this TTT alternative does not clearly indicate whether a permanent midday storage facility is provided for GGT. Absence of a midday storage facility for GGT, for any TTT alternative, is a serious shortfall and does not adequately address the needs of GGT bus services in San Francisco. Similarly, direct access ramps connecting an off-site facility and Fremont Street need to be accommodated.

- Page 5-116 cites this TTT Alternative would feature "street level bus service for Muni and Golden Gate Transit . . . in the block east of Beale Street (as opposed to the mid-block crossing between Fremont and Beale as proposed in the West Loop Alternative')." The DEIS/DEIR does not provide any further description of this street-level arrangement. How many berths will GGT be provided? Where would this street level bus service be located? How will GGT bus operations (e.g., access between a midday storage facility and the beginning of revenue service) be affected?

- Page 5-117 cites "both AC Transit and Golden Gate Transit would be available beneath the western approach of the Bay Bridge at Second Street." How does the space, layout, and the ability to provide a direct ramp between the midday storage site and Fremont Street (i.e., a route of travel that is independent of local street traffic) vary for GGT buses compared to the West Ramp Alternative?

- No reference is made on page 5-117 concerning GGT operating costs with this TTT Alternative. EIR should refer to upcoming relocation of GGT's midday storage to the 8th and Harrison Street site (effective March 2003) to determine the new storage facility's affect on GGT operating cost.

EIR Comments/Operating Costs

- Page 5-120 presents an estimated $312,000 annual increase in GGT operating costs attributed to the relocation of the midday storage function from the current lot at Main/Beale to the new off-site storage facility beneath I-80. This cost estimate assumes GGT midday storage at the current Main and Beale lot. GGT will be relocating its midday storage operation to a lot on 8th and Harrison streets in March 2003. GGT operating cost impacts relative to the relocation to a the proposed storage facility should assume the 8th and Harrison site as the existing condition.

EIR Comments/Traffic Impacts

- Page 5-126 states the project "would result in adverse (traffic) impacts" and "mitigation measures for the seven (impacted) intersections have not been proposed, and the impacts associated with the Project would be considered adverse and unmitigatible . . . ." District recommends full consideration of direct ramps between GGT off-site storage facility and Fremont Street to eliminate circulation of GGT bus traffic on local streets during the evening peak period when traffic conditions surrounding the TTT area operate under extreme levels of congestion.

- According to Table 5.19-5 (page 5-123) Harrison Street and Second Street currently operate at LOS E (delay of 44.9 seconds and v/c capacity at 1.11). Given the close proximity of this intersection to the proposed GGT off-site storage facility, District believes that GGT will be highly susceptible to traffic

queuing on Third Street. District, therefore, urges consideration of a direct ramp connecting the storage facility with the Fremont Street off-ramp.

- Similarly, Table 5.19-5 (page 5-123) cites poor traffic levels-of-service throughout the TTT area under existing and projected 2020 conditions. GGT needs direct ramps between the off-site storage facility and Fremont Street. Lack of these ramps would require a street level staging area near the TTT area.

EIR Comments/Pedestrian Impacts

- Page 3-44 of the DEIS/DEIR provides an accurate portrayal of sidewalk conditions at GGT bus stops on Fremont and Mission streets near TTT. It accurately describes potential conflicts between queuing bus passengers and sidewalk pedestrians on sidewalks that are narrow and furnished with street furniture that effectively reduces pedestrian space. The DEIS/DEIR also highlights the benefits for both queuing bus passengers and sidewalk pedestrians of the Fremont Street overhang of the existing 350 Mission Street building. District strongly advocates the use of overhangs for new buildings constructed in San Francisco with adjoining bus stops to reduce sidewalk obstacles.

- The DEIS/DEIR also discusses the general lack of curb space for GGT buses on Fremont Street. For this reason, GGT Routes 2, 4, and 8 completely bypass the TTT area. District supports expansion of GGT curb space near TTT to enhance bus passenger queuing space and facilitate consolidated bus operations.

- Page 5-131 summarizes pedestrian levels-of-service in the TTT study area. The poor levels-of-service at the Mission and Fremont street intersection highlight the need to make improvements at the street level for bus queuing passengers and sidewalk pedestrians.

- Since a mid-block pedestrian analysis for the sidewalks on Fremont Street between Market and Mission, and between Mission and Howard streets, was not performed, the EIR does not address levels of sidewalk congestion that could be exacerbated for 2020 Baseline Plus Project conditions.

- Page 5-136 recommends potential mitigating measures to enhance pedestrian flow near TTT. District supports these strategies, not only for TTT area but for all new buildings built in San Francisco.

EIR Comments/Construction Impacts

- District would appreciate if traffic control plans, cited on page 5-139, could also be developed in conjunction with District staff. All short- or long-term construction detours and street closures will affect traffic conditions and GGT schedule reliability. Ultimately any prolonged effects on schedule reliability and the continued availability of bus stops near TTT have the potential to decrease the attractiveness of GGT bus service as an alternative means of transportation to and from San Francisco.

- Figure 5.20-8 (page 5-161) presents an estimated construction phasing for the TTT project. It estimates construction of off-site storage facilities and access ramps during the fourth and fifth years of construction. District requests construction of the off-site storage facility be initiated as soon as possible after this site becomes available subsequent to Caltrans' seismic retrofit project in order to address GGT permanent midday storage needs in San Francisco.

- Figure 5.21-1 (page 5-163) illustrates and page 5-165 discusses access to the temporary TTT at the site currently occupied by GGT's midday storage facility. District appreciates efforts by this project to accommodate GGT bus service during construction of a new TTT.

1) Figure 5.21-1 and page 5-165 appear to only accommodate GGT's outbound service since no inbound GGT stops are indicated. District's inbound Basic Service bus stops are required on Mission Street, either between Fremont Street and First Street (as in current conditions) or, if not available, between Beale Street and Fremont Street (shown in Figure 5.21-1 as a San Mateo County/Muni bus stop). District desires to serve both the existing TTT and temporary TTT to facilitate transfers with other regional transit operators.

2) For GGT outbound stops, this figure shows a GGT layover on Folsom Street, a Beale Street bus stop (far side Folsom), and a Fremont Street bus stop (far side Mission). GGT currently has three bus stops on Fremont Street (near side Mission). These bus stops either have to be maintained during project construction or otherwise accommodated near the existing terminal.

District staff appreciates the opportunity to comment on the DEIS/DEIR for this project. Please call Principal Planner Maurice Palumbo at (415) 925-0160 if you have questions.

Very truly yours,

Alan R. Zahradnik
Planning Director

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CAPITAL PLANNING & EXTERNAL AFFAIRS DIVISION • MUNICIPAL TRANSPORTATION AGENCY

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December 17, 2002

Mr. Paul Maltzer
Environmental Review Officer
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1660 Mission Street, Suite 500
San Francisco, CA 94103-2414

Mr. Jose Campos
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Dear Mssrs. Maltzer and Campos:

With this letter, Muni is submitting comments on the Draft EIS/EIR for the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project. We are pleased to see this project moving forward, as it is a very important project for the future of transportation in San Francisco and for the entire Bay Area. This project is critical as a major regional linkage, and will improve transit services for a wide variety of riders. Muni will be happy to work closely with the project designers as this project moves forward, and we look forward to playing an integral role in the city's efforts to implement this project.

Muni has participated for several years in the planning of the proposed new Transbay Terminal, including in the Metropolitan Transportation Commission planning efforts and in charettes led by Simon Martin Winkelstein and Morris (SMWM), as a consultant to MTC. We also interacted extensively with John Eddy at Arup during the MTC planning effort, and developed concepts that should be brought into this EIR/EIS process.

Muni has reviewed the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Draft EIS/EIR, and we have the following comments:

General Comments:

Muni, with 750,000 rides per weekday, is the largest transit operator in the Bay Area and seventh largest in the U.S. Muni's two largest transit corridors are Market and Mission Streets, both of which feed into Transbay Terminal. Muni currently serves the Transbay Terminal with a number of motor coach (MC) and trolley coach (TC) routes, and Muni is by far the highest volume carrier at street level at this facility, both in terms of riders and in terms of number of vehicles.

Muni is concerned that the Transbay Terminal EIS/EIR does not fully address Muni's current and future needs for Muni service to the Transbay Terminal, including serving current riders, a future Geary light rail line, new customers arriving on Caltrain and other heavy rail services, and new residents and employees in the Transbay Terminal Redevelopment Area. We are concerned that the space allocated to Muni in this document is the minimum level needed for current operations, and does not allow for any of the capacity expansions to our service that can reasonably be foreseen. One good example of this is that, although Muni's surface light rail tracks were recently removed from in front of the existing Transbay Terminal, Muni needs the flexibility to be able to serve the new Transbay Terminal with historic streetcar

lines in the future, such as the F and/or E-lines. Muni would like to discuss these issues with you in more detail and to work closely with you to make sure that Muni's needs are met.

Our other main concern is that Muni has done a significant amount of work on a future Geary light rail subway connecting to Transbay Terminal, which is not referenced in this document. Muni worked with the consultants and staff on the January 2001 MTC study to ensure that provisions for future Geary light rail subway would be included in the new facility, including protection of right–of-way, provision for terminal space in the facility, and other aspects needed to integrate a future Geary LRT line into the facility. We recommend that the work done for the 2001 MTC study be reviewed in this light, and appropriate modifications be made to this document to reflect that work, so that the concepts developed at that time can be developed and expanded in the CER and PE phases of the Transbay Terminal project. Our primary concern is that subway access under Folsom (or Howard) be maintained for the Geary LRT branch off of the Central Subway between Third Street and the Transbay Terminal, and that terminal space for the line be reserved. We want to ensure that neither the Caltrain extension nor the Geary LRT subway project proceed with design assumptions that would preclude the other project from proceeding, particularly at locations where the alignments meet and/or cross. Again, we would be happy to meet to discuss the Geary LRT project in greater detail.

Specific Comments:

Page 1-28 – Table 1.2-4:

The SF Parking & Traffic Commission and SF Public Transportation Commission were merged into the SF Municipal Transportation Agency (MTA), effective July 2001. MTA approval is required for municipal public transit route realignments, surface street changes, traffic operation changes, traffic control measures, and on-street parking changes.

Pages 1-26 and 2-4 to 2-5, and Table 2.1-1:

- The elevated Central Freeway, US 101, connects I-80 with Fell and Oak Streets. This will be rebuilt and retrofitted only south of Market Street. The portion north of Market Street will be torn down and replaced by the new Octavia Blvd.
- The Third St. LRT Project Initial Operating Segment (IOS) is expected to be open for full service in 2005; an early partial opening may occur in late 2004.
- The Central Subway is expected to be in service in 2012, not 2009.
- The Ferry Bus Terminal was a "relocation" project in anticipation of hotel construction, not an "expansion", and was completed in Fall 2001.
- Muni's F-Line Historic streetcar service opened for service from Castro/Market Streets along the Embarcadero to Fisherman's Wharf in March 2000, and currently carries approximately 20,000 riders per day. Muni's E-Line station improvements on the Embarcadero and King Streets for historic streetcar service between Fisherman's Wharf and 4th/King Streets will be under construction in 2003.

Chapter 2 – Description of the Project Alternatives

This section should include descriptions of the future Geary light rail subway and its interface with the Transbay Terminal and the Caltrain alignment. There should be a new section that describes the route that the subway would take from a junction with the Central Subway at Third & Folsom (existing design concept), or possibly from Third & Howard, then under Folsom or Howard to Transbay Terminal. This section should describe how the subway would be related to the Caltrain underground alignment and any other underground features and how the station would be integrated into the Transbay Terminal. Muni's proposal for all of these features was presented to the MTC project team in 2000. Attachment A is a map from the Executive Summary of the project report that indicates two conceptual alignments for the Transbay Terminal branch off of the Central Subway. Although the alignments shown do not reflect our

precise preferred alignment, they do indicate that this issue was known at the time the report was issued in January 2001. Attachment B is more detailed information on the Geary project, from the April 1995 Geary Corridor System Planning Study.

Page 2-4 – Section 2.1.2 Muni Facilities and Related Bus Service

The Third St. LRT Project Initial Operating Segment (IOS) is expected to be in full revenue service in 2005. The Central Subway is expected to be in service in 2012, not 2015.

Page 2-4 – Section 2.1.5 Roadway and Street Improvements

The elevated Central Freeway will no longer connect with Oak and Fell Streets. It will be removed north of Market Street and replaced with the new Octavia Boulevard. The reference to a new King Street access roadway at Fifth Street into Mission Bay should be clarified, as to whether or not this roadway extends only south of King Street across Mission Creek, or whether it is intended to cross the Caltrain alignment.

Page 2-6 - Section 2.2 Project Components

Include a description of the future Geary LRT line as an additional component of the project.

Page 2-7 – Section 2.2.1 Transbay Terminal Alternatives

Include a description of the future Geary LRT line as an additional component of the project.

Page 2-8 – Figure 2.2-1 - Transbay Terminal West Ramp Alternative Map

The location of the future Geary LRT line should be indicated on this map.

Page 2-9 – Section 2.2.1.1 - Transbay Terminal West Ramp Alternative

In the discussion on the floor plan, note that space for a Geary LRT subway station would need to be accommodated in the design.

Page 2-10 - Figure 2.2-2: Muni & Golden Gate Transit Street-Level Facilities

The area designated for Muni and Golden Gate Transit to share street-level facilities in the blocks between Fremont and Beale and between Mission and Howard is the minimum space necessary to accommodate current operations, and does not allow for growth and expansion in the future. While the size and capacity of the overall area may initially be adequate, the number of lanes for Muni, the island configuration and the storage areas need to be able to accommodate future capacity expansion and provide flexibility for growth in the future. Muni needs at least five (5) separate lanes inbound (not four, as shown in Figure 2.2-2), with three (3) boarding islands, which can be shorter than the islands shown. Also, Muni needs layover areas. These needs were identified and communicated in meetings regarding Muni and the Transbay Terminal in the period 1999-2001. The following information was communicated to MTC planners in memos and meetings (including 3/24/00), and summarizes Muni's needs for street-level facilities:

TRANSBAY TERMINAL PLANNING: MUNI OPERATING REQUIREMENTS

Alternative 2: Muni in new street between Fremont-Beale/ Mission-Howard:

- Accommodate current Muni lines: 5, 6, 38, 38L, and possibly two other lines (e.g., 2, 3);
- Have the capability to bring in Muni historic streetcar rail lines (E and/or F);
- Provide space for bus stops and layover areas;
- Provide space on Mission Street for Muni lines: 14, 14L (14L terminates in Transbay Terminal street-level facility on Saturdays);
- Provide space on First & Fremont Streets for bus stops for Muni's 10-lines;
- Provide space inside Transbay Terminal upstairs for Muni 108-Line, and provide access to on-street terminals from freeway ramps if terminal is not open 24 hours a day, 7 days a week;
- Provide for future flexibility and growth;
- Also accommodate at least two other Muni Lines: 1 & 41, in Muni terminal area or on Beale St.; and
- Difficult to achieve MUNI needs if area is shared with Golden Gate Transit.

Minimum Requirements for Muni:

➢ The Transbay Terminal should provide convenient and safe transfer activity between Muni and the other primary terminal operator; AC Transit.

➢ The approach to the Transbay Terminal and exit from the terminal by motor coaches and trolley coaches should be at least as safe and efficient as the present condition. Traffic patterns in and around the terminal must efficiently accommodate at least the current level of activity, and should provide for capacity expansion.

➢ The terminal should accommodate at least the minimum number of vehicles on the lines shown below. The type and size of the vehicle, the number of coaches on each line that will need to lay over at any one time at the terminal, and the number of trips per hour at the peak are shown following the line designation *(note: Muni lines, vehicle sizes and numbers of coaches may change over time)*:

- 38-Geary, Motor Coach (MC), 60' (3 coaches at a time, 20 trips per hour);
- 38-Geary Limited, MC 60' (2 coaches at a time, 16 trips per hour);
- 5-Fulton, Trolley Coach (TC), 40' (2 coaches, 13 trips/hr);
- 6-Parnassus, TC 40' (2 coaches, 11 trips/hr);
- 2-Sutter, MC 40' (1 coach, 8 trips/hr), may be converted to TC in the future;
- Provide space on First & Fremont Streets for bus stops for Muni's 10-line;
- Provide space inside Transbay Terminal upstairs for Muni's 108-Line, and provide access to on-street terminals from freeway ramps if terminal is not open 24 hours a day, 7 days a week;
- 1-California, 40' or 60' TC (2 coaches, 12 trips/hr) – either inside street-level facility at Fremont & Beale, or on the street on Beale; and
- 41-Union 40' TC (2 coaches, 10 trips/hr) – either inside street-level facility at Fremont & Beale, or on the street on Beale.

➢ Each line needs an independent storage lane that can accommodate the number of coaches needing to lay over at any one time.

➢ At least two 6" high boarding islands, at least 40' by 8' each for each lane.

➢ Safe areas to exit passengers, which includes an 8'x 6' area to deploy wheelchair lifts.

➢ An area to park a supervisor's automobile and a revenue or maintenance truck.

- Muni operator restrooms (separate restrooms for men and women).
- A space in the terminal with direct access to the Bay Bridge to accommodate the layover and passenger loading for Muni's 108-line Treasure Island service (assume 1 bus every 20 minutes). Also, when the terminal is closed (e.g., in the middle of the night) and the 108-Line is still running to Treasure Island, provide a location for the 108-line to load and for a convenient route from the street-level facility at the terminal to the Bay Bridge.
- A covered area or shelter for waiting passengers in close proximity to passenger boarding areas. Assume up to 40 passengers at any one time.
- The Muni loading and layover areas should be flat, with the loading areas easily accessible for disabled passengers.
- The Muni areas should accommodate expansion of up to 2 additional lines, or 4 buses at any one time and 24 per hour.

Page 2-15 – Figure 2.2-6 - Transbay Terminal Off-Site Bus Storage Ramp Link

This drawing contains a faint dashed line that is labeled "Possible Future Light Rail Connection", but the line is shown to come from the east, apparently from the Bay Bridge. Clarify what this line is intended to represent.

Page 2-16 – Section 2.2.1.2 - Transbay Terminal Loop Ramp Alternative

In the discussion on the floor plan, note that space for a Geary LRT subway station would need to be accommodated in the design.

Page 2-17 – Figure 2.2-7 - Transbay Terminal Loop Ramp Alternative Map

The location of the future Geary LRT line should be indicated on this map.

Page 2-18 – Section 2.2.1.3 - Transbay Terminal Construction

This section should include a description of how provisions for the Geary LRT subway would be made in advance of the actual construction of the subway. It is likely that the new Transbay Terminal would be built before the Geary subway, so it would be important to ensure that an appropriate "box" be built at the time the terminal is constructed to reserve space for the subway and station.

Page 2-19, Figure 2.2-8: Layout of Temporary Bus Terminal:

The Temporary Bus Terminal will need to include provisions for trolley wire on the streets adjacent to the Temporary Bus Terminal, not just in it. This would also include a new boarding island on Beale Street near Howard for the 1-California trolley coach line. These, along with other Muni issues, were discussed with MTC consultants in 1999-2001:

The following is a summary of how bus lines will be routed during the operation of the Temporary Transbay Terminal facility (2003-2006?) at Howard/Beale/Folsom/Main. This is subject to revisions as the design develops, and we will need to work with the project engineers to ensure that appropriate routings are available to us:

Trolley Bus Routes:

- **5-Fulton/ 6-Parnassus**: Continue inbound (IB) on eastbound (EB) Market to Beale, southbound (SB) Beale, left to EB Howard, right into terminal loop at Main (SB contra-flow lane), drop-off passengers at terminal drop-off just south of Howard, continue around loop to layover on westbound (WB) Folsom between Main and Beale (5-line uses first position, 6-line second position). Resume outbound trip with right onto northbound (NB) Beale contra-flow lane, pick-up passengers on Beale south of Howard, left onto WB Howard (protected signal phase), right onto northbound (NB) Fremont, resume existing outbound (OB) route.

- **1-California** - Existing IB route on SB Beale to switch mid-block between Mission and Howard, switch onto left-side curb diamond lane, drop passengers and layover at new boarding island on Beale, NS Howard. Pick-up passengers at island and resume OB trip by making a left onto EB Howard, left onto NB Main, continue on current OB route.

- **41-Union** – Existing IB route on SB Beale, left onto EB Howard, left onto NB Main. Drop off passengers and layover at existing layover location on East Side of Main FS Howard. Pick-up passengers and leave layover, resume existing routing on NB Main.

- **Turnbacks** – ensure that the following turnbacks for trolley coaches would be available:
  - Turnback 14-Mission coaches from IB to OB via right on SB Beale from EB Mission, right on Howard, right on NB Fremont, left on WB Mission.
  - Route 14-Mission coaches into terminal via right on SB Beale from EB Mission, left on Howard, right into terminal, around terminal loop to left on WB Howard, right on NB Fremont, left on WB Mission.
  - Pull-ins on 1, 5, 6, and 41-lines that will by-pass the terminal - use right-hand mid-block switch on SB Beale between Mission and Howard, drop-off passengers NS Howard, right onto WB Howard, normal route back to Presidio or Potrero divisions.

Motor Coach Routes

- **38/38L/2** – Continue IB route on EB Market to Beale. Right on SB Beale to Howard, left on EB Howard, drop-off passengers on the south side of Howard between Beale and Main, right onto main (contra-flow lane), layover at curbside at curb lane on SB Main St. (contra-flow lane). Resume outbound trip with right onto NB Beale, left onto WB Howard (protected phase), right onto NB Fremont, resume existing OB routing onto WB Market.

Muni has also developed some cost estimates for Muni operating and capital costs associated with the Transbay Temporary Bus Terminal, which were provided to MTC. Attachment C is a copy of the letter provided to MTC in March 2001 detailing both the capital and operating costs summarized below:

Operating Costs: Muni estimated the additional annual operating and maintenance costs associated with the Temporary Transbay Terminal at just under $1 million in FY 2000 dollars. These costs are for added service on the 2, 5, 6, and 38/38L lines. Muni does not currently have funding in the operating budget for these increased costs, and a Transbay Terminal project-funding source will need to be identified to provide funds for Muni's operating budget while the Temporary Transbay Terminal is in operation.

Capital Costs: Muni estimated the total capital cost for the Temporary Transbay Terminal at $5.7 million. This cost includes new trolley overhead, strain poles, and special work. It also includes the provision of a temporary street supervisor's office at the temporary bus facility and a temporary operator restroom for the 1-California trolley coach line at its terminal on Beale Street. The existing 1-line restroom on Howard Street will need to be removed when the Temporary Transbay Terminal facility is constructed. The terminal should also provide space for street supervisors and maintenance personnel to park their trucks. Muni does not currently have capital funding planned, programmed, or awarded for these costs, and a Transbay Terminal Project

funding source will need to be identified to provide funds for Muni's capital costs for the Temporary Transbay Terminal.

Page 2-28 and 2-29 – Figure 2.2-15 and 2.2-16 – Plan & Profile Drawings

The location of the future Geary LRT line should be indicated on these drawings.

Page 2-32 and 2-33 – Figure 2.2-19 and 2.2-20 – Plan & Profile Drawings

The location of the future Geary LRT line should be indicated on these drawings.

Pages 3-2, Figure 3-1 Transit Network in the Project Area; and 3-12, Figure 3.1-2 Muni Service at the Transbay Terminal

- Muni service in the Project Area is not adequately represented on this map, particularly the service that currently serves the Transbay Terminal from First Street, as well as the service that continues south on First to Howard (the 10-line), and goes north on Fremont from Folsom (the 10-line). While this service is correctly depicted in Figure 3.1-2, it should also be shown in Figure 3.1.
- The station depicted at 4th and King Streets in the middle of King Street is the Muni Metro station named "4th & King/Caltrain" station, not the Caltrain Station.
- The map in Figure 3.1, as well as others in the EIS/EIR, has a significant highway omission in the base map. It fails to show the touchdown ramps from I-280 to/from King Street in the vicinity of Fifth Street. The primary access to and from I-280 is now via King Street.

Section 3.1.5 – Future Rail Transit and Bus Service – Pages 3-26 through 3-28

This section should include a major Geary rail or bus project as a possible future transit project in the study area. Muni performed a Geary Corridor Planning study in 1994 and 1995, and we have attached excerpts from the Final Report showing the project recommendations and alternatives for terminal configurations (Attachment B). The Geary study recommended moving forward to a Major Investment Study (MIS) and EIS/EIR with three alternatives:

- Light Rail, all-surface configuration (to Transbay Terminal on a street alignment basically the same as discussed for the E and F-lines in these comments).
- Light Rail, surface configuration west of Laguna, subway east of Laguna
- Trolley Coach, surface configuration west of Laguna, subway east of Laguna

The Geary alternatives with subway configurations contained several proposed downtown routings for the subway. The most likely alternative is for the Geary line to use the Central Subway in the downtown area through the Union Square area and then into South-of-Market, with a branch off of the Central Subway at 3rd Street & Folsom (or Howard) for the Geary line, proceeding easterly under Folsom (or Howard) Street to Beale, directly behind the Transbay Terminal. One of the alternatives also included the Central Subway branch coming to the surface on either Folsom or Howard.

At the time the study was performed, Muni's governing board, the Public Transportation Commission (PTC), accepted the report and elected not to move forward to an MIS and EIS/EIR until a viable financial plan could be developed. The PTC also elected not to select a preferred mode and alignment.

A Geary project is one of the four corridors listed in the San Francisco County Transportation Authority's "Four Corridor Plan", and is also included in Muni's recent publication "A Vision for Rapid Transit in San

Francisco", and has been included in Muni's Short Range Transit Plan. Given the proximity to the Transbay Terminal, it should be mentioned in this section.

In 2002, as part of the Muni publication "A Vision for Rapid Transit in San Francisco", MUNI developed a service plan for a Bus Rapid Transit (BRT) Service on Geary, which would significantly reconfigure and speed service on the Geary corridor, from Transbay Terminal to Ocean Beach. This change would increase ridership on the corridor by approximately 5,000 people a day, and would include increased service from the Transbay Terminal. The Geary BRT corridor will be included in an amendment to Muni's SRTP/CIP, and would be operational before any new rail service in the corridor.

This section should also include a discussion of potential future high-speed rail (HSR) service to the Transbay Terminal, including projections of the number of riders expected to use the terminal. HSR could add significant numbers of users to the terminal, and should be considered. In addition, this EIS/EIR should be reviewed with California High Speed Rail staff, if this has not already been done.

Page 3-27 - Section 3.1.5.3 and 3.1.5.4 – Muni Third Street Light Rail and Muni Central Subway

Muni's Third Street Light Rail project has two phases. Phase 1 is the Initial Operating Segment (IOS), and is referenced in Section 3.1.5.3. Phase 2 is the New Central Subway (NCS), and is referenced in Section 3.1.5.4. These two sections should be combined into one section labeled "Third Street Light Rail Project", with discussion of the two phases as two phases of the same project. Also, it is important to note that the New Central Subway alignment in the South of Market area under Third Street will be built complete with the junction connections for the Geary subway branch to Transbay Terminal.

Section 5.19.3.2:

It is not a correct assumption that both the 30-Stockton and 45-Union would be rerouted along Mission Street after the Caltrain extension is in place. One of those lines will still continue to serve 4th and 3rd Streets between Market and Townsend, and will be extended into Mission Bay. The other line will likely be terminated in the vicinity of Yerba Buena Center. It is questionable, however, if the Caltrain Extension would be the triggering event to truncate one of these lines in the Yerba Buena area. It is more likely that the construction of Phase 2 (New Central Subway) of the 3rd Street LRT line would be the event that would cause Muni to truncate one of these lines.

Figure 6.6-1, Capital Financial Plan:

It may be unrealistic to assume that value engineering will reduce the cost of the Transbay Terminal Project by as much as $170 million, particularly in light of the inevitable pressure to add more to the project scope during the outreach process to affected communities and neighborhoods, and as required mitigation for construction phasing, etc. Muni has always found that project scopes tend to grow, rather than shrink, as more participants join the planning and implementation process. This is true in major rail corridors and facilities projects, such as the Third Street LRT Project, K-Line/Ocean Avenue Project, L-Line Project, to name a few. However, a value-engineering process would be useful to identify items that are proportionally high in cost relative to their benefits, perhaps resulting in some savings. In any case an ample contingency should also be included as part of the project budget.

Section 6.6 – Funding Sources

Many of the funding sources listed in the funding plan are sources that provide funds to Muni or could provide funds to Muni, such as existing Bridge Toll funds, Bridge Toll third dollar increase, and Prop 42 funds. It is difficult to gauge from the information given if providing any of these funds to Transbay Terminal would mean that Muni would receive less funding. It would also be useful to know what funds

would be used to guarantee the TIFIA loans. If any of these funds are funds that Muni could expect to receive, using them as a guarantee could affect Muni's access to the funds. It would be good to have more explanation of these issues in this section.

If you have any questions, please contact Kerstin Magary, Senior Project Manager, at (415) 554-1789, fax: (415) 554-3453.

Sincerely,



José Cisneros
Deputy General Manager for Capital Planning & External Affairs

ATTACHMENTS

cc: Michael Burns, Muni
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Peter Straus, Muni
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Sue Olive, Muni
Duncan Watry, Muni
Jim Lowé, Muni
Amy Brown, Deputy City Attorney
Maria Ayerdi, Mayor's Office

File: Transbay Terminal

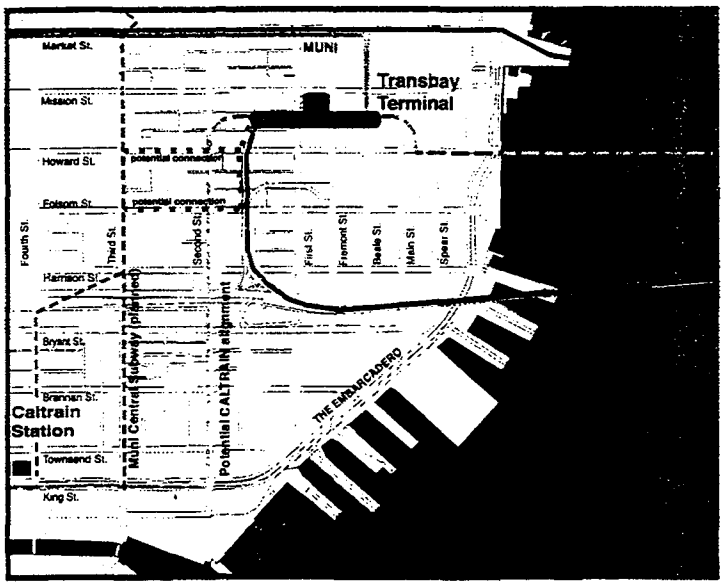
 Attachment A



Favoring transit in a regional framework

improved connections among public transit services.

Located in downtown San Francisco, the new Transbay Terminal will be the indispensable component of a strategy to solve these problems by providing efficiently linked and greatly expanded bus and rail capacity, more convenient access to transit, and a new celebratory building that is delightful and easy to use—an appropriate new gateway to and from San Francisco. Simultaneously, the terminal will serve as the link between trains using the Caltrain Peninsula lines and trains serving the East Bay, making possible, for the first time, direct rail trips between San Francisco and the great interior of the state. After two years of work by the thirty-member Transbay Panel, under the leadership of MTC, the City of San Francisco, AC Transit, Caltrans and Caltrain, an informed, transit-based, site-appropriate decision has been made with the multi-agency constituent support required to inspire and sustain action. Building upon this resolve, the lead consultants to the Transbay Panel, SMWM, Richard Rogers Partnership, and Ove Arup & Partners have developed an exciting concept that realizes the Panel's vision for a remarkable new regional transportation hub, a building designed to encourage and accommodate new transit ridership, and a memorable public structure that celebrates the energy of arrival in a great American city.



A MULTI-MODAL TERMINAL FOR THE BEYOND

As a truly regional facility, the new Transbay to modern ways of working and lifestyles th Area to become a unified economic and cult ing the various modes of municipal, regiona transportation, the new terminal will bring t ciency to public transit throughout the regic izes the free exchange of ideas and informat

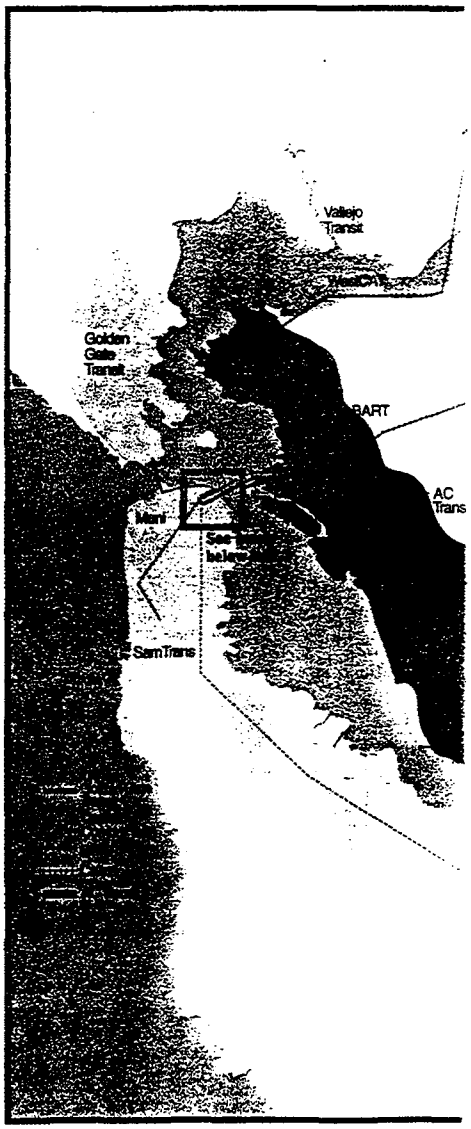


Fig. 1 **Regional commuter transit network** with future connections shown in inset to left.

Attachment B

GEARY CORRIDOR

SYSTEM PLANNING STUDY

FINAL REPORT

PREPARED FOR

SAN FRANCISCO MUNICIPAL RAILWAY

BY **MERRILL & ASSOCIATES**

In Association With

Parsons Brinckerhoff Quade & Douglas
Kiyomura-Ishimoto Associates
Finger & Moy
Manna Consultants
Nelson/Nygaard Associates
Pittman & Hames Associates

APRIL 1995

IV. CONCLUSIONS AND RECOMMENDATIONS

Based upon the results of the Geary Corridor System Planning Study as summarized in Section III above, and as an outgrowth of the ongoing Citywide Fixed Guideway Plan, we have the following conclusions and recommendations:

A. Need for Major Improvement of Geary Corridor Public Transit System. Because of:

- the very high public use of Geary Corridor buses despite the loss of time, reliability and comfort caused by their having to travel in mixed flow traffic lanes;

- the likelihood that the traffic and other adverse conditions which already make Geary Corridor bus travel a relatively frustrating and uncomfortable experience will worsen with time as the San Francisco Bay Region grows; and

- the preference of most of the people attending the 10 public meetings for a major investment which would result in a significant improvement in the reliability and general quality of Geary Corridor transit services

Recommendation No. 1: that subject to the availability of funds, the City move ahead with a major capital investment to improve the Geary Corridor public transit service and that this improvement include significant reduction in public transit trip times as well as significant improvement in public transit reliability and patron comfort.

B. Advancement into the Next Stage. As an outgrowth of comments received during the Public Participation Program, and based upon intensive screening by representatives of the San Francisco Transportation Authority, the City Departments of Parking and Traffic and City Planning, and MUNI as well as by representatives of the Bay Area Rapid Transit District and the Consultant team, the seven options described above were reduced in number and combined into the following four alternatives:

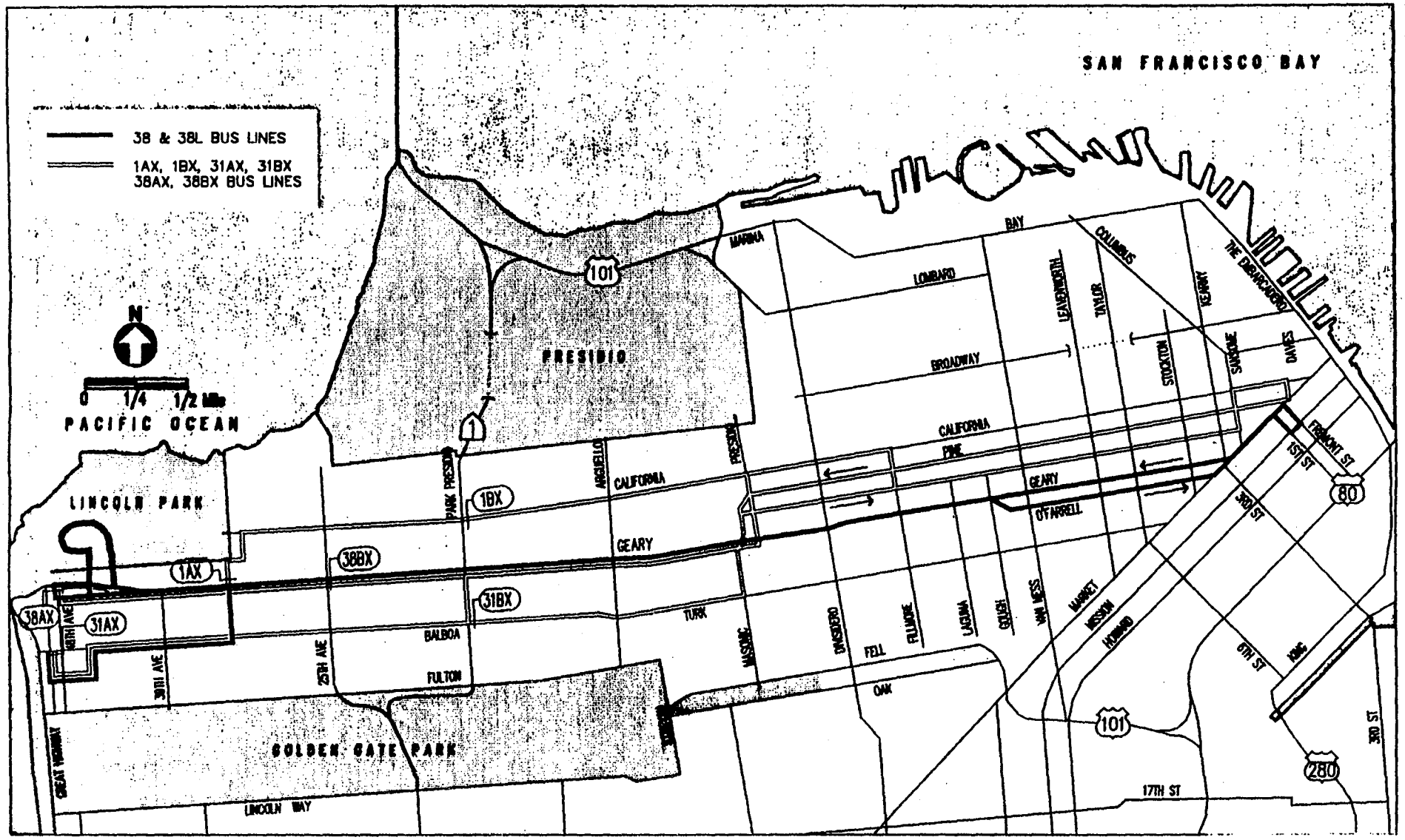


Figure 12A

MUNI GEARY TRANSIT STUDY

Alternative 2 - Partial Subway Light Rail
(Three Downtown Terminal Options)

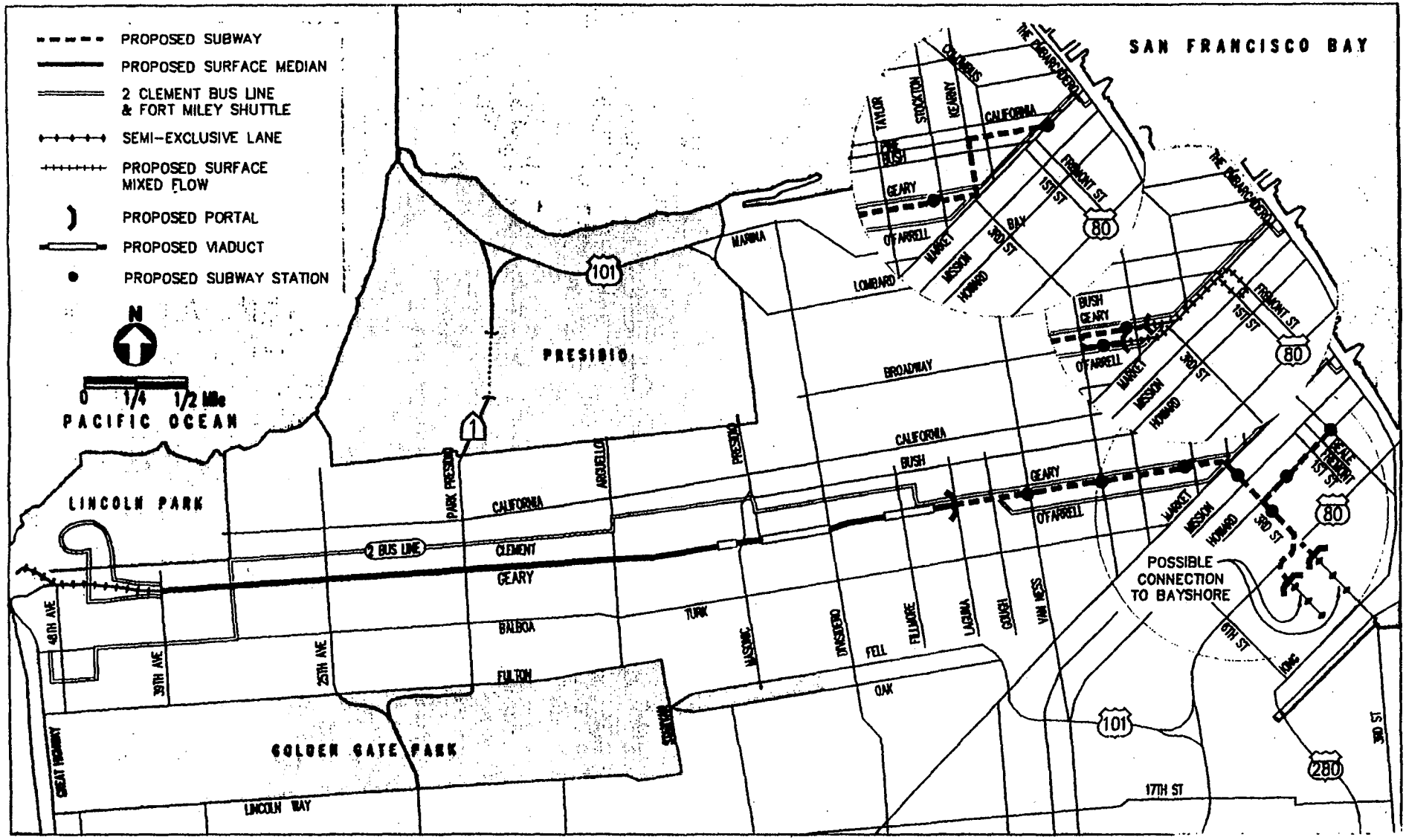


Figure 12B

Alternative 4 - All Surface Light Rail
(Transit Mall between Mason & Kearny)

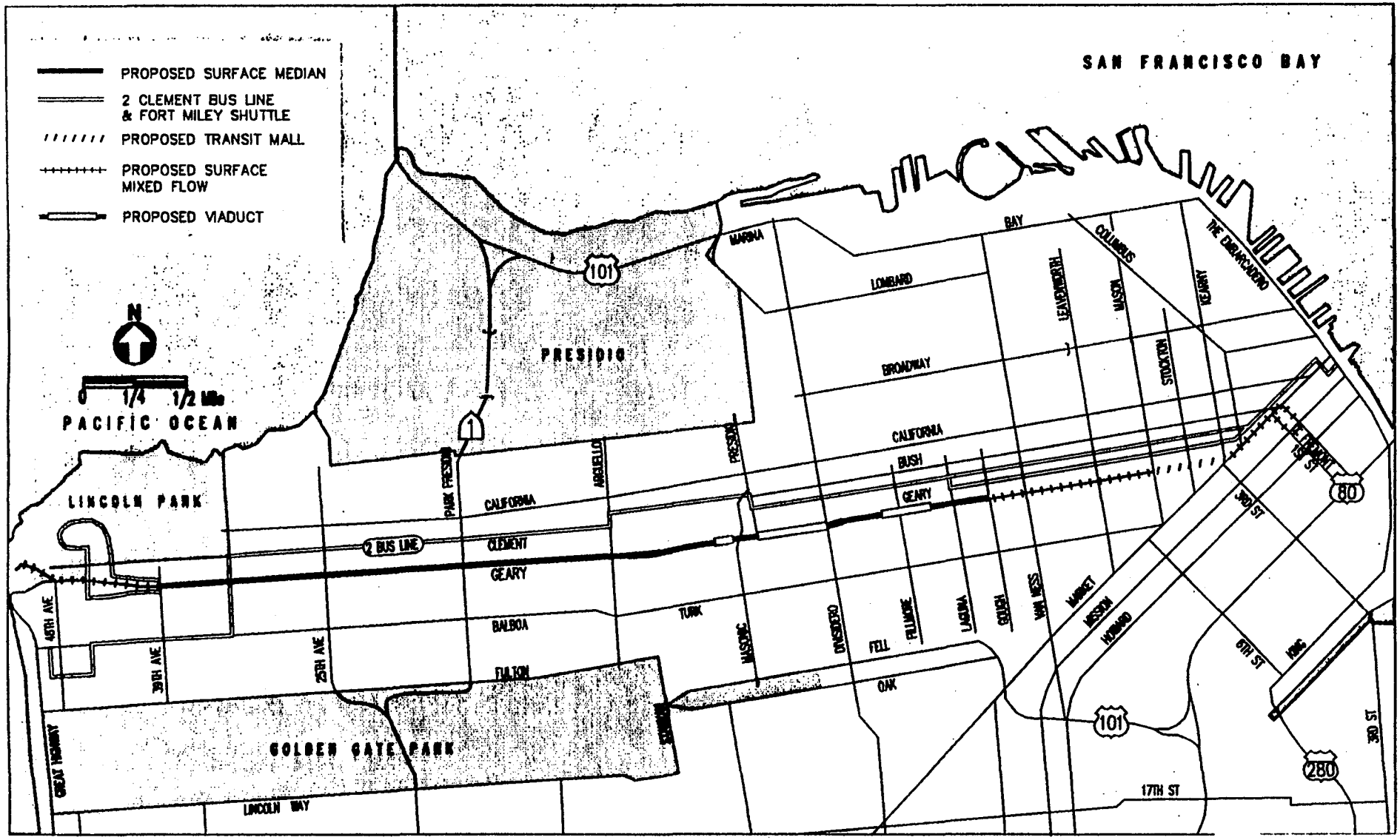
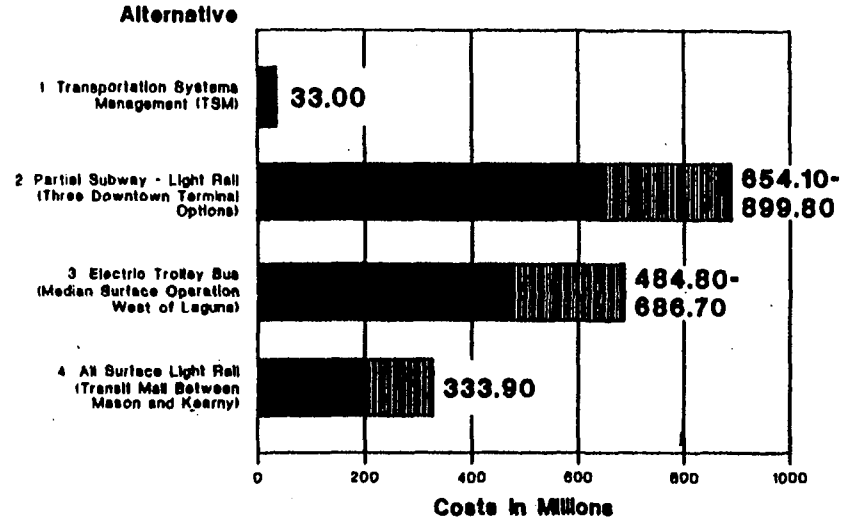


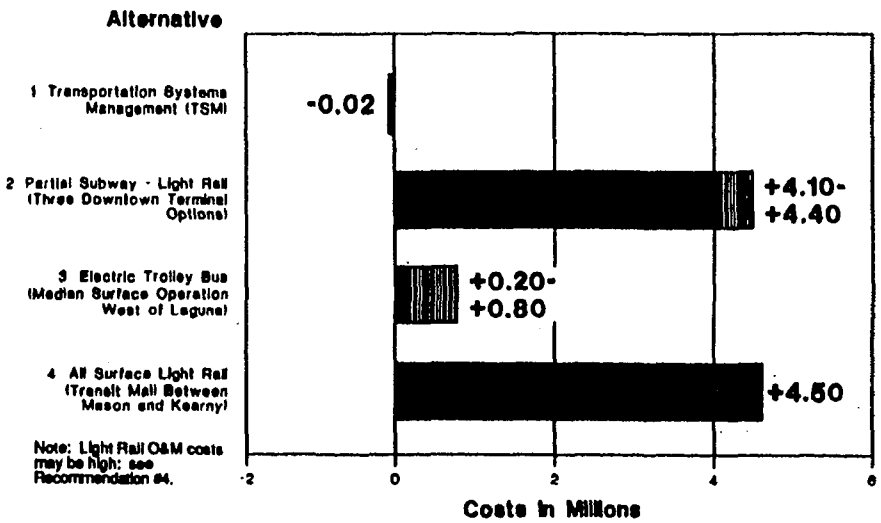
Figure 12D

MUNI GEARY TRANSIT STUDY

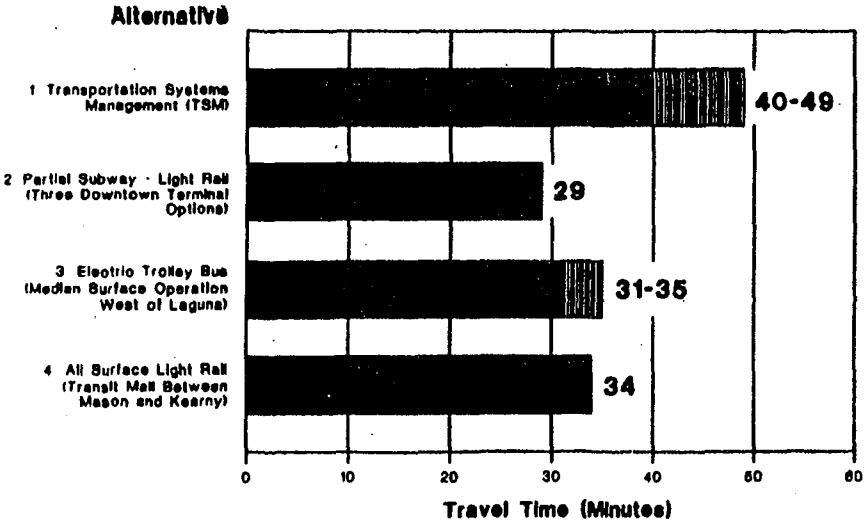
Comparison of Capital Costs



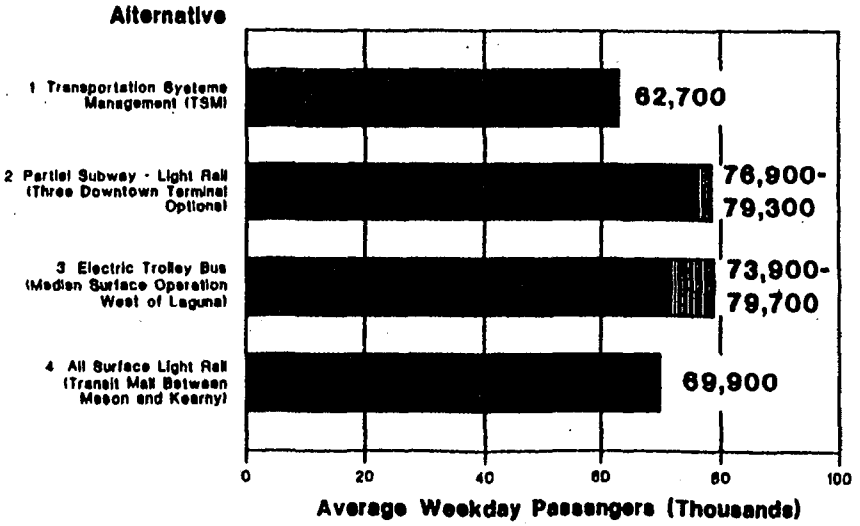
Comparison of Operating Costs



Comparison of Travel Times to Sansome and Market



Comparison of Daily Ridership - Year 2010



MUNI GEARY TRANSIT STUDY

Figure 13

Comparison of Recommended Geary Transit Study Alternatives

Characteristics	Existing (1995)	1 (TSM) (2010)	2 (2010)	3 (2010)	4 (2010)
MODE	Diesel Bus	Diesel Bus	Light Rail	Trolley Bus	Light Rail
Subway Segment	None	None	From Laguna to 3 downtown terminal options	From Laguna or Taylor to Howard/Second	None
Median Operations	No	No	Yes	Yes	Yes
One-Way Route Miles	6.7 38L 6.7 38	6.7 38L 6.7 38	6.4 to 6.6	6.4	6.4
One-Way Travel Time to Sansome/Market (minutes)	40.0 38L 49.0 38	39.5 38L 47.2 38	28.6 to 29.1	30.6 to 34.7	34.3
Headways (minutes)*					
Peak	3.16	2.91	5.82 to 6.00	2.29 to 2.47	6.60
Base	3.60	3.31	6.63 to 6.83	2.61 to 2.81	7.52
Equipment Demand (Peak)	25 38L 24 38	24 38L 23 38	32 to 36	43 to 46	38
Total Capital Cost (millions)***	N/A	$33.0	$654.1 to $899.8	$484.8 to $686.7	$333.9
Change in Net Annual Operating & Maintenance Cost (millions)****	N/A	-$.02	+$4.10 to +$4.40	+$0.20 to +$0.80	+$4.50
Patronage: Daily Boardings on Geary	57,700	62,700	76,900 to 79,300	73,900 to 79,700	69,900

*Combined 38 and 38L services.
**Combined electric trolley bus (ETB) and dual mode (DM) services.
***In 1994 dollars.
****In 1994 dollars, compared to existing.

Table 11

1. Alternative 1 TSM

This alternative consists of two variations; namely the No- Build Alternative and the Transportation Systems Management (TSM) Alternative.

Under a "no-build" alternative, nothing would be done other than to increase the level of existing bus service to keep up with increased patronage. Local policy makers usually want to see what the a no-build condition would cost to help them evaluate the feasibility of the more costly solutions.

Under a TSM alternative as defined in federal guidelines, the existing system would improved through relatively low cost means to render it as efficient and effective as possible. The federal government uses the TSM alternative rather than the no-build alternative as a standard against which to evaluate the feasibility of the more costly "build" alternatives. The federal government wants to see what can be done cheaply before they commit themselves to help pay for more expensive solutions.

There are many gradations of TSM improvement. Virtually anything that can be done to the existing bus service that would speed it up, make it more reliable or safer or more comfortable or easier to understand and use would qualify as a TSM improvement.

TSM improvements affecting the Geary bus lines could include any or all of the following:

- Pre-emption of Traffic Signals: would give transit vehicles priority over other vehicles at crossing points; (opportunities to improve service limited due to heavy cross traffic on many north/south streets).

- Proof-of-Payment System: would feature ticket- dispensing machines on loading islands or nearby sidewalks; would eliminate need for patrons entering Geary buses to pass by operator to pay a fare or show a transfer; would utilize roving inspectors to cite individuals caught without proper proof-of-payment. A proof-of-payment system would offer the significant advantage of speeding up loading by enabling patrons to enter the vehicle by any door at any time.

- Computer-Controlled Traffic Signal System: would have the capability of altering the general traffic signaling system as appropriate to react to predetermined bus priority criteria and varying traffic conditions.

- Gradual replacement of vehicles with low floor vehicles; would speed up loading.

The TSM, as defined for the purposes of this study, involved only the pre-empting of certain traffic signals. As indicated in Figure 13, and in more detail in Table 5A, the TSM Alternative is estimated to cost $33.0 million in 1994 dollars,

primarily to cover the cost of the additional buses needed to carry the additional patronage anticipated because of demographic changes.

2. Alternative 2 Subway Surface Light Rail (with three east end routing options; namely Geary Alternatives 2A and 2B, and an alternative developed as part of the Citywide Fixed Guideway Study featuring a terminal at the foot of Pine or Bush Street).

As described in Section II H, this alternative, under any of the three east end options, features light rail vehicles running in mixed flow traffic from the west end of Geary to 39th Avenue, then in a surface median to Laguna, then in subway to Taylor. From Taylor, the options vary. Options 1 and 2 are Geary Corridor alternatives 2A and 2B. They are described in Section II H and shown in Figure 12B. Option 3 is the Citywide Fixed Guideway Study option. It is also shown in Figure 12B.

> Option 1 (Geary Corridor Alternative 2A) would route light rail vehicles on the surface of Market Street. In terms of routing, this option is regarded as doing the best job of taking people where they want to go (given that the employment centroid of downtown San Francisco is located at the intersection of Market and Sansome Streets).
>
> To ensure that rail vehicles could travel expeditiously along the surface of Market Street, it would be necessary to take certain steps to limit the access of private automobiles to lower Market Street (such as preventing southbound Stockton Street automobiles from turning left onto Market).
>
> Option 2 (Geary Corridor Alternative 2B) would route light rail vehicles under Third and Howard to a subway terminal station at Howard and Beale. Under this option, Geary Corridor travelers wishing to reach lower Market Street destinations would have a choice of transferring to a Market Street bus, or walking (partly on mezzanine level moving sidewalks) from Third Street to the Montgomery MUNI/Metro Station, or walking back to Market Street from Howard Street. This option would improve service to the south of Market area.
>
> Option 3 (Citywide Fixed Guideway Study Alternative, with terminal at the foot of Pine or Bush Street) would provide direct access from the Geary Line to the Montgomery Street Station and to Financial District destinations.

As indicated in Figure 13, and in more detail in Tables 5B and 5C, the cost of this package is estimated to range in cost from $654.1 million to $899.8 million in 1994 dollars, depending upon which east end option is selected.

3. Alternative 3 Subway Surface Electric Trolley Bus

As described in Section II H, this alternative features electric trolley buses running in mixed flow traffic from the west end of Geary to 37th Avenue, then in

a surface median to either Laguna (under Alternative 3B) or Taylor (under Alternative 3C), then in subway under Geary, Third and Howard to separate eastbound and westbound portals on Howard, then on the surface of Howard to a terminal at or east of Beale Street.

As indicated in Figure 13, and in more detail in Tables 5E and 5F, the cost of this package is estimated to range in cost from $484.8 million to $686.7 million in 1994 dollars, depending upon whether Geary Corridor Alternative 3C or 3B is selected.

As can be seen from Figure 11, the electric bus alternatives are cheaper to operate and maintain than the light rail alternatives. In addition, because of lower utility relocation costs, the absence of track work, shorter and fewer stations, cheaper vehicles, and a shorter tunnel, the electric trolley bus alternatives are substantially less expensive to develop than the equivalent light rail alternatives. However, trolley coach options have received almost no public support.

Electric Trolley Bus Alternative 3C would be substantially less costly to design and construct than Electric Trolley Bus Alternative 3B; however it would require surface running through the congested section of Geary between Gough and Taylor, with heavy cross traffic interference at Franklin, Van Ness, Polk, Larkin and Hyde.

4. Alternative All-Surface Light Rail

As described in Section II H, this alternative features light rail vehicles running in mixed flow traffic from the westerly terminal to 39th Avenue, then in a surface median to Gough, then in traffic to the east end of the line at either the Transbay Terminal or the foot of Market Street. (A variant of Alternative 4 would be to operate using electric trolley buses rather than light rail.)

As indicated in Figure 13, and in more detail in Table 5G, this alternative (assuming light rail operation) is estimated to cost $333.9 million in 1994 dollars, significantly less than any of the subway/surface alternatives.

To ensure that rail vehicles could travel expeditiously along the surface of Market Street, it would be necessary to take certain steps to limit the access of private automobiles to lower Market Street (such as preventing southbound Stockton Street automobiles from turning left onto Market).

One major concern with the all-surface rail alternative is that to provide expeditious and reliable transit service along the surface of Geary between Gough and Market, it will be necessary to make a series of far reaching street changes including shifting the entrance of the Union Square Garage from Geary to Post, diverting cars from Geary at several points (thus changing the Market-to-Gough section of Geary from an arterial to a local street), and converting Post from an eastbound arterial to a westbound arterial. Yet without significant street changes, the quality of rail service along the Market-to-Gough

section would be insufficient to justify the cost of developing a surface light rail alternative.

Recommendation No. 2: that on behalf of meeting the objectives of Recommendation 1, the four packages described above be advanced into the next (Major Investment Study) phase of the federal implementation and funding process.

C. Patronage Forecasting. Projecting public transit patronage in San Francisco has been hampered for many years by the limited applicability of the Metropolitan Transportation Commission's (MTC's) forecasting model to this city.

At various times, various city departments have called for San Francisco either to work with MTC to better adapt the MTC model to San Francisco, or to develop a separate City of San Francisco model.

In any event, an accurate means of forecasting future public transit patronage is badly needed as a tool for evaluating the various public transit fixed guideway systems currently under consideration.

Recommendation No. 3: that a sophisticated patronage forecasting model that can be accurately applied to San Francisco County be developed forthwith.

D. Costing Methodology. Each year MUNI submits a Section 15 Report to the Federal Transportation Administration delineating MUNI's annual operating and maintenance (O&M) costs. MUNI's 1993 costs as set forth in the latest Section 15 Report formed the basis of the Geary Corridor O&M cost estimates. During the course of the Geary study a concern arose over the accuracy of the Section 15 Reports.

Recommendation No. 4: that MUNI conduct an independent analysis of the Section 15 Report and make methodology adjustments as appropriate.

E. The BART Regional Alternative. Pursuant to a resolution adopted by the BART Board of Directors on July 14, 1994, the effect of a regional BART Geary regional line on four of the proposed Geary Corridor MUNI lines was evaluated. The results of this BART-sponsored effort were set forth in a separate report entitled "The BART Regional Alternative: Its Effect on MUNI". Based upon the results of the BART study, it was concluded that:

- constructing a Geary branch of the BART system from Market Street, through the Geary Corridor to approximately Seventh Avenue, where BART would

leave the Geary Corridor, would be insufficient to meet the needs of many Geary Corridor travelers, and therefore would not preclude the need for a separate MUNI fixed guideway system designed to improve Geary Corridor transit services;

- regional rail lines linking Northbay counties to San Mateo County and the Eastbay counties could create significant travel opportunities for public transit users and are therefore deserving of further study; and

- additional data and analysis are needed to fully identify the routing, feasibility, and patronage which could be generated by providing additional regional rail transit services in the Westbay and Northbay Counties.

Recommendation No. 5: that if BART is interested in improving regional transit connections on the north and west sides of San Francisco Bay, that it initiate a more definitive study designed to find the best way of extending its system, or otherwise serving the areas not now adequately served by BART.

Attachment C

SAN FRANCISCO MUNICIPAL RAILWAY
425 MASON STREET, 6th FLOOR, SAN FRANCISCO, CA 94102
(415) 923-2626 FAX (415) 923-2620

MAINTENANCE DIVISION
MUNICIPAL TRANSPORTATION AGENCY
MAR 14 2001
Kerstin F. Magary
RECEIVED

Memorandum

To: Rod Mc Millan

From: Walt Streeter

Date: March 13, 2001 By Fax (510) 817-3299 and US Mail

Re: Estimates for Operating and Capital Costs Associated with Changes to Muni Tracks, Overhead, and Operator Facilities at the Interim Transbay Bus Terminal and the 1-California Terminal on Beale Street

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The purpose of this memo is to provide the Metropolitan Transportation Commission with additional estimates of the Muni operating and capital costs associated with the Interim Transbay Bus Terminal

Operating Costs: We estimate the additional annual operating and maintenance costs associated with the Interim Bus Terminal at just under $1 million in FY 2000 dollars. These costs are for added service on the 2, 5, 6, and 38/38L lines per the attached memo from John Katz.

Capital Costs: We estimate the total capital cost associated with the interim terminal at $5.7 million. This cost includes new trolley overhead, strain poles, and special work. It also includes the provision of a temporary street supervisor's office at the interim bus facility and a temporary operator's restroom for the 1-Calfornia trolley coach line at its terminal on Beale Street. The existing 1-line restroom on Howard Street will need to be removed when the Interim Transbay Bus Facility is constructed. The terminal should also provide space for street supervisors and maintenance personnel to park their trucks.

The capital cost estimate, per the attached memo from Bill Neilson, should replace the previous capital cost estimate. It is a conceptual cost estimate that will be refined when the facilities are further developed.

Thank you for MTC's and the Transbay Terminal consulting firm's help in accommodating Muni operating requirements. Please let us know if you need further information on the cost estimates or Muni operations.

cc: J. Eddy, T. Bruzzone, B. Neilson, K. Magary, J. Katz, S. Olive, W Streeter

CONSTRUCTION DIVISION • PUBLIC TRANSPORTATION DEPARTMENT

1145 Market St., 5th Fl. • San Francisco, CA 94103 • (415) 554-0785 • Fax: (415) 554-3217

TO: Kerstin Magary

FROM: John Katz

DATE: February 7, 2001

RE: **Interim Transbay Terminal - Operating Costs**

Following is an estimate of the increase in MUNI's operating costs to serve the interim Transbay Terminal between Beale / Main/ Folsom/ Howard. The estimate, as calculated below, results in an annual increase in MUNI's operating and maintenance costs of just under $1,000,000 a year in FY 2000 dollars.

In computing the costs the key variable is the additional round trip time required to service the interim terminal compared to the existing facility at First and Mission. The computation of that time was arrived at doing real time drive-through simulations from the common point of both terminal loops, which is inbound at Market and First, outbound at the Fremont and Market boarding island.

Based on these simulations and average traffic conditions (mid-day on a weekday), the additional round-trip time required to go to the interim terminal location was **250 seconds (or 4 minutes, 10 seconds).** For purposes of this calculation the time will be rounded off to 4 minutes. This time calculation assumed no stops between First and Market and the interim terminal, no special traffic pre-emptions at intersections not directly at the new terminal, and the completion of the construction project on First St. between Market and Howard. Also the contra-flow lanes in the interim terminal could not be exactly simulated, but a time was estimated for these movements based on drive-throughs of the same blocks in their current allowed directions (without stoplights).

Further Assumptions

- The effected lines are the 5-Fulton, 6-Parnassus, 2-Clement, 38/38L-Geary
- Trip times for the 1-California and 41-Union will not be effected
- Current schedules and layover times are assumed
- FY 2000 costs are assumed

Methodology

The methodology used in this calculation is based on the total hourly costs to MUNI of operating a vehicle in the effected mode (excluding administrative costs). MUNI's experience is that in the long run this is the most accurate estimate of actual increased or decreased operating costs for route changes. Therefore no attempt was made to calculate the impacts by line on the total number of vehicle runs that would be needed. However, it is fairly clear that additional vehicles will be needed on the 38-Geary and 5-Fulton to maintain current peak headways on those lines.

Calculation

Line	Increase in round trips / yr. x 4min/ 60	= hrs./year	x	mode cost/hr	= cost/yr
38/38L Geary	87, 847 x 4 /60	= 5, 856	x	(60'MC)$88	=$515,328
5-Fulton	5, 904 x 4/ 60	= 2, 393	x	(40'TC) $83	=$198,619
6-Parnassus	1, 245 x 4/ 60	= 2, 083	x	(40'TC) $83	=$172,889
2-Clement	16, 307 x 4/ 60	= 1,087	x	(40'MC) $80	=$ 86,960
		Total annual incremental costs			**= $973,796**

If the interim terminal would be in operation for three years, the total increase in MUNI's operating and maintenance costs would be $2,921,388.

When MUNI's terminal operation moves to the proposed new terminal between Beale and Fremont south-of-Mission a very rough estimate of the increased costs (compared to the existing configuration) would be 35% of this figure, or about $340,828 annually.

cc: Sue Olive
Dan Rosen
Patty DeVlieg
Peter Straus

SAN FRANCISCO MUNICIPAL RAILWAY
CAPITAL IMPROVEMENT PROJECT ESTIMATE

PROJECT NO. _____ **TITLE:** Transbay Terminal Temporary Overhead Contact System

CLIENT LIAISON: Kerstin Magary

SCOPE OF WORK:

Install new trolley wires along Beale Street between Howard Street and Folsom Street, along Folsom Street between Beale Street and Main Street and along Main Street between Howard Street and Folsom Street
Install new strain poles along Beale Street, Folsom Street and Main Street
Install new duct bank along Beale Street and Main Street between Mission Street and Howard Street
Special work at Mission Street and Fremont Street
Special work at Howard Street and Beale Street
Special work at Folsom Street and Beale Street
Special work at Folsom Street and Main Street
Special work at Howard Street and Main Street
Adjustment of existing trolley wires along Mission Street and Market Street
Install / remove temporary street supervisor's office
Install / remove temporary operator's restroom for the No. 1 California

ESTIMATE:

1	Muni Construction Division (MCD) services		
	a) Project Management	3.0% of construction cost = $ 70,000	
	b) Engineering Services	17.0% of construction cost = $ 380,000	
	c) Construction Management	10.0% of construction cost = $ 220,000	
	d) Other direct expenses (Reproduction, Revolving fund)	4% of construction cost = $ 90,000	
		TOTAL MEC	$ 760,000
2	Other Services		
	a) Muni Operations and Maintenance	$ 200,000	
	b) DPW BOA work orders	$ -	
	c) DPT work orders	$ 50,000	
		TOTAL OTHER SERVICES	$ 250,000
3	CONSTRUCTION COST		$ 2,220,000
4	CONTINGENCY	75% of items 1, 2, and 3 =	$ 2,430,000
		TOTAL PROJECT ESTIMATE (2000 Dollars) ...	$ 5,700,000
		SAY ...	$ 5,700,000

APPROVED:

W. Nelson 3/2/01

Muni Construction Management Date

TransbayCIP3
3/2/01

SANTA CLARA
Valley Transportation Authority

RECEIVED
DEC 03 2002
PLANNING DEPT

November 25, 2002

City of San Francisco
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103

Attention: Paul E. Maltzer, Environmental Review Officer

Subject: Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project

Dear Mr. Maltzer:

Santa Clara Valley Transportation Authority (VTA) staff have reviewed the DEIS/DEIR for the Transbay Terminal/Caltrain Downtown Extension/ Redevelopment Project. The project would be located in Downtown San Francisco and has three major components:

- A new, multi-modal Transbay Terminal on the site of the present Transbay Terminal,
- Extension of Caltrain from its current San Francisco terminus at Fourth and Townsend Street to a new underground terminus underneath the proposed new Transbay Terminal
- Establishment of a Redevelopment Area Plan with related development projects, including transit-oriented development on publicly owned land in the vicinity of the new Transbay Terminal.

VTA is one of the three member agencies that provide operating and capital funds for Caltrain service. In this role, we are impacted by actions that result in increased Caltrain costs. Therefore, our first several comments relate to the proposed financing plan for the project or related elements. We have the following comments:

1. The electrification of Caltrain is a prerequisite for the Downtown Extension. Statements made on page 2-3 indicating otherwise, contending that dual mode locomotives could be procured to operate service on the downtown extension in the absence of electrification, at an additional cost of $235 million (in 2002 dollars), raise concern because:
    a. The Caltrain electrification project, which is still under environmental review, does not include dual mode locomotives as an option.
    b. No source of funds is identified for purchasing the dual mode locomotives or any associated increase in operations and maintenance costs. Given current economic conditions it is unlikely that the estimated $235 million increment to purchase these locomotives will be available from Caltrain, its member agencies or the State within the projected project development schedule.

3331 North First Street · San Jose, CA 95134-1906 · Administration 408.321.5555 · Customer Service 408.321.2300

2. Funding and schedule assumptions regarding the electrification of Caltrain (e.g. assuming electrification between San Francisco and Gilroy will be implemented by 2006, assuming that electrification will be funded entirely with local sources) are very optimistic given the current status of the electrification project. A funding plan with committed resources has not yet been developed or endorsed for Caltrain electrification by the three Caltrain Joint Powers Board member agencies, who are each responsible for one third of the project costs. VTA, who has funding for our share of electrification in Measure A of 2000 (the extension of our current sales tax that begins in 2006) has consistently indicated that these funds will definitely not be available prior to 2006 and it is highly unlikely that VTA funds will be available for the project prior to 2016.

3. It appears that the project sponsors assume that the State of California-owned land required for the Transbay Terminal project, worth approximately $300 million, will be provided to the City and County of San Francisco by means of an administrative transfer at no cost to the project sponsors. The final document should address this assumption and the status of the property acquisition.

4. The statement on page 6-6 that Caltrain anticipates operating 120 trains a day is very optimistic, given the current economy in the Bay Area. The current Caltrain service level of 76 weekday trains (a decrease from the 80 weekday trains in the previous year) is not expected to increase significantly between now and the estimated completion of the Transbay Terminal.

5. The financial analysis in Chapter 6, particularly the funding source assumptions in Section 6.6 and as illustrated in Table 6.6-1, shows that the majority of funds needed for the project have not been secured, with most of the funding programs and the associated levels of funds not within the control of the project sponsors. The revenue assumptions are also very optimistic in terms of the amounts of funds and the schedule of their receipt. The FEIS should include a more detailed funding plan.

6. For the 2020 no action alternatives and project conditions, was the BART to Santa Clara extension assumed in the project network? If the BART to Santa Clara extension project was not included, how would ridership for the no project and project change if BART to Santa Clara is assumed?

7. Please provide a description of the ridership-forecasting model that was used to produce the station-level CALTRAIN ridership estimates. In particular, describe consistency or inconsistency with the latest MTC regional models.

8. In Table 3.1-14, under the 2020 Extension to the Transbay project alternative column, which land use assumptions are used for ridership estimates? Are these ridership estimates under 2020 cumulative conditions?

9. Please provide the 2020 cumulative scenario estimates for Caltrain system ridership if not already included in Table 3.1-14.

10. No mention of CALTRAIN system impacts outside of San Francisco are disclosed for either Santa Clara County or San Mateo County stations in the 2020 project or cumulative scenario conditions. For example, the document should identify project impacts such as park-and-ride space demand, platform capacity, and other impacts at existing core stations, particularly since ridership is shown to increase for virtually every station on the system. In addition, no increases beyond 170 trains are assumed for the no-project and project alternatives, yet ridership is estimated to increase substantially over levels estimated for the no-project. A description needs to be provided on the peak trainload impacts caused by the project alternative.

11. It should be explained why ABAG Projections 1998 forecasts were used for year 2020 ridership estimates as opposed to the most recent regionally-adopted ABAG Projections 2000 forecasts.

We appreciate the opportunity to review this project. If you have any questions, please call Somruthai Michelutti of my staff at (408) 321-5785.

Sincerely,

James E. Pierson
Planning and Development Director

JEP:SCM:kh

cc: John McLemore, Caltrain JPB Vice Chair
Manny Valerio, VTA Board of Directors
Ken Yeager, VTA Board of Directors
Mike Evanhoe, VTA
Carolyn Gonot, VTA
Jim Lightbody, VTA
Frank Sharpless, VTA

VI. Associations and Organizations

RECEIVED
DEC 27 2002
PLANNING DEPT

BayRail Alliance
formerly Peninsula Rail 2000
3921 East Bayshore Road, Palo Alto, CA 94303 toll-free tel. (866) 267-8024

December 20, 2002

Paul E. Maltzer, Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Ste. 500
San Francisco, CA 94103

Dear Mr. Malter:

BayRail Alliance, a rail transit riders' group consisting mostly of Caltrain riders, wishes to submit the following comments on the draft Transbay Terminal EIS/EIR. We are strong supporters of the Transbay Terminal project, and we feel that it is one of the most exciting public transportation and land use projects in the United States. However, we have specific concerns about the proposed plans that we ask you to consider.

Summary of our Recommendations:

Build a new terminal and rail extension that can accommodate the next fifty years of growth for rail and bus transit in the Bay Area and California.

- The downtown extension configuration must be modified to accommodate high speed rail. Pursue a modified 2nd-to-Mission alignment, rather than the 2nd-to-Main alignment, as the preferred alternative for the downtown extension. Platform and track design must be modified to include more and longer platforms, with fewer path conflicts, to provide for efficient and successful operation of high speed rail on shared tracks with local service.

- It is imperative to grade separate the two street crossings in the Mission Bay area (16th Street and Common Street) as part of the DTX project, as these grade separations will become difficult, if not impossible to construct, once the extension becomes operational.

- Track configuration can be improved. The number of platforms should be increased and path conflicts reduced. Track alignments should be improved to lessen tight curvatures, while impacting fewer buildings.

- Perform value engineering to identify ways to phase construction of less essential portions of the project to reduce required debt service.

- Contain overall project cost by eliminating or postponing construction of underground tail tracks and storage yards and the underground pedestrian connection to Market Street; and by avoiding cut-and-cover construction wherever feasible.

- We strongly support the full build, West Ramp alternatives and bus storage facility location.

Rail Platforms and High Speed Rail

While platform lengths presented in the DEIS/DEIR are substantially longer than what is required for conventional commuter trains, they do not provide sufficient capacity for HSR. In Europe and Japan, it is common to run HSR trains that are 14 or 16 cars long (400m/1312ft design standard), and even with this extra length, there has been a movement toward double-decked trains to provide sufficient seating capacity.

Currently, only the 2nd-to-Main alignment option has platforms long enough to accommodate HSR. However, the highly curved platforms in the 2nd-to-Main alignment are seriously flawed and ineffectual in their intended purpose of serving the extra long trains needed for HSR. The proposed curvature would result in unacceptably long gaps between train doors and platforms.

We ask you to examine other options for providing optimum platform length for high speed rail. We believe the 2nd-to-Mission alignment can be improved substantially to achieve this goal. Richard Mlynarik and Michael Kiesling have outlined a design alternative that will permit longer platforms (see attached Figure 1). We also believe that the number of platforms can be increased. For example, see Figure 2, attached.

Long platforms have the advantage of providing storage space for two conventional trains end-to-end until tail tracks are constructed at a later phase.

Improve Track Configuration

We also believe it is possible to add tracks and platforms relatively inexpensively at the stations to increase efficiency of operations. Keeping in mind the long service life of the terminal and future needs, we ask that you modify the design to provide as many operating tracks and platforms as will fit on the site to be installed. For example, see the attached designs by Richard Mlynarik.

We have concerns about the flexibility of operations allowed by track approaches into the platforms. For example, in figures 2-2.15 and 2-16 of the DEIR, the four northernmost tracks feed into a single approach track. This greatly constrains train movement into or out of the station. We ask that you redesign track approaches to reduce such path conflicts, and we believe an improved design is possible.

While extensive modeling of bus capacity performed as part of the MTC Transbay Terminal Improvement Program, informed the design of the bus terminal configuration, it doesn't appear that there has been any capacity modeling done for rail operations into the terminal. We believe such modeling will show the need for a more flexible approach-track configuration.

Reduce Impacts to Multistory and Historic Buildings

At several places along the proposed route, we see opportunities to reduce costs and community impacts by adjusting the alignments to impact fewer buildings.

For example, the proposed curvature of the tunneled track alignment near 7th and Townsend is the same as that of the existing surface tracks which currently forces trains to a crawl. This curve needs to be made less sharp to permit speedier train movement. At the other curves (at Townsend/2nd and between 2nd and the Terminal), we believe that it is possible to make small adjustments to the alignments to reduce their curvature while impacting fewer buildings, where these do not impact long-term operational flexibility.

For example, see Figure 3, attached

Grade Separations

16th Street and Common Street

We feel that it is of paramount importance to extend the scope of the study a few blocks south, and to include a grade separation at 16th Street. To serve future Mission Bay developments, MUNI is contractually obligated to operate the 30-Stockton trolley bus at sub-5 minute headways across the Caltrain line via Sixteenth Street and to operate the 45-Union trolley at sub 10-minute headways across the Common Street crossing. This will pose substantial technical problems with the crossing of trolley and Caltrain overhead wires, and traffic delays will become completely unacceptable as Caltrain service levels increase.

The downtown extension must allow 16th Street to be grade separated, and it would be most desirable to complete this at the same time as the rest of the project. It may not be possible to do so later and even if it were possible, will be much more costly and disruptive to Caltrain service.

Common Street

We also feel it is desirable to grade-separate Common Street. We are aware that grade separation was deemed infeasible in an earlier study, and that the CPUC approved an at-grade crossing at Common Street in an earlier decision (across 2 tracks and a Union Pacific siding). Nevertheless, it is highly unlikely that the CPUC would grant approval for a grade crossing across four active tracks. For example, the CPUC recently expressed strong opposition to Caltrain's request to construct an at-grade crossing across four active tracks at Sunnyvale Avenue in Sunnyvale.

By beginning the tunnel for the Caltrain downtown extension at a more southerly location, it should be possible to grade-separate Common Street.

We suggest cost savings below that will offset the cost of constructing these grade separations.

Containing Overall Project Cost

We believe that it is important to reduce the capital cost of the initial terminal construction to the lowest possible, viable amount to reduce interest expenses. Because the Transbay Terminal project will obtain substantial revenues through its Passenger Facility Fee, it makes sense to defer some elements of the project until higher passenger volumes can help pay for them.

- We recommend that you eliminate, or postpone building, the massive, below-ground-level train yard at Seventh and Townsend Streets. The storage space it would yield does not justify its exorbitant cost. In lieu of expensive underground stub-end tracks that can only be used for storage, we recommend building additional through tracks (i.e., four tracks south of the Mission Bay station as far to Sixteenth Street) to provide both additional operating flexibility (at peak congestion times) and off-peak train storage space.

  Future operating scenarios will result in relatively fewer trains requiring mid-day storage. Money would be better spent excavating a much smaller amount of fill to create a Caltrain tunnel at Sixteenth and Common Streets to allow for grade-separated street crossings.

- We recommend that you engage in value engineering to determine elements of the plan, which can be constructed at a later date without sacrificing required near-term operational flexibility or incurring large "retrofit" expenses. These elements should be designed but left unconstructed.

  One example of this is the tail tracks, which can be constructed at a later phase and funded as the need arises, since they are not required for the level of service planned near term. However, tail tracks should be designed into the plan, and any necessary rights-of-way and easements acquired if necessary. We estimate this will save $100-$150 million in immediate construction costs, and more when debt service is included.

- Similarly, postpone constructing the underground pedestrian connection to BART. We ask that it be included in the project design, but this connection can be built at a later date when pedestrian volumes at the terminal increase.

- Cut-and-cover construction should be avoided where it would directly displace multi-story structures or busy roadways such as Second Street; otherwise it can be employed in some locations to reduce costs. We support tunneling, which the DEIR/DEIS indicates will be cheaper and faster than cut-and-cover construction, and which will minimize neighborhood disruption and opposition to the project.

Bicycle Accommodation

The projected number of bike parking spaces required at the Transbay Terminal, 105, is extremely low. The Palo Alto Caltrain station, for example, has approximately 400 class 1

bike parking spaces (open-air racks), 3 dozen class 2 spaces (bike lockers) and 90 class 3 spaces (bike parking spaces monitored by staff).

On-board bicycle accommodations will be limited to 32 spaces with the new Baby Bullet cars even as demand grows. Bicycle-riding Caltrain patrons have long complained about the problem of "bumping", or being unable to board a train that is already full of bikes. The problem has been exacerbated by lack of secure bike parking at stations.

It is much easier to provide additional bicycle facilities at the station than to expand on-board bicycle capacity. It is highly desirable to encourage bicycling in lieu of driving to the station, to reduce automobile congestion in the vicinity of the station. It is also as much as ten times cheaper to provide bike parking than automobile parking.

The Nakano train station in Tokyo has a staffed bike parking garage which accommodates over 3600 bikes in a double-decker, two-story structure, and it is regularly 80% full. Over 55 train stations in Japan have bike parking facilities which have capacity for more than 2000 bikes. Similarly, many train stations in Europe have bike parking facilities which accommodate from 300 to 3000 bikes, depending on passenger volume at the station. For example, Munster station has bike parking for 3,000 bikes; Rheine, 1500; Oldenburg, 1500; Bremen, 500; and Hannover, 350. (see Figure 4)

The world-class, high-volume Transbay Terminal is sure to see much greater bicyclist patronage than the smaller Palo Alto station does today. We ask that you greatly increase the amount of bike parking at the Transbay Terminal, and include provisions for a staffed bikestation.

Transbay Terminal Bus and TOD Components

We support the Full Build alternative to take advantage of this transit-rich, prime location. This project provides one of the most phenomenal opportunities for transit-oriented development in the country, and its potential should not go to waste. The affordable housing component will be a significant boost to San Francisco as well.

We also request that the redevelopment area be extended beyond the present boundaries to include additional parcels that will obviously benefit from the project. This includes

- The block between First, Second, Mission and Minna. It is immediately adjacent to the terminal, contains a large number of fragmented parcels, and is ripe for development.

- The Cornerstone project and 524 Howard, which are holes within the redevelopment area within the present terminal bus ramps on which construction has not proceeded. Should redevelopment take place on these parcels in the future, it will be in no small part due to the appeal and utility of the Transbay Terminal facility, and so it is appropriate for these to contribute to the overall redevelopment plan.

On the bus side, we support the West Ramp alternative because it provides adequate capacity and a well-thought-out operating plan while increasing the amount of land available for

transit-oriented development. We also support the bus storage area under I-80 as it elegantly meets bus operational needs and it will improve a blighted area.

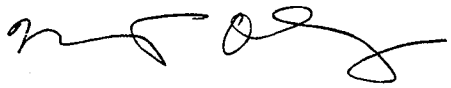
Comments on "Environmentally Superior Alternative"

We take issue with the description of the "Environmentally Superior Alternative" on page S-27 of the report, which obscures the differences between the 2nd-to-Main Caltrain alignment and the 2nd-to-Mission alignment. We concur that the Full Build, West Ramp, Tunneling options are superior to the Reduced Scope, Loop Ramp, Cut-and-Cover options; however we believe that the characterization of the 2nd-to-Main alignment as "fully meet[ing] the purpose and need for the project" is false because we don't believe it provides sufficient accommodation for HSR. The purported benefits of the 2nd-to-Main alignment are marginal compared to the 2nd-to-Mission alignment as proposed in the DEIR/DEIS.

We believe that it is possible to make adjustments to the 2nd-to-Mission alignment which will clearly establish it as the environmentally superior alternative that results in the fewest business and residence relocations and impacts the fewest historic buildings, while fully meeting the purpose and need for the project. In addition, we note that the Mission Street rail alignment eliminates the need for a third of the tunnel by virtue of extending the train mezzanine level to the corner of Mission and Beale; that savings should be taken into account in the rail alignment alternative analysis.

Thank you for your consideration of these comments.

Sincerely,



Margaret Okuzumi

attachments:
- Figure 1: http://www.sonic.net/~mly/tmp/deis/kiesling.pdf
- Figure 2: http://www.sonic.net/~mly/TTT-2001-02-28/o9.ai.pdf
- Figure 3: http://www.sonic.net/~mly/tmp/deis/townsend.pdf
- Figure 4: picture of interior of bike parking garage in Europe

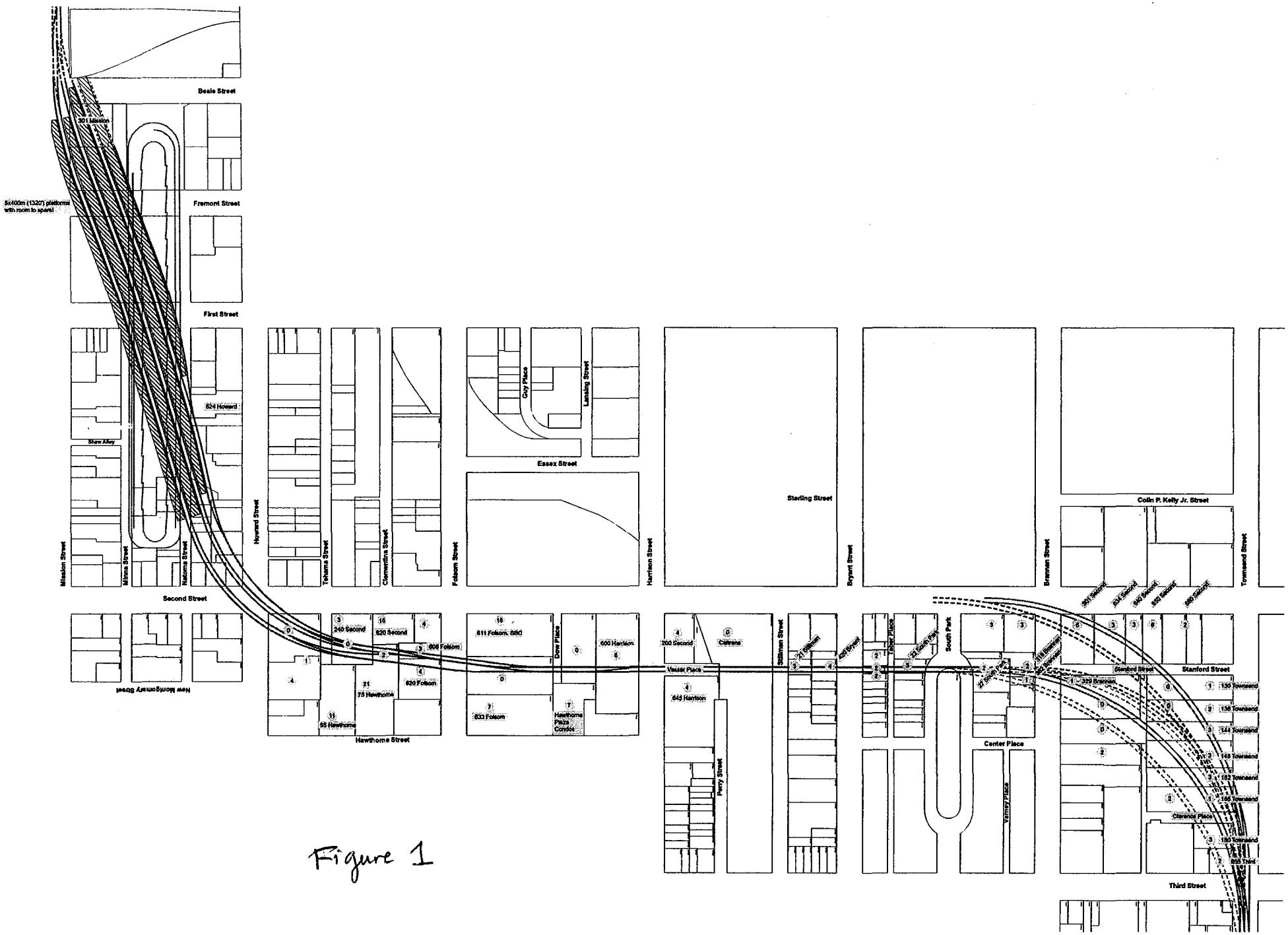
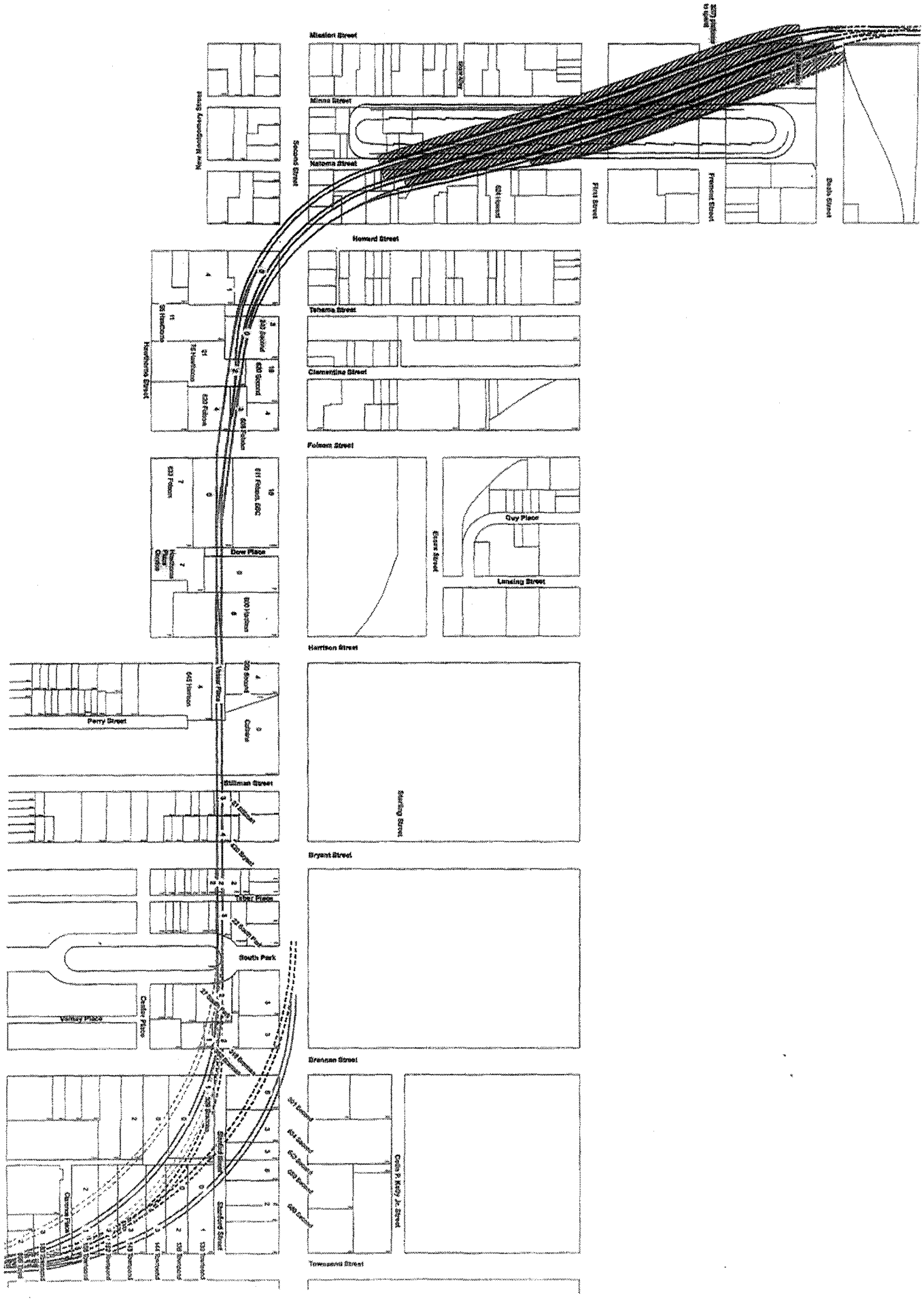
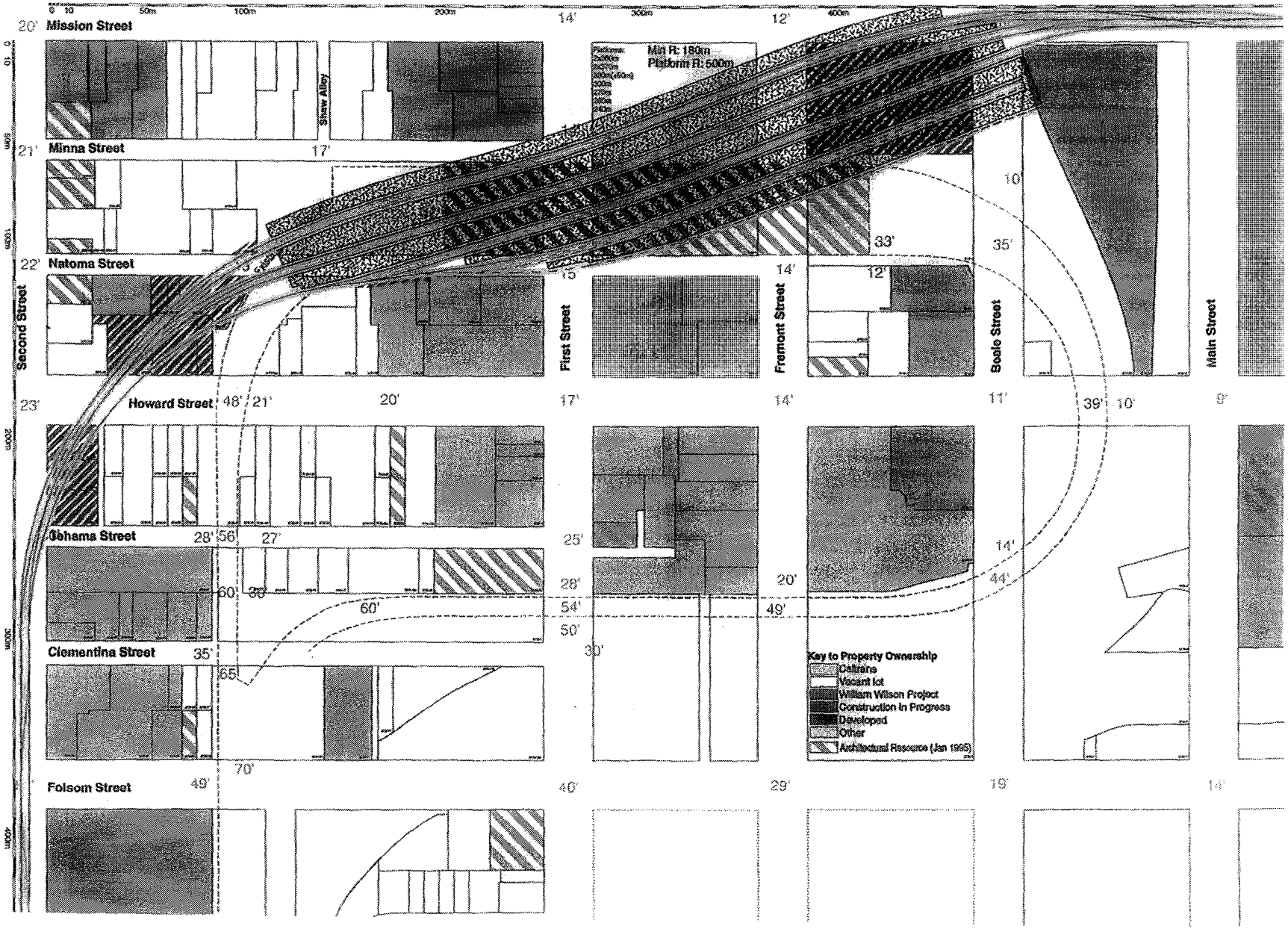
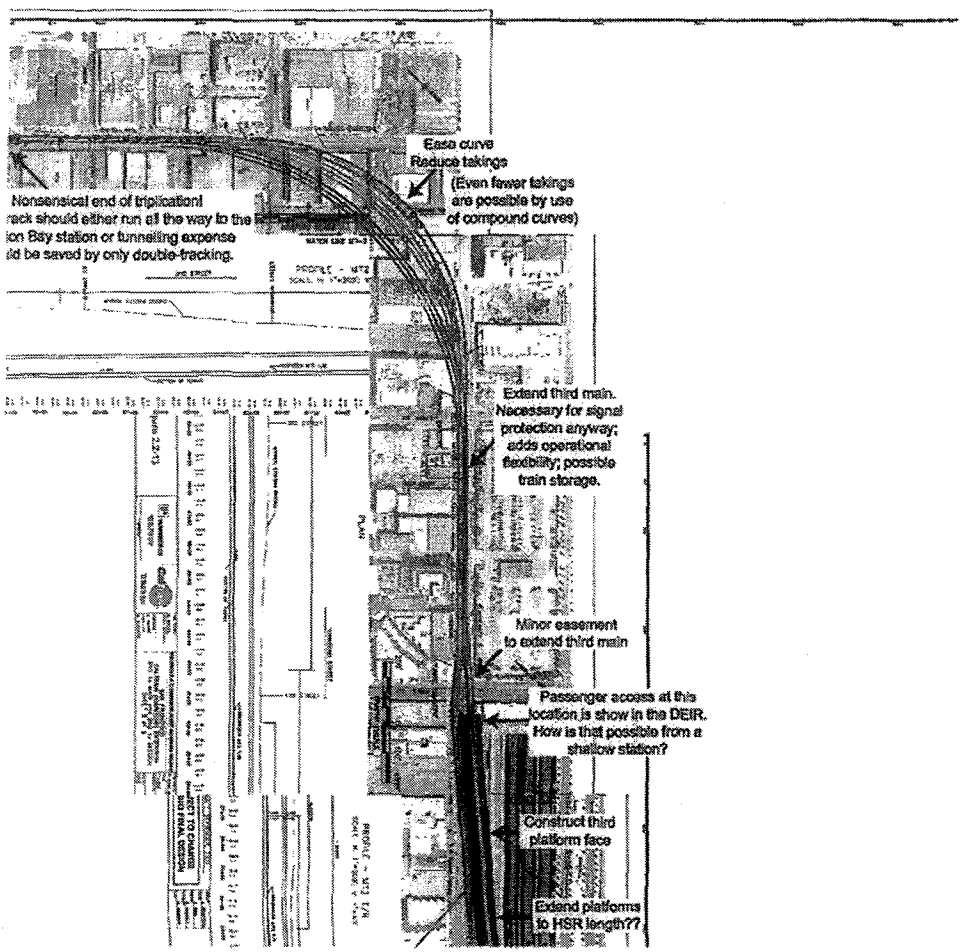

Beale Street
301 Mission
5x400m (1320') platforms with room to spare!
Fremont Street
First Street
624 Howard
Shaw Alley
Mission Street
Minna Street
Natoma Street
Second Street
New Montgomery Street
Howard Street
Tehama Street
Clementina Street
Folsom Street
Guy Place
Lansing Street
Essex Street
Harrison Street
Sterling Street
Bryant Street
Brannan Street
Colin P. Kelly Jr. Street
Townsend Street
240 Second
620 Second
608 Folsom
620 Folsom
75 Hawthorne
55 Hawthorne
Hawthorne Street
611 Folsom, SBC
633 Folsom
Dow Place
600 Harrison
Hawthorne Plaza Condos
200 Second
Caltrans
Vassar Place
645 Harrison
Perry Street
Stillman Street
Taber Place
South Park
Center Place
Varney Place
Stanford Street
Clarence Place
Third Street
130 Townsend
136 Townsend
144 Townsend
148 Townsend
152 Townsend
166 Townsend
180 Townsend
695 Third

Figure 1


Mission Street
Minna Street
Natoma Street
Howard Street
Tehama Street
Clementina Street
Folsom Street
Harrison Street
Bryant Street
Brannan Street
Townsend Street
Second Street
New Montgomery Street
Hawthorne Street
Dow Place
Perry Street
Stillman Street
Taber Place
South Park
Vantay Place
Center Place
Stanford Street
Colin P. Kelly Jr. Street
Guy Place
Lansing Street
Essex Street
Sterling Street
First Street
Fremont Street
Beale Street


Mission Street
Minna Street
Natoma Street
Howard Street
Folsom Street
Second Street
First Street
Fremont Street
Beale Street
Main Street
Shaw Alley
Min R: 180m
Platform R: 500m
Key to Property Ownership
Caltrans
Vacant lot
William Wilson Project
Construction in Progress
Developed
Other
Architectural Resource (Jan 1995)


Ease curve
Reduce takings
(Even fewer takings are possible by use of compound curves)
Nonsensical end of triplication!
rack should either run all the way to the
ion Bay station or tunneling expense
ld be saved by only double-tracking.
Extend third main. Necessary for signal protection anyway; adds operational flexibility; possible train storage.
Minor easement to extend third main
Passenger access at this location is show in the DEIR. How is that possible from a shallow station?
Construct third platform face
Extend platforms to HSR length??

Ground level lead to surface station
Edge through tracks – more flexible than excavated yard
Ease unacceptably tight curve (to >250m)
35' box outfall overcrossing. s. Unavoidable.
Catellier Common Street
Grade separation required
Connecting ramp from trenched mainline to vestigial surface station
Raise 16th Street ~2m only to bridge depressed tracks
Sixteen Street
Completely unacceptable as a grade crossing (Must go low)
Interim surface lead during trenching
Open trench or cut and cover
~250m for dive
~5m elevation loss @2%
PLAN
PROFILE
Figure 2.2-11
Figure 2.2-10
Figure 2.2-12



Figure 4

LEAGUE OF WOMEN VOTERS OF THE BAY AREA
An Inter-League Organization of the San Francisco Bay Area

December 5, 2002

Joan Kugler, AICP,
EIR Project Manager
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103-2414

Re: Comment on DEIS/EIR for San Francisco Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project (City Project No. 2000.048E)

Dear Ms. Kugler;

The League of Women Voters of the Bay Area, an inter-League organization of twenty-one local Leagues in the nine Bay Area counties has long advocated for this project because of its importance for regional transit connectivity.

Several LWVBA goals are in alignment with the opening Statement of Purpose and Need (S-1), notably:

- Improve public access to bus and rail services
- Enhance connectivity between Caltrain and other major transit systems
- Reduce non-transit vehicle usage
- Improve regional air quality by reducing auto emissions
- Facilitate transit use by developing both market-rate and affordable housing next to a major transit hub
- Provide a multi-modal transit facility that meets future transit needs

We are in favor of the West Loop Alternative. In addition to increased land available for development, its configuration provides better access for bus riders because the buses encircle a single platform.

A pedestrian tunnel or other seamless enclosed pedestrian connection between the Transbay Terminal and BART is absolutely essential to make this a regional multi-modal transit facility. It is a necessary link in the regional transit network, and is critically important for physically challenged persons. It is not just a rainy day convenience.

We are pleased that the three projects are considered as a whole and not separately evaluated for environmental impacts. However, we would like some key assumptions in the October 2002 DEIS/DEIR for the Transbay Terminal/ Caltrain Downtown Extension/Redevelopment Project clarified:

Ridership: On pages 1-17, 1-19 ridership from a boom period and mode split from 1990 and 1995 are used. In Chapter 3, Caltrain level of service and fare structure does not reflect recent changes.

- How does the recent drop in ridership with economic decline affect projections?
- Will ridership shifts shown on Page 3-29, Table 3.1-14 and on page 5-119 (decreased Millbrae boardings) fiscally impact Samtrans?
- Do projections take into account BART to San Jose service?
- Are Baby Bullet travel times included in Page 3-30, Table 3.1-15/could they be? Include note that East Bay travel times include other transit providers.

Reduction of auto trips: (Page 1-24-25) It appears from the chart that the primary cause of projected Caltrans ridership increases is the improvement in travel time due to Caltrain improvements, with additional substantial travel time savings after the Extension.

- Does the estimate should take into account an operating BART extension to the San Francisco International Airport?
- What if Caltrain is not electrified by 2006?

Air Quality: (Page 5-50, Table 5.7-1). Protection of air quality is a very important benefit of transit oriented development. Bad math discredits findings.

Land Use: (Page 2-44). The land use mix assumed is dominantly residential which would provide a desirable balance for the intense job center of San Francisco. The Full Build alternative also includes 1,184,590 square feet of office space.

- If the Reduced Scope without office is built, are tax revenues to pay for additional services affected?
- If more office space than "Full Build" is built, consistent with current zoning, how would that affect traffic projections and air quality?
- The open space and community services assumed to suffice should be related to the amount of housing to be built. Does San Francisco have relevant standards or precedents?.

Emergency Services: (Page 4-21). Response times for Fire Department are lacking.

- Will response times be affected?
- What is potential for loss of communications as in BART to airport project?

Business Disruption: (Pages 5-41). "The cost estimate does not include payments associated with business interruption, loss of goodwill, and "nuisance" costs associated with the construction of the extension, including loss of property access."

- Why?

Bus Service Suspension: (Page 5-107). Elimination of SamTrans routes to downtown is of concern to coastside commuters.

- Would suspension of service lengthen commutes from locations such as Pacifica?

Historic Context: The consideration that the existing terminal cannot perform its original function safely is persuasive but the mitigation for loss of historic structures is too vague. "Dynamic continuity" is a creative concept that needs more contextual specificity to be a mitigation.

- What mitigations are likely to be included "Memorandum of Agreement"? (What is previous Redevelopment Agency practice in comparable cases?)
- Are any of the other historic buildings to be removed also seismically unsafe?

Power: (Page 5-106). The implication that reliance on city or PG&E electricity is a problem to be alleviated by deregulation needs some explanation.

Pedestrian Access (construction): (Page 5-175). "70 percent of pedestrians going to and from the terminal would have up to a four block longer walk than under the existing situation" during construction.

- What effect is this expected to have on ridership during and after the construction period?
- Are special mitigations for physically challenged riders needed (shuttle? attention to maintenance of curb cuts during construction?)

Pedestrian Access (post construction) (Page 5-135). The underground connection from the terminal to BART seems important to provide transit linkage, to serve physically challenged riders, to relieve sidewalk congestion and exposure to wind, rain, and traffic mishaps. While restricted vehicle access is a corollary of intense transit-oriented development, poor Pedestrian Levels of Service would seem to suggest more specific mitigations.

- Is connection to buildings with commercial offerings either below grade or from bus level skyway possible?
- Would the linkage save on total trip times, attracting more transit ridership?
- Could a table be provided summing potential users (bus, Caltrain, high speed rail passengers...)

Operating Costs: (Page 5-115). As operating costs are often the hardest to raise, the cost increases for AC for the West Ramp option seem large.

- Can the sources of additional cost be clarified?
- (Page 6-4, Table 6.3-1). A net surplus from additional fares of $2.76 per passenger is outlined to cover the cost of operating the Caltrain extension.
- Is this realistic in the light of the current state of the economy?

Costs relative to benefits More information in Chapter 6 seems necessary to support new regional revenue sources such as bridge toll money or a possible gas tax. The Caltrain extension and Transbay Terminal was included in MTC Track 1 plans with costs per new rider that were lower than most project proposals.

- How does the Great Expectations plan in the DEIR/EIS compare with that MTC analyzed?
- Which terminal and tail configuration is the most amenable to grade separated pedestrian linkage and rail service expansion ?

We greatly appreciate the opportunity to comment on this project and hope to be involved in its fruition.

Sincerely,

Doris Maez

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North San Mateo County League of Women Voters
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Onnolee Trapp

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Eva Alexis Bansner

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President
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LEAGUE OF WOMEN VOTERS OF SAN FRANCISCO

582 Market Street Suite 615, San Francisco, CA, 94104 • (415) 989-VOTE Fax (415) 989-8685 Email: sfvoter@mindspring.com Web: leagueofwomenvoterssf.org

November 22, 2002

Paul Maltzer
Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Ste. 500
San Francisco, CA 94103

Re: Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project DEIS/DEIR dated October 2002

Dear Mr. Maltzer:

The League of Women Voters of San Francisco concur with the analysis of the League of Women Voters of North and South San Mateo County in regards to this report. A copy of this analysis is provided as an appendix to this letter.

Our hope is that this analysis provided by these Leagues will be taken into consideration when the final environmental report is completed.

Sincerely,

Sarah Diefendorf,
Co-President, League of Women Voters of San Francisco

Tuesday Ray,
Co-President, League of Women Voters of San Francisco

cc: Doris Maez, League of Women Voters of North San Mateo County
Onnolee Trapp, League of Women Voters of South San Mateo County

Appendix

RECYCLED PAPER

APPENDIX

Analysis of Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project DEIS/DEIR dated October 2002

Introductory remarks:

We are pleased that the three projects are considered as a whole, and not separately evaluated for environmental impacts. However, there are still significant details lacking in specifics. Parts of the document are dated and need to be made current. A significant error in air pollution reductions must be corrected. There are numerous syntax and spelling errors in the text. Financial impacts to businesses during the construction period are not considered sufficiently. The financial chapter lacks a cost/-benefit analysis. There is very little discussion of the impacts of the construction and use of the temporary bus terminal and the ramps to it. There is also no discussion of impacts of off-site bus storage. Impacts on historic structures may be the biggest negative impact. Does the willingness/necessity to take down the existing Transbay Terminal compensate for the other losses?

Page 1-17. Caltrain ridership data is already nearly 2 years old and reflect a period of peak ridership during a boom economy. There has been a 17% decline in weekday riders since October 2001. (Source: JPB agenda packet for 10/31/02 meeting) The mix of northbound and southbound riders has most likely changed as well.

Page 1-19. Similarly, cited data for San Francisco employee residency and mode of work trips is quite dated, citing data from 1990 and 1995, respectively. Given the decline in Caltrain ridership since February 2001, Caltrain projections may be inaccurate.

Page 1-24-25. Is the reduction of auto trips estimate based on the number of daily auto trips that take place before or after the Caltrain/BART connection in Millbrae is implemented? Since the base case (no project alternative) includes the BART extension to the San Francisco International Airport, the reduction should be based on the number of auto trips after the BART extension is in service, but that is not clear in the discussion.
Please clarify.
The estimated reduction in auto trips may be affected by the opening of BART service to Millbrae and the resulting connection with Caltrain, will give where northbound commuters will have the option of getting to downtown locations on BART.

Page 2-3. Electrification of Caltrain by 2006 is highly unlikely. Revenue reductions and budget shortfalls caused Santa Clara Valley

Transportation Authority (VTA) to decline to fund its $2.3M share of funding the DEIR for the electrification project in FY 2002-2003. Sources of federal funding were identified, but those are frozen until a lawsuit against EPA's approval of the 2001 Regional Transportation Plan is resolved. It is very unlikely therefore that the environmental review process will be completed in 2003.

Figures 2.2-9 to 2.2-21. The varying orientation (with respect to the north) of the reproduced maps from map to map is extremely difficult to follow. A large map that connected all the components would be very helpful.

Page 2-44, Table 2.2-7. There is a huge amount of office space (1,184,590 sq ft) being added to a part of the city in the Full Build alternative that already is mostly office, and the surrounding areas are expected to be developed mostly as offices. There is no discussion of the financial impact of NOT building the office space. Although proposed office space is considerably less than residential space, office space will bring many more people into the area, mostly by transit. Tax revenues for office space will be different than for residential space, so there will be multiple impact differences between the Full Build and Reduced Scope. If I were a San Francisco resident, I would want more discussion of this aspect.

Page 2-45, Figure 2.2-22. This Figure and Table 4.1-1 on page 4-10 are helpful in conceptualizing the project.

Pages 3-1 to 3-5. The discussion relating to Caltrain level of service and fare structure is dated. Current service is 76 trains on weekdays, with no service on weekends until March 2004 for construction of passing tracks and other upgrades of the signaling system, trackwork, and other improvements to allow for "Baby Bullet" express service. An average 10% fare increase took effect in July 2002. One-way fares now range from $1.50 to $7.25, and discounted midday "offpeak" fares no longer apply. Caltrain ridership is currently well under 35,000 weekday trips.

Page 3-28. Caltrain ridership projections with 170 trains/day sound almost too optimistic. An increase to 50,000 riders/day from the current ridership figures of around 30,000 riders is even more optimistic than the stated 35,600 daily trips in February 2001.

Page 3-29, Table 3.1-14. Why do daily Caltrain boardings at Millbrae decrease in 2020 with the downtown extension (5,948) compared to No Project (8,370)? There is no discussion of possible impact on Caltrain ridership of a BART extension to San Jose. It was noted on page 1-19 that drive-alone rate is highest

(44%) from South Bay to SF, with lowest transit mode (37%) while East Bay to SF is 55% transit.

Page 3-30, Table 3.1-15. The title of this table is misleading, since it includes trips from Redwood City to Concord and from Oakland to San Carlos, which clearly must include BART and MUNI segments. It does not appear to include the addition of the Baby Bullet service.

Pages 4-14 and 4-17, Tables 4.2-1 and 4.2-4. The total number of households in Census Tract 176.02 is listed as 257 in Table 4.2-1 and as 1952 in Table 4.2-4. Which is correct?

Page 4-21. Response times for Fire Department are not given. This important statistic is kept by all fire departments, and should be readily available.

Figures 5.2-1 to 5.2-6. The varying orientation of these maps with respect to north is difficult to follow.

Pages 5-36 and 5-37. It is highly interesting that the increased demands for fire and police services could be met by "reorganizing existing staff". Does it follow that either these services are currently overstaffed or that service will be understaffed when the proposed development takes place?

Page 5-41. "The cost estimate does not include payments associated with business interruption, loss of goodwill, and "nuisance" costs associated with the construction of the extension, including loss of property access."
Why aren't these costs included, or at least an estimate included? These were significant costs associated with some of the Peninsula grade separation projects.

Page 5-50, Table 5.7-1. This table represents some very sloppy work. It is bogus math, and seriously misrepresents the air pollution reductions. For example, 329 pounds/day of ROG equals approximately a ton a week for a 7-day week (59 tons per year), or 1650 pounds per week for a 5-day workweek (43 tons per year), NOT 51,702 tons per year. Data should be verified before inclusion.

Pages 5-54. The discussion about the Regional Transportation Plan applies to the situation before the lawsuit mentioned under comment about page 2-3 was upheld. At the current time, the outcome is uncertain, and federal funding for all projects not already underway is frozen.

Page 5-62. Storage yard noise will not be limited to engine noise, as this discussion seems to imply. Simply moving large pieces of equipment generates noise, as well as associated

activities. To state that no mitigation will be necessary seems far-fetched. Additionally, light sources from this site may be intrusive to surrounding uses.

Page 5-64, Table 5.8-6. Vibration impacts are worse than noise impacts, with little reduction from mitigation using resilient track system.

Page 5-67. Bay mud goes down 100 feet and is the worst seismic hazard for amplified ground motion.

Page 5-68. "Rapid rail repair" is the recommended mitigation for seismic impacts to surface tracks, but there is no mention of mitigation for tunnel collapse at the portals, where the subway depth is in Bay mud, or prevention of damage. What would happen to a train traveling exiting from the subway at the time of seismic motion?

Page 5-70. The paragraph about communications is very inconclusive. Viability of redevelopment for both offices and residences depends greatly on the availability of telephone utilities, and the statement by Pacific Bell that it would take many years to complete relocation is very unsettling.

Page 5-75. How will impacts on the Bay Bridge structure be mitigated, also with respect to NRHP?

Page 5-91. Regarding mitigation of loss of historic structures: The first option of listed Relocation is extremely unlikely. Recordation, Interpretive Display, and Salvage seem practical, but how much do these options really compensate for the loss, and how is such loss calculated?

Page 5-106. There are concerns that dependence on only PG&E or Hetch Hetchy source of electricity seems risky both in terms of supply and cost, unless SF is willing to make a deal regarding its Hetch Hetchy power. The report vaguely hopes that deregulation will alleviate these problems.

Page 5-107. Elimination of SamTrans routes to downtown is of concern to coastside commuters. Coastside locations, such as coast towns Daly City, Pacifica, would be better served (they say) by continuation of bus service to downtown San Francisco, not by feeder to BART or Caltrain.

Page 5-112. The sentence "The West Ramp Alternative would increase the number of bus bays from 32 to 30 bays along and provide..." does not make sense.

Page 5-115. This looks like a huge cost increase for AC Transit for the West Ramp option, which is the lowest overall cost option in all other respects. Is this increase based on the increased mileage required for offsite storage?

Page 5-118. Linked transit trips for the region increase by 10,000/day. This is good, but is really only a little over 1% of the total. The discussion on increase in Caltrain ridership is vague, and contains no discussion of cost/rider.

Page 5-119. The predicted 9% decline in BART ridership in San Mateo County is cause for concern for county taxpayers who will be responsible for BART losses in that corridor. (See comment about page 3-29.) This sounds like it will be difficult to get beyond an operating deficit in the BART/SamTrans agreement. What is the financial equivalent? Will the expected decline in SamTrans expenses offset the BART losses?

Page 5-126-136. Cumulative impacts at seven intersections would be considered adverse and unmitigable. Pedestrian congestion also results in LOS F for eleven corners and two crosswalks. These are serious impacts, and consideration should be given to how streets are used by private cars, commercial vehicles, etc. and to alternatives that limit commercial traffic to nonpeak times.

Page 5-135. Estimates of Caltrain and AC Transit transfers to BART and MUNI based on a 2001 survey found 5% of riders would make such a transfer. However, only half of the AC riders are assumed to use the underground tunnel, which translates to 2.5% of AC Transit riders because the AC Transit loading area is aboveground. All Caltrain riders making the transfer are assumed to use the underground tunnel because the Caltrain platform is underground. Therefore, based on 10% of 50,000 daily Caltrain riders disembarking at the downtown terminal, (see page 3-6) there would be 5% of 5,000, or 250 potential roundtrip users of an underground tunnel from Caltrain to BART or MUNI. Based on 15,205 daily AC Transit riders, (see page 3-15) 2.5% or 380 AC Transit riders would use the underground tunnel. In addition, 108 pedestrian trips are expected to be diverted from the Fremont and Mission Streets intersection. This appears to add up to 738 daily users of an underground tunnel. Is this correct? It would have been helpful if a table were included that adds up these estimates.

We are concerned about transit connectivity after construction is completed. The document states that construction of a pedestrian tunnel connecting the TBT to BART is more likely in one configuration than the other. The (perhaps unintended) message seems to be that this connection might easily be dispensed with, especially if financing is short. This is a necessary link in the regional transit network, and is critically important for

physically challenged persons. It is not just a rainy day convenience.

Page 5-161, Figure 5.20-8. Construction period appears to be a little over four years. The longest activity is the construction of a cut and cover Subway Structure along Track Corridor or tunneling, which lasts 36 months. This is a long time for surrounding businesses and traffic disruption. The area will feel like a war zone.

Page 5-167. The construction period is assumed to be two years for the Second-to-Main Cut-and-Cover Option. Is this for excavation only? (See Figure 5.20-8, which shows a 36-month period of construction.)

Page 5-173-174. This section describes possible mitigation measures to offset the disruption to businesses and community during the construction period. These include onsite and field offices, an information line, signage, traffic management plans, street and sidewalk level decking, sidewalk design and maintenance, and construction site fencing. There is no discussion, however, of the financial impact to businesses during the construction period, and if compensation would be required for loss of business. See also 5-41.

Page 5-175. "70 percent of pedestrians going to and from the terminal would have up to a four block longer walk than under the existing situation." This is a severe impact, and may affect transit ridership during the construction period. Some form of mitigation for physically challenged persons is in order. It is important that curb cuts and other features designed to accommodate persons with limited mobility be retained during the construction period. Perhaps some form of shuttle similar to that used in airport terminals would be helpful in mitigating the impacts on less mobile transit users.

Page 5-182. "It is anticipated that subway construction would last for a total period of approximately three and a half to four years". This appears to conflict with the two-year period mentioned on page 5-166.

Page 6-1 to 6-8. Capital costs are estimated to range from $1.864-$2.095B for the rebuilt Transbay Terminal and Caltrain extension. Federal funding for the project (page 6-8, Table 6,6-1) is estimated at about $600-$700M. However, as discussed before, an approved Regional Transportation Plan and Transportation Improvement Program are required for federal funding, and at the current time, a lawsuit has delayed such approval for an indefinite period of time.

Page 6-4, Table 6.3-1. A net surplus from additional fares of $2.76 per passenger is outlined to cover the cost of operating the Caltrain extension.

These estimates are based on estimated ridership of 50,000 daily weekday riders, which may be overly optimistic. Current operations costs are exceeding revenue sources because of the steep decline in sales tax revenues and drop in ridership in 2002. Sales tax revenues from San Mateo County (per MTC's RTP, page 6-8, Table 6.6-1) are expected to provide $27M of capital costs as well. Are these figures realistic in the light of the current state of the economy?

Chapter 6, general. The chapter lacks a cost/benefit analysis. The financial plan depends on several presently non-existing revenue sources (bridge tolls, gas tax, etc.), uncertain sales taxes, and revenues derived from the Redevelopment Project and Scope (not building proposed office space) and Full Build. There is no discussion of the financial impacts of NOT doing Full Build. This should be a major concern for San Francisco residents, city government, and all the transportation agencies involved.

We endorse the inclusion of considerable residential space in the Redevelopment project surrounding the TBT, and the commitment to the affordable housing component.

Doris Maez, North San Mateo County League of Women Voters
Tel: 650-588-2793; Email: travlnut@hotmail.com

Onnolee Trapp, South San Mateo County League of Woman Voters
Tel: 650-851-8272; Email: o.trapp@ieee.org

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OAKLAND HERITAGE ALLIANCE

December 5, 2002

Joan Kugler, AICP,
EIR Project Manager
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103-2414

Re: Comments on EIS/EIR for San Francisco Transbay Terminal/Caltrain Downtown Extension Project (City Project No. 2000.048E)

Dear Ms. Kugler;

The Oakland Heritage Alliance is particularly concerned about the loss of the Transbay Terminal because this National Register eligible property is a regional resource as part of the San Francisco / Oakland Bay Bridge.

However, Oakland Heritage Alliance recognizes that although the Transbay Terminal has served its purpose well in the past, it cannot accommodate an intermodal station which would include a below grade train station and so needs to be replaced by a new structure at the present site that would a landmark of the future. This is the ideal location for a regional transportation hub that will afford efficient transit connectivity.

However the mitigations for the loss of this historic resource are inadequate. We urge a thorough documentation of the building itself and its role as part of transportation history. The information should be available to the public in a usable, interesting form. A prominent space should be allocated in the new building for a permanent exhibition. In fact, a Bay Area Transportation Mini-Museum could be accommodated in the terminal with this as a permanent exhibit. And the very solid comfortable oak benches, which are beloved by bus riders, should be reused in the new facility.

Sincerely,

Mary MacDonald
9.12.

Mary MacDonald
President

Office: 1418 Lakeside Drive, Oakland • (510) 763-9218 Voice/Fax
Mail: P.O. Box 12425, Oakland, California 94604

Partnership Transit Coordinating Council

AC Transit • BART • Benicia • CCCTA • Fairfield/Suisun City • GGBHTD • LAVTA • MCTD • MTC • Petaluma • SamTrans • Santa Rosa
SF Muni • Solano TA • Sonoma County • Tri Delta • Union City • Vacaville • Vallejo • The V.I.N.E./Napa Valley • VTA • WestCAT

October 24, 2000

Lawrence Dahms
Executive Director
Metropolitan Transportation Commission
101 Eighth Street
Oakland, CA 94607-4700

Re: Partnership Transit Coordination Committee (PTCC) Accessibility Committee - Comments on Paratransit and Access Provisions of Transbay Terminal Improvement Plan

At the September 11, 2000 meeting of the PTCC Accessibility Committee, Rod McMillan, MTC staff, gave an informative presentation on the status of the Transbay Terminal (TBT) Improvement Plan, the regional effort to replace the existing San Francisco Transbay Transit terminal with a new, state-of-the-art building and multi-modal center. On October 10, 2000, a subcommittee of the Accessibility Committee met with Mr. McMillan to further review the conceptual plan and report back to the full Committee. As a result of this review, can advise MTC that it supports the plan and would like to compliment the design that was ultimately developed as well as the consultants' obvious hard work. The Accessibility Committee would also like to forward to MTC and the Bay Area Toll Authority (BATA) the following comments and recommendations regarding the plan which were adopted by the Accessibility Committee at its October 23, 2000 meeting:

1. TBT should be designed to provide a street level paratransit transfer location adjoining the primary taxis zone as well as the ground level terminal facilities between Fremont and First Street. The location should enable paratransit vehicles to approach from all directions, facilitate connections between paratransit van and taxi service, and minimize the distance between terminal facilities and transfer location for disabled passengers. Referring to the current concept design, a location on the north side of Natoma Street between First and Fremont St. west of the proposed mid-block cross-walk appears to meet this criteria. Less vehicle traffic on Natoma Street would minimize conflicts with other vehicles and minimize potential hazards to transferring passengers. Because as many as four paratransit providers may use the transfer location, the location should be approximately 100 ft. long, sufficient to accommodate up to three vans or small buses.

2. The facilities adjoining the transfer location should be in keeping with adopted regional criteria for paratransit transfer locations. According to these criteria, the facilities should:
    - be clean, safe, sheltered, well-lit and provide seating; provide accessible telephones and restrooms near the location;
    - be open during comparable hours to the paratransit service, with ample activity and people nearby.
    - be clearly marked with the adopted regional transfer location sign.

    In accordance with these criteria, the terminal building should be designed so that restroom, escalator, elevator, telephone, seating, ticketing, and staffed facilities are located as close as feasible to the paratransit transfer site.

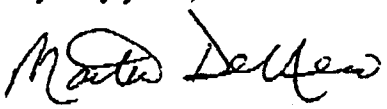
3. As a new state-of-the-art transportation center, TBT presents a unique opportunity to create a state-of-the-art accessible facility. Innovative accessible features and concepts should be incorporation into the design where ever possible. These include:
    - minimizing distance, slope, and travel requirements between accessible features within the facility;
    - providing restrooms and telephones on every floor; providing elevators and escalators between all floors and within each section of the proposed three section TBT building. (Accessibility Committee understands that space is constrained in the portion of TBT containing the ground floor MUNI/Golden Gate Transit bus-bays. However, Accessibility Committee believes an elevator connecting these bays to all other transit levels is a necessity for mobility impaired customers.)
    - orientation surfacing as well as warning tiles (easily recognized by color, contrast, texture and sound) to assist visually impaired passengers with navigation through out the building;
    - crosswalks and paths of travel clearly signed or marked and indicated by a central tactile guideline;
    - providing tactile orientation maps at every building entrance;
    - clear paths of travel, free of street furniture and other architectural obstructions between entrances and boarding areas;
    - providing braille signage and information to indicate bus poles, ticket machines, rest rooms, elevators, and other essential landmarks;
    - using "talking" or auditory signs in addition to visual signs;
    - provide the means to make visual as well as audible public service announcements through-out the station;
    - windscreens where needed;
    - other concepts as needed.

    Accessibility Committee is in the process of preparing a list of accessible design guidelines (to be forwarded to you under separate cover) that will include specific criteria for such components as bus bays, cross walks, pathways, bus pole and sign locations.

4. An accessibility professional who is expert in the ADA Accessibility Guidelines (ADAAG) and California Title 24 requirements must be part of the design team as the project moves forward. This project provides an opportunity to design and build a state of the art accessible transit facility that incorporate the principals of universal design to insure that the terminal is user-friendly and accessible to all transit customers. This opportunity can be realized by:
   - including an accessible transit professional on the design team;
   - including passengers with disabilities in the public review process to obtain feedback on the design of TBT;
   - inviting the PTCC Accessibility Committee to provide input and review and comment on the plan.

Please contact me at (408) 321-7040 if you have any questions or require additional information. PTCC Accessibility Committee looks forward to working with MTC staff and representatives of the Bay Area Toll Authority Transbay Panel to help make TBT the best and most usable transportation facility possible for all of its customers.

Very truly yours,



Martin DeNero, Chair
PTCC Accessibility Committee

c: PTCC Accessibility Committee
Bay Area Toll Authority Transbay Panel
Rod McMillan, MTC
Connie Soper, MTC
Jacob Avidon, MTC

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December 18, 2002

Paul E. Maltzer, Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Ste. 500
San Francisco, CA 94103

Re: Transbay Terminal / Caltrain Extension DEIR Comments

RAFT, the Regional Alliance For Transit, was formed over a decade ago to support the enhancement and improvement of the Transbay Transit Terminal (TTT) for AC Transit Transbay service, and to fight various proposals to tear the building down. These comments represent a decade of experience and effort from the members of our group to lead this project to where it is today.

Over the past decade we have witnessed a wide range of official actions on the TTT. Initially, the city wished to completely remove the terminal and ramps, putting hundreds of buses on the congested SOMA streets. As studies began on the Caltrain extension, some quite interesting alternatives were proposed, including running train down the middle of SOMA streets and even on Market Street.

The DEIR that has grown out of the last decade of debate is supported by RAFT. We have concerns with some details of the project, but overall the projects described meet the transportation and planning goals that RAFT has supported and lobbied for over the last decade.

Our specific comments support the detailed comments made by others, specifically those of Richard Mlynarik, Michael Kiesling, and Norman Rolfe.

The bus portion of the project is a well-researched design, and is the result of a decade of work. We support the West Ramp Alternative. As part of this we STRONGLY support the dedicated off-site bus storage facility between Perry and Stillman Streets, beneath the Bay Bridge approach structure. An issue of contention with the previous designs for the terminal was the lack of adequate bus storage. RAFT fought long and hard to ensure that any new terminal would be operationally equal-to or better than the existing terminal. The proposed location, under the freeway, is close to the terminal

and maximizes the use of this already impacted public land. We support designing the bus storage facility to mitigate the concerns of its neighbors, and suggest that with proper landscaping and architectural treatment, the neighbors will find the facility a compliment to their neighborhood, and a great improvement over the existing public parking lot. Additionally, concerns about possible bus diesel exhaust will probably be well-mitigated through the advancement of bus propulsion technology by the time the facility is operational.

The Caltrain extension component is good, but further revision is needed in the trackwork and alignment. We would like to point out the proposed high-speed rail platforms in the Second to Main alternative are completely un-workable, due to the gap between the curved platform and standard high-speed rail cars. Generally, we support the fully tunneled option, leading to a Second to Mission terminal, with no underground connection to BART. We would like to see a modified tunneled alternative studied, involving an alignment approximately 150' west of Second Street. This alignment will further minimize impacts on historic structures, minimize the distance of mined tunneling by passing under many empty properties, and maximize the potential platform length at the Transbay Terminal.

Specific revisions to these basic alternatives include:

- grade separations at both 16th and Common Streets
- easing of the 7th Street curve for higher-speed operation
- consideration of a long-term storage facility south of the project area
- elimination of a storage yard in the Mission Bay area
- addition of a third and fourth track in the Mission Bay area (which can be used for temporary storage)
- altering the tunneled alignment to further reduce the impact on buildings along the alignment
- studying a tunneled alignment approximately 150' west of Second Street
- easing the Townsend-Second Street curve for higher-speed operation
- altering the throat of the terminal tracks for better operation
- altering the rigid design of the terminal trackwork and platforms to maximize the number and length of platforms
- consideration of phasing the construction of the tailtracks until the facility is operational and producing a pfc revenue stream, in order to reduce the proposed debt service
- a good pedestrian connection to a Market Street subway (MUNI/BART) is important, but recommend that other options besides a costly and sterile underground corridor be considered

- consideration of improvements to Ecker Alley, including a new, accessible entrance to the Montgomery subway station, to provide a high-quality, off-street pedestrian connection to Market Street

- continued coordination with the operating plans of the proposed statewide high-speed rail project is necessary to avoid costly design errors and enhance possible shared-use of facilities, especially in the area of maintenance and storage

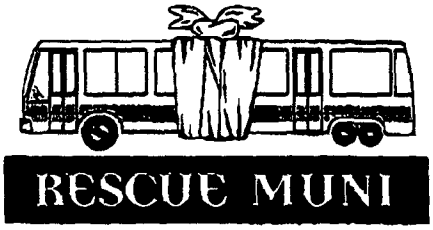
The redevelopment portion of the project is an excellent example the synergy of land use and transportation. We fully support the Full Build redevelopment alternative. There is no more appropriate place in California, and very few in the country, for this intensity of development. It has been the policy of the City of San Francisco since the 1980's to encourage this type of development between Mission Street and the Bay Bridge. The emphasis on housing only enhances the benefit of the proposed redevelopment. Furthermore, we strongly urge the redevelopment area be expanded to include undeveloped parcels in the center of the proposed redevelopment area, and undeveloped parcels adjacent to the terminal on the south side of Mission Street, east of Second Street. Any new development on these parcels will be greatly enhanced by the TTT project, and it seems fitting that a portion of that benefit be captured to aid the project.

RAFT urges this project to move forward, with further refinement and revision to the items we've mentioned above.

Sincerely



M. Kiesling
for RAFT



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A Transit Riders' Association for San Francisco • Box 190966, SF, CA 94119 • 415/273-1558 • www.rescuemuni.org

Paul E. Maltzer, Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Ste. 500
San Francisco, CA 94103

via fax: 415-558-6409

December 20, 2002

Re: **Comments on Transbay Terminal / Caltrain Downtown Extension EIR**

Dear Mr. Malter:

Rescue Muni, a transit riders group in San Francisco, respectfully submits the comments below on the DRAFT EIS/EIR for the Transbay Terminal/Caltrain Downtown Extension project. As strong supporters of this project, we are very excited that this project is finally moving forward after years of delay.

Rescue Muni supports the following Alternatives to the project:

1) Caltrain Extension Alignment – 2nd to Mission.
2) Ramp Configuration – West Ramp Only.
3) Land Use – Full Build Out
4) Subway Construction Method – Tunneling (as oppose to cut-and-cover).

Caltrain Extension Alignment – 2nd to Mission.
We feel this alignment is superior for the following reasons:

- Will allow for platforms with less sharp turning radii than the 2nd & Main alignment. **We believe the 2nd and Main alignment will not accommodate CA High Speed Rail because the platform radii are too sharp, creating large gaps between the train cars and the platform. We believe this is unacceptable.**
- Will be a shorter distance to the Bay for a future extension of conventional rail to East Bay.

Ramp Configuration – West Ramp Only

- We support the West Ramp option versus a full loop ramp because it will free up much more space for Transit-Oriented Development around the site.

Land Use – Full Build Out

- We generally support as much Transit-Oriented Development around the site as possible to help increase ridership at the transit facility, and also to improve the project's ability to pay for itself.

Subway Construction Method – Tunneling

- We support the tunneling method of excavation versus cut-and-cover. According to the DEIR/DEIS this will be less disruptive and less expensive.

Additional Rescue Muni Comments:

Grade Separate 16th Street and Common St.

- With a significant increase in rail service in the near future, especially with the commencement of the Baby Bullet service, we believe that the crossings at 16th Street and Common Street must be grade separated now, rather than later. Muni is planning to re-route bus service all the way down 16th Street with frequent headways. We feel it would be very difficult operationally to have to electric systems intersecting one another at this grade crossing as well as potentially dangerous. We also feel Common Street should be grade separated as it is in the Mission Bay Area, which will soon have high levels of automobile traffic.

Bike Storage

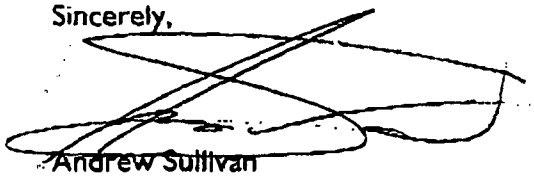
- Significantly increase bike storage at the new terminal over the 105 spaces planned. We suggest 1000 spaces.

Reduce Costs to the Project

- Consider building the tail tracks in conjunction with the California High Speed Rail project. We feel a stub-end terminal will suffice until traffic increases with the commencement of High Speed Rail service.
- Consider postponing the construction of the underground pedestrian path to the Embarcadero BART station. Though we strongly support this project, we feel it can be delayed until there is more traffic at the Terminal and new funding sources can be found.
- Consider postponing the below-ground train yard at Seventh and Townsend.

Thank you for the opportunity to make comments on this crucial transportation project.

Sincerely,



Andrew Sullivan
Chair, Steering Committee
Rescue Muni

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December 4, 2002

Mr. Paul E. Maltzer, Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Ste. 500
San Francisco, CA 94103

Re: Transbay Terminal / Caltrain Downtown Extension / Redevelopment Project DEIS/DEIR

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Charles Edwin Chase, AIA
Executive Director

Dear Mr. Maltzer:

San Francisco Architectural Heritage submits the following comments on the above referenced DEIS/DEIR:

New Transbay Terminal

The DEIS/DEIR does not provide for a preservation alternative for the removal of the existing Transbay Terminal Building, a contributing resources to a National Register eligible property. The two alternatives represent a total replacement of the building and ramp system, which are listed as contributing elements to National Register eligibility.

We believe this is inconsistent with federal requirements, which stipulates special efforts be made to protect historic sites. We disagree that a prudent and feasible alternative cannot be designed that would minimize harm to the known historic resources.

Caltrain Extension from Fourth & Townsend Streets to a New Terminus below the proposed New Transbay Terminal

The two extension alternatives indicate the preferred 'cut and cover' construction method and alternatively, 'tunneling' south of Folsom Street. Tunneling would reduce the adverse effect of loss of contributing resources to the San Francisco South End Historic District and Rincon Point/South Beach Historic District, and minimize the project's impact on known contributing historic resources.

In all cases, retention of the three structures at Howard and Second Street were determined infeasible. Significant subway construction in other major metropolitan cities including New York and Washington DC was accomplished without removal of existing buildings of greater magnitude than those within the proposed tunnel alignment.

In addition there are several technical issues contained within the DEIS/DEIR which require we would like to call to your attention.

Section 4.16.6
This section references the classification of historic resources identified in Article 11 of the San Francisco Planning Code. The DEIS/DEIR lists Category II rated buildings as both significant and contributory and does not reference Category III buildings. This is inconsistent with Article 11 of the code.

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FAX 415-441-3015
www.sfheritage.org

Section 5.14.3.4

1. Mitigation measures are identified which include recordation. The DEIS/DEIR states: "The mitigation measures identified above are suggested measures; actual measures will be set for thin the MOA. Although recordation eliminates one adverse effect of demolition, the loss of historical information, it does not present the tangible loss of historically significant properties." We believe this to be an inaccurate statement. Previous court decisions have stated that recordation is not a sufficient mitigation to reduce the level of effect below adverse.

2. Page 5-91 references The Foundation for San Francisco's Architectural Heritage. The legal name of the referenced organization is San Francisco Architectural Heritage.

Sincerely,

Charles Edwin Chase, AIA
Executive Director

CEC/s

SAN FRANCISCO BICYCLE COALITION

1095 Market Street #215
San Francisco CA 94103
415.431.BIKE
415.431.2468 fax
www.sfbike.org

PROMOTING THE BICYCLE FOR EVERYDAY TRANSPORTATION

December 5, 2002

Paul Maltzer
Environmental Review Officer
SF Planning Department
1660 Mission Street, Ste. 500
San Francisco, CA 94103

Dear Mr. Maltzer,

I am writing on behalf of the San Francisco Bicycle Coalition (SFBC) in response to the Draft EIS/EIR for evaluation of the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project.

The SFBC is a nonprofit advocacy group promoting bicycling for everyday transportation. In addition to our 4,000 members, we also work on behalf of the estimated 30,000 regular bike commuters in San Francisco. The SFBC has been a supporter of this project, in general.

The SFBC has serious concerns about the severe underestimation of bicycle parking spaces recommended in the proposed project. The proposed 105 bike parking spaces in the new Transbay Terminal is inadequate. The project should provide at least 300 indoor bike parking spaces, which meet the city's legal requirements for new commercial buildings (Section 155.4 of the S.F. Planning Code).

Bicycle parking at transit centers in the Bay Area have proved immensely successful and popular in the past few years. The Berkeley BART bicycle station regularly reaches capacity at its 75-space bike parking station. The Palo Alto Caltrain bike station regularly parks 60 bikes per day.

The S.F. Embarcadero BART bike station, planned to open in early 2003, is expected to hold 150 bicycles. And Caltrain's planned bike station at the S.F. Fourth & King site, projected to start operation in Fall 2003, will hold at least 100 bikes. Given the central location and high regional transit ridership expectancy for the new Transbay Terminal, it will clearly call for significantly more bike parking spaces than the more constrained transit stations listed prior.

STAFF • Dave Snyder EXECUTIVE DIR. • Leah Shahum PROGRAM DIR. • Elizabeth Creely DEVELOPMENT DIR. • Mary Brown MEMBERSHIP DIR. • Nancy Botkin OFFICE MANAGER
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Simply considering the bicycle ridership levels in San Francisco and, specifically, on Caltrain proves the wisdom of increasing the number of Transbay Terminal bike spots. In San Francisco, an estimated 30,000 residents bike regularly for transportation, according to a 1998 David Binder Research Poll. This number is expected to have risen in the past four years, and does not even include non-SF residents traveling to the city via combined means of transit and bikes.

That multi-modal commute choice of bikes and transit is increasingly popular in the Bay Area, as evidenced by the fact that 6% of Caltrain's riders bring their bikes on the trains, a figure that is actually over capacity.

While most transit systems in the Bay Area accommodate bicycles at some level— including AC Transit, SamTrans, Golden Gate Transit, BART, and Caltrain — there is clearly a capacity problem, as evidenced by the regular overflow of bikes on Caltrain. In addition, the buses hold only up to two bicycles each. As space on transit is limited, indoor, secure bicycle parking must be provided at as many transit stations — particularly regional ones — as possible.

We formally request that the Transbay Terminal project increase its bike parking units to 300 to be located indoors in a secure, visible, easily reached location.

In addition, a change should be made in the EIR to reflect that a stretch of Howard St. does now have bike lanes between 5th and 11th Streets. The SF Department of Parking and Traffic is currently considering a proposal to extend those bike lanes eastward to Fremont Street. Bike lanes on Howard Street will only increase the ease and frequency of bike trips to and from the Transbay Terminal.

Thank you for your consideration of this request.

Sincerely,

Leah Shahum
Executive Director

cc: Peter Tannen, Bicycle Program Manager, SF Department of Parking and Traffic
Honorable Chris Daly, San Francisco Supervisor
Maria Ayerdi, San Francisco Mayor's Office; Peninsula Corridor Joint Powers Board



San Francisco Tomorrow

Since 1970, Working to Protect the Urban Environment

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December 20, 2002

Paul Maltzer
Office of Major Environmental Analysis
1660 Mission St., Ste. 500
San Francisco, CA 94103

re: Draft EIS/EIR, Transbay Terminal/Caltrain Downtown Extension/Redevelopment project

Dear Mr. Maltzer:

San Francisco Tomorrow would like to express its appreciation to the Planning Commission and to Director Gerald Green for granting an additional two weeks to prepare comments on this important and complex project. We understand that the preparing agencies are working under considerable constraints in preparation of this document, and hope that our comments will make the document more complete and easier to understand.

General

The numerous studies that have been done in this area have produced an intimidating amount of information. Many reports are cited and summarized in this document. Many more reports which were key to the development of these proposals have been left out. The limitations on the size of this document may make this necessary, but the result is that more information is left out than included.. We recommend therefore that the FEIR/FEIS include as an appendix a bibliography of all of the source material for these projects.

The maps in this document are difficult to read and would benefit from the addition of directional arrows. Also, relevant street names are often omitted, again making it difficult to pinpoint locations. Please consider remarking these maps to make them clearer to the reader.

We understand that the funding stream for this project is extremely complex. It would seem prudent to design the project so that, if funding falls short, some aspects could be postponed without compromising the ability to build them later, once new funding sources are found. For instance, components that will be necessary primarily for high speed trains should be planned as part of this process, even though construction may not occur until new funding for that project has been allocated.

Financial Analysis

Project Estimated Capital Costs and Funding Sources. Table S-5 appears to have an inaccurate entry (repeated on Table 6.6-1). The revenue generated by land sales and tax increment is the same for both the West Ramp and Loop Ramp alternative. But these two alternatives do not place the same amount of land into the Redevelopment Area - so these figures should be different for each alternative.

This table (S-5, 6.6-1) also assumes a revenue stream from leverage lease transactions, with the footnote that "Leveraged lease transactions are encouraged by the FTA as innovative financing mechanism." Have the project sponsors considered as another "innovative financing mechanism" the use of ground rents combined with sale of development rights, rather than land sales, to provide an inflation-proof revenue stream for the project?

Environmentally Superior Alternatives

We question the combination of alternatives that on page S-27 are identified as the "environmentally superior alternative". We suggest that this document recommend and justify the environmentally superior alternative for each component separately.. For example, the 2nd-to-Main platform alternative does not qualify as an environmentally superior alternative because it does not fully meet the purpose and need for the project. The platforms in this alternative are not long enough to accommodate high-speed trains As the accommodation of high-speed trains is a specific goal of the project as approved by the voters (see Purpose and Need), the 2nd-to-Main alternative cannot be considered environmentally superior to the 2nd-to-Mission alternative. For the record, here are San Francisco Tomorrow's preferred alternatives:

1. West Ramp Transbay Terminal. This reduces the amount of land required for the ramps, allowing more opportunities for residential development.
2. Second-to-Mission, modified (see Figure 1, Note 6). In addition to its superiority for the accommodation of high speed rail, this alternative would appear to be cost-effective than the Second-to-Main alternative.
3. Tunneling Option. The tunneling option will result in less taking of property and less construction impacts on surface traffic and commerce. Proposition H recommends tunneling wherever feasible to minimize disruptions and relocations in the neighborhood. .

4. Full Build Out. With careful planning and urban design and by minimizing the parking requirements, this area can be a model for building a dense but livable urban environment.

Purpose and Need

In recounting the history of recent planning efforts in and around the Transbay Terminal, it is important that this document cite the voter initiative of November 1999 that instituted the current process. Two sections are particularly relevant to this document;

> Section 2. "As part of the extension of Caltrain downtown, a new or rebuilt terminal shall be constructed on the present site of the Transbay Transit Terminal serving Caltrain, regional and intercity bus lines, MUNI, and high speed rail, and having a convenient connection to BART and MUNI Metro..."
>
> Section 9. "The mayor, the Board of Supervisors, and all relevant city officers and agencies are hereby forbidden from taking any actions that would conflict with the extension of Caltrain to downtown San Francisco, including, but not limited to, pursuing any uses that conflict with Section 2; or undertaking any other land use or development efforts that would conflict with the intent of this legislation."

This mandate must be followed in implementing this project. In the case of this document, it should be the guide for determining the environmentally superior project.

Project Description

It would be extremely helpful if this section would include a map or maps of the entire project area with the three projects delineated on those maps. The current document has no overview of the combined projects.

The Redevelopment Area shows zero space allocated to parking. This doesn't seem realistic, so it must be an oversight. Please include this information in the project description. We trust that any parking provided will be minimal, and unbundled from the residential component. After all, one result of these projects will be the creation of perhaps the most transit-friendly neighborhood in the country. Including parking, especially at anything approaching a 1:1 ratio, would make a mockery of the project and make the creation of a desirable dense urban environment next to impossible.

Modification of Alternatives

It is critical to grade separate Sixteenth Street and Common Street as part of the Downtown Extension rail construction. The Caltrain line must be completely grade separated eventually in order to accommodate greatly increased levels of service and high speed trains. If it is not done as an integral part of Downtown Extension construction, it could be difficult if not impossible to do so in the future, given the existence and design of the ramps leading underground on Townsend Street. It should be noted that because Caltrain traffic levels are now at the lowest levels they'll ever be, single-tracking and line closures necessary to undertake this will be least disruptive if done now. It should be possible to accomplish this without closing the line altogether.

Therefore, an alternative that would place the Caltrain tracks underground from just north of the north portal of Tunnel Number One must be studied. This would eliminate grade crossings at Sixteenth Street and Common Street and make the right of way better suited for future high speed trains. It will also avoid the crossing of Cal-Train's 25,000 volt catenary wires and Muni's 600 volt trolley wires on 16th Street. Although this problem has been solved many times and in many places, it would be best to avoid it.

An alternative in which the proposed underground storage tracks would not be built, but instead be replaced by surface storage tracks in the same location should be studied. Having these tracks on the surface would improve working conditions for cleaning and light maintenance of the rolling stock. They would be accessed via a ramp from the underground line as shown in Figure 1. Development of air rights over the surface tracks could be considered as another revenue source for the project.

Please see the attached Figure 1 for an illustration of the recommended additional undergrounding of the Caltrain Downtown Extension and minor changes in its routing that would result in less taking of property than the alignments shown in the DEIS/DEIR.

San Francisco Tomorrow suggests an alternative platform arrangement that is similar to the 2nd to Mission alternative, but will better accommodate high speed trains (Figure 1). We find the 2nd-to-Main alternative to be seriously flawed, as the straight portion of the platforms will be only 900 feet long, too short for high speed trains. In addition, using the curved platforms in this alternative presents dangerous conditions to passengers (see Figure 2) as the distance between the platform and the train can be significant, ranging up to two feet.

Our modified 2nd-to-Mission alternative has the secondary benefit of reducing the length required for the underground pedestrian connection to Market Street. In addition, this alternative would simplify and improve the circulation patterns for train riders.

Land Use Impacts

It is very difficult to analyze the redevelopment project based upon the data given. We understand that the analysis of Urban Design is not required for this document, but one purpose of this review should be to suggest guidelines and components to be included in the Urban Design Plan for the Redevelopment area. We ask that the following points be included or clarified in that process - and that the Urban Design Plan for the project be completed and widely circulated prior to its adoption concurrent with the redevelopment plan.

1. Pedestrian enhancement should be a key component of the Urban Design Plan. This includes designing those elements that make circulation easier - wide sidewalks, corner bulbs - as well as determining the type of street wall that will be prevalent in the area.
2. Does this plan envision recreating the system of alleys found elsewhere in SOMA, but which were lost when the freeway ramps were built? This document would seem to indicate that this is not the case, but we think it could have many advantages, including breaking up the large blocks, and providing quieter pedestrian thoroughfares.
3. When will the height and bulk changes listed in Table 5.1-1 (page 5-5) be enacted? We suggest that the process await the preparation of the Urban Design Plan, which we understand is being undertaken now. Since several blocks of the Reduced Scope alternative actually feature taller height limits than the Full Build alternative, a plan could feasibly be adopted that uses a combination of height and bulk from the two alternatives to create the final Full Build alternative.
4. The Urban Design Guidelines for this project need to include guidelines for reuse of historic fabric and contextual treatment of new buildings when they are juxtaposed with older buildings. The Redevelopment Plan should incorporate the historic preservation components of the General Plan, including Article 11 of the Planning Code.
5. The new open spaces identified for the redevelopment area must be identified on a map somewhere in this document. Also, assumptions need to be made about the type and intensity of use that would be encouraged or expected at each location, and Design Guidelines developed to suit.
6. If 1:1 parking is provided for the new residences in this new neighborhood, six to eight floors of parking will be needed for each building. This is a problematic design element. To avoid this problem, parking should be retailed separately from the residential units, and any

parking provided must be placed below ground level. Also, as noted above, parking should be provided at a ratio considerably less than 1:1.

Shadows
Can you identify on a map the three new open spaces that will be created in the Redevelopment Area, and list the shadow impacts on these areas?

Wind Impacts
Can you identify on a map the three new open spaces that will be created in the Redevelopment Area, and list the wind impacts on these areas?

Displacements and Relocation
The tunneling method for the Caltrain extension is clearly preferable to the cut-and-cover alternative from the viewpoint of preserving historic structures and minimizing local disruptions. Proposition H also specifies that tunneling be incorporated to the greatest extent possible to minimize relocation of existing homes and businesses

As shown in the attached Figure 1, San Francisco Tomorrow advocates reviewing the track alignment at 2nd and Howard Streets for opportunities to reduce the number of historic buildings that are endangered.

Parklands
Please add a map of the Redevelopment Area that includes the size and location of the open spaces listed on Page 5-39.

Water Resources
Please include information on the increased volume of sewage that would be expected at full build-out, and the corresponding increase in CSOs (combined sewer overflows) into Mission and Islais Creeks.

Historic Resources
The mitigation measures on Page 5-91 should be clarified. How will the feasibility of relocation of historic buildings be determined? The comment about the scarcity of open land in San Francisco is inappropriate; the fate of an historic building should be determined not by its destination, but by the properties of the building itself. This mitigation measure needs to be corrected and clarified.

Why isn't an option included for preserving all or part of the buildings in place? A study should be made of the possibility of saving buildings that might otherwise be demolished during construction of the Caltrain Downtown Extension by means of bracing, underpinning, or other means of support. What is the possibility of preserving at least the facade of one or more of the endangered buildings?

Bus
The bus portions of the Transbay Terminal analysis appear good. The capacity is adequate, but not excessive, and the operating plan is well thought out. However, a signal will probably needed mid-block on Fremont Street between Mission and Howard Streets to expedite Muni and Golden Gate Transit buses exiting the terminal.

Parking
There is no mention of any parking whatsoever for the Redevelopment Area. Figure S-2 and 2.2-22 both give square footages for Hotel, Office, Retail, and Residential uses in this area, but no mention is made of parking. What assumptions were made for the purpose of review in this document? How would a significant reduction in the parking assumptions reduce the adverse traffic impacts determined by this document?

Thank you for your attention to these comments. Please feel free to contact us if you have any questions about our input.

Sincerely,

Jennifer Clary, President
(415) 585-9489

Norman Rolfe, Transportation Chair
(415) 775-9167

attachments:

Figure 1
Notes to Figure 1
Figure 2

Notes to Figure 1

Note 1. Study adding third track in this section of the line. This would be a continuation of the third track proposed each side of this section. This would allow greater operational flexibility , increase the capacity of the line, and reduce the possibility of delays to trains entering or leaving the terminal

Note 2. Study possibility of reducing taking of property by use of different curve radii or compound curve.

Note 3. San Francisco Tomorrow recommends that the feasibility and superiority of grade separation at the 16th Street and Common Street crossings be studied. In this alternative, tracks would pass under 16th and Common Streets (it may be necessary to raise 16th Street to clear underground tracks).

Note 4. Caltrain goes underground from just north of the north portal of Tunnel Number One. Ramp down to underground trackage at 3% grade.

Note 5. This is a refinement of the alternative that should be studied in the final design. We recommend additional studies to determine whether changes can be made in the Second and Howard Street turn that could preserve one or more of the historic buildings in the area that are proposed for demolition in the DEIR/DEIS.

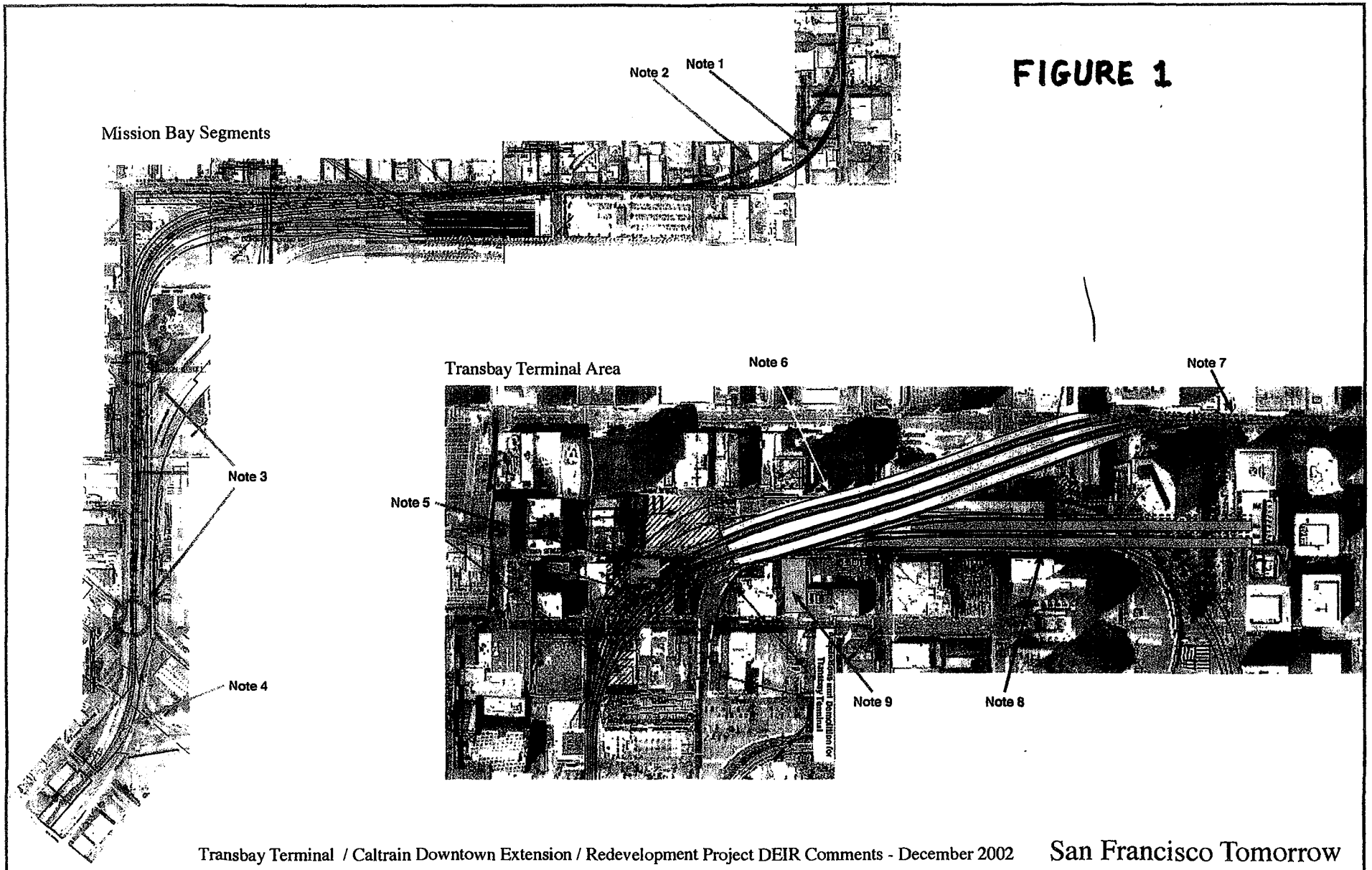
Note 6. Second to Mission Modified Alternative offers the only possibility to construct platforms long enough for high speed rail. This would create platforms that are from 1180 to 1245 feet in length, the longest possible for this project. The European standard is for 1312 foot platforms. .

Note 7. If necessary to conserve capital funds, the tail tracks here could be a separately funded second stage. They will become necessary when service is greatly expanded in the future.

Note 8. Bifurcated platform arrangement of the DEIS/DEIR shown for comparison. The additional diagonal platforms shown here have many footprint and circulation advantages. It is recommended that diagonal platforms only as shown on this drawing be constructed. The Diagonal platforms have the advantage of better circulation - the entrances and exits would be in one general location.

Note 9. We recommend obtaining an easement through the currently vacant lot at 524 Howard Street where a project has been approved, but construction has not yet begun. This would allow a more flexible track design, such as we show in our

FIGURE 1



Transbay Terminal / Caltrain Downtown Extension / Redevelopment Project DEIR Comments - December 2002 San Francisco Tomorrow

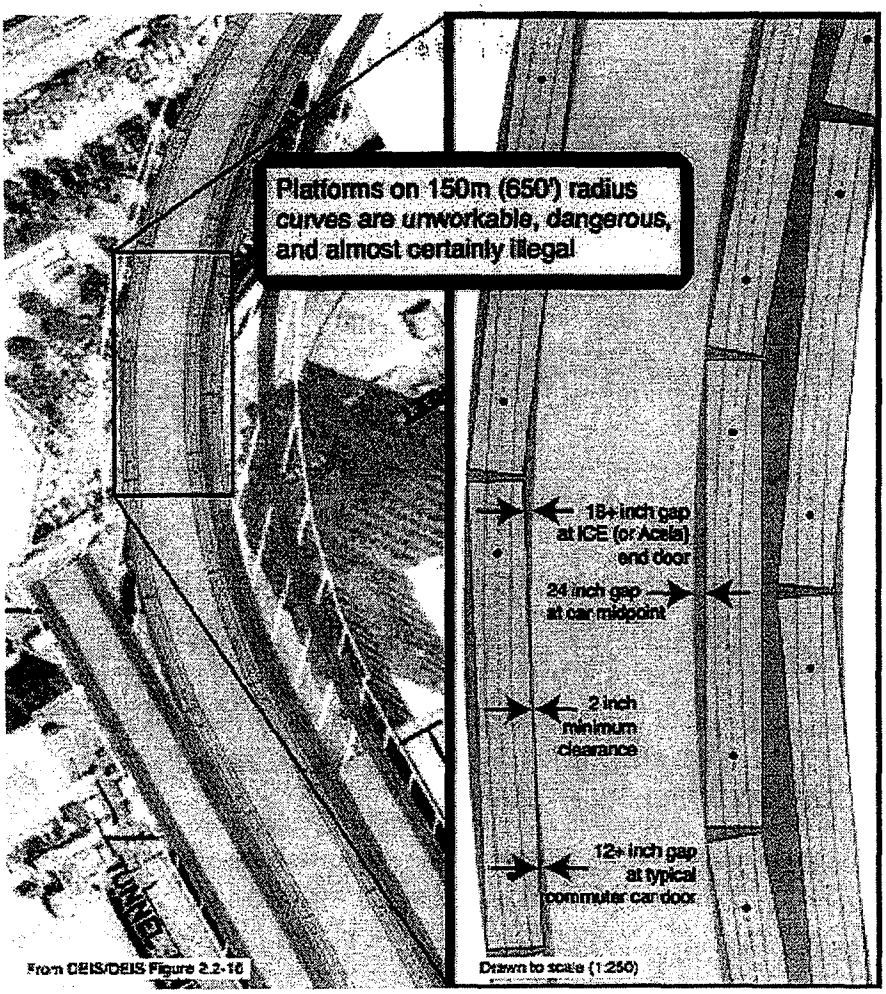

Platforms on 150m (650') radius curves are unworkable, dangerous, and almost certainly illegal
18+ inch gap at ICE (or Acela) end door
24 inch gap at car midpoint
2 inch minimum clearance
12+ inch gap at typical commuter car door
TUNNEL
From CEIS/DEIS Figure 2.2-16
Drawn to scale (1:250)

FIGURE 2

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November 13, 2002

Ms. Joan A. Kugler
San Francisco Planning Department
1660 Mission Street
San Francisco, CA 94103-2414

Dear Ms. Kugler,

Re: Extension of comment period for Transbay EIR/EIS

SPUR has assembled a working group to comment on the Transbay EIR/EIS and we look forward to sending our written comments to you. We find the document to describe the impacts one of the most complex projects the city has seen. Given that the new Planning Commission has yet to schedule a hearing, SPUR requests that the comment period be extended an additional forty five days (until after the December holiday season) so that we may thoroughly analyze and comment on the document. We believe that this additional time would be valuable for other commenters and is appropriate given the length of gestation time of the project.

Sincerley,

Jim Chappell
President

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DEC 23 2002
PLANNING DEPT

Mr. Paul Maltzer
Environmental Review
San Francisco Department of City Planning
1660 Mission St.
San Francisco, CA 94103

Dear Mr. Maltzer:

Enclosed are SPUR's comments on the Transbay Terminal/ Caltrain Downtown Extension/ Redevelopment Project Draft EIS/EIR. Thank you for the opportunity to comment.

Yours sincerely,

Michael Alexander
Chair, SPUR Transbay EIS/EIR Working Group

SPUR Comments

Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project

Draft EIS/EIR dated October 2002

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Contributors

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Introduction and preferences

SPUR has always advocated for the integration of land use and transportation. SPUR has long supported extension of Caltrain to the Transbay Terminal. As downtown expands to the south, rebuilding an obsolete hub for commuter transit, improving connections to BART, adding High-Speed Rail and surrounding the new terminal with a new mixed-use community that is friendly to pedestrians and non-motorized travel will be essential to the city's continued viability and livability.

Toward these ends, our preferred set of options for this project are:

- West Ramp alternative
- Tunneling option
- Creation of High Speed Rail facilities
- Pedestrian connection to BART
- Selection of a mixed-use development package scaled financially to the cost of the terminal, with proper consideration for urban design issues. This indicates the Full Build option
- We are unable to express a preference on the tail track options, because the information presented is incomplete.

Our internal discussions and analysis of this project have raised a number of questions, reflected in these comments. Financial concerns are more general, while comments on technical issues may be quite specific. Because this is a compilation of individual reviews, please excuse stylistic differences and occasional redundancies.

William Blackwell is a SPUR member and a contributor to SPUR's discussion on the EIR/EIS. He has submitted his own comments. A number of them are consistent with SPUR's preferences, particularly if construction needs to occur in stages. Rather than repeat them, SPUR urges that they be carefully considered and responded to.

Please accept these comments with our support for the project and mutual interest in seeing this great opportunity for San Francisco realized for the broadest benefit for our city and the region.

Thank you for your consideration.



Michael Alexander
Chair, SPUR Transbay Working Group
SPUR representative to Transbay CAC

Transit

Rail

Page S-6 and Sections 2.2.2.1 and 2.2.2.2 Tail Track Options

The Second-to-Main option takes fewer buildings and less land and costs less than Second-to-Mission. But the EIS/EIR does not explain how the tail track options differ in their operational characteristics, so it is not possible to evaluate whether the Second-to-Mission design has overriding advantages. Which is better:

- Three center platforms, or two center platforms and two side platforms?
- Two tracks splitting into six tracks, or one track splitting to four terminal tracks, with two other tracks being extended as tail tracks?

On page 2-35, Section 2.2.2 says that two tracks enter the Transbay Terminal, but Section 2.2.2.2 says that Second-to-Mission's "... southernmost track would branch into four tracks... [and]... The two northernmost tracks would continue on an angle to Mission Boulevard *[sic]*..." Thus, the Second-to-Mission option appears to have three tracks entering the terminal. Please clarify.

Section 2.2.2.4

Both tail track options allow extension of high speed rail to the Eastbay, but such extensions would start from different locations and directions. SPUR believes that the Eastbay extension will eventually happen. Please clarify if one alignment (and if so, which one) offers significant engineering, construction, cost or operational advantages over the other.

Page 3-29

states that Caltrain ridership would increase from about 13,000 to 29,300 daily boardings and alightings at the San Francisco terminal if the terminal station would be moved from Fourth and Townsend to the Transbay Terminal site. Is this significant increase due solely to the extension of Caltrain or also to the development of new office, retail and residential uses in the immediate vicinity of the new terminal that is considered part of the project? Also, page 5-120 states that the Caltrain extension would result in a shift in SamTrans passengers, which seems to account for 2,000 passengers or 4,000 of the daily boardings and alightings. Please clarify.

Page 5-118

identifies a shift in mode share with the Transbay Terminal/Caltrain Downtown Extension Project for work trips between San Mateo and Santa Clara Counties and San Francisco. Is the shift due solely to the extension of Caltrain, or is it also partially due to development in the area associated with the Redevelopment Plan component of the project? Please clarify.

Bus

Page 2-7. Bus Storage: Section 2.2.1.1: West Ramp Alternative

AC Transit Bus Storage is listed as between 42 and 53 buses, plus Golden Gate Transit Storage. No number is given for the Golden Gate Transit Storage portion of the project. In Section 2.2.1.2, Loop Ramp Alternative description, bus storage is identified as being 120 on the ramp and up to 53 in a storage yard. If the entire bus storage need can be accommodated in the storage yard as shown in the West Ramp Alternative, then what is the rationale for choosing the Loop Ramp

Alternative to provide storage? Conversely, in the Loop Ramp Alternative what is the need for a bus storage yard if the ramp will provide over twice the storage of the West Ramp Alternative?

It would be helpful to provide a chart showing the projected storage needs of the various operators.

Page 2-9

The text indicates that Golden Gate Transit *basic service* will be located in the new mid-block terminal, while page 5-114 indicates that Golden Gate Transit *commuter service* would use the new mid-block boarding area. Which one is correct, and how do the services differ?

Please explain why Golden Gate Transit commuter service buses continue to be staged at the curb. Why were they not included in the new Terminal regardless of where the midday layover occurs?

Street improvements included as part of the new Terminal should be described in Chapter 2. There are discussions in Chapter 5 that indicate that street improvements would be made. For example:

- It is unclear if there is a bus lane on Beale Street or on Fremont Street. Discussion of Muni bus travel times (on page 5-113) indicates that "assuming the implementation of a diamond (bus only) lane on Beale Street..." Would there be a bus lane? How would it be configured? What would be the impact on traffic operations?
- Similarly, what would the roadway striping be on Fremont Street? Would the existing bus lane be eliminated? Relocated?
- Page 5-136 indicates that there would be a new mid-block signal on Fremont Street between Mission and Howard Street south of the overpass. What would happen with the existing signal? Has an operations analysis of the buses entering and exiting the terminal been conducted? Why hasn't it been included in Chapter 3 or 5?
- Page 5-136 indicates that a pedestrian mitigation measure should be to ensure that "the Transbay Terminal design increases corner and sidewalk widths at the four intersections immediately surrounding the terminal". Shouldn't this level of terminal design already have been completed? What would happen to the existing travel lanes and curb parking/bus stops? Why haven't these been included as part of the project and their effects analyzed?

Page 2-12

states that with the new terminal that SamTrans would terminate on Mission Street between Fremont and Beale Street, and that SamTrans buses would load on Fremont Street immediately south of the terminal. Would the Mission Street curb between Fremont and Beale Street become the new layover location for SamTrans buses? How much of the curb would be affected? No analysis of the impact of this on parking and traffic operations is presented in Chapter 3.

Page 3-44

identifies current operations of the Golden Gate Transit buses, including the problems with pedestrians queuing for the bus blocking pedestrian flows on Fremont Street. Given the significant increase in street level activity from development in the area, why haven't Golden Gate Transit operations been entirely shifted to the new Transbay Terminal? Why hasn't a plan for street level loading of Muni, SamTrans and Golden Gate Transit buses been developed and illustrated? How much of the street curbs during the AM and PM peak hours be dedicated to idling buses? How and where will future increases in Golden Gate Transit service be accommodated? The impact of operations that remain at street level should be fully discussed.

Page 5-113

states "assuming the implementation of a diamond (bus only) lane on Beale Street between Market Street and through the terminal's designated Muni loading area..." which implies an HOV lane on Beale Street. How would this look? Also, would there be an HOV lane on Fremont Street? Would the existing mid-block signal that facilitates buses exiting from the hump to access traffic flow be removed, or be moved?

Page 5-120.

Please quantify the increase in transfers between Caltrain and AC Transit and Golden Gate Transit, or explain why they aren't quantified.

Section 5.1.1.1 Impacts common to both alternatives

"Additional impacts would occur due to off-site staging and parking requirements for both AC Transit and Golden Gate Transit. Buses would be stored at a lot on Harrison Street." Please clarify how the impacts of the Loop Ramp alternative (Sec. 2.2.1.2), a facility that will hold up to 173 buses, will be the same as for the West Ramp Alternative (Sec.2.2.1.1), a facility that holds only 53. The West Ramp and the Loop Ramp alternatives are quite different, with significantly different impacts on land area where bus storage is concerned.

Table 5.19-1 Operational Differences between Transbay Terminal Alternatives

The numbers in the table don't add up. Some examples:

- Bay Bridge to Terminal: Based on the illustrations in Figure 2.2-1 and 2.2-7, please explain how the West Ramp alternative requires an additional 1,100' of travel distance, the equivalent of 2.5 city blocks, between the Bay Bridge and the Terminal, if the Terminal is in the same location as the existing terminal. The actual travel distance should be less, since the first bus bays are up to 1100' feet *closer* than other alternatives, given the actual travel paths involved. If the number reflects looping within the facility before arrival for the West Ramp, then the distance from the Terminal to the Bay Bridge should be called out separately, since the West Ramp Alternative will have a shorter travel time for this leg.
- Bay Bridge to Terminal to Storage Area: How can this number be the same as for Bay Bridge to Terminal? Since the Loop Ramp and West Ramp alternatives include bus storage in the same yard, as indicated in Section 2.2.1.2, then why aren't the travel distances the same?
- Storage Area to Terminal to Bay Bridge: Same as above.
- Travel Times: the travel times do not match travel distances.
- Travel time from Bay Bridge to Terminal
    - Existing Terminal is 216 seconds for travel distance of 6500'
    - West Ramp is 317 seconds for travel distance of 7600'
    - Loop Ramp is 227 seconds for travel distance of 6500'
    - Why is the travel time greater for the Loop Ramp vs. existing, if the distance is the same?
- Travel Time from Storage Area to Terminal To Bay Bridge
    - Existing Terminal is N/A. Buses are currently stored on the ramp, and not in the facility. (See p. 5-114, Bus Storage Areas) Why is this not reflected in the table?
    - West Ramp is 329 seconds for travel distance of 7600', a difference of + 12 seconds over the same distance listed for Bay Bridge to terminal. Reversed, the same travel time is 334 seconds, a 17 second increase for the same route in reverse.

- Loop Ramp: why is travel time 13 seconds more than the same distance given for Bay Bridge to Terminal? Why does the same trip in reverse take 3 seconds less? why the discrepancy between this and the West Ramp alternative?

- Please review the remaining travel times and distances for similar problems.
- Ramp to Terminal: if the Loop Ramp Alternative replicates the same configuration and function as the existing condition, why is there no travel time listed here?
- Notes: Note 1 of the table says that "no deadheading or off-site staging is currently involved with AC Transit operations". P. 5-114 says that currently AC Transit buses are stored on the access ramps and not in the terminal. If the current facility and the Loop Ramp alternative both use the access ramp for bus storage, how can one not require "deadheading or off-site staging" when the other does?

Table 5.19-2

- AC Transit operating costs. Given the errors listed above, the numbers here don't seem to add up. If the terminals are all in basically the same place, then the numbers should be closer than shown. Given the information presented, we question that operating costs could be so much higher for the West ramp than for the existing situation.
- P. 5-117 says that table 5.19.2 shows that the Loop Ramp Alternative requires a 78% *increase* in operations and maintenance costs, and then characterizes this as "not significantly higher...than under the current situation." Please clarify how such an increase is not significant.

Pedestrians

- The Second-to-Main and Second-to-Mission Caltrain Extension Alternatives both include a design option for a pedestrian connection underneath Fremont Street to the BART Embarcadero Station (S-7, also 5-118). However, only 0.16% of people walked, 4.63% took BART, and 0.23% took Muni rail to get to the Transbay Terminal in the morning (3-46). Also, while 78% of TBT patrons walked from the Terminal to their destinations in SF in the mornings, only 1.7% of them use BART and 2.96% of them use Muni rail. Please explain how the pedestrian tunnel to BART/Muni would significantly promote linked transit ridership and stem pedestrian reductions in the TBT area.
- Special Pedestrian Conditions concerning casual carpool and Golden Gate Transit queues are mentioned (3-43); however, there are no mitigation measures proposed for these conditions.
- The EIS makes no mention of current or future obstacles to pedestrians with disabilities, or how the TBT intends to comply with the Americans with Disabilities Act.

Page 5-136

- The text indicates that there would be a new traffic signal on Fremont Street between Mission and Howard Street. Would the new signal be in addition to the existing mid-block signal? What would a "full stop" phase be? Since the only vehicular movement at the mid-block crosswalk is westbound, and since buses exit the surface terminal downstream of the proposed new mid-block signal, a signal similar to the one that currently exists north of the terminal should be sufficient to accommodate pedestrians and vehicular traffic.

- The EIR/EIS does not include operational analysis of the access and egress from the surface level of the new Terminal.

Page 5-136.
Would it be possible to provide access to the pedestrian tunnel from street level? If so it would serve many more people than the 108 currently identified.

Bicycles

The EIS adequately covers the issues of bike lanes, bike ridership, and bike storage. However, it also needs to identify short-term bike parking at the TBT or on the sidewalks around it as a way to promote bike ridership and lessen automobile impacts.

Autos and Parking

Page 5-121.
The reduction in person-hours of vehicle travel by seven percent seems high. What is the reduction in travel times based on? Was the significant development in the South of Market area considered?

Page 5-122.
The methodology that the Planning Department used for determining adverse effect at the study area intersections should be up front before Table 5.19-4.

Page 5-122.
Why does Table 5.19-4 have Existing plus Project conditions, while the text header is Baseline plus Project? This is somewhat confusing. 2020 Baseline plus Project seems understandable and indicates that it is not a true Existing (2002) condition.

Page 5-123.
What does the shading on Table 5.19-5 represent? Some of the "adverse effect" intersections are shaded, but not all. Were some missed?

Page 5-126.
The EIS expects there to be 7 intersections with "adverse and unmitigable" traffic impacts. The only improvement proposed is that the City may request developers to contribute to the new Integrated Transportation Management System program. Since developer participation is not mandatory and this system has not yet been implemented, what evidence is there that it might ameliorate these specific traffic impacts?

Development Strategy

The EIS/EIR should clarify why the project is to be constructed all at once, and what procedures and environmental review will occur if that strategy is found to be infeasible and construction happens in stages.

William Blackwell is a SPUR member and a contributor to SPUR's discussion on the EIR/EIS. He has submitted his own comments. A number of them are consistent with SPUR's preferences,

particularly if construction needs to occur in stages. Rather than repeat them, SPUR urges that they be carefully considered and responded to.

Economics

The key issues of financing and development raised in the EIS/EIR center on some fundamentals of the entire project's stated feasibility. As a redevelopment project, the importance of revenue from land sales gained by the removal of the Eastern ramps segments and the later tax increment streams are clearly seen as essential to the viability of the project. However, no sufficient discussion is given to the pre-development financing of the project. Please explain the sources of project and construction money needed before the availability of revenues from land sales and tax increment.

The analysis of the revenues from mixed-use development appear to be the same in both ramping alternatives. The West Ramp alternative will make available somewhat more land for mixed-use construction. More importantly, it consolidates a city block, making development options much more attractive and valuable. As a result, land sales and subsequent tax increment revenues should be significantly higher. Therefore, we believe the EIS/EIR's assumption that revenues are the same for the alternatives is inaccurate.

Similarly, the West Ramp and Loop Ramp alternatives show the same construction costs. Since the West Ramp is considerably shorter, the cost assumptions appear to be inaccurate.

Construction Issues

SPUR is concerned about the impacts of the Cut-and-Cover Option to historic architectural resources and existing business operations. Dramatic change to SOMA in the last decade has included the loss or alteration of many historic structures that play a significant role in giving our city its unique character. Many of the buildings that would be demolished under Cut-and-Cover are contributors to historic districts, making their value greater than as individual pieces of architecture.

The impacts of cut-and-cover when BART/Muni was built under Market St. raises additional concerns. Existing businesses suffered for years from construction limits on public access, and many businesses failed.

SPUR therefore supports the Tunneling option and strongly encourages efforts to minimize adverse impacts to historic structures and districts, and existing businesses.

Design

Historic/ Cultural Resources (Sections 4.16 5.14 & 7.2)

Section 5.14.2, Archaeological Resources: Mitigation

- By stating that mitigation measures for both archaeological and architectural resources would be set forth in an MOA, the EIS/EIR is deferring the mitigation. Per CEQA Section 15126.4(a)(B): "Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way." Deferring mitigation to a future MOA without setting performance standards in the EIS denies the public its opportunity to provide input on the proposed mitigation, and makes the EIS inadequate.

Section 5.14.3.3, Redevelopment Components

- The conclusion that neither of the redevelopment alternatives would have an adverse impact on historic properties does not seem correct. Since the intention of creating a redevelopment area would be to encourage and facilitate new development in the designated area, there could be an increased likelihood that historic resources located within the area would be altered or demolished. The EIS should identify protections against such impacts.

Section 5.14.3.4, Affected Properties

- Please note that the 670-680 Second Street building has been altered in recent years and converted to an office building. As such, the structure no longer appears as depicted in this document. A Negative Declaration was prepared by the City of San Francisco for the alterations to this property.

- Section 5.14.2 refers to mitigation for architectural resources, but its mitigations are about archaeology. There should be a separate section on mitigation of architectural resources. See our comments about adequacy in Section 5.14.2, above. Providing a list of types of measures and stating that these are merely suggestions is not adequate. It should be stated here which, if any, of these mitigation measures would have the potential to reduce impacts to a less than significant level and whether such a conclusion would be different for different buildings.

- Please explain what is meant in the last sentence of Section 5.14: "...recordation eliminates one adverse effect of demolition..." Since demolition means the total loss of a building and results in a significant unavoidable impact for an historic resource under CEQA, how does recordation eliminate one adverse impact?

Section 7.2, Unavoidable Significant Adverse Effects Under CEQA

This section should list which buildings and districts would be significantly impacted under each alternative. The lack of clarity of the Historic and Cultural Resources section makes this doubly important.

Visual & Aesthetic Issues

Summary Project Description, p. s-3: No-project alternative

- There is no discussion of the need to seismically upgrade the existing Transbay Facility. Wasn't the expense of doing this one of the main reasons for rebuilding the facility?

Summary Table, p.s-16, Visual/Aesthetics Impact Category:

- No-Build Alternative:
  - Will this alternative have additional visual impacts due to requirements that existing facilities need to be seismically upgraded?
- Transbay Terminal Components:
  - Because there are no supporting illustrations of the Loop Ramp Alternative, other than a site plan diagram, it is not possible to evaluate the visual/aesthetic impacts of this scheme.
  - Based on the illustrations and text provided, it is clear there are significant differences between the two terminal alternatives. The West Ramp Alternative replaces a single-deck loop ramp with one double-decked ramp; how does this

make the ramps "less visually intrusive"? How does the Loop Ramp Alternative enhance views? Views from where?

- Caltrain Extension:
  - The Tunneling option would have significantly fewer aesthetic impacts on the area than the Cut-and-Cover option. In addition, what is the likelihood that new construction will be of the same scale as that which is demolished?
  - What are the mitigation measures proposed for the Caltrain extension? It seems that the Tunnel option is the way to mitigate the aesthetic impacts of the extension.
- Redevelopment Components:
  - There are two redevelopment alternatives; it seems highly unlikely that the two alternatives will have the same visual impact. Does the text in the table refer to both schemes?

Summary Table, p.s-17, Transit Operations Category:

- No-Build Alternative:
  - What are the impacts on operations if portions of the facility must be closed for seismic upgrading?
- Transbay Terminal Components:
  - How can the Loop Ramp Alternative with almost double the number of bus bays handle only 68% of the passengers of the West Ramp Alternative?
  - What is the mitigation proposed for off-site bus storage?

Chapter 2, Description of Project Alternatives

- In general, the almost complete lack of illustrations of the Loop Ramp Alternative make meaningful analysis of the visual and aesthetic impacts of this scheme impossible.
- Levels of Redevelopment, p. 2.43
  - How does the full build/reduced scope development scenarios relate to the two terminal proposals? The Loop Ramp Alternative has less land available for redevelopment and the land will be under greater constraints than the West Ramp Alternative. Thus the EIS/EIR is inaccurate in not comparing development levels for each ramp alternative.
  - It would be useful to know what the proposed development levels mean in terms of FAR, building height, building separation, and relationship to height and bulk limits of the planning code. Do the development levels spelled out deviate significantly from what is permitted under current zoning?
  - There are significant differences between the development envisioned in Table 2.2-22 and the illustrative model shown in Fig. 5-16.3. Please clarify.
- Levels of Redevelopment, Figure 2.2-22:
  - Some of the development levels seems highly unlikely when compared to parcelization, adjacent land uses, etc. For instance:
  - Block #3718: it is difficult to imagine that the shape of the parcel as drawn will support the level of development illustrated.

Section 5.16. Visual and Aesthetic Environmental Consequences and Mitigation Measures

- The minimal graphic representation of the Loop Ramp Alternative make it difficult to gauge its visual and aesthetic impacts.

- 5.16.1 No-project alternative, p. 5-92, 93
  - The existing terminal would require extensive seismic renovations. There is no discussion of the negative aesthetic impacts this could have.
  - Do continued existence of the bus ramps contribute to declining levels of maintenance and investment in surrounding properties, and therefore constitute a future negative aesthetic impact?

- 5.16.2 Transbay Terminal, p. 5-93
  - Figure 5.16.2 does not clearly show the difference between the west ramp (stacked) and the loop ramp (split) scenarios. It shows existing and stacked ramps only.
  - Model of Potential Redevelopment Sites and Scale, Fig. 5.16.3, p. 5-99: Please provide evidence of the likelihood that developers would propose high-rise projects, especially residential high-rise development, in such close proximity to one another as shown in the illustration.
- 5.16.3 Caltrain Downtown Extension
  - The cut and cover option will have significant visual and aesthetic impacts in both the near and short term. Operations will cause disruptions to the surrounding businesses and store frontages by making access for customers and employees difficult for extended periods of time. When this occurred on Market and Mission Streets during the construction of BART, many businesses failed or moved away, resulting in long-term deterioration to the urban fabric, and therefore producing significant negative visual and aesthetic impacts. Similar impacts could and should be expected in the project area under this option.
- 5.16.5 Changes to Scenic Views and Vistas
  - The loss of views mentioned in the report is not illustrated. Are these lost views from existing buildings, or from public spaces and streets? If the former, then it should be noted that the new development will replace these views with an equal or greater number.
  - On page 5-98, the report states that the spacing between the new towers in the redevelopment area would be greater than is typical North of Market, but the model illustrated in Fig. 5.16-3 sseems to show towers spaced as close or closer than the north of Market St. condition.
- 5.16.6 Change in the Cityscape
  - There is no Illustration 5.16-6 in the draft plan
  - Illustrations 5.16.4 and 5.16.5 do not show the views that are "more differentiated as the stepping up of development heights towards downtown is realized" The views as illustrated are much more monolithic and undifferentiated than described, espceally in Fig. 5.16-5. Better illustrations would be helpful.
- Other:
  - Sound walls: there is a mention somewhere in the report that sound walls are required. Are they required on the ramps? If so, this is a major impact that is not illustrated in the document.

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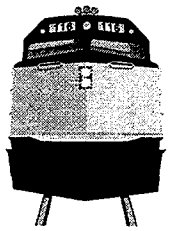

December 19, 2002

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PLANNING DEPT

San Francisco Planning Dept.
Attn: Paul Maltzer, Environmental Review Officer
1660 Mission St., Suite 500
San Francisco, CA 94103

Subject: Transbay Terminal EIR Comments

Dear Mr. Maltzer:

We are dismayed to learn that the new Transbay Terminal / Caltrain Extension EIR does not include the alternative of rehabilitating the existing Transbay Terminal for use as a joint rail and bus terminal for Peninsula trains, high speed rail, and Transbay buses. We believe that this alternative should be seriously considered for the following reasons:

1. The extraordinarily high cost of removing and then replacing the existing facility. Replacement costs are much higher than re-configuring the existing facility. Property acquisition would be entirely eliminated by re-configuring the existing facility.

2. The estimated cost of rehabilitating the Transbay Terminal in the 2001 MTC Transbay Terminal Improvement Plan Study was only $275 million. Since the existing terminal was built and operated as an interurban railway terminal from 1939 to 1956, the additional cost of rehabilitating the terminal for use by trains of the same weight should be minimal.

3. A rehabilitated and reconfigured transbay terminal will serve future needs for more than a quarter of a century. The capacity of the existing terminal is well in excess of any prospective needs for the next 30 years or more. For example, the capacity of Lane 3 which formerly accommodated Tracks 5 and 6 would be 300 rail commuter cars per hour assuming 2 minutes for loading or unloading and one minute for entrance and one minute for exiting. Since Caltrain operates only about 40 cars per hour maximum at present, even a very conservative capacity estimate of 200 cars per hour with 10 car trains would be more than adequate for any for seeable increase in rail commuting from the Peninsula. Lane 2 has room for 15 bus loading zones. Assuming 1.5 seconds loading time per passenger with fare pre-payment, a loading time of 1.5 minutes for 60 passengers, and a consequent minimum headway per zone of 5 minutes, a capacity of 180 buses per hour from the east bay could be accommodated in Lane 2.

Currently, AC Transit operates only about 80 buses per hour during the peak hour. Similarly, Tracks 1 and 2 in Lane 1 could easily handle all of the high speed trains that one could ever hope to see. Other bus operators, such as Golden Gate Transit, can be easily accommodated in Lane 2 with AC Transit for the foreseeable future. Greyhound which now operates 5 to 10 coaches per hour in Lane 1, could easily be relocated to the ground level such as Natoma Street behind the terminal where Amtrak formerly boarded passengers.

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Yolo County

Hal Wanaselja
San Francisco County

TRAC, active since 1984, is a non-profit consumer lobby advocating improved passenger train service in California.

4. We believe that the reasons given in the EIR for not considering the rehabilitation of the existing Transbay Terminal for rail and bus use to be without foundation or justification. Most, if not all, rail passenger cars in the United States can operate around a 250 foot radius curve. The 870 foot long platforms can accommodate 10 car trains which is more than long enough for any foreseeable demands. The design capacity of the terminal and loop is 75 tons per car which is adequate for most commute rail cars, high speed rail cars, and high speed locomotives. Talgo, which now operates trains in the Northwest, has informed us that their new high speed Talgo 350 Km. trains can with minor modifications negotiate curves of less than 250 feet. There cars also weigh less than 37 tons per truck with passengers as do the French TGVs. With reuse of the terminal for trains and buses as described above, there is no need for an additional bus deck, so no major seismic work is required. The claim that obtrusive bracing would be needed for rail was based on the erroneous assumption that an additional deck would be needed for buses above the existing building.

5. Re-use of the existing Transbay Terminal would not require acquisition of additional property. This is a major cost savings and a major environmental advantage.

6. Proposition H of 1999 mandates fiscal prudence. Conserving public resources through reuse is the least-cost alternative. The two alternatives considered in the EIR require the installation of a much more massive 2 or 3 level structure over both 1st Street and Fremont Street than the existing single level structure. This installation presents obvious environmental impacts which have not been adequately addressed by the report.

7. San Francisco Proposition H of 1999 mandates that the City select the most economical alternative for extending Caltrain to the Transbay Terminal that provides rapid and efficient service. Since a loop terminal does not require inbound trains to cross outbound tracks, or outbound trains to cross in front of inbound trains, or require crews to reverse trains, as with a stub end terminal, a loop terminal can be expected to operate with fewer and shorter delays.

We would also like to recommend that a direct tunnel connecting Tunnel #1 on the Caltrain line with the throat to the Transbay Terminal Loop between Harrison and Folsom be considered. A direct routing would be about 1.25 miles long, require no property takings, and allow much higher speeds south of Harrison Street. In the course of the preparation of the report, reuse of existing facilities was ruled out because of the supposedly high cost, but now appears to be the most feasible option as new construction options assumed by the report now have a cost in the billions of dollars. This is as much true on the Bay Bridge as it is with the Transbay Terminal. Adaptive reuse of both facilities for rail should be studied in detail before any final decision is made on the configuration of a new TBT.

Whichever option is chosen, we believe a rail terminal on the second level with access to the Bay Bridge should be studied carefully as part of the project. After completion of the new east span, there is no reason to demolish the old span. The east span could be retrofitted for rail (plus bicycles and pedestrians) and connected to the existing west span. The rails-on-the-bridge study concluded that adding rail to the west span would cost less than $1.5 billion, but this alternative was ruled out because of the supposedly high cost. In light of the tunnel alternatives, which soar to $12 billion as estimated by the MTC, rehabilitation of the Transbay terminal is the most feasible option.

Rail on the Bay Bridge and a second level Transbay Terminal rail facility should be evaluated and compared with the other options in detail before any final decision is made on the configuration of a new TBT.

Sincerely,

Richard F. Tolmach
President, Train Riders Association of California

TRANSPORTATION SOLUTIONS DEFENSE AND EDUCATION FUND

16 Monte Cimas Avenue Mill Valley, CA 94941 415-380-8600

December 20, 2002

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CITY & COUNTY OF S.F.
DEPT. OF CITY PLANNING
ADMINISTRATION

Paul E. Maltzer, Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Ste. 500
San Francisco, CA 94103

Re: Transbay Terminal DEIS/R

Dear Mr. Maltzer:

Transportation Solutions Defense and Education Fund (TRANSDEF) is a non-profit organization dedicated to improving regional planning for transportation, land use and air quality for the Bay Area. The Transbay Terminal / Caltrain Downtown Extension/ Redevelopment Project is the most significant project to come forward during our ten years of advocacy. It embodies all the most positive aspects of Smart Growth and the regional approach we have been advocating. We support the project wholeheartedly. In addition, we are pleased to note that the quality of the DEIS/R is consistent with the quality of the project. The DEIS/R is comprehensive, thoughtful, detailed and well-edited. The preparers are to be congratulated.

TRANSDEF supports the detailed architectural comments of RAFT and Michael Kiesling. Due to the commentors' many years of involvement with the details of a Caltrain rail extension, we are confident that the alignments proposed therein deserve close study as additional alternatives to the two rail alternatives in the DEIS/R.

Recognizing that no document is perfect, TRANSDEF appreciates the opportunity to provide the following comments, which are keyed to page numbers:

S-7 and elsewhere: The reference to Mission Boulevard appears to refer to Mission Street.

S-27: While the Summary contains a description of the Environmentally Superior Alternative, a more extended discussion in the body of the DEIS/R would be useful.

1-28: The Project will also need MTC and federal DOT approvals.

2-11: It appears that the location of the lower bus level exit ramp on the drawing is incorrect, as it conflicts spatially with the entry ramp to the upper bus level.

3-25: The high existing peak period transit capacity utilization indicates a need for mitigation for the increased passenger demand resulting from the Project. Please evaluate the impact of increased use of the Terminal on the need for additional Muni service, to maintain acceptable service standards. Note, for example, on 5-114 how the ground level loading area will operate near capacity for existing levels of transit service. Determine locations for loading for the full complement of transit service needed to adequately serve the new Terminal.

3-26: Verify that the capacity utilization numbers in Table 3.1-13 are comparable. Describe the capacity utilization service standards for the other transit operators.

3-28: The asserted 140% increase in 3.1.6.1 is incorrect.

3-48: The discussion is unnecessarily complicated by the inclusion of BART patrons that did not use the Terminal in the AM. Because they are irrelevant to any useful conclusions, they should be deleted.

4-29: On July 23, 2002, the US Court of Appeals for the 9th Circuit issued a stay of MTC's mobile source emissions budget, pending review of a challenge to its adequacy. This triggered a second conformity lapse, which is still in place as of the date of this letter. In addition, the SIP's Negative Declaration of Environmental Impact is facing challenge in Superior Court. If successful, the SIP approval would be vacated.

5-9: The Land Use analysis of the Redevelopment Project fails to evaluate the Project's regional land use benefits, which include preserving suburban open space (see 5-122).

5-49: An analysis of the tax and other economic implications of a operational Project is glaringly absent. The Project should have strikingly positive net benefits to the San Francisco and regional economies. Increases in retail sales and employment should be estimated, along with increases in the taxes reported in Table 5.6-5.

5-49: The air quality analysis must evaluate the regional emissions reductions that result from the increased use of bus transit and the corresponding decrease in auto travel.

5-49: The air quality benefits of the Redevelopment Project must be identified here. This will occur through correction of the definition of alternatives on 5-122 (see below).

5-95: The Figure legend should be "stacked" not 'staked.'

5-115: Please provide an explanation for why operating costs for AC Transit will increase beyond existing levels.

5-119: Include the Muni and other transit operator cost savings in a comprehensive analysis of Fiscal and Economic Impacts.

5-120: Because the expected most significant benefit of the Project is the synergy of bringing all the region's transit operators together at one location, it is especially important to evaluate the impact of this co-location on the ridership of each of the operators. It is not adequate to say that the Caltrain extension "would likely encourage transfers from Caltrain to AC Transit buses, thereby increasing AC Transit bus ridership." The increase in transit ridership should be evaluated for its impact on mode split, regional VMT and air emissions.

5-121: A 20% decrease in peak hour delay is very significant. Please verify that this is reflected in the air quality analysis. It should also be highlighted as one of the benefits of the Project.

5-122: The land use intensities of the three alternatives listed here are not comparable, making comparisons of impacts invalid. The total development for each of the alternatives be at the ABAG Projections level. Suburban development on the fringes of the Bay Area must be correspondingly decreased. The work done for the Regional Agencies Smart Growth Strategies/Regional Liveability Project Smart Growth Alternative should be very helpful here. We suggest consulting ABAG for guidance as to where to reduce projected suburban development, because they are assembling the Projections for the Smart Growth Alternative. These alternatives then need to be plugged in when re-running the emissions and travel demand models (see 5-49 and 5-120) and looking at open space consumed by suburban development (see 5-9).

5-126: Provide additional mitigations for adverse impacts at seven intersections: (1) reduce maximum parking ratios permissible in the Project area, (2) require provision of City Car Share-type service for new development in the Project area and (3) increase local transit service to the Project Area. The best way to avoid congestion is to discourage driving and provide convenient transit. Without parking, the Project Area will not be a destination for autos.

5-135: Please explain the methodology used in developing the extraordinarily low projected Caltrain rider transfer rates to Muni Metro and BART.

5-138: Please explain the methodology used in developing the surprisingly low projected need for bike storage.

5-174: Because no additional parking or feeder transit service to Caltrain stations is assumed, it is clear that Caltrain patronage could increase significantly beyond projected levels, were these facilities to be added in the future. This is additional justification for the mitigations proposed at 3-25 above.

Several issues arose that we believe should be discussed in the FEIS/R:

- It appears that the upper bus level of the West Ramp Alternative uses only half of the space available. It would be desirable for the building to have the structural capacity to build out the other half, if demand for it should develop in the future.

- If the rail lines are extended to the East Bay in the future, the tail track function would be lost. Should the right-of-way for replacement tail tracks be identified and protected?

TRANSDEF is very pleased with the DEIS/R for this exceptional project. The comments we raise here mostly seek full documentation of the regional benefits of the Project. We believe that the Bay Area needs to understand how beneficial this project will be. In addition, we have identified the need for further mitigation of the Project's impacts. Thank you for this opportunity to comment on the DEIS/R. Should any questions arise as a result of these comments, please contact us at the address on the letterhead.

Sincerely,

David Schonbrunn

David Schonbrunn,
President

VII. Businesses

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December 20, 2002

VIA FACSIMILE AND HAND DELIVERY

Mr. Paul E. Maltzer
Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103-2414

RE: Draft Environmental Impact Statement/ Draft Environmental Impact Report/Section 4(F) Evaluation (DEIS/DEIR) For The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project ("Transbay Project")

Dear Mr. Maltzer:

We represent Mission Street Development Partners, LLC, the 301 Mission Street project sponsor. The project site is on the south side of Mission Street between Fremont and Beale Streets, Assessor's Block 3719, Lots 1 and 17. We write to affirm the DEIS/DEIR's conclusion regarding the Environmentally Superior Alternative (including the Second-to-Main alignment) and to request that this Alternative be selected as the Locally Preferred Alternative.

Both the Second-to-Mission and Second-to-Main alignments can accommodate a potential cross-bay high speed rail connection in the future. However, the Second-to-Mission alignment has numerous adverse impacts in comparison to the Second-to-Main alignment, including substantial and prolonged excavation and closure of Mission Street and unresolvable conflicts with the 301 Mission Street project, a development with substantial public benefits, including generation of tax increment necessary to support the Transbay Project. It is also significantly more costly, due to more extensive excavation, Mission Street disruptions, property acquisitions, and loss of tax increment. None of this is reflected in the document. The DEIS must be revised to include a more thorough analysis of the Second-to-Mission alignment, both to comply with NEPA and CEQA, and to properly identify for decisionmakers and the public its significant impacts.

INTRODUCTION AND SUMMARY OF COMMENTS

By way of background, the 301 Mission Street project is a substantial mixed use development, including 320 dwelling units, commercial spaces, sizable publicly accessible open space and other features designed to activate and enliven Mission Street. It is currently undergoing environmental review, and we anticipate that the Draft Environmental Impact Report ("DEIR") will be published at the beginning of the year. As part of the DEIR process, the City and Caltrain representatives shared conceptual plans for the Transbay Project with the project sponsor and their technical consultants in an effort to evaluate the impact of the Transbay Project on the 301 Mission project. The consultants analyzed the conceptual plans and developed several DEIR project Alternatives. Technical memoranda summarizing the Alternatives are attached as Exhibit A. Those Alternatives consider the feasibility of accommodating both the Transbay Terminal and the Caltrain Extension. Based on this analysis, the project sponsor believes that the 301 Mission Street project could likely be modified in a feasible manner to accommodate the Terminal portion of the Transbay Project and the Second-to-Main alignment. This accommodation would involve a partial acquisition of the 301 Mission Street project site, significant construction coordination and additional construction costs.

The technical analysis for the 301 Mission Street DEIR concludes that the Second-to-Mission alignment cannot feasibly be accommodated. The DEIR analyzes both building above the alignment and on a "remainder" area outside of the alignment. As discussed in Exhibit A, those Alternatives are infeasible for a variety of technical, urban design, cost, timing and other reasons. The DEIS/DEIR fails to identify, yet alone analyze, these impacts of the Second-to-Mission alignment on 301 Mission Street.

The DEIS/DEIR Second-to-Mission financial data is also unsupported. The economic data in the document is based on studies developed for the 1997 Caltrain DEIS/DEIR, which did not include the extension alignments. As a result, there is no evidence — not a single document — in the public record supporting the cost estimates for the Second-to-Mission alignment. Exhibit A establishes some of the 301 Mission Street technical consultants' preliminary cost estimates of the alignment as it relates to 301 Mission Street, but the DEIS/DEIR itself is devoid of any meaningful cost data for 301 Mission Street or any other aspect of the Second-to-Mission alignment.

TRANSBAY DEIS/DEIR COMMENTS

The DEIS/DEIR does not meet its burden as a disclosure document because the Project Description for the Second-to-Mission alignment lacks information required by

law. Impacts from that alignment, including those related to the 301 Mission Street project,[1] are absent from the document or are inadequately analyzed. This is a particularly glaring deficiency given the high burden of Alternatives analysis under NEPA for an EIS. The NEPA Alternatives analysis has been called the "lynchpin" of an EIS, requiring "substantial treatment" in the document. See, e.g., 40 C.F.R. § 1502.14. The analysis also disregards substantial adverse impacts of the Second-to-Mission alignment — information that is critical to the decisionmakers' evaluation of the preferred alternative. Our specific comments on this and other issues are provided below.

1. Page S-27, Environmentally Superior Alternative. We concur with the document's conclusion regarding the Environmentally Superior Alternative, particularly as it relates to the Second-to-Main component. However, the list of benefits is incomplete. The Second-to-Main alignment significantly reduces operating expenditures and costs (including acquisition costs), increases tax revenue (including from tax increment), minimizes disruptions to Mission Street (a major thoroughfare and General Plan Transit Preferential Street), substantially reduces excavation and related construction truck trips (and related traffic and air quality impacts), retains the 301 Mission Street development, is more compatible with surrounding development and generally results in reduced impacts in the areas of land use, displacement and relocation, socioeconomic, fiscal, noise and vibration, utilities, visual/aesthetic and transportation impacts, all as discussed below in comments 6-15 and in Exhibit A. Please revise the list to include these additional benefits of the Second-to-Main alignment.

2. Page 1-1, Purpose and Need for Transportation Improvements. The 301 Mission Street Project is consistent with and assists the Transbay Project in fulfilling several of the "primary purposes" and "associated needs" cited on page 1-1. This must be noted in the text so that the public and decisionmakers are advised that the Second-to-Main alignment accommodates the 301 Mission Street project, preserving its associated benefits, while the Second-to-Mission alignment does not.

The primary benefits of the 301 Mission Street project are as follows. The 301 Mission Street project proposes a substantial mixed-use development of approximately 320 residential units, 120 hotel units, 130,560 gsf of office use, 9,400 gsf of restaurant/retail use, 6,400 gsf of publicly accessible atrium space and 4,340 gsf of ground-floor lobbies. It would make a positive contribution to the Downtown skyline through innovative design and building form, including a graceful, slender tower

[1] The 301 Mission Street project is a reasonably foreseeable project and the DEIS/DEIR must analyze it. See C.C.R. Title 14, Section 15130(b)(1)(B).

articulated through elements such as a podium and central atrium. The project would also provide an active and pedestrian-friendly ground-floor environment, with attractive open spaces and retail uses; contribute significant resources to the City through generation of various fees and taxes (including but not limited to affordable housing, open space, transit, art, schools and child care fees and property, transient occupancy and parking taxes); generate substantial new employment opportunities in a variety of job classifications, including entry-level jobs; and support the City's efforts to redevelop the Transbay Terminal by providing an immediately adjacent, high-quality project generating substantial tax increment. This increment is critical to the Transbay Project, which has a significant funding gap under every development scenario analyzed in the DEIS/DEIR.

3. Pages 2-21 — 2-37, Project Description for Caltrain Extension Alternatives. The Project Description fails to perform its essential function as a disclosure document because it lacks sufficient detail for the Second-to-Mission alignment. For example, the document does not describe the impacts related to Mission Street generally, the loss of the 301 Mission Street project, and the limited reuse opportunities available for that site. The latter two are described in Exhibit A. The Project Description also omits operational considerations, such as the expense resulting from two platforms and separate tracks under the Second-to-Mission alignment. For these reasons, it is impossible to adequately analyze the impacts of the Second-to-Mission alignment. However, based upon the project sponsor's understanding of the alignment, we have provided additional impacts information below. We request that both the Project Description and impacts analyses be substantially revised to incorporate these comments and to provide the full level of analysis mandated by NEPA and CEQA.

4. Pages 2-38 — 2-41, Cost Estimates. These cost estimates are fatally flawed in that they refer only generically to source information (usually simply by consultant and year), rather than citing any memoranda or analyses. This is a problem throughout the DEIS/DEIR. We have requested the underlying background documents supporting the DEIS/DEIR Tables, but are advised that no such information exists and that the numbers have simply been updated from earlier reports prepared in connection with the 1997 DEIS/DEIR. However, because the Second Street alignments were not included in the 1997 document, there is no original data to be "updated." Accordingly, there appears to be no evidence in support of these numbers. If such evidence exists, it must be identified and should be made part of the DEIS/DEIR Appendix. Specifically, the text lacks support regarding the right-of-way acquisition, relocation and resale figures and "mid-point estimate for real estate." It is inconceivable that the Second-to-Mission alignment under the cut-and-cover and tunneling options would result in only a $32.6 and $31.2 million additional net cost, respectively, as compared to the Second-to-Main alignment. As established in Exhibit A, there is no feasible 301 Mission Street

project Alternative based on the Second-to-Mission alignment. The acquisition cost of 301 Mission Street alone would far exceed the additional net cost cited in the DIES/DEIR. Extremely limited reuse opportunities for 301 Mission Street and complexities of construction work in Mission Street under the Second-to-Mission alignment would substantially increase the net cost differential far beyond the DEIS/DEIR estimate.

5. Pages 2-48-2-53, Alignments Considered and Withdrawn. The text describes a number of Caltrain Extension alignments that were considered and withdrawn. Among the reasons for withdrawal are operational issues based on platform location (page 2-50), potentially substantial noise, traffic, air quality and other construction impacts (page 2-51), increased capital operating costs and reduced operating efficiencies (page 2-52) and impacts of a long tunnel on the real estate above (page 2-53). The Second-to-Mission alignment shares each of these impacts, none of which is discussed in the DEIS/DEIR. Each of these impacts must be analyzed, and the Second-to-Mission alignment must be similarly rejected as infeasible.

6. Pages 5-3 — 5-4, Land Use Impacts. The statements regarding land use impacts are conclusory and unsupported by evidence as they relate to the Second-to-Mission Street alignment. This section ignores facts about that project that are a matter of public record — the sole reference to 301 Mission Street is a one paragraph statement on page 5-4. In fact, the Second-to-Mission alignment would pose a substantial land use conflict with the 301 Mission Street development. As discussed in Exhibit A, the Second-to-Mission alignment renders the 301 Mission Street project infeasible, and severely restricts reuse of the site. The consultants have determined from documents not otherwise even described in the DEIS/DEIR that the alignment involves construction of a forty-five foot deep (or possibly deeper) tunnel which would traverse directly through the 301 Mission Street property. It is obvious that the location of the tunnel and its physical configuration would significantly alter both the remaining below grade and above grade buildable area on the property. The train tunnel and the pedestrian mezzanine connecting the bus terminals will take about 2/3 of the entire site.

If the 301 Mission Street project does not move forward, the City would not enjoy the various benefits of the project, discussed above, and most importantly its 320 dwelling units, significantly enhanced street-level experience, and substantial tax increment, which is a critical funding element of the Transbay Project. The DEIS/DEIR contains no discussion of the environment that would remain along this important segment of the Mission Street corridor, nor of how loss of development opportunity at this site impacts the value or reuse potential of surrounding properties. The loss of this project is a foreseeable and significant land use impact of the Second-to-Mission alignment that must be identified and discussed.

Also absent from this discussion is any analysis of relevant Downtown Plan policies related to land use. By way of example, see Objectives 7 (expanding housing supply Downtown) and 13-16 (urban form). The Second-to-Mission alignment is inconsistent with these policies with respect to its 301 Mission Street site impacts.

The Land Use section purports to analyze wind and shadow impacts. Despite the enormous scope of the project, the DEIS/DEIR does not follow the City's standard format and in fact provides far less information than would normally be included in a Downtown project analysis. For example, the shadow discussion makes conclusory impacts statements, without including any quantitative information or graphics to support or explain the conclusions. The 301 Mission Street development is a foreseeable project that must be included in these analyses.

7. Pages 5-19 — 5-32, Displacements and Relocation. What are the funding sources for the property acquisitions listed in the charts, and when do these funds become available? Why doesn't the displacement section mention the loss of approximately 320 housing units under the Second-to-Mission alignment?

8. Pages 5-31 — 5-32, Socioeconomic Impacts. The statements regarding socioeconomic impacts are conclusory and unsupported by evidence as they relate to the Second-to-Mission alignment. The loss of the 301 Mission Street project and the limited reuse opportunity as a result of the Second-to-Mission alignment is a socioeconomic impact. As discussed above, that project will generate substantial employment opportunities, fees and taxes that would be eliminated under the Second-to-Mission alignment. The analysis must also include the socioeconomic impacts of businesses disruptions along Mission Street during the lengthy Second-to-Mission alignment construction period.

9. Pages 5-44 — 5-49, Fiscal Impacts. The statements regarding fiscal impacts are conclusory and unsupported by evidence as they relate to the Second-to-Mission alignment. The DEIS/DEIR discusses right-of-way acquisition in Tables 5.6-2 and 5.6-3. The basis for the Fiscal Impacts analysis is indecipherable, as only general reference is made to the Sedway Group, First American Real Estate Solutions, Comps Inc. and Marshall Valuation Service information. Again, how were these numbers generated? How can there be no supporting documents? The DEIS/DEIR must include specific references and background documents that support these numbers and conclusions to provide a road map for decisionmakers as to how these conclusions were reached. Those documents should also be included in the Appendix. The cost of the Second-to-Mission alignment is clearly understated in light of the substantially greater acquisition costs, and the limits to reuse of the property. Specifically, on page 5-45, footnote 7 references a $50 million total valuation for the 301 Mission Street property. How is this reflected in the acquisition estimate tables? What is the basis for

this determination? This is inaccurate in that it represents only a partial value for the 301 Mission Street site. Tables 5.6-1 — 5.6-3 misrepresent the difference in acquisition costs between the two alignments, which is shown as only approximately $10 million.

The estimates for payroll tax and retail sales tax losses are also underestimated. How is the limited reuse of the 301 Mission Street site reflected? There appears to be no analysis of that impact. Presumably Mission Street would be closed in phases over a significant period of time to accommodate the Second-to-Mission alignment. What is the phasing plan? This in turn would have substantial impacts on businesses along Mission Street. These are not even mentioned in the DEIS/DEIR. Also, what is the engineering solution to tunneling beneath the Muni turnaround and the historic Agriculture Building at the terminus of Mission Street — how has that cost been addressed in the Second-to-Mission alignment analysis? What are the timeframes and associated costs for each of these? Is it even feasible? How does grade change of this tunneling impact high speed rail? The DEIS/DEIR fails as a disclosure document without this crucial information that speaks to the fundamental feasibility and impacts of the project. Under both CEQA and NEPA, the perfunctory description of the Second-to-Mission alignment and impacts is a fatal flaw, and the document must be revised to include the requested information.

10. Pages 5-55 — 5-65, Noise and Vibration. The statements regarding noise and vibration impacts are conclusory and unsupported by evidence as they relate to the Second-to-Mission alignment. The Second-to-Mission alignment involves a long tunnel which impacts the developability of real estate above the alignment, as discussed in Exhibit A. The Noise and Vibration discussion makes no reference to impacts of the Second-to-Mission Street alignment on 301 Mission Street or other properties along Mission Street, nor does it identify measures (and their associated costs and timing of implementation) that might be necessary to reduce vibration to acceptable levels.

11. Pages 5-69 — 5-70, Utilities. The statements regarding utilities impacts are conclusory and unsupported by evidence as they relate to the Second-to-Mission alignment. With the substantial excavation of Mission Street that would be required, clearly there would be substantial utilities impacts that are not analyzed here.

12. Page 5-96, Visual/Aesthetic Changes. The statements regarding visual/aesthetic changes are conclusory and unsupported by evidence as they relate to the Second-to-Mission alignment. The analysis of visual/aesthetic changes makes no reference to the significant adverse changes associated with the Second-to-Mission alignment. As discussed above (see in particular Downtown Plan policies 13-16) and in Exhibit A, the loss of the 301 Mission Street project and limited reuse opportunities would result in a substantially changed visual environment, both in terms of the street-

level environment and the Downtown skyline. The 301 Mission Street project must be included in the photomontages as a reasonably foreseeable project.

13. Pages 5-109 — 5-137, Transit, Traffic and Parking, Including During Construction. The statements regarding transit, traffic and parking (including during construction) are conclusory and unsupported by evidence as they relate to the Second-to-Mission alignment. This section contains no analysis of transit, traffic and parking impacts associated with that alignment. Due to the vague Project Description, it is difficult to identify or assess those impacts. However, at a minimum, they include substantial disruption to Mission Street (a General Plan Transit Preferential Street) while construction occurs at that location. Construction would presumably progress block-by-block along Mission Street, over a long period of time, with no street parking during construction and significant potential for disruption of MUNI operations both above and below grade. The impact of these closures would be substantial and must be discussed.

14. Pages 5-138 — 5-187, Construction Impacts. The DEIS/DEIR is inadequate in its description of the impacts of demolition, underpinning, surface rail line and station construction and support of adjacent structures that would be required for the Second-to-Mission alignment. These topics receive scant mention on pages 5-144 and 5-148 with no impacts discussion. On page 5-166, the text states that construction traffic "could potentially result in temporary delays." The Table on page 5.20-8 suggests that the schedule for both alignments is the same; this analysis appears to ignore impacts from the closure of Mission Street west of Beale Street. The limited nature of the impact is unsupported by analysis, particularly with respect to street closures necessary for construction of the Second-to-Mission alignment. Why is Mission Street west of Beale Street omitted from the analysis? Impacts to this section of Mission Street (including 301 Mission Street) must be addressed in terms of driveways blocked during construction, on-street parking removal, impacts to businesses, utilities relocation and construction noise and vibration.

Table 5.20-4 estimates the amount of excavation materials. Given the extent of excavation required under structures at the terminus of Mission Street, the numbers for the Mission Street alignment are not credible. Even if these numbers were accurate, the Second-to-Mission alignment would involve about 10% more excavation. How is this accounted for in the financial analysis? Again, all of this information must be provided.

15. Chapter 6, Fiscal Analysis. The DEIS/DEIR does not identify specific source documents or make those documents available to the public. For example, where is the cited but undescribed Seifel Consulting and Nancy Whelan Associates tax increment analysis? Specific information regarding that information and acquisition,

relocation, resale, and mid-point of real estate costs are essential to adequate analysis, but we are advised they do not exist. The acquisition costs associated with the Second-to-Mission alignment have been significantly underestimated, as have the costs of business disruptions and tax revenue loss. On page 6-8, the tax increment assumptions remain constant for all scenarios. Clearly, there would be a substantial difference between the two alignments in light of impacts on the 301 Mission Street project. The Tables on pages 6-4 and 6-8 must both be revised to account for increased operating expenses for the two platforms and separate tracks in the Second-to-Mission alignment. Finally, the analysis does not account for the costs of acquiring City subsurface land — is the City donating this land and, if not, what is the acquisition cost?

The project is only in its initial stages of identifying potential funding sources, and the vast majority of funds are as of yet unsecured, but the document does not discuss funding feasibility or timing. The entire financial and feasibility analysis is meaningless without this information, particularly since factors such as the "midpoint of real estate costs" are central to that analysis. The financial information drives phasing and its physical impacts, which is a fundamental component of the Project Description and impacts analysis.

In conclusion, we reiterate our concurrence in the DEIS/DEIR's determination regarding the Environmentally Superior Alternative, which includes the Second-to-Main alignment. While both alignments preserve the opportunity for a future cross bay high speed rail connection in the future, only the Second-to-Main alignment preserves the 301 Mission project and its contributions to the Transbay project. By contrast, the Second-to-Mission project results in numerous adverse impacts, including the loss of the 301 Mission Street project and its associated benefits, without any identified advantages . Accordingly, we request selection of the Environmentally Superior Alternative as the Locally Preferred Alternative.

Thank you for your consideration.

Very truly yours,

Tay C. Via

Tay C. Via
COBLENTZ, PATCH, DUFFY & BASS, LLP

TCV/wpd

cc: Members, Pennisula Corridor Joint Powers Board
Michael J. Scanlon, Executive Director, Peninsula Corridor Joint Powers Board
Leslie T. Rogers, Region IX Administrator, U.S. Department of Transportation, Federal Transit Administration
Jose Campos, Planning Supervisor, San Francisco Redevelopment Agency
Jerome Wiggins, U.S. Department of Transportation, Federal Transit Administration
Joan Kugler, City and County of San Francisco Planning Department

EXHIBIT A

EXECUTIVE SUMMARY OF 301 MISSION STREET PROJECT TRANSBAY/CALTRAIN EXTENSION ALTERNATIVES

1. **Analysis of Project with Modifications to Accommodate Conceptual Plan for Transbay Terminal.** (Alternative E, Technical Letter Nos. 1, 2.) Feasible.

   - Basic Project Description: Modifies project to reflect preliminary conceptual plan for a new Transbay Terminal only, assuming Second-to-Main alignment (Plan DTX-ALT1B-40 dated 7/21/02, 7/29/02). Involves acquisition of a southerly portion of project site to accommodate Transbay Terminal access tunnel.

   - Engineering Approach: 45' deep tunnel would encroach approximately 5' into 301 Mission Street site. Requires replacement of temporary piles with new approximately 18-24" thick foundation wall constructed as part of the 301 Mission Street project. Assumes isolation of the tunnel from the 301 Mission Street structure with load-bearing wall of the 301 Mission Street project cantilevering beyond newly-positioned foundation wall.

   - Project Impacts: Loss of approximately 3'6" along the 275' length of site, or 4,000 gross square feet over below-grade levels. Elimination of about 30-40 subterranean parking stalls and approximately 500 square feet each of storage and mechanical space.

   - Increased Costs: Approximately $400,000-600,000, plus additional transactional and coordination costs, in addition to loss of site area and related program space.

   - Conclusion: Provided that cost and construction issues can be adequately addressed, appears feasible from construction and program perspective.

2. **Analysis of Project Reconfigured to Accommodate the Second-to-Mission Street Caltrain Extension.**

   (a) **Analysis of Tunnel 45' Below Grade, Column-Free.** (Variant F1, Technical Letter Nos. 1 and 2.) Infeasible.

   - Basic Project Description: Based on preliminary conceptual plan No. DTX-ALT2B-40, 8/1/02. Bottom of tunnel 45' below grade, top at grade, all column-free zone.

   - Engineering Approach: 301 Mission Street preserves path for future Caltrain terminal; building supported on very deep concrete transfer girder above grade at top of future tunnel roof and pedestrian mezzanine. Transfer girder of about 30' thick, with approximately 76 piles on both

east and west sides. Site cannot accommodate this number of piles, even assuming encroachment into sidewalk area.

- Program Impacts: Above-grade, 30' mat replaces first two floors of project program, including atrium and associated publicly-accessible open space, retail/restaurant and residential/hotel lobbies. Lobbies relocated to third floor, with two escalators and four additional elevators required for access. Structural mat eliminates main vehicular and pedestrian drop-off and loading areas, relocated to Beale Street. Reduced program: 400 to about 100 parking spaces, 11,300 gsf to 2,000 gsf open space at the ground floor, and 10,000 gsf to 4,500 gsf restaurant/retail.

- Urban Design Issues: Ground floor-activating features eliminated and replaced with structural mat reading as a blank concrete three-story wall from street; physical and visual barrier along Fremont and Mission Streets; only remaining program at ground floor is office lobby and partial ground floor retail, with remaining ground floor area dedicated to loading, vehicle ramps and mechanical shafts.

- Increased Costs: About $35,750,000-$43,250,000, plus incremental transaction and coordination costs. See Technical Letters No. 3 and 4.

- Conclusion: Infeasible due to impacts on program, urban design, timing and cost.

Notes:

- Could also be revised to include construction of Caltrain tunnel as part of 301 Mission Street project's scope. Involves same feasibility issues as Variant F1, additional costs of tunnel construction, plus final construction drawings for tunnel and funding required by first quarter of 2003.

- If assume reduced development program (roughly one-half of the proposed project), Variant remains infeasible. Mat is reduced, but still 15' above grade, creating same conflicts as Variant F1, and eliminating about 400,000 gross square feet of program, including roughly 130 units of housing and 100 hotel rooms.

(b) Analysis of Reduced Development, "Remainder" Site. (Variant F2, Technical Letter Nos. 1 and 2.) Infeasible.

- Basic Project Description: Assumes site is reduced to only about 17,000 gross square feet "remainder" portion of the 301 Mission Street site (outside of the Caltrain alignment) available as building site, with balance used for vehicular access and landscaping only. Entails loss of approximately 2/3 of site.

- Program Impacts: Buildable area reduced from about 900,498 to 300,000 gross square feet. Due to relocation of ground floor functions, loss of the 6,400 gsf central atrium, 7,200 gsf garden terrace, 4,500 gross square feet retail use and reduction in residential and hotel public lobby spaces. Substantial portions of residential and hotel elements also eliminated in light of over 600,000 gsf (almost 2/3) reduction in buildable area.

- Urban Design Issues: Similar to Variant F1.

- Conclusion: Infeasible due to substantial reduction in program (and associated costs), timing and conflicts with urban design policies as described for Variant F1.

(c) **Analysis of Revised Caltrain Plan (lower tunnel; potential column zones).** (Variant F3, Technical Letter Nos. 3 and 4.) Infeasible.

- Basic Project Description: Based upon revised plans Nos. C/01-C/03 dated November 4, 2002, modified to (i) show lower tunnel floor (64') with top of tunnel 18' below grade and (ii) identify certain areas where columns placed to support 301 Mission Street project's superstructure.

- Engineering Approach: Support 301 Mission Street superstructure on 10' concrete mat reinforced with structural beams and conventional reinforcement, with isolation of below grade structure from tunnel. Conventional load-resisting system consisting of 3-5' diameter columns at about 15' on center.

- Program Impacts: Below-grade program impacts result in loss of about 1/3 of gsf available for parking and building services and other support space. Reconfiguration results in loss of about 243 stalls, leaving only 157 stalls for 320 residential units, and no spaces for visitors and commercial uses (loss of about 60% of the parking spaces). About 84,712 square feet of mechanical and building services requires above-grade relocation. This absorbs eight floors or about 64 units (20% of the project's total). Lost units potentially added to office tower, but building loses efficiency as the elevator core enlarges significantly, with substantial duplication of mechanical systems. Therefore, assume replacement of lost units with about six floors of new office space, increasing height of office tower from 126' to 209'. Loading facilities also configured to provide access to elevator core for residential tower's loading facilities from third floor of office building, with service corridor traversing public atrium.

- Urban Design Issues: Requires servicing residential tower through office elevator; sound and vibration concerns from above-grade mechanical equipment; and numerous design and operational challenges to Caltrain. Service corridor runs between residential and office buildings traversing public atrium, disrupting skylight views. Project's expression and

connection to street disrupted by louvers required to screen mechanical functions. Louvers replace vision glass, an important element of the design/visual continuity. Additional office floors dramatically change scale and daylight in atrium and outdoor space.

- Increased Costs: About $29,500,000-$34,250,000 plus incremental transaction and coordination costs. See Technical Letters No. 3 and 4.

- Conclusion: Infeasible for a variety of functional, urban design, timing and cost issues.

09475.001.0230.a

September 10, 2002

Mr. Glenn Rescalvo
Gary Edward Handel & Associates
735 Market Street, 2nd Floor
San Francisco, CA 94103

Subject: Evaluation of Caltrain Alternates for the Downtown Terminal Expansion
301 Mission Street, San Francisco, CA

Dear Glenn:

We are pleased to submit this preliminary evaluation report summarizing the results of an impact study we performed analyzing the proposed Caltrain downtown terminal expansion and the high-rise building project at 301 Mission Street. The drawings containing the parameters for the proposed Caltrain terminal expansion were prepared and submitted for our review by Computer Design Solutions. There are two configurations, both of which require acquisition of a portion of the project site. As discussed below, based upon the plans provided by the Transbay Terminal Consultants, Alternate I could be accommodated, but at an increased cost to the 301 Mission Street project. Alternate II is infeasible based upon the timing, technical and economic factors identified in our analysis.

Alternate I:

Alternate I relates to the new Transbay Terminal. Drawing DTX-ALT1B-40, dated 7/31/02, shows a plan view of this alternate. A cross section through this scheme is shown on Section AA dated 7/29/02. This plan comprises a proposed new tunnel (45 ft. deep) to be constructed under Mission Street, running parallel to the south lot line of the 301 Mission street property. The temporary shoring wall of the Caltrain tunnel structure, as shown in Section AA, is located approximately 5 feet from the property line of the subject 301 Mission building project. We propose that the temporary piles indicated on Section AA be eliminated in lieu of a new 18- to 24-inch thick foundation wall that would be constructed as a part of the 301 Mission Street project. The Caltrain tunnel wall will need to be isolated from this foundation wall so that the lateral pressure imposed by 310 Mission street project structure is not transferred to the Caltrain structure. We estimate that an isolation joint filled with a compressible material of approximately 8- to 12-inches in width will be required between the two walls. In addition to being designed to support the 301 Mission Street superstructure, this foundation wall system would also be required to be designed to resist all anticipated loads associated with the construction of the Caltrain tunnel.

The above-grade structure for the 301 Mission Street project is comprised of a two-story load-bearing wall situated at the property line that will need to be supported by the ground floor structural slab, which would cantilever out beyond the newly-positioned foundation wall. This condition will require the installation of a continuous corbel along the top of the foundation wall to provide adequate and continuous support for the superstructure.

Based upon the above noted constraints, we estimate that the approximate additional cost to design and construct the foundation wall to resist any anticipated Caltrain tunnel construction loads and to design and construct the corbel on the top of this wall to support the cantilevered ground floor slab will be range from $400,000 to $600,000. Of course, this would also involve agreements and coordination between the parties that would result in additional expense. We emphasize that this is a preliminary conceptual cost estimate based upon the plans provided, and that the final cost of construction may vary significantly from this estimate. Furthermore, any modifications to those plans would also increase this cost.

Alternate II:

Alternate II is the Second-to-Mission Street Caltrain extension. Drawing DTX-ALT2B-40, dated 8/1/02, shows a plan view of this alternate. This alternative would also involve agreements and coordination between the parties that would result in additional expense. There are several ways to analyze the impacts of this alternative.

Alternate IIA would require that 301 Mission Street project provide the necessary clearances to accommodate a 90-foot wide tunnel (train track and two platforms) under the high rise structure's base. Figure 1 shows the site plan with building footprint overlaid on the proposed Caltrain tunnel.

This proposed alternate will require that the entire 301 Mission building be supported on a very deep concrete transfer girder (concrete mat or a structural steel grillage system) spanning across the Caltrain tunnel. Section AA shows that the top of the tunnel roof (including the mezzanine structure) is located approximately at grade. Therefore, the entire depth of this transfer girder will be above grade. A layer of compressible material of up to 3-feet in thickness will be required to be installed between the underside of the transfer girder foundation mat and the Caltrain tunnel roof in order to isolate the Caltrain structure from the building. Due to site geometry constraints imposed by the proposed Alternate II Caltrain alignment, this deep transfer girder can only be supported on the east and west ends of the project site. No supports can be provided along the north and south direction of the mat as the tunnel continues beyond the project site.

As part of our evaluation of proposed Alternate II, we have performed preliminary structural analyses to establish design parameters for the transfer girder support system that would both span the Caltrain tunnel and provide requisite support for the 301 Mission building's superstructure. For the purposes of this analysis, we modeled a concrete mat foundation to act as the transfer girder. The intent was to determine equivalent stiffness and strength of the transfer girder system required to span across the Caltrain tunnel and resist loads imposed by the superstructure. The final material, type and configuration of this transfer girder will be selected based upon contractibility and design requirements.

End support area for the Mat
Max. 3 ' piers = 46

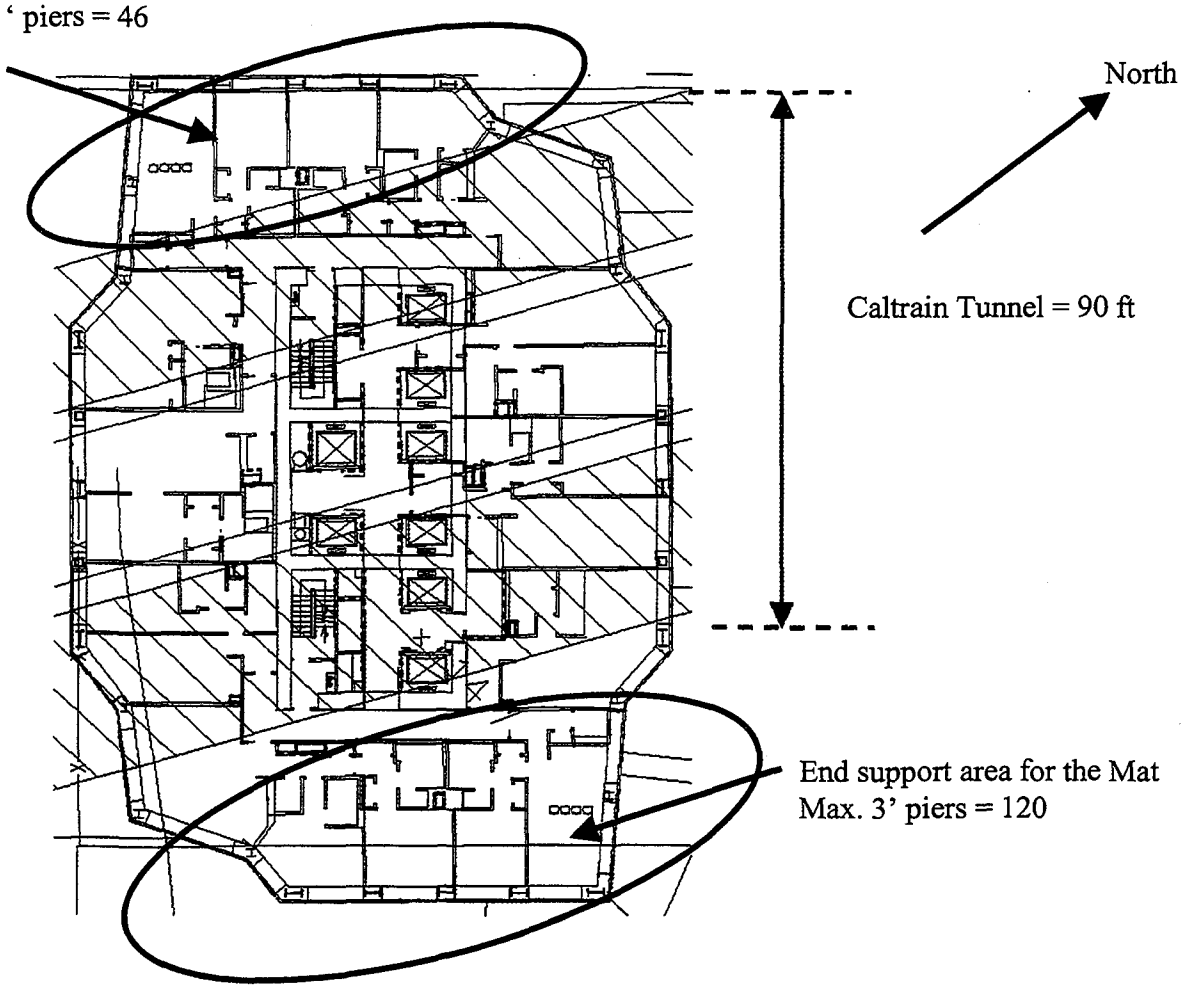

Figure 1: Building Foot Print Overlaid with Caltrain Tunnel

Figure 2 shows a schematic of a finite element structural model that was developed to represent a thick reinforced-concrete mat supported along its edges in one direction. The edge support conditions were approximately modeled in order to capture reasonable estimates for the reactions (e.g. tension, compression). The building core was modeled as line loads in order to capture the transfer of seismic lateral load moments from the building's superstructure to the mat. The non-seismic gravity column system was modeled by evenly distributing the building's gravity loads across the mat. Based on these estimated seismic overturning and gravity loads, the vertical deflections of the mat and internal flexural stresses were then computed.

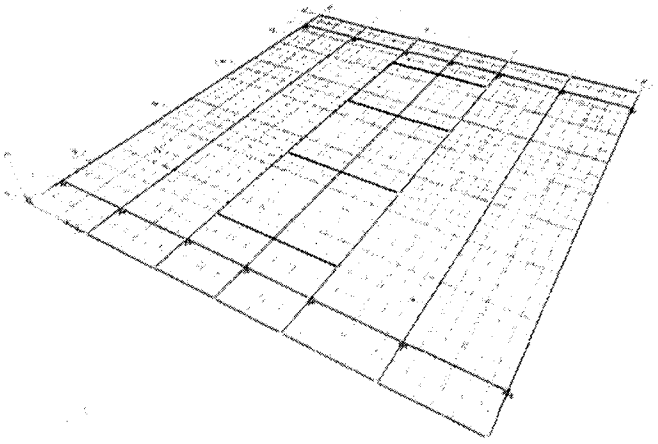

Figure 2: Finite Element model of the Foundation Mat Slab

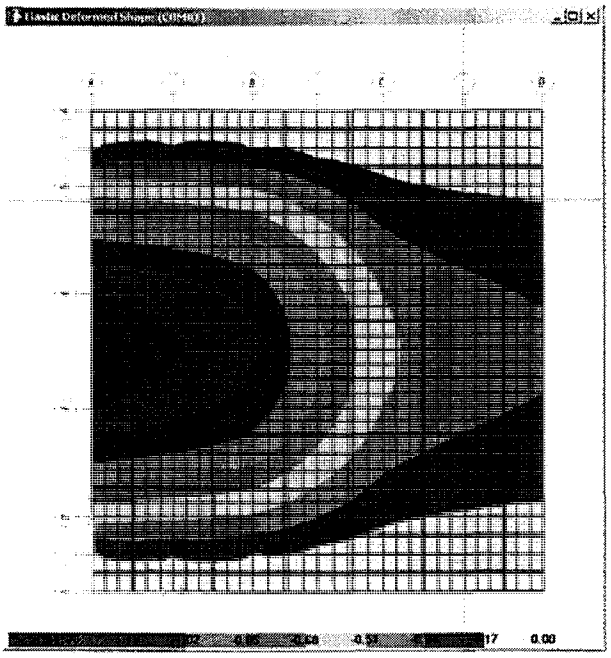

Figure 3: Deformations for 15 ft. thick Mat

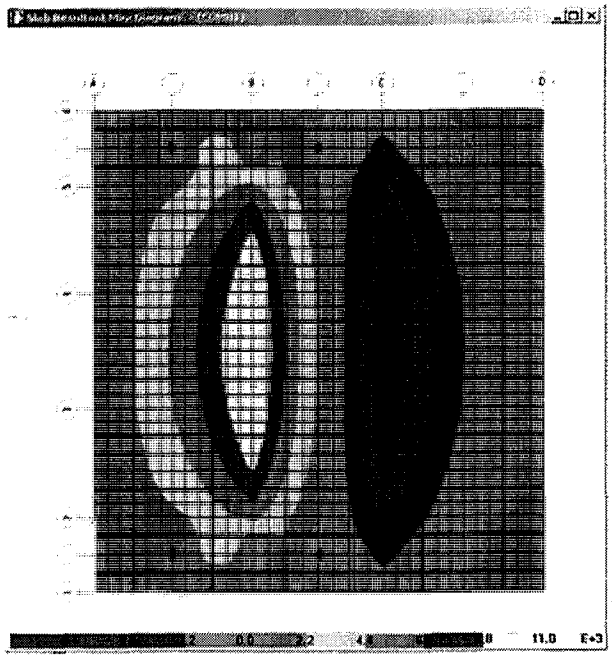

Figure 4: Flexural Stresses for 15 ft. thick mat

Figures 3 and 4 show deformations and flexural stresses for a proposed 15-foot thick transfer girder mat. As the mat deforms, it causes rotation at the base of the high-rise tower, which in turn results in a lateral deflection at the top of the 630-foot tall tower.

Tables 1 and 2 present a summary of the deformations, stresses and tower tip deflection for three different mat thicknesses (8 ft., 15 ft., and 30 ft.). Table 1 shows that the tower tip deflection for an 8-foot thick mat is approximately 53 inches, for a 15-ft. thick mat is 12.4 inches, and for a 30-ft. thick mat is approximately 3.6 inches. Therefore, to reasonably limit the tower tip deflection due to foundation rocking, stiffness and strength required for the transfer girder needs to be equivalent to a concrete mat of approximately 30-feet thick.

Table 1: (Parallel to Mission Street) X- direction

Mat Thick. (ft)	Vertical Differential Displacement (in.)	Tower Tip Displacement (in.)	Mxx (kip-ft/ft)	End Reaction Kips	No of Piers Required
8	4.40	53.31	10740	60109	43
15	1.02	12.36	11630	65520	46
30	0.30	3.63	12807	78625	56

Table 2: (Perpendicular to Mission Street) X- direction

Mat Thick. (ft)	Vertical Differential Displacement (in.)	Tower Tip Displacement (in.)	Mxx (kip-ft/ft)	End Reaction Kips	No of Piers Required
8	0.65	10.64	6000	88022	62
15	0.19	3.11	11000	94137	67
30	0.08	1.37	16800	107242	76

The number of piles required to support the foundation mat along each of its two sides are shown in Table 1 and 2. For calculational purposes, we have assumed that a number of individual 3-foot diameter drilled piers (each 120-ft. long) will be required to provide sufficient tension and compression capacity. A total of approximately 76 drilled piers will be required to support each side (east and west) of the 30-foot thick mat. Based upon the geometry constraints illustrated in Figure 1, however, a maximum of only 46 piers can be installed along the west side of the tunnel (this includes encroaching into the sidewalk area outside of the property line). If all the piers were installed within the property lines of the project, a total of 18 drilled piers can be installed along the west side of the tunnel. Therefore, all 76 piers cannot be installed on the west side of the tunnel even after encroaching into the sidewalk area outside the property line.

In summary, there is not sufficient physical space within the confines of the 301 Mission Street project site to install required number of required drilled piers to support the foundation mat spanning across the Caltrain tunnel.

A brief summary of our findings is presented below.

1. The stiffness and strength of the transfer girder system for supporting the building's superstructure and for minimizing tower tip deflections due to foundation rocking are required to be equivalent to approximately a 30 feet thick concrete mat. A transfer element of this required thickness will essentially eliminate the first floor of the building and all proposed floors below grade. The cost of constructing such a mat will be significantly higher than the cost of the basic foundation system that would have been required in the absence of the Caltrain tunnel.

2. The large number of drilled piers required to be installed at the ends of the foundation will necessitate going outside of the bounds of the existing building property line. However, after utilizing the space under the sidewalk on the west side of the tunnel, there is still not sufficient room to physically install the required number of piles.

3. With a 30-foot thick mat, the seismic deflection at the top of the tower resulting from foundation mat overturning is about 3.6 inches. This deflection needs to be added to the overall seismic deflections of the building superstructure. To incorporate these deformations, the conventional structural systems being considered (either reinforced concrete shear wall core or steel braced frame core) may not be sufficiently stiff and strong within reasonable member sizes to allow for proper architectural planning and to achieve the desired building functions, especially around the building core. Therefore, these systems will need to be supplemented by non-conventional lateral load-resisting methods such as base-isolation or active damping devices. This will result in a significant additional cost to the 301 Mission building project. We estimate that this additional cost will be in the range of 25% to 35% of the base structural cost.

Based upon the above noted constraints in the design and construction of the foundation system, we estimate the additional costs for the construction to be as follows:

Drilled piers (152 piers, 120 ft. long) = $4 to $6 Million
30 ft. thick transfer girder mat slab = $5 to $7 Million

Total additional cost of foundation system = $9 to $13 Million.

Please note that these costs are based upon preliminary conceptual estimate and the actual costs may vary significantly from this estimate. Based upon the results of the preliminary analysis described above, it appears that it is neither physically nor economically possible to provide for a sufficiently thick transfer element to support the building superstructure

and to span across the Caltrain tunnel. This conclusion is based on the large number of drilled piers that will be required to support the proposed tower structure, coupled with the fact that the structural solution will then need to be augmented with non-conventional solutions, and the additional costs for incorporating this Caltrain Alternate II in the design will be significant. Beyond the cost issues, this Alternate II is infeasible because the required number of piles cannot be accommodated on-site, even assuming the use of the adjacent sidewalk.

Alternate II B:

This alternate assumes the following:

1. The proposed building will be same as the Alternate IIA.

2. The foundation system will be same as the Alternate IIA and the Caltrain tunnel will be isolated from the building structure.

3. The 301 Mission Street project sponsor not only provides the necessary clearances but also will construct the Caltrain tunnel under the project.

This alternate requires that Caltrain's plans are finalized and approved before the construction of the project can begin. This alternate also requires that the tunnel excavation and construction of the tunnel structure be completed prior to the start of building construction. Based upon our review of the plans and understanding of the construction schedule, these requirements are infeasible. It also involves the same issues as Alternate IIA.

Alternate II C:

This alternate assumes a substantially reduced 301 Mission Street project:

1. The proposed building height will be reduced to half of its originally intended height, or to approximately 300 ft.

2. The foundation system concept will be same as that proposed for Alternate II, and assumes that the Caltrain tunnel will be isolated from the building structure.

Based upon our preliminary analyses, the foundation system required to support the truncated building and to span over the Caltrain tunnel will be similar in concept to the system discussed in Alternate IIA. However, the depth of the transfer foundation mat can be reduced to approximately 15 feet and the total number of piles required to support the transfer foundation mat will also be reduced to approximately 50 on each side of the tunnel. As described in Alternate IIA, a maximum of 46 piers can be installed (this

includes encroaching into the sidewalk area outside of the property line) in the physical space on the west side of the tunnel. If all the piers were installed within the property lines of the project, a total of 18 drilled piers can be installed along the west side of the tunnel. Therefore, all 50 piers cannot be installed on the west side of the tunnel even after encroaching into the sidewalk area outside the property line. All other parameters of design and construction would remain same as in Alternate II. The estimated additional cost (preliminary conceptual cost estimate) of this foundation system will be approximately $6 to $7 million. We understand this would significantly impact the project program. In addition, as with Alternate IIA, the required number of piles could not be accommodated on the site even using the area under the adjacent sidewalks.

Alternate II D:

This alternate assumes the following:

1. The proposed building will be moved to the "remainder" parcel (Lot 1) that is free from Caltrain development.

By relocating the building to Lot 1, the building's structural foundation system will be substantially removed from the Caltrain tunnel, with the exception of a small area in the west corner that is situated over the tunnel. We believe that the structural design for this alternate will be impacted very little by the proposed Caltrain tunnel location.

We hope that the above noted preliminary analyses provide the necessary information that you desire. If you require any further information or clarification regarding the above, please contact us at your convenience.

Sincerely,

DeSimone Consulting Engineers, P.L.L.C.

Niaz A. Nazir, Ph.D., SE
Principal & Project Director

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December 4, 2002

Mr. Glenn Rescalvo, AIA
Gary Edward Handel + Associates
735 Market Street, 2nd Floor
San Francisco, CA 94103

Subject: Evaluation of Caltrain Alternate 2 for the Downtown Terminal Expansion
301 Mission Street Project, San Francisco, California

Reference: Preliminary Evaluation Report - Alternatives for the Downtown Terminal Expansion, Issued by DeSimone Consulting Engineers, September 10, 2002

Dear Glenn:

We are pleased to submit this preliminary evaluation report summarizing the results of a study we performed related to the potential impact of the proposed Caltrain downtown terminal expansion on the planned high-rise building project at 301 Mission Street. Subsequent to the issuance of the above-referenced report and a meeting with the City and Caltrain to present and discuss the findings, Caltrain has made extensive modifications to the underground structure layout both in terms of lowering the tunnel floor and allowing for placement of columns to support the building's superstructure within selected regions of the tunnel. DeSimone Consulting Engineers (DCE) received the following drawings from Caltrain showing these modifications.

Reference Drawings:

Downtown Terminal Expansion - Alternate 2, Proposed Millennium Partners Section:
Drawing No. C101: Aerial view of the site with proposed Caltrain tunnel
Drawing No. C102: Aerial view of the site with tunnel and longitudinal profile
Drawing No. C103: Cross-section across the tunnel and mezzanine showing "No-Column" zone

From a review of these drawings, the following key changes were made to the Caltrain tunnel layout (Alternate 2) as compared to the earlier plans received on July 31, 2002:

1. The bottom of the tunnel floor has been lowered by 19 feet. It is now shown at 64 feet below grade as compared to 45 feet below grade previously.
2. The top of the mezzanine level has been lowered to 18 feet below grade. Previously, the top of the mezzanine roof slab was shown to be at grade. The height of the mezzanine is shown as 20 feet including the roof slab thickness (5-feet thick); whereas, previously it was shown as 15 feet (including the roof slab). Note that for analysis purposes, we have assumed that the mezzanine

roof slab could be incorporated into our design as a part of the building's foundation mat.

3. Provisions were made by Caltrain to allow interior columns to be added through the tunnel structure in certain zones in order to support the building's superstructure.

Summary of DCE Report Dated September 10, 2002

Since early August, DeSimone Consulting Engineers (DCE) have been providing support to both Millennium Partners and Gary Edward Handel + Associates (GEHA) to evaluate the potential structural engineering impacts of two proposed Caltrain terminal expansion alignments on the planned 301 Mission Street building project. Caltrain Alternate 1 passes adjacent to (and slightly encroaching upon) the 301 Mission Street site, and Alternate 2 passes underneath a portion of the site, directly under the planned location for the core of the proposed building tower.

It was concluded that Alternate 1 could be accommodated, but at an increased cost to the 301 Mission Street project. Alternate 2 was judged to be infeasible, based upon the timing, technical and economic factors identified in our analysis. Alternate 2 was found to be infeasible in part due to the stringent constraint required by Caltrain that the building structure span across the entire width of the tunnel (in excess of 90 feet) without any provisions for support of the building superstructure either by or through the Caltrain structure. This resulted in a structural design solution that required the entire superstructure to be supported by a very thick structural mat that would act as transfer element to distribute the gravity as well as lateral forces across a 90-foot wide span to a deep foundation system on either side of the tunnel. Such a solution would result in significant structural, programmatic and cost implications for the project, and was therefore judged to be impractical.

On October 21, we participated in a meeting with Caltrain and the City of San Francisco to present and discuss these results. As a result of this meeting, Caltrain has modified its criteria from what is described in their initial conceptual plan and the Transbay Draft Environmental Impact Statement, and have now provided us with a revised Alternate 2 alignment that is both lowered by 19 feet and delineates specific allowable zones within the proposed tunnel where columns may be placed for support of the building tower.

Analysis Methodology and Summary of Results

A three-dimensional linear model using the ETABS computer program was developed that comprised a complete model for the superstructure as well as the below grade structure. Figure 1 shows the computer model for the entire building. Figure 2 shows a partial 3-D model of the below-grade structure. Figure 3 shows the foundation plan layout indicating both column and shear wall sizes and locations with respect to the Caltrain tunnel.

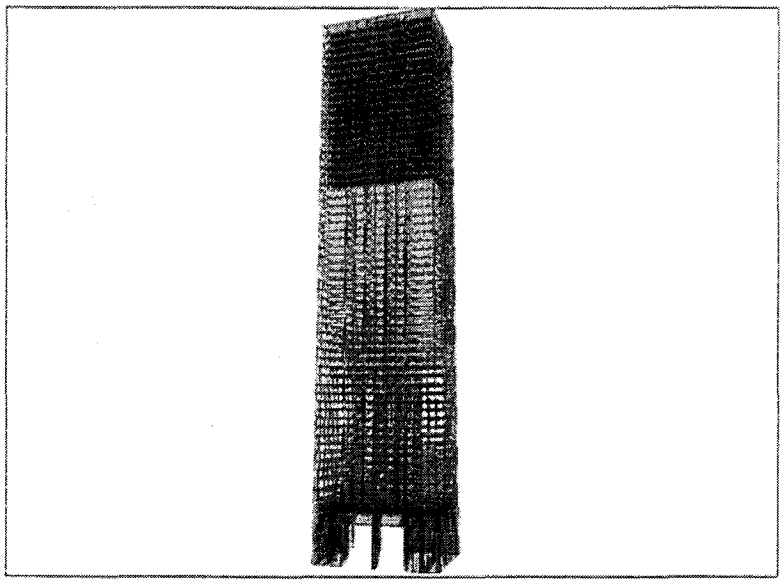


Figure 1: 3-D model of Building

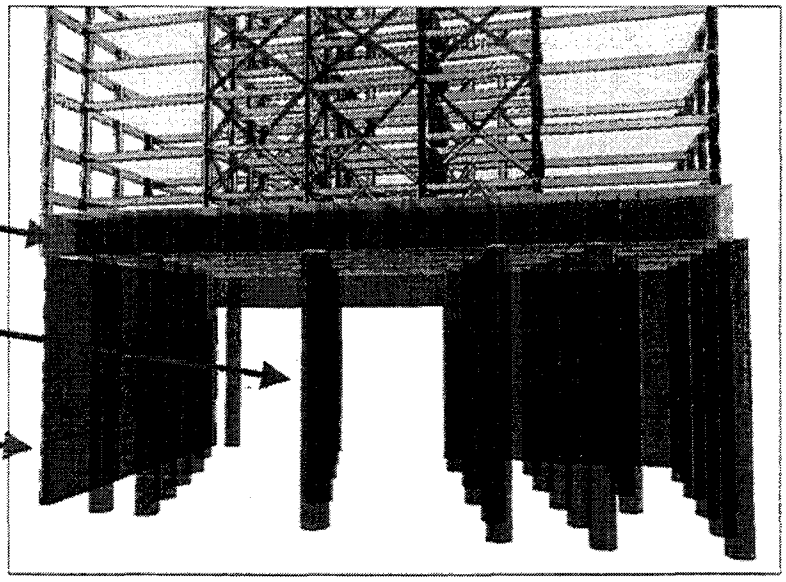


Figure 2: 3-D model of below-grade structure

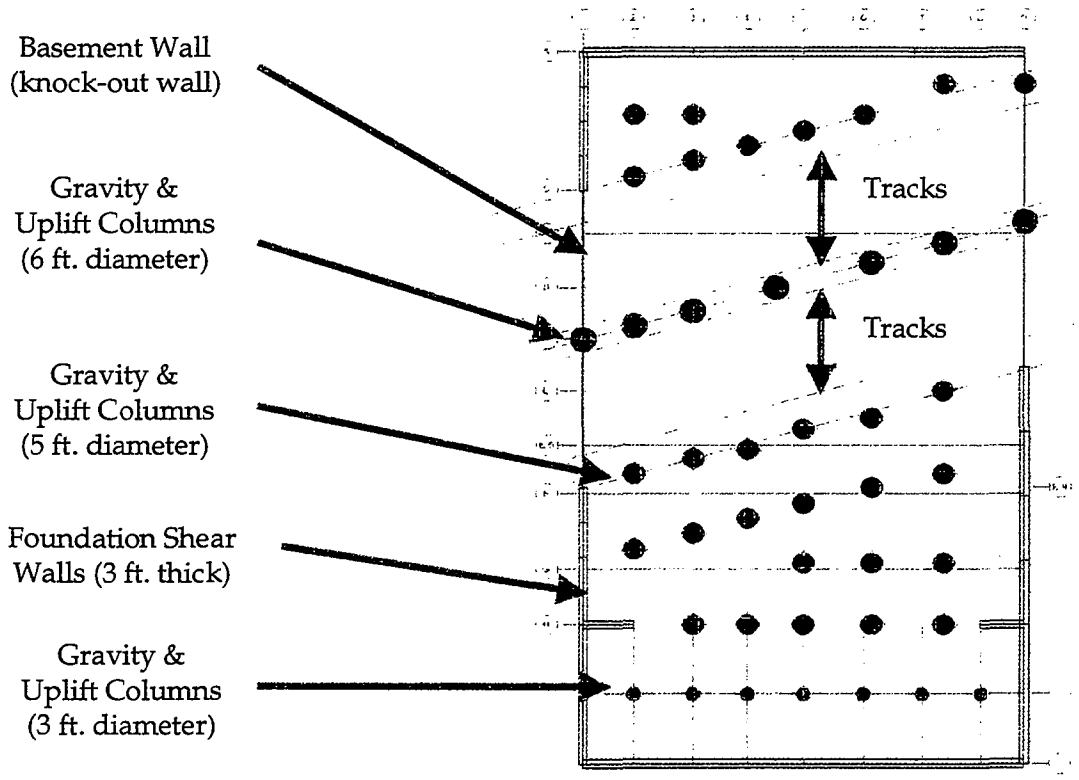


Figure 3: Foundation Plan Layout

The proposed strategy for developing a revised foundation plan for the 301 Mission Street tower comprises supporting the superstructure of the building on a thick concrete mat reinforced with structural steel beams as well as with conventional reinforcement. The concrete mat would then be supported by series of columns below as shown in Figures 2 and 3. The concrete mat acts as transfer girder in bending to transfer the superstructure's gravity and lateral tension/ compression loads to the columns below. The concrete mat also acts as a thick shear plate transferring the superstructure's shear loads to the perimeter concrete shear wall.

It was assumed that the below-grade structure supporting the building would be isolated from the Caltrain structure in order to ensure that the supporting structural system would not impose lateral loads or deformations on the Caltrain structure. As such, a 3 to 4-inch wide isolation joint will need to be provided around all columns and shear walls. Therefore, for analysis purposes, the columns and shear walls supporting the concrete mat were considered to be isolated from the Caltrain structure. As a result, the clear height (i.e. no lateral support) of these elements from the bottom of the concrete mat to the top of the pile caps is assumed to be approximately 46 feet.

The column and shear wall layout of the below-grade structure as shown in Figure 3 does not match up with the layout of the moment frames and braced frames of the superstructure. This condition is defined as a vertical and lateral discontinuity, and according the Code, all structural elements below such discontinuity shall be designed by multiplying the design loads by the "Omega" factor, which in this case will be 2.8. Therefore, the design forces for both the concrete mat and the foundation structure below this mat will need to be increased by 280% to conform to this Code requirement.

The deformations in the superstructure were also monitored to determine the relative increase in story drifts due to the foundation flexibility. The foundation flexibility resulted in an increase in story drift of approximately 20%. Therefore, the superstructure would have to be strengthened over that of the base design (without the Caltrain tunnel) to accommodate this additional flexibility. Based upon the analysis, the superstructure of the building can be stiffened by using a conventional dual lateral load-resisting system. However, this will result in an increased structural cost to the project. We estimate that this additional cost will be in the range of 10 to 15% of the base structural cost, or about $3,500,000 - $5,250,000.

Using the above methodology, the member sizes of the key structural foundation support elements were determined and are as shown in Figures 2 and 3. The members were sized based upon both strength and stiffness requirements, and as a result, a three (3) foot-thick perimeter foundation shear wall is required to resist the shear loads and provide sufficient stiffness. The shear wall would in turn be supported by a drilled pier foundation below the Caltrain track elevation. The columns situated between the tracks are required to resist the highest load due to the location of braced frame core above, as well as to support the largest unsupported span of the concrete mat. These columns are required to be approximately 6 feet in diameter, located at approximately 15 to 17 feet on center. Similarly, the remaining columns within the tunnel are required to be approximately 5-feet in diameter, with the columns on south side of the tunnel required to be 3-feet in diameter. These columns would probably be designed as composite elements comprised of heavy structural steel shapes encased in concrete in order to optimize their size and spacing.

The concrete mat would be approximately 10-feet thick, and would be comprised of both structural steel and high strength concrete working in composite action. The structural steel shapes would serve to increase the stiffness as well as to improve the constructibility of the thick mat. As mentioned previously, it was assumed that the underside of the concrete mat could serve as the ceiling of the Caltrain mezzanine structure. In the event that Caltrain prefers to have an independently supported mezzanine roof structure, this structure will need to be isolated from the bottom of the foundation mat. In this event, we estimate that a vertical isolation of between 5-to-8 inches will suffice.

Project Programming Impacts

The extensive modifications to the Caltrain tunnel layout plans noted above would result in lowering the mezzanine level to 23 feet below the street level and the train track level to 61 feet below the street level. While this element has not been analyzed or designed, it presents significant challenges for passenger access to the train level from the street and will require a series of escalators, elevators and stairs at steep angles due to the limited horizontal distance available. These escalators, elevators and stairs will also require large openings in the concrete mat of the building which will need to be significantly reinforced and may also need to be thickened at areas around these openings. This will result in additional cost, as well as architectural programming issues, for the 301 Mission Street project.

As noted above, the columns supporting the concrete mat and the superstructure range in size from 3 to 6 feet in diameter with the majority of these columns being of 5 foot diameter. These columns are spaced at approximately 15 feet-on-center. Therefore, the size, location and spacing of these columns within the Caltrain structure present significant security and passenger traffic challenges that Caltrain will need to consider in their program.

Design and Construction Sequence Constraints

There are a number of ways in which the construction of the structural system, including the Caltrain tunnel, could be sequenced. However, it would be particularly impractical and costly to construct the system in a way that would require Caltrain to bore through to create the tunnel after the building project had been completed. Therefore, we assume that prior to construction of the 301 Mission Street superstructure, it would be required to excavate to the bottom of the track elevation (-61 feet), and to provide shoring retention, pier foundations, columns, and shear walls. In addition, concrete knock-out panels at the ends of the tunnel right would need to be provided.

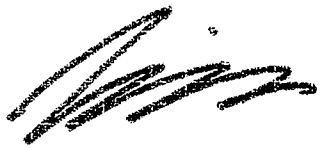
This proposed strategy would require that the conceptual tunnel layout plans made available to the project design team by Caltrain be verified and developed into final drawings and approved by the various agencies that are involved in a very short period of time so that the 301 Mission Street project schedule is not adversely impacted. It would be imperative that these final drawings by Caltrain be made available to the project design team before the project design is further developed into final construction documents. Based upon the 301 Mission Street project schedule and current state of the Caltrain drawings, this would not be possible without delay to the project. This will also require extensive coordination and agreements between the parties that will result in additional cost and schedule impacts. Furthermore, after the 301 Mission Street project design is completed, any material modifications to Caltrain's plans would likely result in significant costs and scheduling delays for the project as they may require redesign of part or all of the project.

Based upon the above noted constraints in the design and construction of the foundation system, we estimate the additional hard cost for the construction will be in the range of $12 to $15 million, which includes tunnel improvements of about $6 to $7 million. The total incremental structural costs of this Alternative as compared to the proposed project are about $15,500,000 to $20,250,000, taking into account both the dual lateral load-resisting system and the foundation costs. Incremental structural costs of Alternative II analyzed in our September 10, 2002 letter as compared to the proposed project are about $9-13 million for foundation work, plus about $8,750,000-$12,250,000 for the load-resisting system, for a total of about $17,750,000 to $25,250,000 in increased structural costs. The costs for Alternative II would increase by an additional $6-$7 million if the tunnel improvements are also assumed. Please note that these costs are based upon a preliminary conceptual estimate and the actual costs may vary significantly from this estimate. This preliminary cost estimate represents bare construction costs only and does not include soft costs or costs associated with delay in project completion due to construction of the structural foundation system presented in this report. These and other associated costs would be incurred in the near future as part of the 301 Mission Street project, but would be the responsibility of the Transbay project. We are unaware of any funding source to cover these costs.

We trust that the above-noted preliminary analyses will provide the necessary information you desire. If you require any further information or clarification regarding the above, please do not hesitate to contact us.

Sincerely,

DeSimone Consulting Engineers, P.L.L.C.



Niaz A. Nazir, Ph.D., S.E.
Principal & Project Director

cc: Mark Farrar (Millennium)
Stephen DeSimone (DCE)
Ron Polivka (DCE)

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September 19, 2002

Mark Farrar
Millennium Partners, SF
720 Market Street, 9th Floor
San Francisco, Ca 94102

Re: 301 Mission Street

Dear Mark:

We have reviewed the two alternatives for the proposed Caltrain "Downtown Terminal Extension" as it relates to the 301 Mission Street Project. As per your request we have evaluated each alternative with respect to the architectural design and programming of the project as it is currently designed. I have also attached a letter from DeSimone Consulting Engineers, P.L.L.C., which raises additional cost and feasibility issues.

Alternate I: drawing DTX-ALT1B-40 dated 7-31-02 and Section A-A dated 7-29-02.
This alternative relates to the new Transbay Terminal and involves acquisition of a southernly portion of the site. The plans indicate that the construction of a forty-five (45 ft.) deep tunnel wall would run parallel and approximately five (5 ft.) within the south lot line of the 301 Mission Street (the project) property. The encroachment of this wall would affect the current diagonal parking stalls along the south wall and perhaps the vehicular passageway/loading dock at ground level. We feel that a redesign for this area of the garage is realistic and that we can make the adjustments to accommodate the design of Caltrain tunnel, at an increased cost provided that the plans are accurate and that there are no major revisions. For the purpose of this analysis we have made the following assumptions: (Refer to figure 1 on page 2 for illustration).

1. As indicated in drawing Section A-A the outside face of the Caltrain foundation wall is aligned 2'-0" over the property line of the project, which we have assumed as a starting point for construction purposes (see figure 1).
2. The temporary piles indicated on Section A-A could be eliminated in lieu of utilizing the project's foundation wall to construct the Caltrain tunnel wall up against.
3. An 8" to 12"construction separation joint would be placed between the outside face of the proposed Caltrain tunnel wall and the foundation wall of the project to mitigate movement between the two structures.
4. The thickness of foundation wall for the project would be approximately 18" to 24".
5. The total dimension width lost within the garage would be 3'-6" over the length of the site which is 275'-0". Approximately 4000 sq. ft. of floor area would be lost over the four levels below grade (Levels B1-B2-B3-B4).
6. The ground level slab will be cantilever over the project's foundation wall towards the property line. This will enable the project to maintain the existing design along the vehicular passageway and loading dock areas.

Given the assumptions described above in Alternative I approximately 30 to 40 parking stalls would be lost throughout the parking garage and approximately 500 sq. ft. of storage and 500 sq. ft. of mechanical space would be lost on Level B1. With respect to the vehicular passageway and loading dock at the ground level, no changes or alterations will be required assuming that cantilever at the ground slab is acceptable.

735 Market Street, 2nd Floor San Francisco CA 94103 tel: 415 495 5881 fax: 415 495 3620 e-mail: gehesf@gehe.com

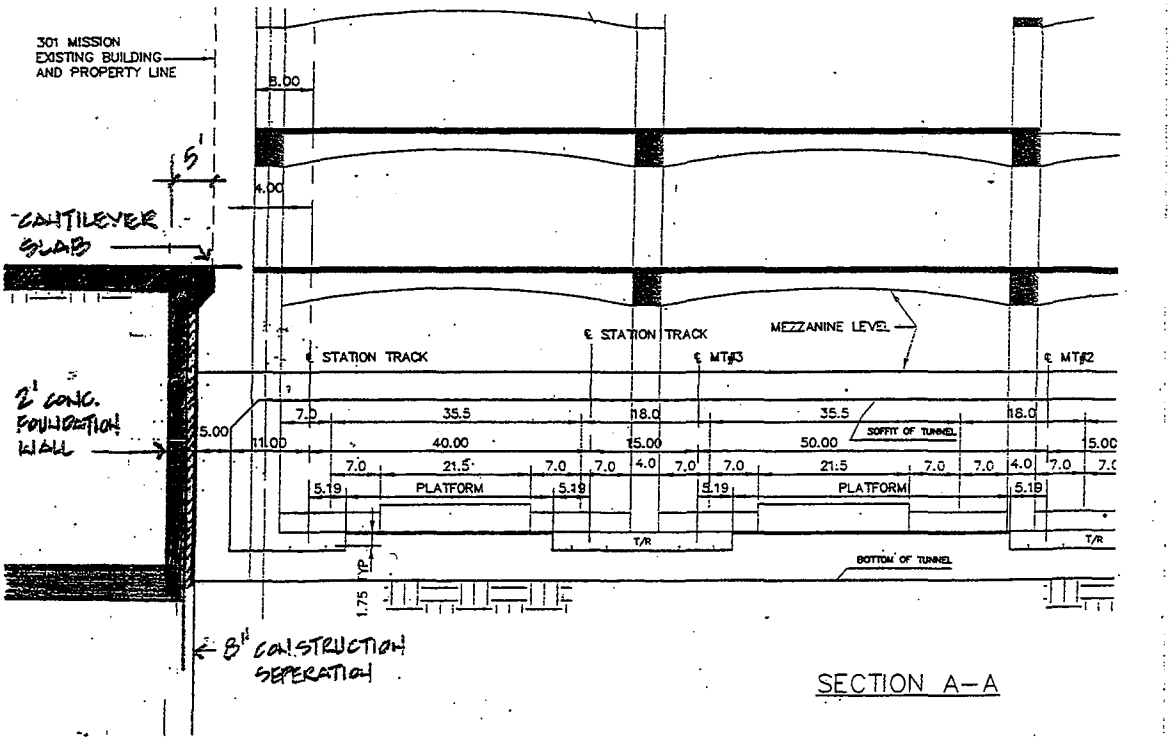


Figure 1

Alternate II: drawing DTX-ALT2B-40 dated 7-31-02.
Alternative II is the Second Street-to-Mission Street Caltrain extension alternative. There are several ways to analyze the impact of the alternative.
The plans indicate that the construction of a forty-five (45 ft.) deep tunnel would traverse directly through the 301 Mission Street property. The location of the tunnel and its physical configuration would significantly alter the remaining below grade buildable area on the property and would cause a redesign of various portions of the project. Judging from these drawings we have assumed that the train tunnel and the pedestrian mezzanine connecting to the bus terminals will make up approximately 2/3 of the entire site. The remaining 1/3 of the site (approximately 17,000 sq. ft.) would be free of any Caltrain construction and could be utilized for the below grade services of 301 Mission Street (see figure 2).

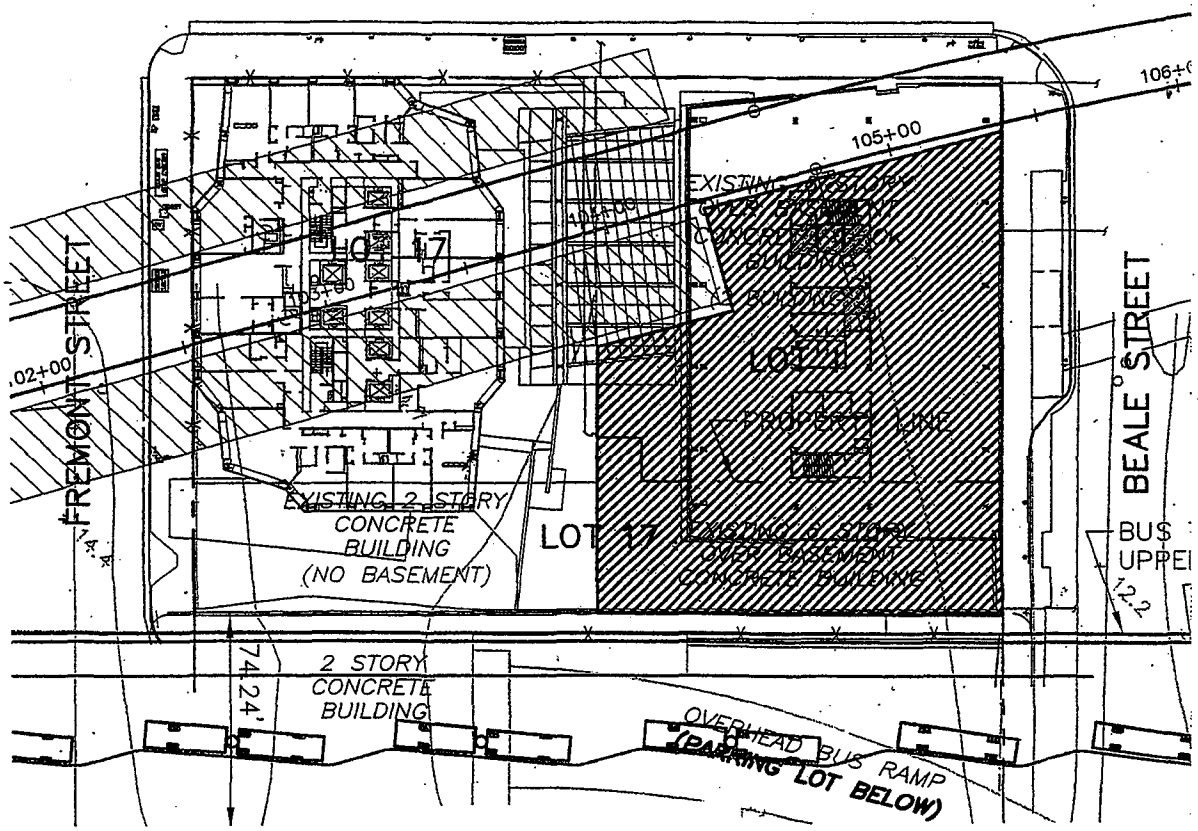


Figure 2

Alternative II A is assuming that the 301 Mission Street project provides the necessary clearances to accommodate the Caltrain tunnel under its base. Given the schedule for 301 Mission Street, it would be necessary to confirm the required clearances now. Above the mezzanine level of the tunnel a 30' deep structural mat would span the width of the tunnel (approximately 90') and piles will be located at the northern and southern outer edges of the mat for the vertical support. Under this scenario the 30' structural mat would extend above the existing grade of the street and the first two floors within the tower footprint would be completely eliminated (see figure 3). This scheme will also eliminate the main vehicular and pedestrian drop-off Porte Cohere area and the vehicular parking and loading access point from Fremont Street. We also anticipate that the structural mat would have to extend beyond the site in order to facilitate the appropriate number of piles to support the building. According to the D C E report, even with use of the public sidewalk area, the required piles need to support the mat could not be accommodated on such a small area of site. This solution will have tremendous design implications, which make it infeasible for the following reasons:

1. A 30' structural mat eliminates the first two floors of the tower footprint replacing the ground floor and second floor retail and the atriums open space areas. The residential and hotel lobbies will have to be relocated to the third floor. Access to these lobbies will replace the public atrium on that floor as well. This approach will take up approximately 2500 sq. ft. of dedicated atrium open space as well as add a significant amount of cost for additional elevators and escalators in order to shuttle hotels guests and residents up to a third floor lobby.

We can assume that two escalators and four elevators, at a minimum, would be added to the project. The functions designated to the second and third floors of the tower will also need to be relocated or eliminated due to relocating the ground floor functions above the structural mat. Relocating the second and third floor functions to higher floors within the tower will also eliminate 20 hotel units.

2. Approximately 4500 sq. ft.of restaurant and retail space at the ground floor will be eliminated below the tower footprint due to the placement of the structural mat.
3. The vehicular access to the site from Fremont Street for passenger car and loading vehicles will be eliminated due to the configuration of structural mat. In addition, the access to the parking garage ramp, the loading dock and the Porte Cohere, which is the primary pedestrian drop off for the project, will all be eliminated. As a result pedestrians, vehicles and service vehicles would need to access and egress the site from Beale Street. This resolution will significantly affect the ground floor reducing retail, public open space, and the central atrium. Additionally this resolution would create numerous constraints for locating the office elevator core in an area that would functionally be desirable for servicing pedestrians and deliveries.
4. Presently the mechanical and electrical distribution design to the residential tower is routed below grade from various mechanical rooms within the garage. Our design also incorporates a dedicated service corridor for deliveries to be routed to the central elevator cores of the tower from a below grade service elevator adjacent to the loading dock. Due to the location of the Caltrain tunnel and physical constraints of the structural mat, all mechanical and electrical distribution would need to occur outside the footprint of the tower, reducing yet more additional valuable square footage at the ground and second floor. Approximately 1500 sq. ft. of dedicated shaft area will be needed on the ground and second floor to route the mechanical and electrical distribution from below grade up and over the structural mat at the third floor. Additionally, a dedicated service elevator and corridor will need to be added to the design of the atrium to services the residential tower. A total of about 4000 sq. ft. of ground and second floor program area will be replaced by these services.
5. As per the changes to the below grade design the project will significantly be affected by the site constraints and reduce buildable area that is free of any Caltrain construction. Under the current design 123,000 sq. ft. is devoted to parking, 25,000 sq. ft. to ramps and drive aisle, 40,000 sq. ft. to mechanical rooms, and 10,000 sq. ft. to elevator cores, stairs and shafts. Assuming that a vehicular parking ramp from the ground floor to B1 can be accommodated and that an elevator core can be centrally located within the 17,000 sq. ft. parcel, and mechanical rooms can be arranged in some cohesive order, the remaining area that could be dedicated to parking would be significantly reduced and inefficient for a project of this size. Per floor, about 2000 sq. ft. is dedicated to garage exhaust fan room, 2500 sq. ft. for a vehicular ramp, 3000 sq. ft. for mechanical rooms and 2000 sq. ft. for elevator core and stairs. The remaining area dedicated to parking stalls and drive aisles would be approximately 7500 sq. ft., which would allow for roughly 25 parking stalls per floor; totaling approximately 100 cars over four floors verses 400 per our existing design.
6. From an Urban Design standpoint, this alternative would conflict with policies set forth in the downtown plan. The encroachment of the structural mat would prohibit any ground floor activity to occur below the residential tower, and eliminate all ground floor activities and visually create a physical barrier effectively a concrete wall along Fremont and Mission Street. Outdoor public space along Fremont Street and Mission Street would also be eliminated from the open space design.

   As a result of this alternative, the only remaining program at the ground floor that can be salvaged from the existing design would be the office lobby and partial ground floor retail at Mission and Beale Street. The remaining ground floor area would be dedicated to loading, vehicular ramps and mechanical shafts. The second floor of the tower will also be encroached by the structural mat and would not have any program space.

   The central atrium will not exist in its present design. Adding numerous elevators to the project to reroute pedestrians and deliveries to the third would also absorb a significant amount of the floor area (approx. 2500 sq .ft.) The remaining area that could be dedicated to public open space on the ground floor would be approximately 2000 sq. ft. versus 11,300 sq. ft., which our current design indicates.

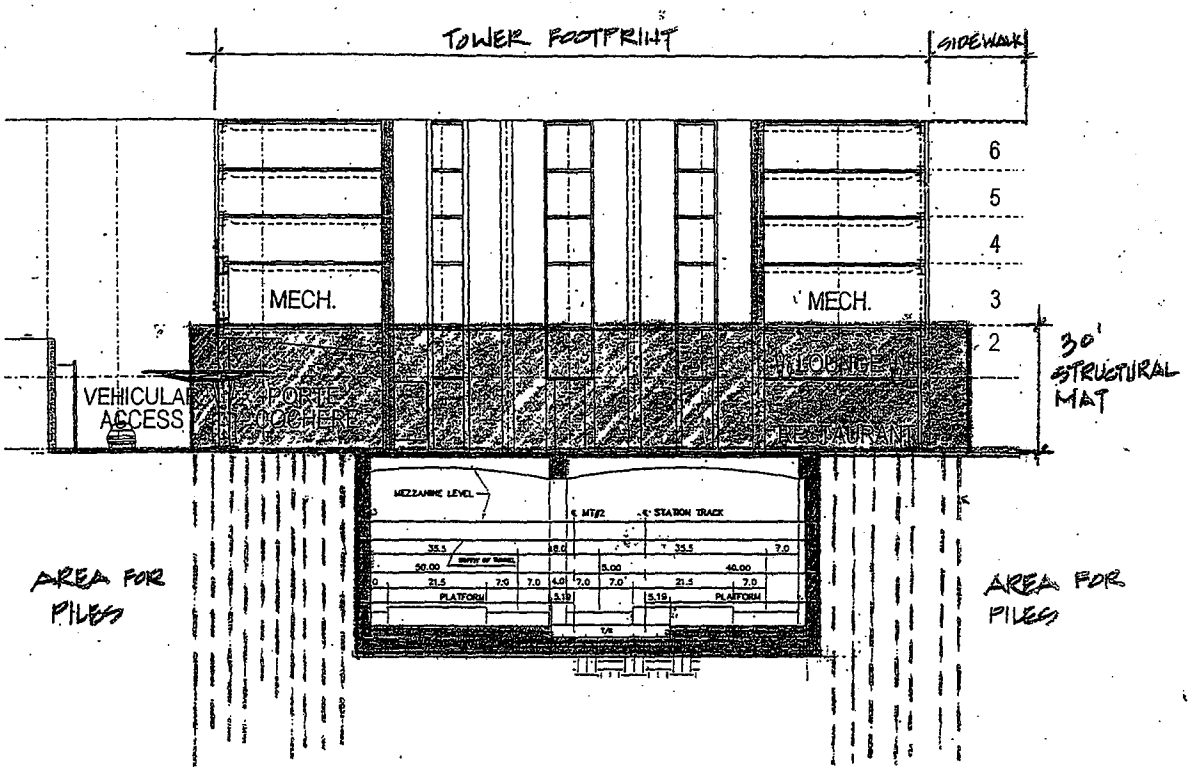


Figure 3

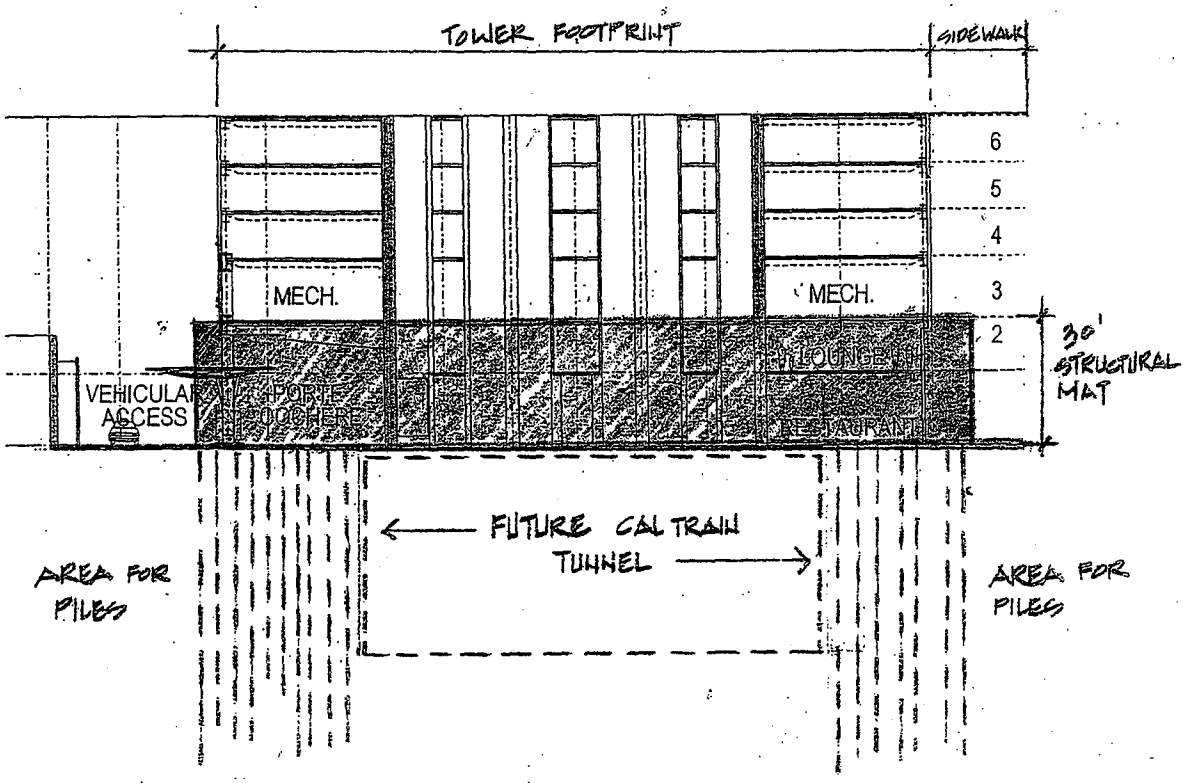


Figure 4

Alternative IIB is assuming that the Caltrain tunnel is constructed as part of the initial 301 Mission Street development. Assuming the configuration of the tunnel is as per drawing DTX-ALT2B-40, the structural foundation system for the project will be as described above in Alternative IIA. A 30' deep structural mat extending above grade supported by numerous piles at both ends of the mat will be constructed as the primary structural foundation system for the tower (see figure 4). As in Alternative IIA the problematic issues with this alternative regarding pedestrian and vehicular access, program reduction, etc., (see comments above) will be identical for Alternative IIB plus additional construction cost and timing issues, making this alternative also infeasible.

Alternative IIC is assuming that the height of the tower is reduced by ½. According to DeSimone Consulting Engineers the thickness of the structural mat could then be reduced to 15' in thickness. The engineers have concluded that, as in Alternative IIA, the required piles cannot be accommodated on the site. Although the thickness is reduced, this alternative is substantially similar to Alternative IIA in its program and urban design impacts. Similar to alternatives IIA and IIB described above the configuration of the mat in this alternative will also interfere with ground floor functions, i.e. residential and hotel lobbies, vehicular access and loading access. In addition to the programmatic issues that this solution creates at the ground floor and below grade, reducing the tower by ½ its height will also eliminate over 400,000 sq. ft. of program, most or all of which would be residential units, depending on the revised program mix. (See figure 5).

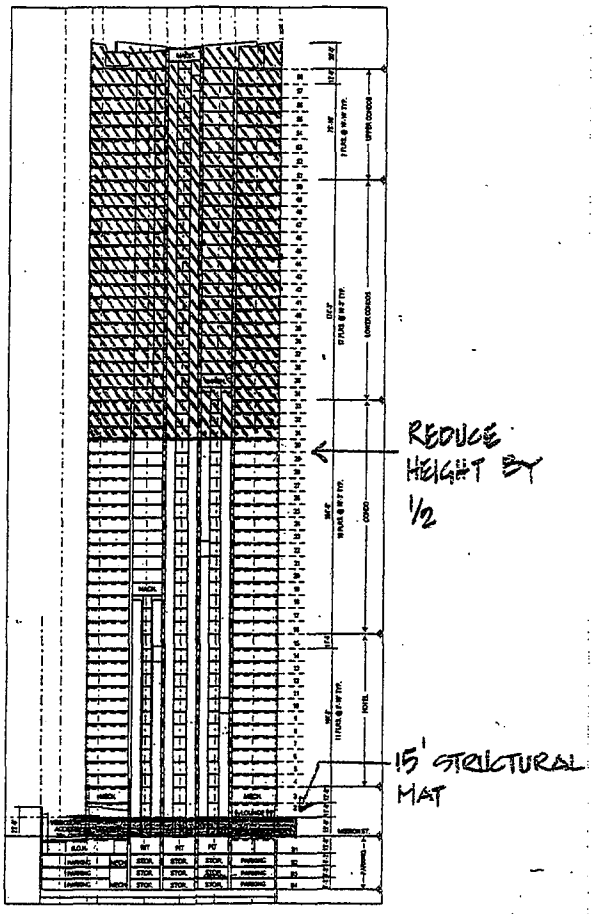


Figure 5

Alternative IID is assuming that the tower location for the project is shifted onto the area of land outside of the Caltrain tunnel. Assuming that the tunnel and pedestrian mezzanine takes up approximately 2/3 of the site, approximately 17,000 sq. ft. of land would remain free of any Caltrain construction (reference figure 2 for buildable area). This area of land would be utilized for construction of the foundation system to support the superstructure of the tower's footprint. This is of course based only on the Conceptual Plan, and additional reductions in the footprint could be necessary to accommodate CalTrains' program. As a result of this condition the project would be infeasible as follows:

1. The location in which the remaining buildable area is located is zoned for a maximum height of 400' (versus 550'), which is the zoning allowable for the current tower location. Assuming that a similar tower floor plan is designed for this location the maximum area of FAR that could be achieved on this parcel of land is approximately 306,000 sq. ft. versus 907,498 sq. ft., which is allowed. This assumes that a project of this size would support a TDR transfer bringing the FAR to 18:1; without the transfer, the square footage would be considerably less.
2. Reducing the height of the project will also have significant impacts on the project presence along the city skyline and would not be in keeping with the Downtown Plan and Planning Department policies regarding density and design at this location. The goals set forth in the Downtown Plan encourage towers of this stature to have a sense of slenderness and add visual interests to the termination of the building and emphasize that added height would improve the appearance of the skyline when viewed from a distance. Furthermore, from a development standpoint a reduction in the height of the residential tower would have a significant impact on potential views and will reduce the value of the overall project.
3. Reducing the buildable area of the project will also have a significant impact on the ground floor functions such as the residential lobbies, loading dock areas, vehicular and parking ramp access. The central atrium would be completely eliminated from the design and retail spaces at the ground floor would be very minimal. The area required to program all the ground floor functions, i.e., the residential lobby, loading dock, vehicular parking ramp, mechanical shaft and back of the house offices for a project of this size is approximately 20,000 sq. ft. This does not include areas dedicated to public open space. Due to the constraints of the reduced site (17,000 sq. ft.) this alternative cannot accommodate these functions. Furthermore, parking below grade will be dramatically impacted due to the irregularity of the site, and the limited amount of parking area that can be dedicated to stalls.

   Elevator shafts, mechanical room, electrical vaults room, and garage ramps will require approximately 8,000 sq. ft. per floor of program area. This allows only 9,000 sq. ft. for parking stalls which is equivalent to 28 stalls per floor, for a total of 112 cars if four levels were constructed. However it is unlikely that four floors would be constructed, given the high cost of excavation and small number of cars each floor could accommodate.
4. With regards to the projects urban identity and public features it will be extremely difficult to accommodate the current design or a similar concept on the reconfigured site. Assuming that the project is built as a residential building all public open space areas would be eliminated from the design and most likely the residential open space component will be designed within the units as balconies and as a dedicated roof top garden. The loading dock, the vehicular ramp and the residential lobby will primarily consume the ground floor. Due to the site constraints, retail spaces, restaurants and interior open space components that add significantly to the urban character of the street and reflect the intention of the Downtown Plan will not be accommodated in this alternative.

Based on our preliminary analysis for Alternative II, we believe that the four variations of this alternative to be infeasible. Given the constraints of the site in conjunction with the project's existing program, the physical character and program would be completely altered and a redesign of the project would need to occur. Even with a redesign, cost, site constraints and other technical considerations would make the current program, or even a substantially similar one, infeasible..

If you have any further questions, please do not hesitate to contact us.

Sincerely

Glenn G. Rescalvo, AIA
Partner

December 6, 2002

Mark Farrar
Millennium Partners, SF
735 Market Street, 3rd Floor
San Francisco, Ca 94103

Re: **Evaluation of Caltrain Alternative 2 for the Downtown Terminal Expansion**
301 Mission Street

Dear Mark:

We have reviewed the revised alternative plan for the proposed Caltrain "Downtown Terminal Extension" (Alternate 2) as it relates to the 301 Mission Street Project. This alternative, which represents the Second Street to Mission Street Caltrain extension, is a revision to the "original Alternative 2" which Caltrain presented to us in mid-October of 2002. It entails drawings C101, C102 and C103 dated November 4, 2002. Per your request we have evaluated this alternative with respect to the architectural design and programming of the project as it is currently designed.

As discussed in the attached DeSimone Consulting Engineers' letter, the revised plan includes a lower tunnel floor and allows for placement of columns to support the building's superstructure. Under this Alternative, only 1/3 of the below-grade area would be available for parking and building support functions. While the entire site above grade is assumed to be available for the development program, the program and design are altered significantly as compared to the project in order to accommodate the relocation of below-grade functions. The following discusses the impact to the building's vertical circulation servicing, parking, support functions, and their subsequent affect on floor area ratios (F.A.R.), residential unit count, office areas, costs and Caltrain pedestrian circulation.

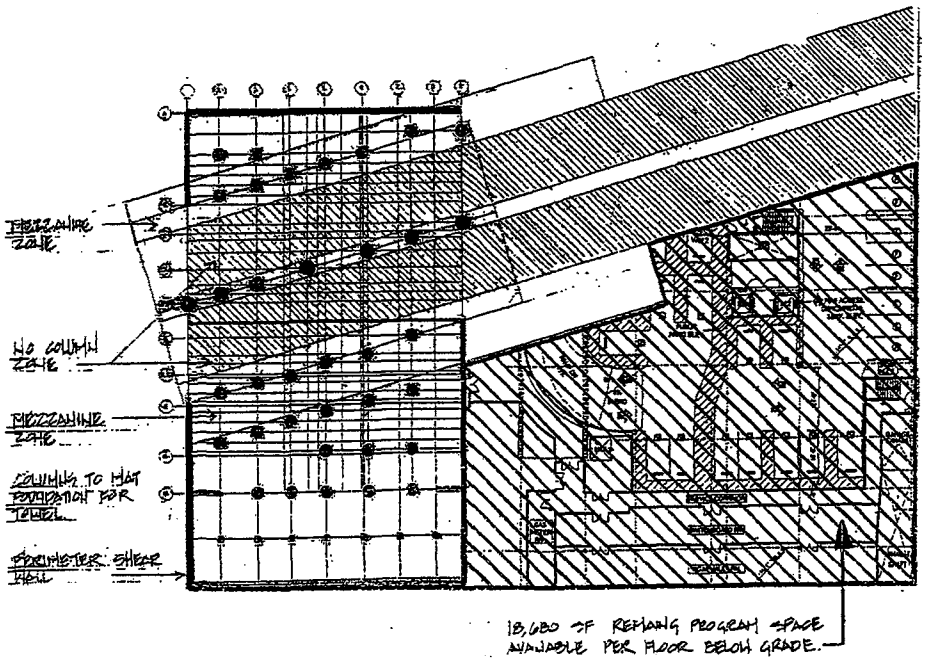


Figure 1

Residential Tower Elevator Core Servicing

Per the analysis in DiSimone's letter, the top of the tower's residential foundation slab would be placed eight feet beneath the residential tower's grade level. Thus access from the loading facilities, currently below grade would no longer be feasible and access to the elevator core from the loading facilities would need to relocate above grade, on the third floor of the office building. A service corridor would then need to traverse the public atrium and connect with the residential tower core. This enclosed corridor would ruin the purity of the current design. Upon entering the public atrium, pedestrians' views upward towards the skylight roof would be disrupted by the enclosed crossing above (Fig. 2 & 3). This resolution is also problematic from a servicing standpoint, as this entails servicing the residential tower and hotel by means of the office service elevator to reach the residential tower. This is operationally challenging, inefficient and creates numerous security concerns.

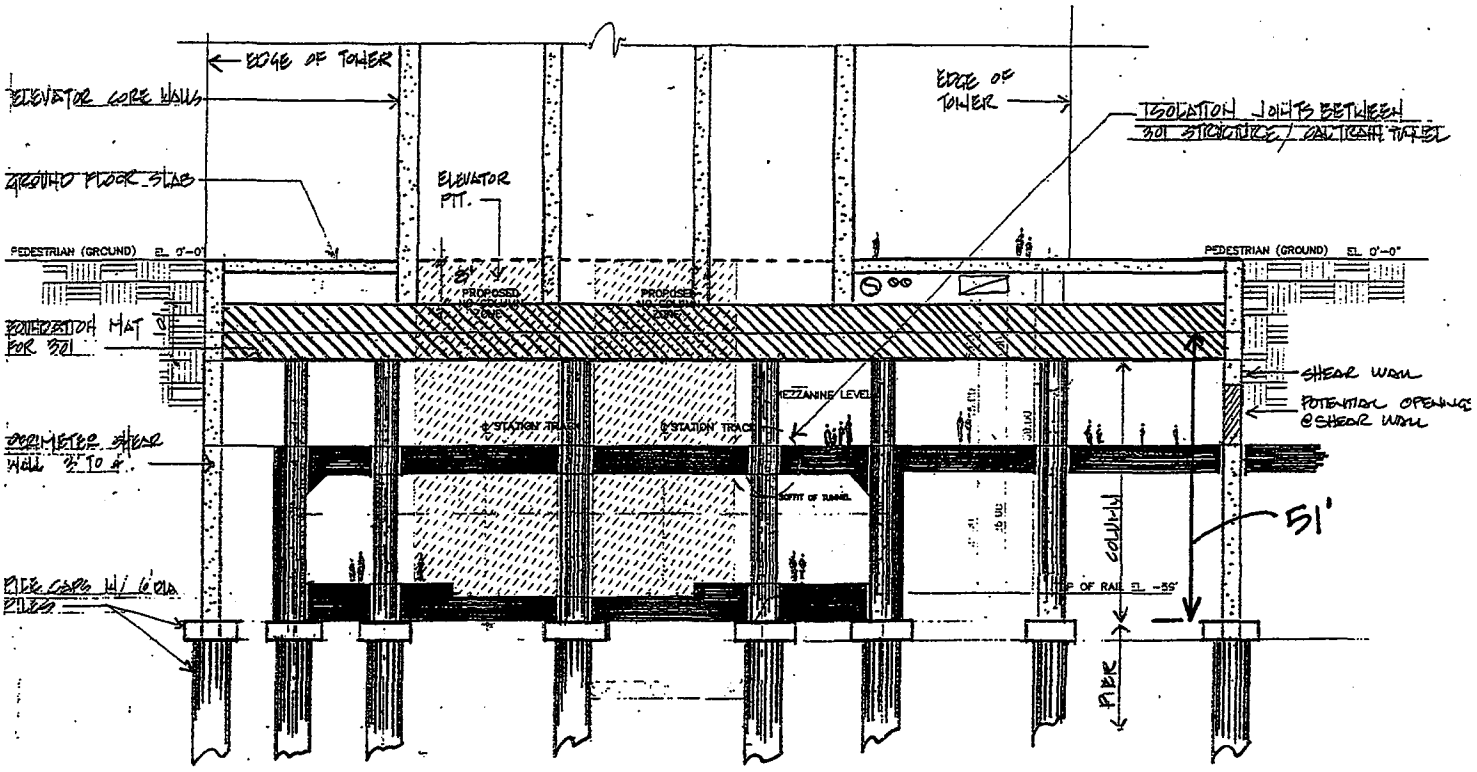


Figure 2

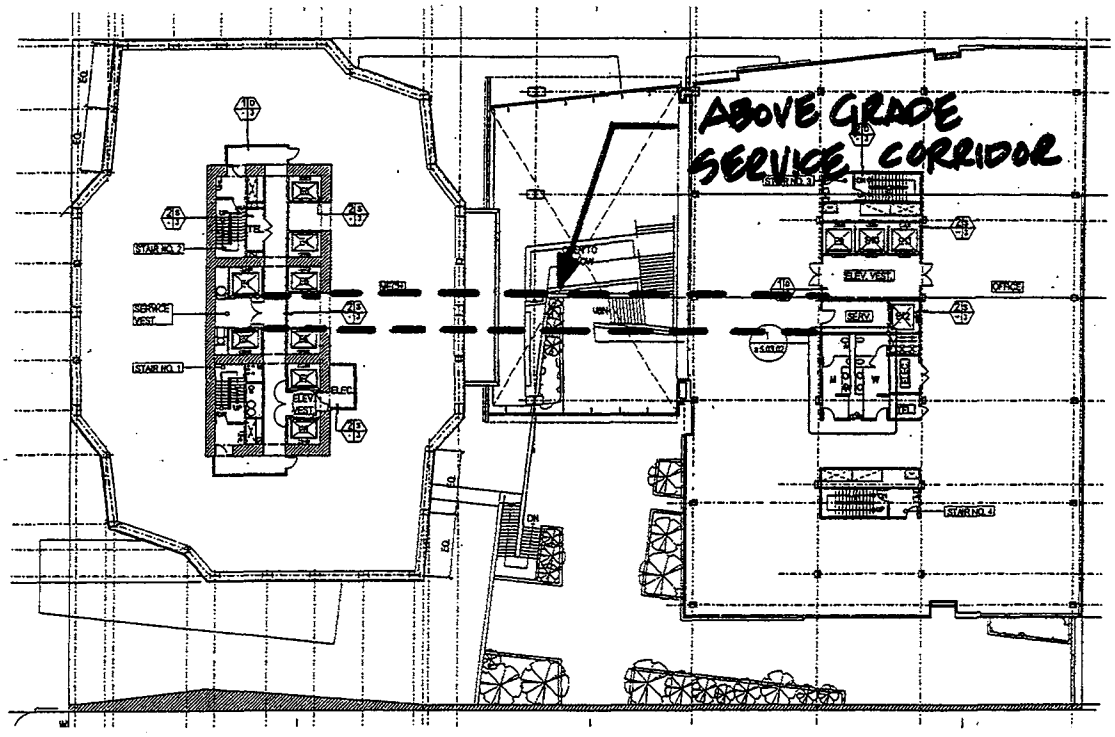
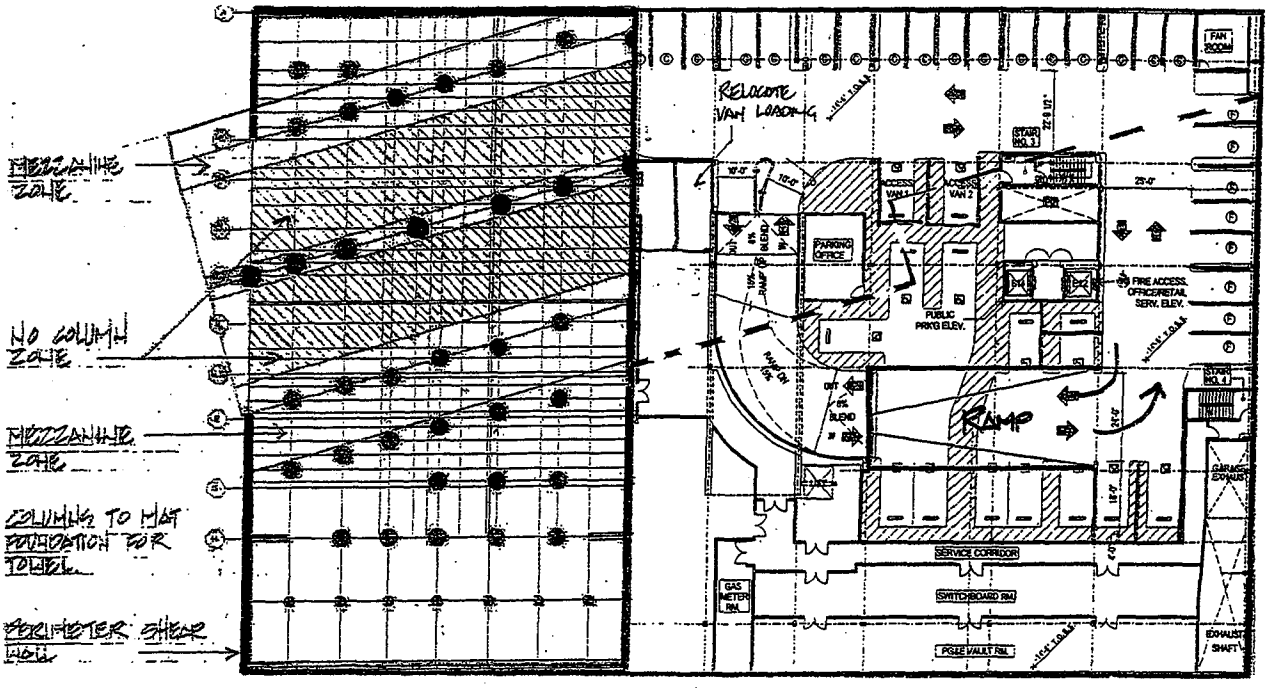


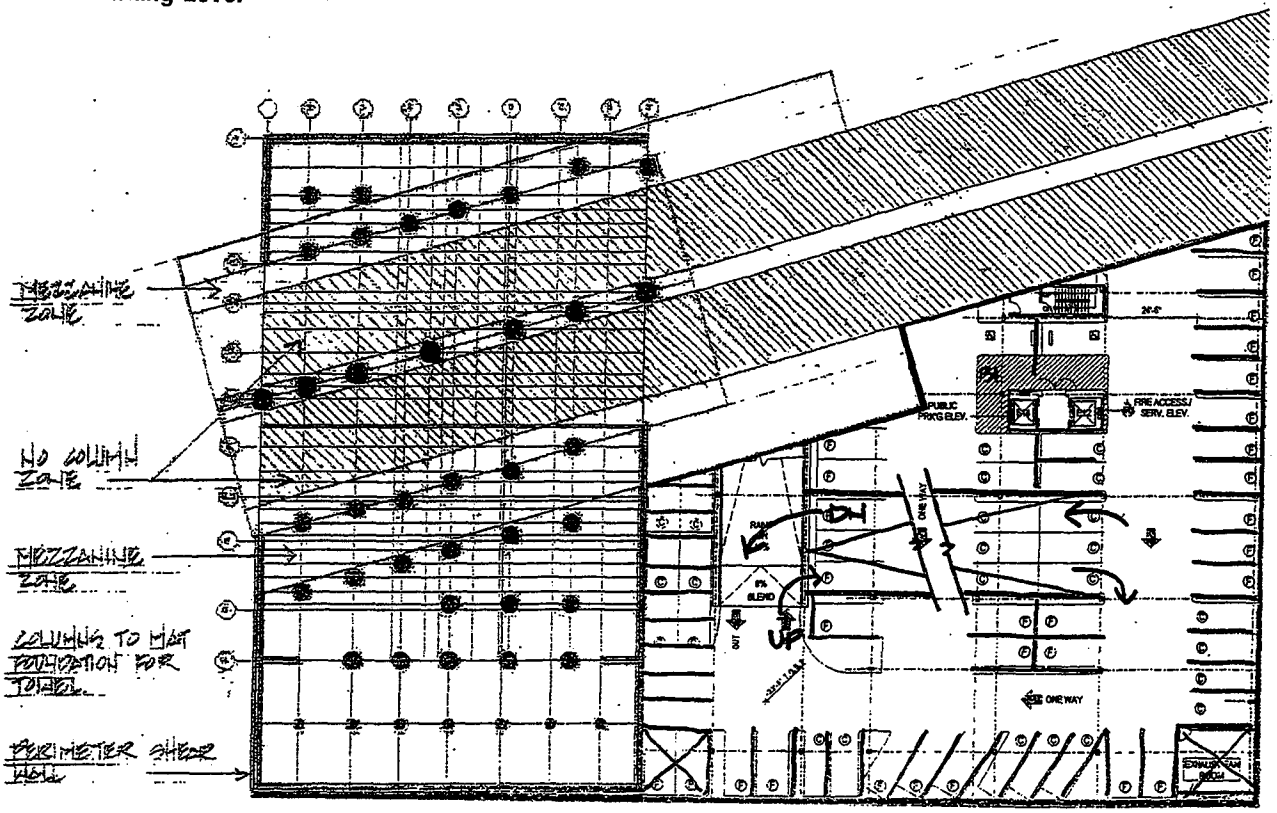
Figure 3

Parking Impact

Below grade Levels B1, B2, B3 and B4 would all be significantly reduced by the incorporation of the Caltrain alternative and subsequently would need to be completely redesigned. As noted on figure 4, the remaining 18,680 square feet of area would need to be devoted only to parking ramps and stalls. Given the awkwardness of the layout, maneuvering and efficiency of parking will result in a loss of 243 stalls leaving the project with only 157 stalls for 320 residential units, and no spaces for visitors and commercial uses. In addition to the loss of 60% of the parking stalls, building support functions would need to be located elsewhere within the project as discussed next.

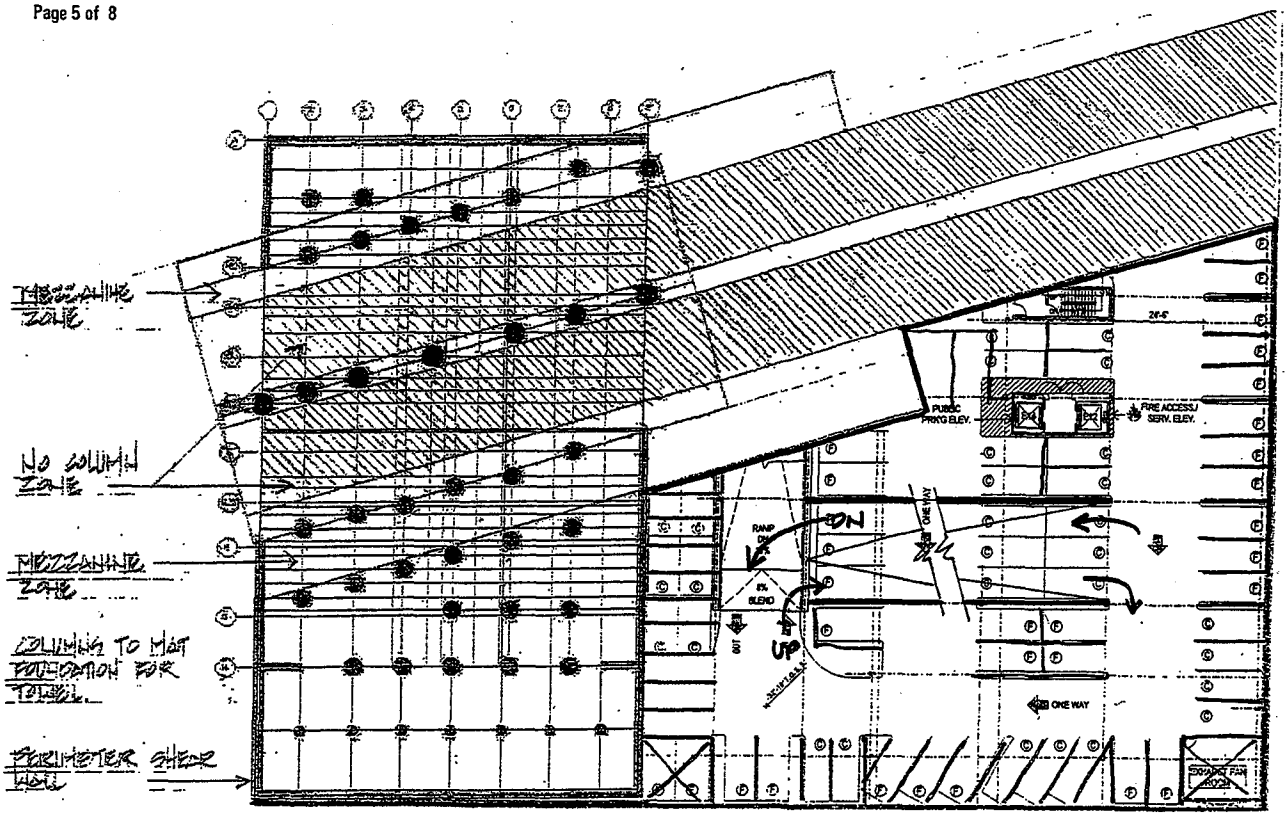


B1 Parking Level

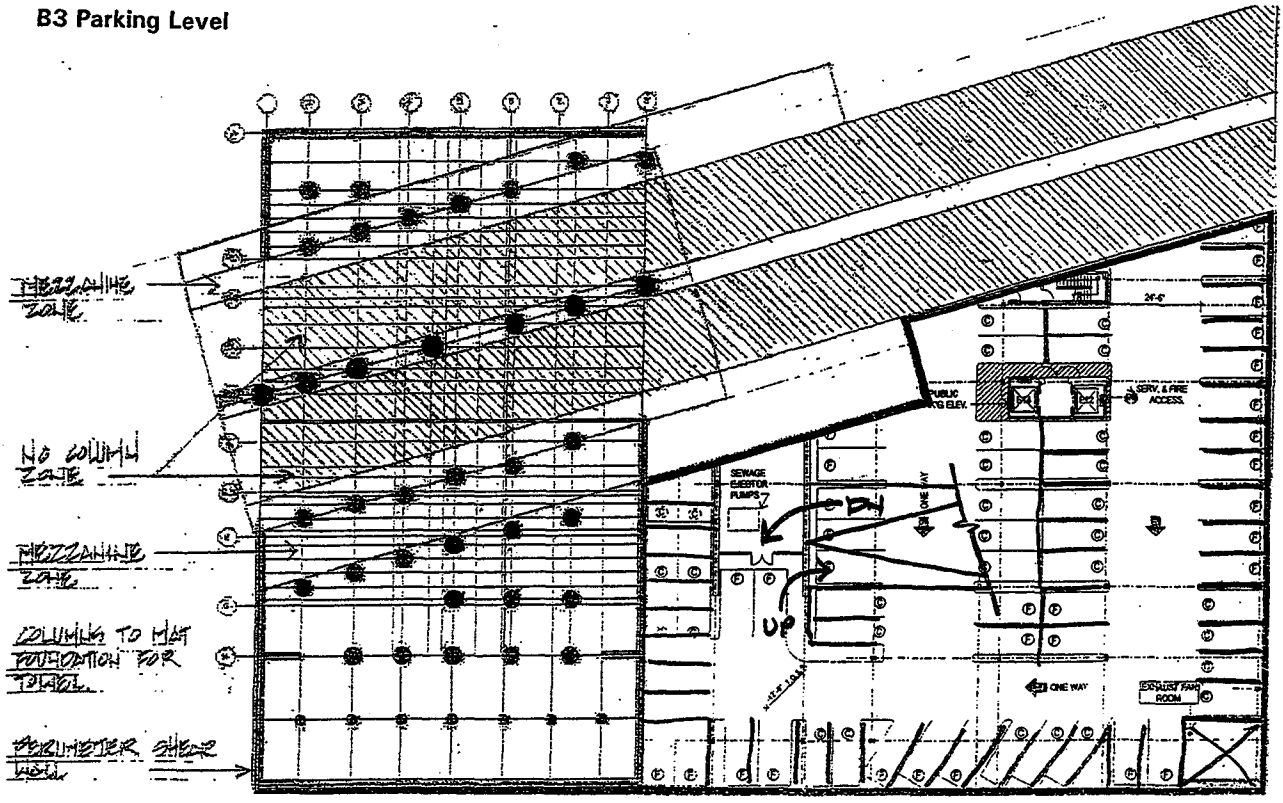


B2 Parking Level

Figure 4



B3 Parking Level



B4 Parking Level

Figure 4 continued

Relocation of Building Support Functions

For this evaluation, building support functions consist of two categories: 2- story mechanical spaces, and 1-story support spaces (utility, electrical, plumbing and storage). Caltrain's new alternative necessitates relocation of these services to tower floors above grade, and as a result valuable F.A.R. square footage will need to be recaptured else where on the site.

The 2-story mechanical spaces currently located directly beneath the residential tower footprint are strategically located to efficiently feed up into the tower. 23,725 square feet (net) of double height mechanical space would need to be relocated into the tower, for a total of 47,450 square feet. The other 1-story service areas comprise 37,262 square feet, for an overall total of 84,712 square feet of relocated space. This would absorb eight floors, equivalent to 64 units.

To address the displaced square footage from the residential tower, the area could be relocated to the office tower. This would increase the office tower 6 floors, from, 9 floors to 15 floors (Fig. 5), and increase the height of the office tower 83 feet, from 126 feet to 209 feet. Please note, the 84,714 represents net square feet associated with the support functions that would replace 8 floors of F.A.R. from the residential tower, totaling about 103,050 gross square feet, and equivalent to 6.3 current office floors, rounded here to 6 floors.

While it is possible to relocate the lost housing to the office tower, we do not recommend this given the scale of the building. The building would lose efficiency as the elevator and service core would enlarge noticeably and there would be substantial duplication of mechanical systems. Again this arrangement would be operationally challenged, inefficient and increase security concerns.

Given the steel structure above grade, sound and vibration transmittance of the mechanical equipment would be of great concern. This problem would require substantial study and result in additional costs.

Regarding aesthetics and urban design, the project's expression and connection to the street would be disrupted. With four to five lower tower floors allocated to mechanical functions, louvers would replace vision glass. The glass is an important element of the design's visual continuity and the concept of a graceful, slender glass tower. The additional 6 stories on the office tower would dramatically change the scale and daylight quality in the public atrium and outdoor space.

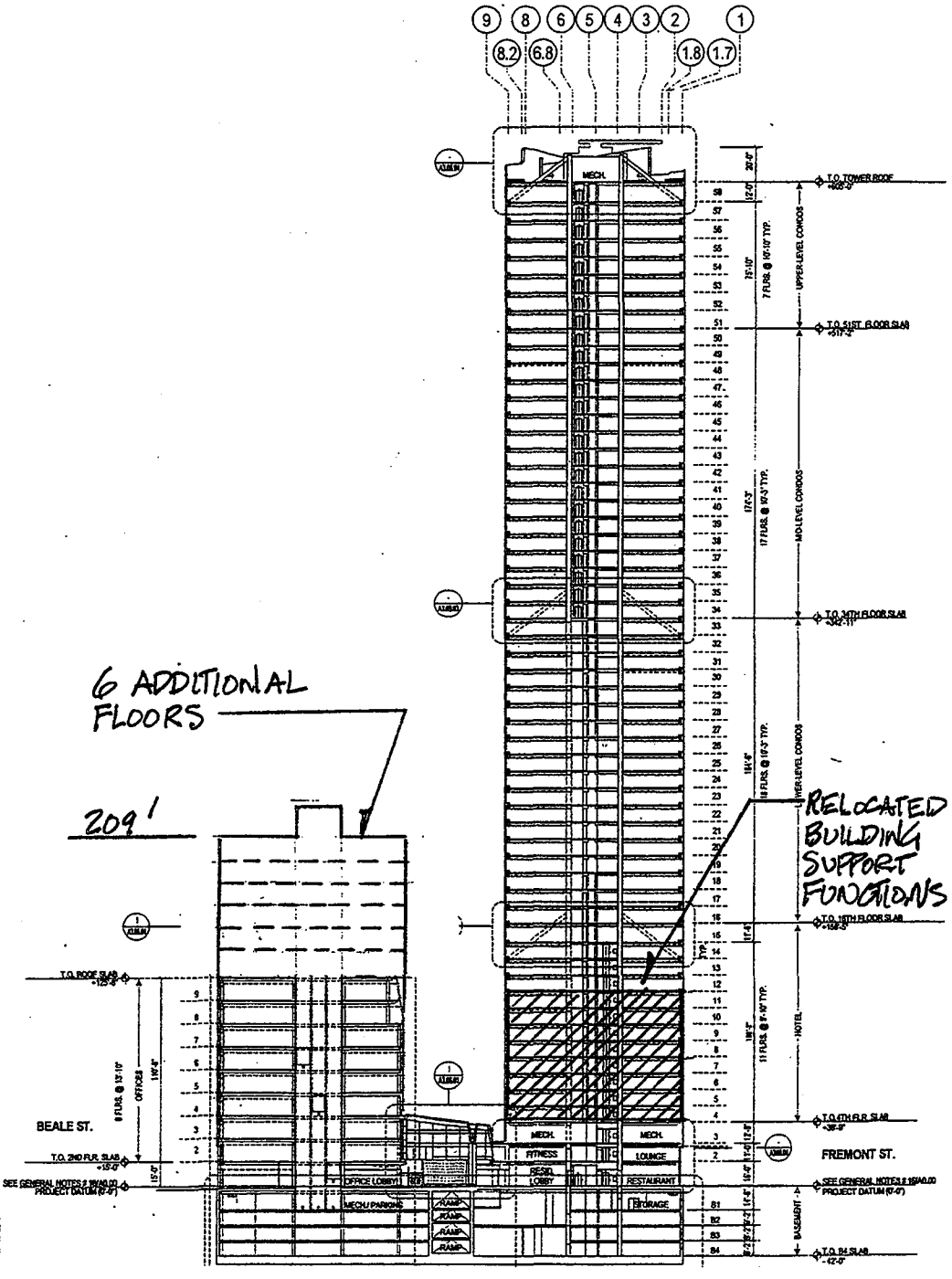

6 ADDITIONAL FLOORS
209'
RELOCATED BUILDING SUPPORT FUNCTIONS
BEALE ST.
FREMONT ST.
MECH.
FITNESS
LOUNGE
RESID. LOBBY
RESTAURANT
STORAGE
OFFICE LOBBY
MECH./PARKING
RAMP
T.O. TOWER ROOF
T.O. 51ST FLOOR SLAB
T.O. 34TH FLOOR SLAB
T.O. 16TH FLOOR SLAB
T.O. 4TH FLR. SLAB
T.O. 2ND FLR. SLAB
T.O. B4 SLAB
UPPER-LEVEL CONDOS
MID-LEVEL CONDOS
HOTEL
BASEMENT

Figure 5

Cost Issues

Given the greater complexity of the foundation system, the need to incorporate additional sound and vibration mitigation components, and the addition of 6 floors to the office tower, we anticipate the incremental construction cost will be in the range of $29,500,000 to $34,250,000. These numbers include the $15,500,000 to $20,250,000 preliminary estimate within DeSimone Consulting Engineers' letter, another $2,000,000 to mitigate sound and vibration transference, architectural and engineering design costs of approximately $2,000,000, and $10,000,000 for the additional office floors. This is above and beyond what it would have cost to do the same residential F.A.R. Alternative II analyzed in our September 19, 2002 letter would total about $35,750,000 - $43,250,000 in incremental costs as compared to the proposed project, assuming a similar approach to replacing lost developable area with office space. This total assumes the structural cost for Alternative II outlined in the December 4, 2002 DeSimone Consulting Engineers letter and an additional $4,000,000 for costs of circulation related to the "sky lobby", and would be further increased by $6,000,000 to $7,000,000 if tunnel costs are assumed. Please note these costs are very preliminary.

Caltrain Pedestrian Circulation

Since a residential tower above the Caltrains would necessitate a dense grid of columns (3 to 6-foot diameters) as they penetrate Caltrain's platforms and mezzanine beneath the project, pedestrian circulation at the platform would be circuitous and difficult to monitor for security. Making the transition upward from the mezzanine to the Transbay Terminal would also be indirect as the vertical transition would need to occur west of the 301 Mission Street Project, given the 10-foot thick tunnel roof/tower foundation projected in the DeSimone letter. As this Caltrain alternative also lowers the platform 15 feet from the prior iteration, the added vertical climb or descent, expected of the commuters could further inconvenience them creating operational concerns. These issues, together with train access issues resulting from the tunnel grade change, would need to be addressed by Caltrain.

Summary

The new Caltrain Alternative 2 significantly impacts the current design for 301 Mission Street, necessitating major revisions to the building's functional, aesthetic, urban design character, and costs. The subsequent redesign would lose 20% of its residential units, increase the amount of office space 79%, and reduce the number of parking spaces 60%. Building servicing would be less efficient. Building esthetic and urban design are compromised since mechanical relocation above grade results in louvers replacing substantial vision glass, disrupting the project's slender glass tower concept and conveying a less inviting expression to the street. The project's public atrium and open space would dramatically change in scale and daylight quality as 6 floors are added to the office tower to recapture F.A.R. Additional construction and design costs are anticipated to be in the range of $29.5 to $34.25 million. Although the Transbay space has not been designed, from the perspective of the Caltrain users, the labyrinth of large columns penetrating the pedestrian areas would likely result in circuitous pathways, a deep climb and other operational issues.

Please do not hesitate to contact us should you wish to discuss this further.

Sincerely,

Glenn G. Rescalvo, AIA
Partner
Enc: DeSimone Consulting Engineers Letter, 12/04/02

M:301Mission\docs\caltrain\atl2-120602vt

S. J. Mfg. Inc.
148 Townsend Street
San Francisco, CA 94107
415-597-7500, ext. 701

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December 6, 2002

To Whom It May Concern,

I am submitting this letter in response to invitation for public comment on the Transbay Terminal/Caltrain Downtown Extension Redevelopment Project Draft Environmental Impact Report. I am a lease holder as well as an owner respectively, of two buildings directly involved in the report as being in the path of the Caltrain Extension. Therefore, my concerns lie primarily with the construction of the extension itself.

I would like to state foremost that I am in favor of mass transit improvements in general, and the redevelopment project specifically. I would like to add my support for the tunneling option recommended by the report, as opposed to the cut-and-cover option, which may require acquisition and demolition of property. I would like to know more about how this choice will be made and within what time frame.

Given the project goes ahead with the tunneling option, my concerns are primarily of business disruption on Townsend and Second Streets, length of construction time and vibration of building during tunneling. These issues are not thoroughly addressed in the draft EIR, nor is adequate attention given to the underpinning process as part of the tunneling process. I would like to see more information on mitigation of dust, traffic, noise and timeframe. I would like more information regarding when the various components of the project might actually begin in order to plan accordingly for the future.

Respectfully,

Seymour Jaron

Pacific Bell Telephone Company
140 New Montgomery Street
Room: 2244
San Francisco, CA 94105
Phone: 415.537.3266
Fax: 415.543.0852
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Lynn Bunim
Executive Director
External Affairs

PACIFIC BELL | SBC global network

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November 19, 2002

Mr. Paul Maltzer, Environmental Review Officer
City and County of San Francisco
Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103-2414

Re: Cal Train Extension Draft Environmental Impact Report (DEIR) Comments

Dear Mr. Maltzer:

Bob Pickard, SBC Pacific Bell Public Works Coordinator and I thank you for the opportunity to comment on the DEIR for your project. SBC-Pacific Bell supports your effort to improve mass transit in San Francisco. We also welcome the chance to help you in the planning stages of the project so that the project can be completed quickly, economically, and with minimal disruption.

The DEIR briefly mentions utilities, but does not portray the magnitude of the telecom facilities that both parallel and cross the proposed path of the CalTrain extension. SBC-Pacific Bell and several other telecom carriers have significant infrastructure along the route, including conduit and vaults that are as deep as 30 feet below grade. In one block, we have nearly one hundred ducts in three different structures. Several other carriers have structure on the same block, as do all the other non-telecom utilities. We will be happy to meet with your staff to provide you with specific details about our structures that we are not at liberty to make public.

We believe that by using the tunnel method of construction, the project could reduce the time, expense, and risk involved with either supporting or relocating the utilities that serve this vital portion of San Francisco

More than 30,000 SBC Pacific Bell customers suffered major service interruptions on several occasions as a result of the Bay Area Rapid Transit (BART) District's recent construction of the extension to San Francisco Airport. BART used open-cut construction methods. The risk of such a scenario in downtown San Francisco should not be acceptable to either the City or any of the telecommunications companies.

There are two other construction issues that we want to note. The water table along the route is within several feet of the surface at the route's low points, and would present a significant challenge to open-cut construction. Another factor to consider is the presence of foundation tieback cables in the street placed by recently constructed buildings. These cables are not identified on any City documents; therefore, a high risk exists that many of them might be cut during open-cut construction project. Ultimately, delays would result, as well as extra expense.

Like other major downtown employers with thousands of employees working in five major buildings and three field work centers near the proposed construction path, we are also concerned about the disruption, noise, environmental impacts, access restrictions, and quality of work-life issues that open-cut construction would present. Once again, using tunnel construction would avoid these issues for all downtown business workers.

While we welcome the improvements for public transit and the upgrades to the neighborhood and terminal that your project offers. We simply ask that you utilize the least disruptive methods of construction, namely tunnel construction so that our infrastructure and our service to downtown customers can remain intact

If you have any questions regarding this matter, or need specific information about our underground facilities, please contact Bob Pickard, our Public Works Coordinator, on (415) 542-9095.

Sincerely,

Lynn Bunim

Lynn Bunim
Executive Director
SBC Pacific Bell

rwp/

cc: Supervisor Chris Daly, City and County of San Francisco
Laurie Miller, General Manager, SBC North Bay Construction and Engineering

VIII. Individuals

Joan Kugler
Environmental Analyst
City & County of San Francisco
1660 Mission St. #500
San Francisco, CA 94103

December 12, 2002

Dear Ms. Kugler.

These comments are submitted on the Transbay Terminal/ Caltrain Downtown Extension/ Redevelopment Project DEIS, DEIR and Draft Section 4(f) Evaluation (the "Environmental Document") on behalf of the Clocktower Lofts Owners Association.

- The Clocktower is an historic building in a historic area.
- The Clocktower is a live/work building providing housing for 127 families including small children.
- The Clocktower is already an area in city with mitigations for the Giants Stadium. Second Street is designated as a pedestrian walkway; Third and Fourth Streets are the bus bridges.
- This area is already subject to extensive disruption during Cal Trans bridge and approach demolition and rebuilding for next 5 years.
- The Clocktower relies on open windows for ventilation as do many of its Stillman Street neighbors.

Bus Storage Facilities

One of the project elements is development of bus storage facilities. 42 or 53 AC Transit Buses would be stored between Second and Third Streets at Stillman, facing our building. 140 Golden Gate Transit buses would be stored between Third and Fourth.

These bus yards would concentrate noise and diesel emissions in a semi-enclosed area near high density residences and businesses.

The Environmental Document is obligated to consider the environmental impacts of the project, including all its components. The Environmental Document does contain a discussion of air quality impacts. It appropriately includes a microscale air quality assessment. The microscale analysis, however, was limited to an assessment of the concentrations of carbon monoxide.

The California Air Resources Board has identified diesel emissions as a carcinogen. In recognition of the health risks to children from diesel exhaust, the ARB has just taken action to prohibit idling of school buses within 100 feet of a school building, see http://www.arb.ca.gov/newsrel/nr121202.htm.

The buses utilizing the storage facilities contemplated by this project will undoubtedly be a source of diesel emissions. These emissions could be a significant health risk because of the number of buses involved. The Environmental Document acknowledges that bus engines will be warmed up in these storage areas (page 5-63). The emissions in these storage areas will be more concentrated than they would be in an open area because of the semi-enclosed covering of the freeway structure. In addition to presenting possible health hazards to residents in the surrounding areas, the relative enclosed nature and lack of significant airflow in this area may present substantial health hazards to the bus drivers and associated mass transit employees.

There are numerous residences located in this area that house sensitive populations, including children. There is a residence for the elderly adjacent to this area.

An analysis of the environmental impacts of this project should include an identification of the residences near the bus storage facility, the sensitive populations that would be affected, and an analysis of the potential exposures to diesel exhaust, including a worst case analysis and a cumulative impact analysis.

Diesel engines are also notorious sources of noise. The noise will also be greater because it will be partially contained by the freeway structure. The Environmental Document contains only a four line qualitative discussion of the bus storage facility noise impacts (page 5-63). There is no quantitative analysis presented.

The Environmental Document proposes construction of a sound wall on the south side of the storage areas to mitigate the noise impacts. This appears to be based on a recognition that the noise impacts would be regarded as significant though that is not explicitly stated. There is no analysis of how effective the sound wall would be. A sound wall may not be effective since it would be expected that noise would reflect off the bottom of the freeway structure and escape over the top of a sound wall. A sound wall on the south side of the storage areas will not mitigate the noise impacts on the Clocktower at all.

There are accepted methodologies for conducting a quantitative noise analysis of the operation of these storage facilities. Such an analysis should be performed and presented. If there are significant impacts, they should be acknowledged and mitigated. There should also be an analysis of the effectiveness of any proposed mitigation measures.

Vibration Impacts

The Environmental Document states that "the highest levels of ambient ground-borne vibration were measured at the Clock Tower (sic) building at Bryant and Second Streets. Both exterior and interior vibration was measured. The exterior location was on the sidewalk relatively close to the street. Even at this location, the highest vibration levels were only slightly above what can be perceived by most humans." (Page 4-32)

The vibration analysis that was performed showed that vibrations would exceed the FTA impact threshold for residential land uses in the hallway of the Clocktower even with mitigation in the form of a resilient track system. The vibration analysis included projections for 4 additional locations in the Clocktower. Those projections show that vibrations would be very close to exceeding the impact threshold.

The Environmental Document, however, concludes with respect to the Clocktower: "Projected vibration levels exceed the impact threshold only at the hallway site, and therefore no mitigation is indicated." In itself, this is a questionable conclusion since the hallway itself is part of the residential use.

Moreover, vibrations are already a significant problem at the Clocktower. This is apparently because of the building's proximity to the elevated freeway structure. We are very concerned about any vibrations in addition to the ones already experienced. An analysis of the impacts of the project on the Clocktower must include an analysis of the impacts of the project in addition to the impacts already experienced. The explanation of the vibration analysis does not indicate that this has been done.

The Environmental Document also indicates that there are some significant qualifications on the vibration analysis.

In light of the qualifications on the vibration analysis and in light of the results showing that the impact threshold has been exceeded in the hallway and showing that impacts elsewhere are close to the impact threshold, the analysis that has been done should be regarded as a screening level analysis. The results indicate that a more specific and detailed analysis should be performed. Any analysis should include indicate the vibrations that would be experienced if vibrations from the train occurred at the same time as serious vibrations from the freeway.

The Clocktower believes this analysis is legally required. Additionally, if this analysis is not performed and if there is damage to the Clocktower residents or to the building from vibrations, a failure to have performed this analysis could have profound legal consequences.

Construction Period Access

The Environmental Document states that if the cut and cover method of tunnel construction is utilized, there will be block-by-block closures on Second Street. A chart describing the driveways and streets temporarily blocked by construction mistakenly states that only a delivery entrance at the Clocktower would be blocked. Obviously, the Clocktower has not been provided with the detailed plans for the closure of the Second Street, but it would appear that a driveway entrance would be blocked as well. This driveway provides access to parking both in an exterior lot and in an underground interior lot. This driveway also provides emergency access/egress in the event of a fire or other emergency.

The Environmental Document should correctly assess the impacts on the Clocktower. If the street closure will prevent access to parking, even temporarily, that impact must be fully mitigated.

Construction Period Noise and Vibration

The Environmental Document presents a qualitative analysis of the noise impacts, and apparently concludes that the construction phase noise impacts would be significant. The mitigation measures that are proposed, however, are so vague and ambiguous as to be unenforceable. They include such things as "conduct noise monitoring," "conduct inspections and noise testing of equipment," "implement an active community liaison program." Specific quantitative noise limits should be stated for each period during the day.

The Environmental Document states that noise waivers may be obtained to allow nighttime construction. It also states that "it is not anticipated that the construction documents would have specific limits on nighttime construction. (page 5-185)." There will apparently be no limits on the use of jack hammers, hoe-rams and pile drivers before 10 p.m. This will significantly add to the nose in the area. Mitigation measures could easily be developed preventing the use of such extremely noisy equipment unless a specified standard of necessity were met.

A meaningful noise mitigation program could do much better than this. It could set forth specific showings that must be made in order to justify nighttime construction. The proposed mitigation measures contain none. It could set forth noise limits in the event nighttime construction is necessary. The proposed mitigation measures do not. It could prohibit the use of certain equipment at night. The proposed measures do not.

The mitigation plans states that contractors will be required to "use equipment with effective mufflers." What is an "effective" muffler? This is so vague as to be meaningless. Additionally, there is often an electric alternative to diesel-powered equipment. There is no requirement to use electrically powered equipment when it is available.

The Environmental Document acknowledges that construction vibration effects can damage historic buildings. It states that a study has been done showing that no damage will occur due to construction vibrations. This study is not presented, and so it is impossible to evaluate.

Additional Comments

All in all, the noise, disruption, and other impacts of the cut and cover tunnel construction alternative are so severe that it should be abandoned as a project alternative.

The Clocktower has entered into an agreement with Caltrans to lease the parking lot off Harrison Street behind Marathon Plaza. This lease will run from the completion of the Western Approach Seismic Repair until December 31, 2038. The Environmental Document should analyze whether any of the ramp alternatives would have an impact on this lot and mitigate any impacts that may occur.

The Clocktower has entered into an agreement with Caltrans to use the parking lot at Second and Harrison until completion of the Western Approach Seismic Repair. This lot is identified for future redevelopment. The timing of that redevelopment is not stated. No potential development of that site should interfere with the Clocktower's ability to use that lot in accordance with its agreement with Caltrans.

Figure 4.1-1(b) setting forth Existing Land Uses erroneously fails to identify the parking lot at Second and Harrison or the parking lot beneath the existing Harrison Street off-ramp. That figure also identifies the Clocktower as residential, whereas it is a live/work building.

Chapter 4.18 fails to identify the tower containing the clock on the Clocktower Building as a visual resource or as part of the visual character of the area. The Clocktower is one of the most significant and well-recognized landmarks in the area.

We have also stated our concerns at the Public Hearing April, 2001, and in writing, requesting a study of the Effects of Emissions the many residences and businesses. Those comments are all incorporated by reference in these comments.

We are concerned that public health and safety needs are not being met, and we are considering legal action. We feel we have been ignored in the process. The Clocktower Lofts Owners Association is not even on the distribution list for information. Please correct that omission.

Yours very truly,

Michael Altaro
Vice President
Titan Management Group

cc Planning Commission

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Paul E. Maltzer, Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Ste. 500
San Francisco, CA 94103

December 20, 2002

Re: Caltrain - Transbay Terminal DEIR Comments

In 1992 I circulated the first version of my plan for extending Caltrain to a re-built Transbay Transit Terminal (TTT). The result of over five years of research and design, it suggested that a tunnel could be dug under Rincon Hill to bring trains from Mission Bay to the Transbay Terminal. Over the next decade, I refined the design to meet the changing technical and political situation. My comments come from my decade-plus involvement with the project.

The bus and terminal building project, described in the DEIR, is an excellent design. This portion of the project was often the most contentious, as initially the City of San Francisco proposed removal of the bus facility. The current design can be further improved by shifting the footprint of the facility to the west, to occupy the area of the failed residential highrise project to the immediate west of the TTT. This would allow the above-ground portion of the TTT to keep to the west of Beale Street, removing the need to bridge that street.

The bus storage facility is crucial to the operation of the terminal. The location proposed for bus storage, beneath the west approach to the Bay Bridge, between Fourth and Second Streets, connected to the terminal by grade-separated ramps, is the best alternative available. The storage facility will be an improvement over the unimproved parking lots that currently occupy the land under the freeway. Proper landscaping and design will make an aesthetic improvement to the neighborhood. The maintenance and security of the facility will improve the safety of the neighborhood. The continuing evolution of bus propulsion technology, the switch to cleaner fuels, will result in fewer pollutants in the neighborhood, not more.

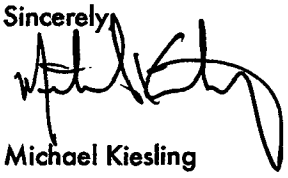
The terminal capacity and operations described in the DEIR meet all the objectives that I worked for over the past years. I support the West Ramp Alternative as the preferred alternative.

Redevelopment is key to this project, from both a urban design and funding perspective. I support the Full Build Alternative, and would like to see it expanded to other properties in the immediate terminal area that have not yet been redeveloped, and any properties north of Harrison Street that might be needed for construction of the Caltrain extension. It would also help the neighborhood if the need for the diagonal exit ramp leading to the intersection of Fremont and Folsom Streets could be re-assessed, as it reduces the development potential for the area by splitting a large lot and creating a dangerous 5-leg intersection.

Finally, provision for an extension of Essex Street should be made beneath the highway ramp as far as First Street. By providing a second approach to the bridge from First, traffic on upper First Street, past Folsom, can possibly be limited to carpools, removing the queued afternoon traffic out of the redeveloping residential neighborhood.

Good luck with the project. I look forward to reading how you plan to incorporate these suggestions into the final EIR, and seeing them implemented in the construction of the project.

Sincerely,



Michael Kiesling

A pdf of this letter and all drawings is available at:

www.arch21.org/tttdeir.pdf

or as html at:

www.arch21.org/TTTDEIR.htm

The remainder of my comments concern the Caltrain component of the project. This portion of the project needs much greater refinement, as part of it is currently un-workable as designed.

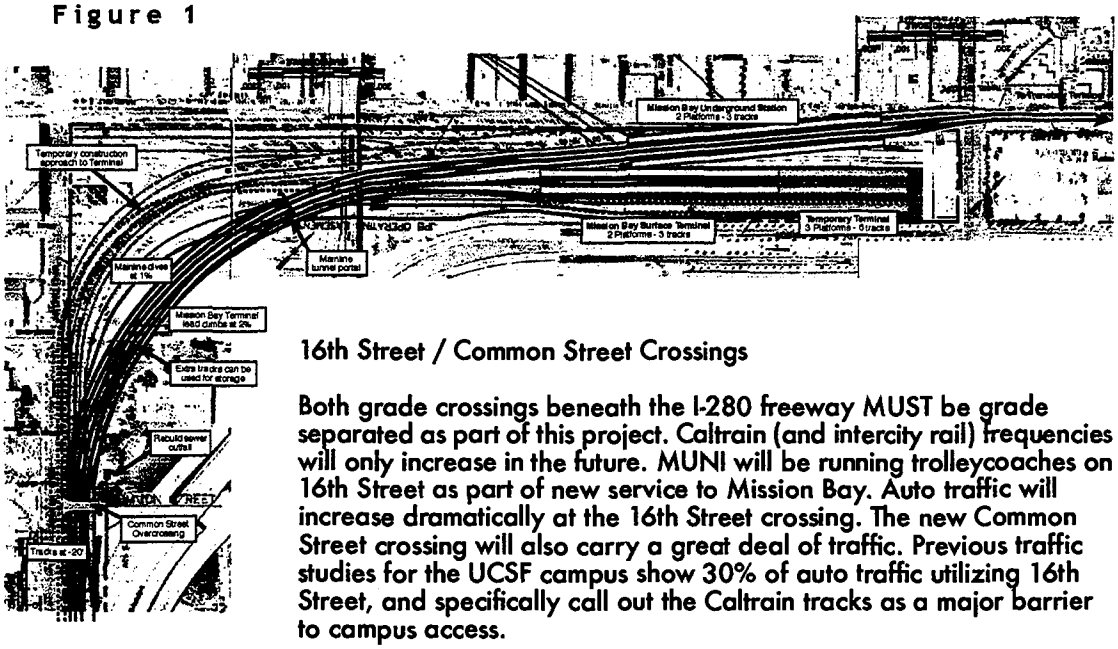
I STRONGLY support the Fully Tunneled Option under any alignment. This project cannot rip down blocks of buildings in the South Beach/Rincon Hill neighborhood. I also suggest that the alignment be "fine-tuned" to minimize the impact of construction on existing buildings. In the attached Figures 2 and 3, I've outlined a new alignment about 150' to the west of Second Street that has a smaller impact on the built environment.

The following comments are made geographically, starting south of the project area and working towards the TTT.

Fill Disposal & Storage/Light Maintenance Area

This project will generate a great deal of fill with no identified location to dispose of it. The Caltrain ROW between Palou and Cesar Chavez Streets runs along a 20' embankment. This embankment can be enlarged with suitable spoils from the tunneling and excavation of the rail extension and terminal project to create space for storage tracks and a minor maintenance facility. This can replace the function of the yard near the current Fourth and King terminal, and allow for fill disposal very close in to the project area, greatly reducing hauling costs.

Figure 1



16th Street / Common Street Crossings

Both grade crossings beneath the I-280 freeway MUST be grade separated as part of this project. Caltrain (and intercity rail) frequencies will only increase in the future. MUNI will be running trolleycoaches on 16th Street as part of new service to Mission Bay. Auto traffic will increase dramatically at the 16th Street crossing. The new Common Street crossing will also carry a great deal of traffic. Previous traffic studies for the UCSF campus show 30% of auto traffic utilizing 16th Street, and specifically call out the Caltrain tracks as a major barrier to campus access.

By beginning to descend into an open cut soon after crossing under Mariposa Street, both 16th and Common Streets can be grade separated. The height of the I-280 viaduct is great enough so that the cross streets can be raised some to help with the separation. Additionally, there is

enough distance to allow the yard lead for the permanent Mission Bay surface station to climb back to the surface after passing under Common Street. The Mission Creek outfall will need to be rebuilt, but this is not a fatal flaw to the grade separation. These issues are illustrated in the attached Figure 1.

Seventh Street Curve

Existing and future rail operations will be greatly improved by increasing the radius (and thereby the design speed) of the Seventh Street curve. Today, with the terminal at Fourth Street, there is little operational advantage to increasing the speed of the curve. But, under future conditions, many trains, especially intercity and express trains, will not be stopping in the Mission Bay area. Leaving the Seventh Street curve as a major speed constraint will degrade the operations of the mainline.

An equitable solution should be easy to reach with Catellus (the owner of the property at Mission Bay) to move the PCJBC operating easement to allow for the improvement of the curve. (See Figure 1) The property on the inside of the curve, which would be impacted by re-alignment of the curve, is hemmed in by the existing (and future tracks), the Sixth Street off-ramp from I-280, and the Mission Creek pumping plant. Moving the tracks to reduce the area of this parcel INCREASES the area of the outer parcel, which fronts on Townsend and Seventh Street, facing the edge of the Showplace Square neighborhood.

Temporary Terminal During Construction

Obviously, Caltrain will require to continue operation into San Francisco while the extension is under construction. Utilization of roughly one-half (6 tracks) of the existing terminal should provide sufficient capacity for daily operations. Figure 1 shows a suggested arrangement of the temporary and permanent facilities in the Mission Bay area.

The first phase of construction would reconfigure the south 6 tracks of the existing station and construct a small portion of the sub-surface mainline in the area that the temporary lead tracks for the terminal will cross the mainline, approximately under the Sixth Street overcrossing. A temporary shoo-fly would also be constructed from Mariposa Street to King Street west of the existing tracks, in the ROW of Seventh Street. Seventh Street is wide enough to accommodate two tracks plus two traffic lanes.

Once the first phase is complete, trains would run on the shoo-fly from Mariposa Street into the Seventh Street ROW, curve towards the terminal at King Street, passing over the new mainline at about Sixth Street, and then into the southern six tracks at the existing terminal. Excavation and construction of the sub-surface Mission Bay station and depressed mainline from Mariposa Street north would commence, including construction of the 16th and Common Street overcrossings. A permanent lead to the surface station at Mission Bay would also be built to the south of the mainline.

Once the downtown extension is operational, the 6-track surface terminal would be reduced to a 3-track, 2 platform terminal. I am suggesting that it be set back from both Fourth and King Streets, to allow development of the property on the street frontage to improve the activity in the neighborhood. This shields the trains from the surrounding development, mitigating the concerns over leaving a surface rail operation in the area.

Mission Bay Sub-Surface Station

The sub-surface Mission Bay station should be constructed with at least three tracks, allowing trains to pass through with trains stopped at each platform. The station should also be deep enough to allow a mezzanine at the east end of the station so the platforms don't have to connect directly with the street. This station will still see heavy ridership after the extension opens, and a good pedestrian flow is crucial to the operation of the station.

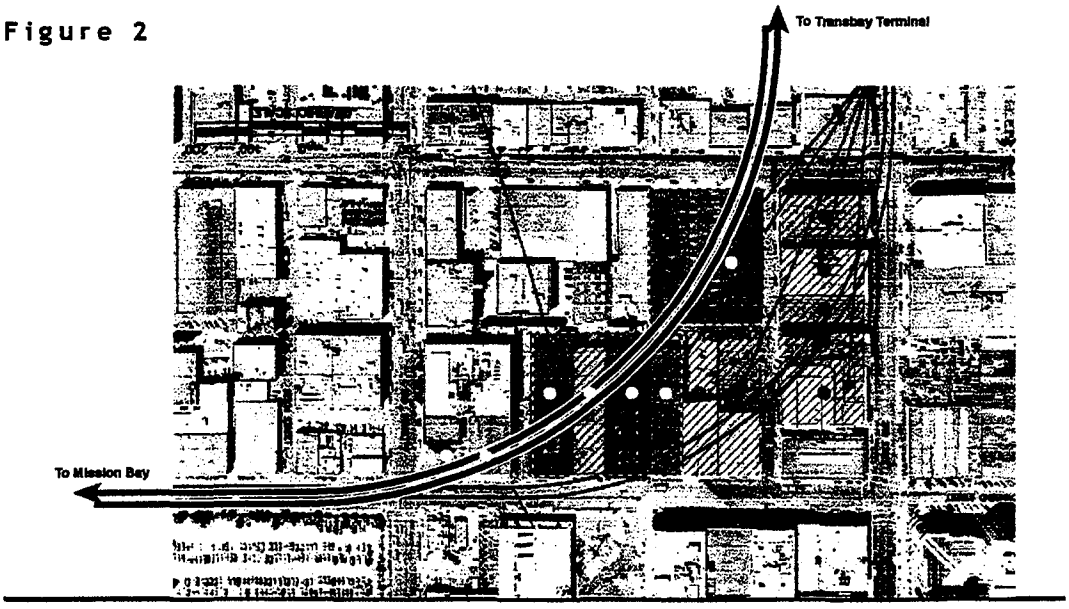
West of Second Street Alignment

Key to the entire Caltrain extension project is the minimization of construction disruption to the neighborhoods it will be passing under. In my 1992 proposal, I pointed out that the alignment passed under Rincon Hill, and therefore could be tunneled under the hill. Digging a cut and cover tunnel along Second Street not only requires acquisition of many historic and expensive properties, many recently renovated, but also the excavation and shoring of a 100' deep trench for four blocks along Second Street. A bored tunnel is the only realistic way to build the extension.

For the past decade, I've refined my designs for the project, altering the alignment in many ways. In the recent years, as the specific requirements for high speed rail have become clear, forcing the alignment from Essex Street to Second Street, I've identified a new alignment west of Second Street that should further reduce impacts on developed properties and improve the alignment into the terminal to allow for the maximum platform length.

Starting in the Mission Bay area, shown on Figure 2, the alignment begins to turn to the north just west of Third Street. It passes directly beneath the first two buildings on the north side of Townsend Street, then the public ROW of Clarance Place, and then beneath the mid- to rear-portions of 166-168, 162-164, 148-154, and a very small portion of the rear of 144-146 Townsend Street. The ground-level above this alignment is slightly higher throughout, resulting in a deeper tunnel, further minimizing potential impacts on the structures at ground level.

Figure 2

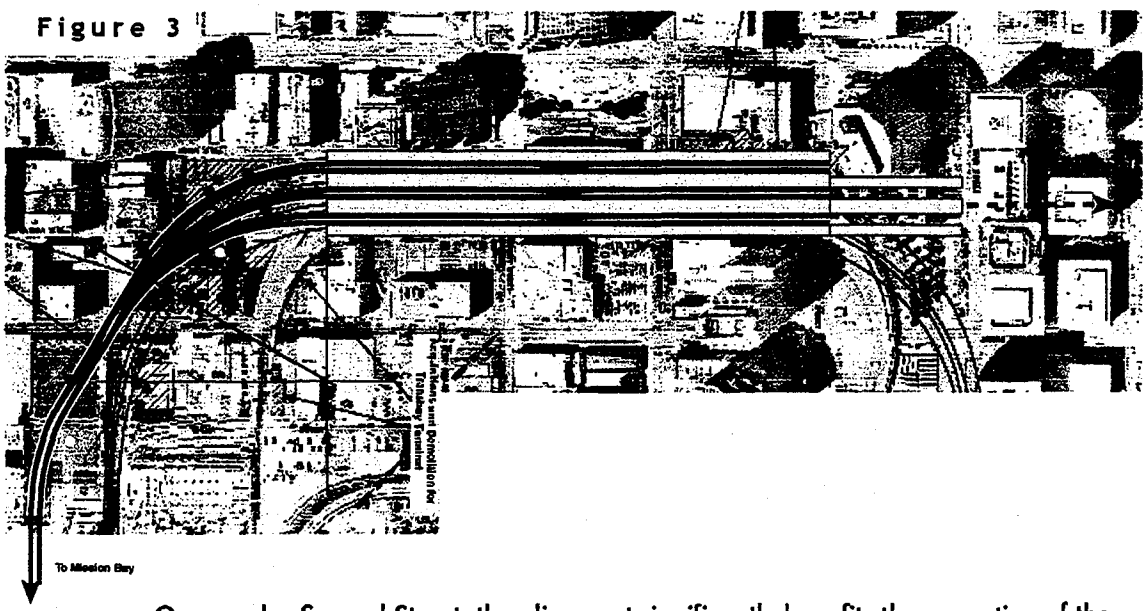


Once under the historic buildings along Townsend Street, the tunnel runs beneath a large surface parking facility, utilized by Pacific Bell. If necessary, this large property could be utilized for the tunnel heading, allowing tunneling to proceed in two directions, north to the terminal, and south towards the Mission Bay station. The current use of the property, parking and one-story garage, can easily and inexpensively be relocated to a nearby parcel during construction. Access to the tunnel heading on Brannan Street keeps large haul trucks out of the more congested streets near Mission Bay and the ballpark. (Please note- In the DEIR drawings, Brannan is mis-spelled as Brennan.)

North of Brannan Street, the tunnel is running deep under the South Park neighborhood. Where it passes beneath the Bay Bridge approach, the opportunity exists for integrating any necessary emergency access and ventilation facilities within the bus storage facility. Between Harrison and Folsom Street, most of the tunnel is under empty properties. From Folsom Street to the intersection of Howard and Second Streets, the alignment is threaded between highrises, ending beneath a large parking lot at the intersection. Almost 60% of this "off-street" alignment is under empty lots or streets, and many of these properties are in public ownership as streets or parks.

This alignment eliminates the need to acquire and demolish at least 3 properties along Second Street, 201, 205-15, and 217 Second Street. Additionally, since the angle of the tracks in the throat change, it should be possible to avoid 580-586 Howard Street. Three of these are significant historic buildings. This is shown in Figure 3.

Figure 3

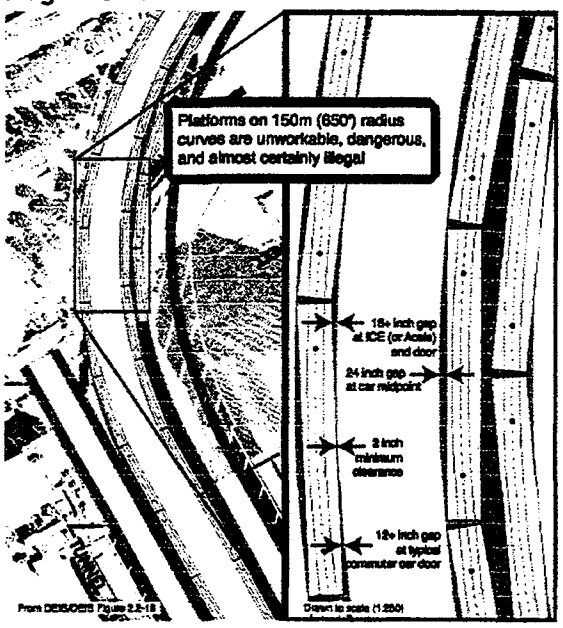


Once under Second Street, the alignment significantly benefits the operation of the terminal, in either the Second to Main or Second to Mission alternatives. The design allows the throat of the station to begin sooner, allowing longer platforms. Richard Mlynarik has provided comments showing a Second to Mission alignment. I will describe the simpler Second to Main (Terminal Basement Platforms) alignment in this document.

Terminal Basement Platforms

The proposed high-speed rail platforms described in the Second to Main alternative in the DEIR are completely un-workable, due to the gap between the curved platform and standard high-speed rail cars. See Figure 4. This should drop this terminal configuration from consideration, due to its inability to accommodate standard high speed rail train consists, or even standard commuter trains.

Figure 4



by Richard Mlynarik

I do not support the inclusion of tailtracks as part of this project. With platforms well over 1000' possible in the basement of the rebuilt TTT, and the provision for four of the platforms to extend to 1,450' with minimal effort, crossovers can be added at the midpoint of each pair of platform tracks to allow a pair of Caltrain consists to independently access each platform. The tailtrack is pulled into the body of the station.

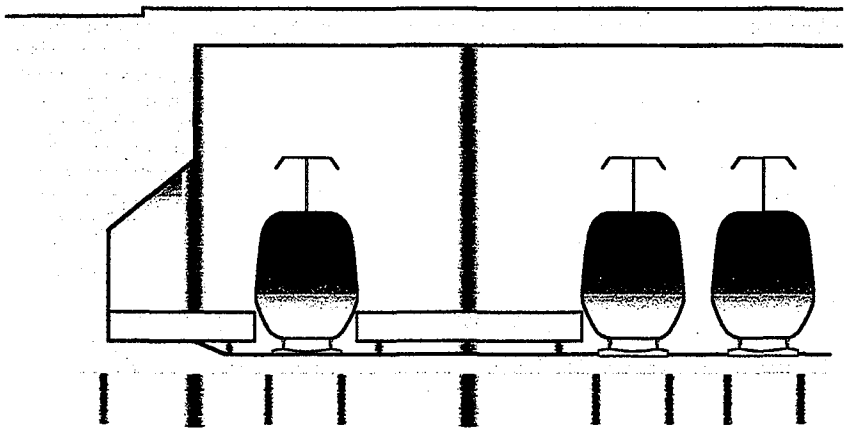
Recent MTC studies have placed the cost of a new Transbay rail tube between $2.75 and $7.25 billion. Preliminary estimates from the High Speed Rail Authority peg the cost of constructing a new high-speed line from the South Bay to Oakland at about $2 billion. It seems clear that Oakland (and the entire East Bay) would be better served with their own line, rather than an expensive transbay connection to the San Francisco line. If it does become necessary to invest in a new transbay rail link, the added cost to tunnel through the pilings of the buildings between Main Street and the Embarcadero will add very little to the overall cost of a multi-billion dollar project.

Additional transbay commute capacity can be achieved through expansion of the transbay bus service, an integral part of this project, and the growth of the ferry network. AC Transbay service today is a fraction of what it was in the 1970's, so simple expansion to previous levels can add significant capacity. Finally, the expansion of the regional ferry system will take place mainly in the Bay Bridge corridor.

For all of the reasons cited above, the platform configuration shown in Figure 3 should be substituted for the current Second-Main Alternative. The design allows for 1,150' platforms in alignment with the terminal, extending to Beale Street. The four tracks on the south side of the terminal can be extended another 300' (for a total of 1,450' - today's European High Speed practice) with minor modifications to the rear extension of the Pacific Gateway building on Mission, between Beale and Main Streets.

Another alteration to the proposed platform design is to change the arrangement of tracks and platforms from 3 platforms / 6 tracks, to 4 platforms / 6 tracks. This allows crossovers to be placed on all track pairs to allow 2 500' train consists to share the same platform. This increases capacity in the station and replaces the function of the discarded tailtracks. The side platforms, serving only one track each, would be narrower, and could be excavated alongside the station box, to limit the total amount of excavation. See Figure 5.

Figure 5



Section through terminal showing side platform

Connection to Market Street

I do not support an underground connection to Market Street, although I do urge surface improvements to both sidewalks along Beale, Fremont and First Streets, and installation of a mid-block pedestrian signal at the intersection of Ecker and Mission Street. Ecker Street has been improved as a pedestrian way between Mission and Market Streets, leading to the Montgomery Street (MUNI/BART) station. The intersections of Stevenson and Jessie with Ecker should also be modified to raise the Ecker crossing to slow traffic on Stevenson and Jessie. As a further improvement, the possibility of adding an entrance to the Montgomery Street station near Ecker on Market Street should be assessed.

Urban Design Suggestions

As the project progresses in design, there are a few items that should be explored. The un-built phase of the Foundry Square project immediately south of the TTT on Howard Street, between First and Fremont, should be integrated into the TTT with mid-block pedestrian access through their building from their planned open space at the corner of the project. The proposed project to the north of the terminal at 301 Mission (between Fremont and Beale) should also be integrated with the project, providing pedestrian access to the mezzanine levels of the terminal. Additionally, auto and truck access to the underground parking should be developed jointly with the TTT development so that only one delivery/parking access point is need for the combined projects. This is key, as MUNI will be running many routes on Beale and Fremont Streets to access their new terminal beneath the TTT. Extra driveways will cause conflicts with the MUNI, other transit, and autos around the terminal.

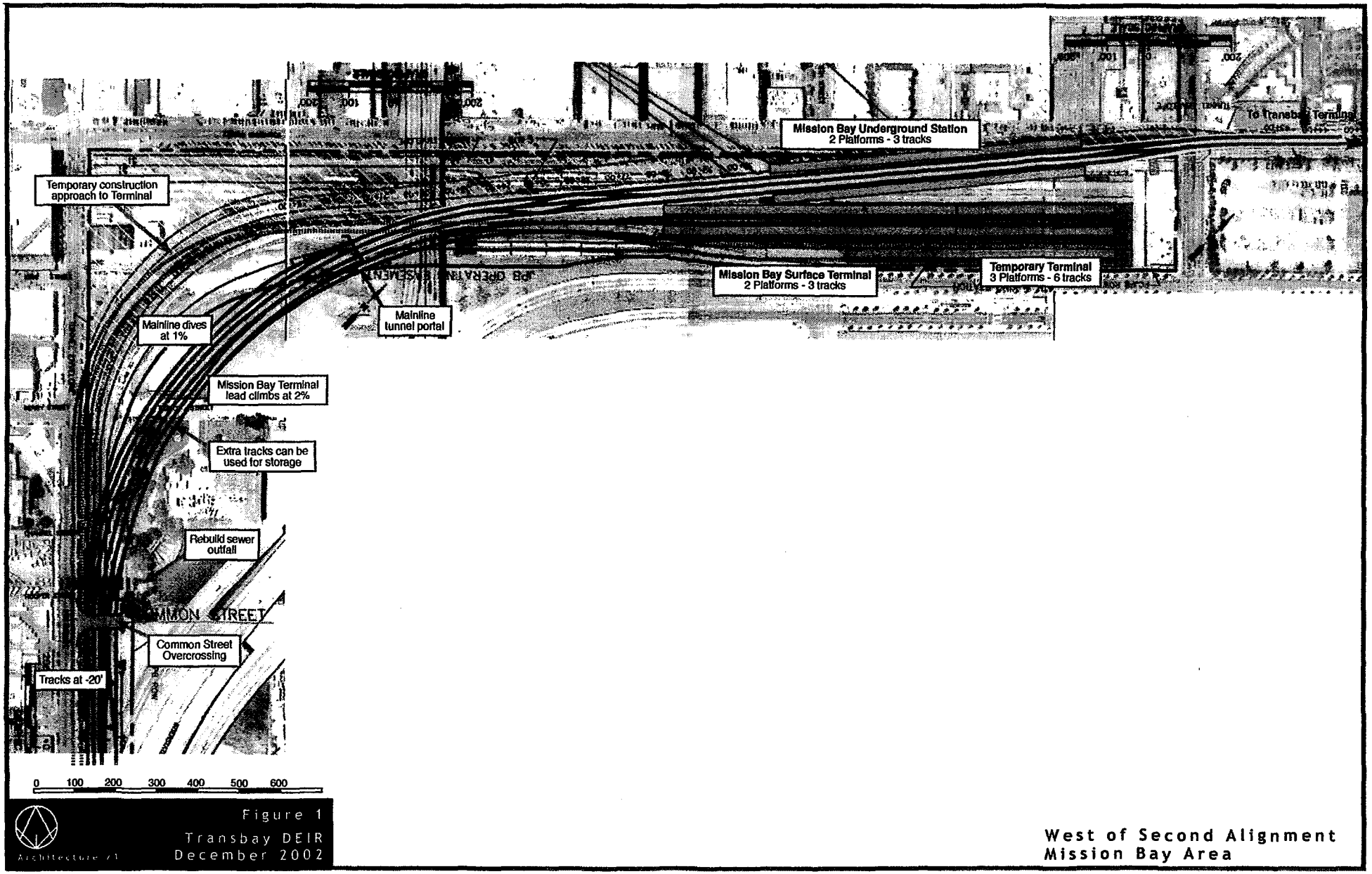
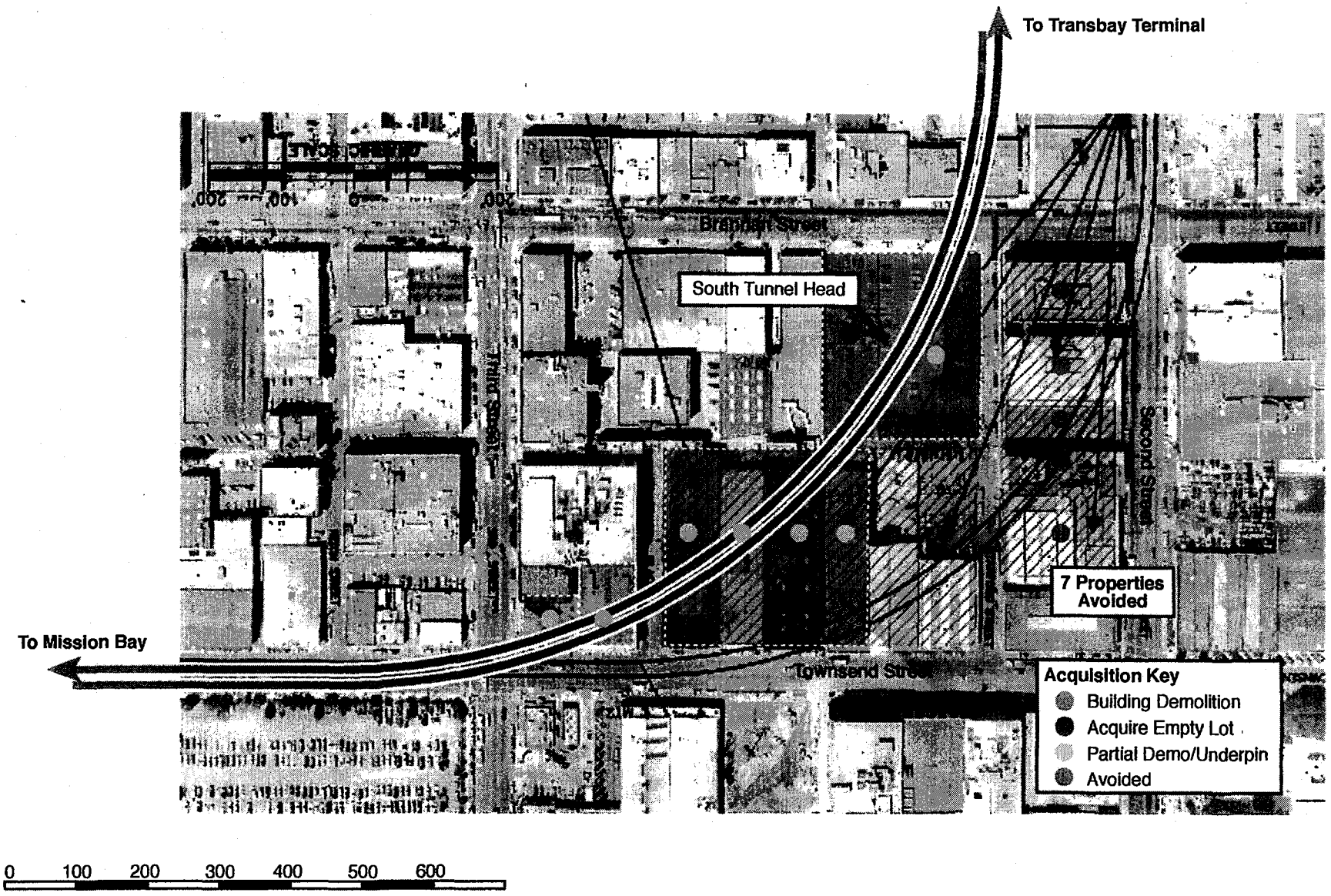


Figure 1
Transbay DEIR
December 2002

Architecture 41

West of Second Alignment
Mission Bay Area



Architecture 21

Figure 2
Transbay DEIR
December 2002

West of Second Alignment
South Portal Tunneled Section

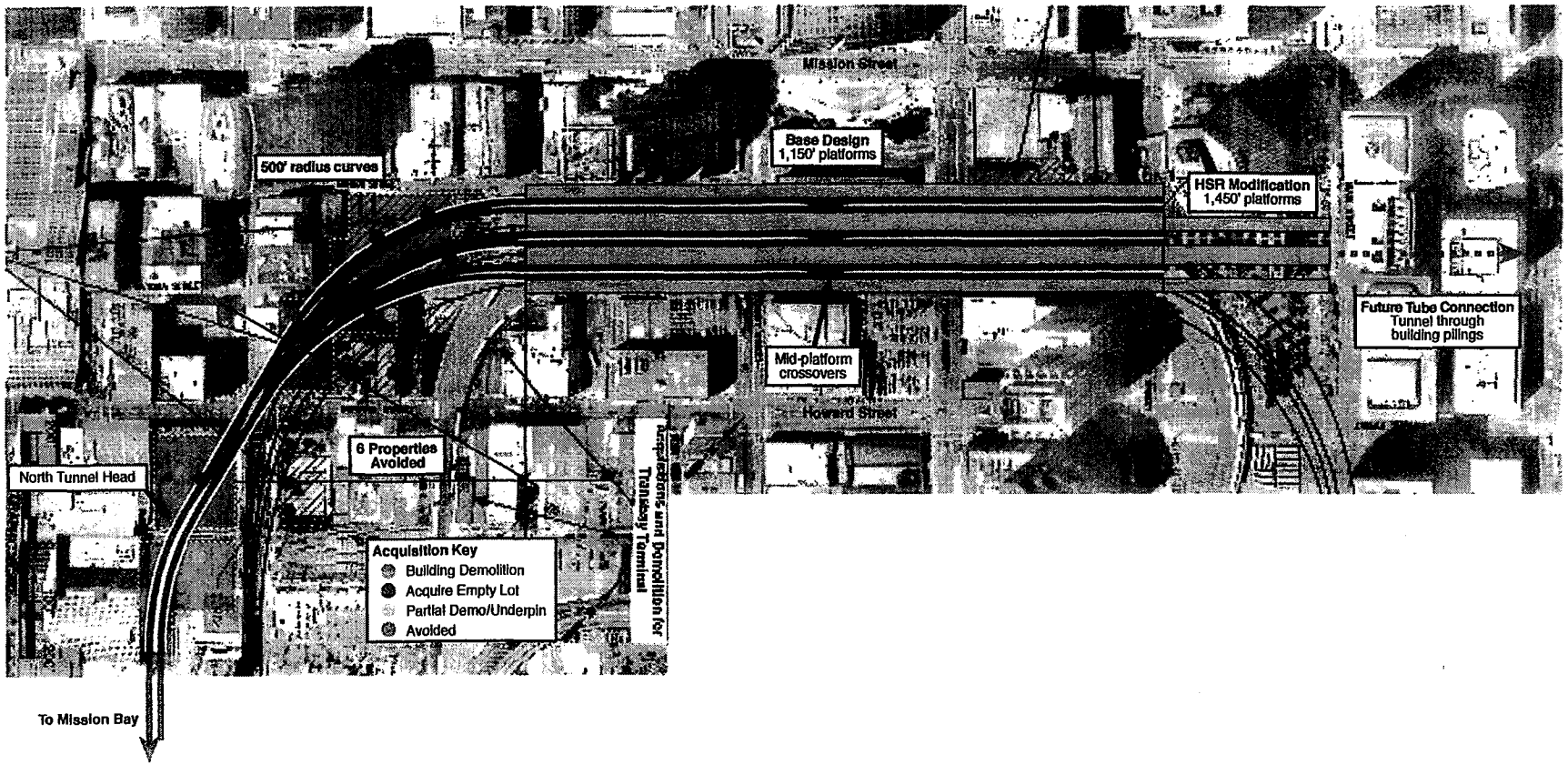
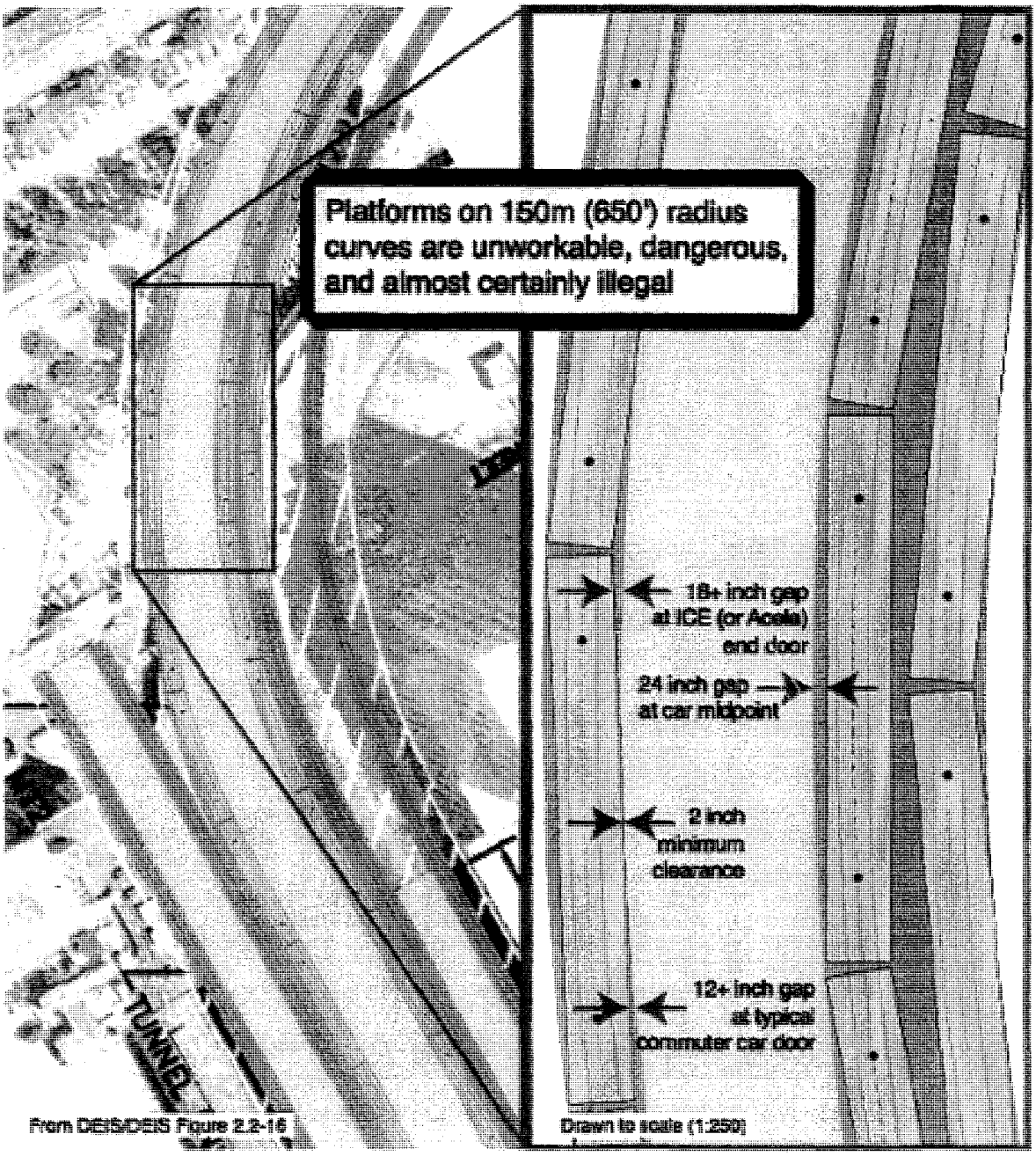


Figure 3
Transbay DEIR
December 2002

Architecture 21

West of Second Alignment
North Portal To Transbay

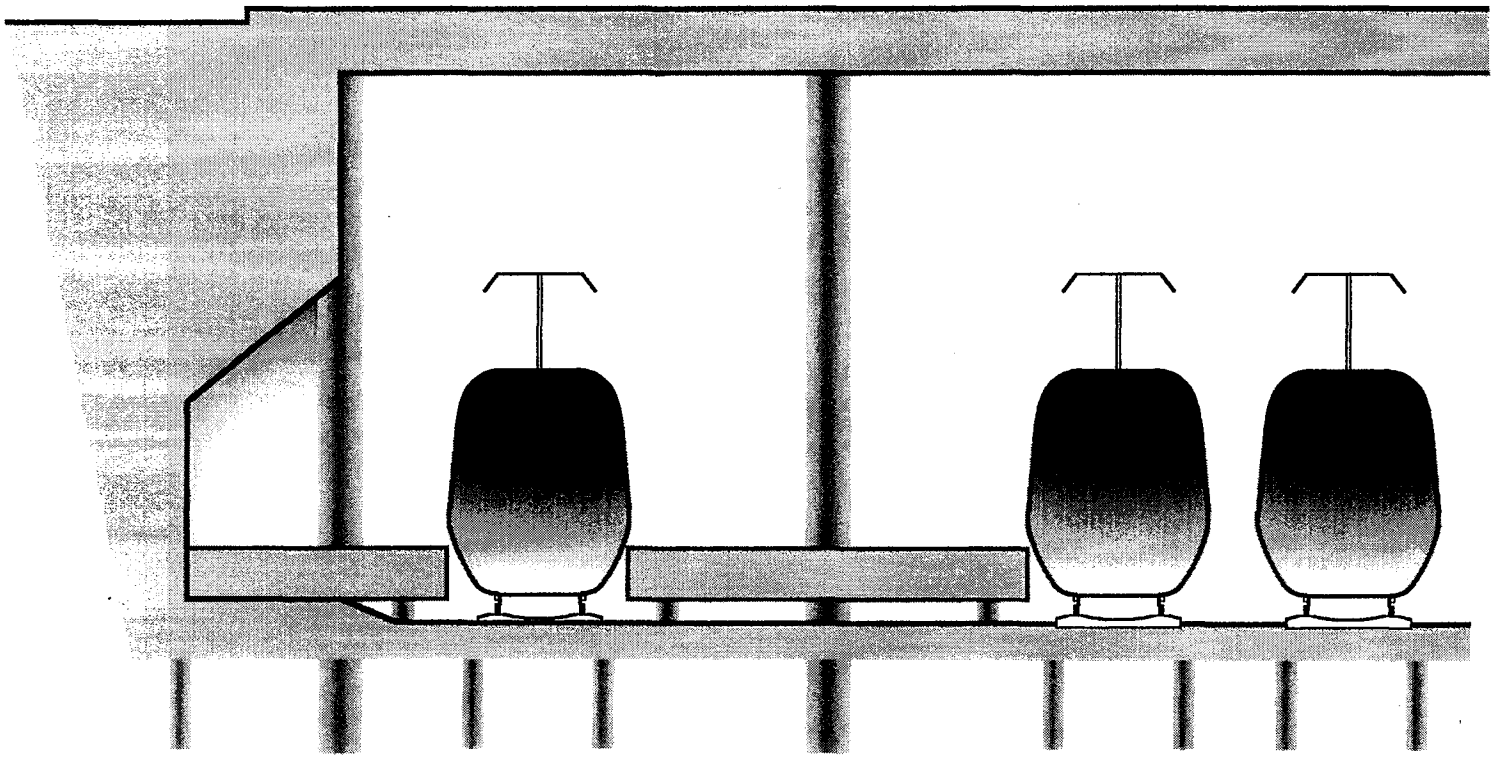


by Richard Mlynarik

Architecture 21

Figure 4
Transbay DEIR
December 2002

Platform Gaps from the DEIR Second to Main Alt.



Section through terminal showing side platform

Architecture 21

Figure 5
Transbay DEIR
December 2002

Terminal Basement Platforms
Side Platform Excavation

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December 16, 2002

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Mr. Paul E. Malzer
Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, Ca. 94103-2414

Via Fax 415-558-5991

Ms. Joan A. Kugler
EIR Project Manager
San Francisco Planning Department
City and County of San Francisco
1600 Mission Street, Suite 500
San Francisco, Ca. 94103-2414

Via Fax 415-558-5991

Reference: Transbay Terminal Project - Proposed Bus Storage Parking Facility
Stillman/Perry Street - 2nd to 4th
Our Letter of July 5, 2001

Dear Ms. Kugler and Mr.Malzer;

I have spoken at the public hearings on April 4, 2001, November 12, 2002 and November 26, 2002 in opposition to the *proposed permanent location of the A C/Golden Gate Transit Bus Storage Facility* on Stillman/Perry Street.

I have reviewed the report titled Draft Environmental Impact Statement/Draft Environmental Impact Report and Draft Section 4(f) Evaluation concerning the impact analysis performed for the Bus Storage portion of the proposed project.

The report does not address the impact on our neighborhood that will be caused by placing a Bus Storage Facility for approximately 200 buses within this two (2) block area. The draft report is grossly inadequate as it pertains to the impact that diesel fumes and circulating buses will have on the Stillman/Perry Street neighborhood.

1. The report is silent on the pollution and health hazards that will be caused by the increase in diesel emissions in the neighborhood. Diesel exhaust fumes are listed by the EPA as toxic and likely to cause lung cancer in humans. The EPA has found diesel exhaust triggers asthma and other respiratory problems.

2. The report is silent on the traffic impact to the one way street and neighborhood. The report does not address bus circulation on Stillman Street. Figure 2.2-5 on page 2-14 shows the one way direction on Stillman Street being changed. Do all the Golden Gate transit buses enter Stillman from 3rd Street ? Bus circulation and the impact within the Stillman / Perry neighborhood is not addressed.

3. The Draft EIR does not address the impact of the increase in the noise level resulting from the proposed Bus Storage Facility in the center of the Stillman / Perry Street neighborhood. The report (Section 5.8.6 & 5.8.7) mentions increased noise from the Bus Storage Facility as pertaining to only one (1) Building in the neighborhood. The noise levels are not quantified. What happened to the other forty (40) Buildings that make up the immediate neighborhood surrounding the proposed Bus Storage Facility ?

4. The loss of approximately 800 parking spaces to the businesses and residents has not been mitigated by 300 parking spaces in the proposed parking deck at 4th and Stillman.

5. None of the issues and resulting impacts raised in my certified letter to Ms. Joan Kugler dated July 5, 2001 have been addressed in the Draft EIR report. We have had no response to our letter. Not even a phone call.

6. Our Neighborhood will be impacted for the next 5-7 years as the West Approach is rebuilt. Cal Trans has made public assurances in several open meetings that the parking would be returned under the West Approach at the conclusion of the project.

The extent of the impact on our neighborhood depends on which ramp alternative is selected for further study and analysis. The Loop Ramp Alternative would provide for the storage of 120 buses on the eastern open air bus ramps. This alternative along with finding a more suitable ***permanent Bus Storage Facility now*** for the Golden Gate Transit buses would eliminate the need for Stillman/Perry Street neighborhood Bus Storage Facility under the West approach.

The Draft EIR Report presents an analysis and modeling criteria (Section 5.7) for the carbon monoxide (CO) levels on 8 intersections downtown. The Draft EIR makes no mention of any analysis or modeling for the elevated levels of carbon monoxide (CO) that will be present over the ambient conditions due to diesel bus circulation, idling and warmup in the eight (8) acre site in the middle of our neighborhood. A bus storage facility will have a significant carbon monoxide (CO) level impact within the Stillman / Perry Street neighborhood that must be addressed. Many of these Buildings and residences in this two (2) block area use operable windows for code required ventilation and air changes in the structures.

The proposed location of the ***temporary*** Golden Gate Transit Bus Storage Facility during construction of the Transbay Terminal project is not identified in the Draft EIR The temporary Golden Gate Bus Storage yard should be built as the permanent facility at the *front end* of the project in an open air location that will not impact residents and businesses with increase diesel emissions and toxic carbon monoxide. This would also eliminate the cost of a new temporary storage facility for Golden Gate Transit.

169 Stillman Street for 18 years has seved as a private day school for up to 40 children. We are currently negotiating a new lease with a private Charter School. Locating an enclosed Bus Storage Facility across the street from our Building and circulating buses up and down the street is condemning the legal highest and best use of our Building. The State of California has banned idling buses near schools. The California Air Resources Board passed this measure on Thursday, December 12, 2002.

Your planning efforts and analysis should be directed at locating a suitable open air facility for ***all*** bus storage that can not be accommodated on the open air elevated ramps or in the new terminal design. You should be able to accommodate all buses on the open air ramps, open air lots or design adequate storage space within the proposed Transbay Terminal. Trying to circulate and store 200 plus buses in a storage area with a lid on top and surrounded by business and residents is like trying to drive square pegs in round holes, they do not fit.

We request advance notice for all meetings regarding the Transbay Terminal Project and any other meetings addressing the temporary and permanent bus storage facility locations and analysis.

I again request that you consider the alternative locations that have been presented to date and explore other suitable open air sites away from residences, schools and business. The buses that need to access the terminal should be stored in the terminal or on the open ramps and lots.

If the Stillman / Perry neighborhood continues to be proposed for the Bus Storage Facility, extensive analysis must be included in future reports with regards to air quality, noise and noise. With respect to air quality it is imperative that your analysis and modeling address levels of carbon monoxide (CO) exposure to children as well as adults as their are families in addition to a school site located in this two (2) block area.

I have attached a copy of my July 5, 2001 letter for your ready reference. We look forward to hearing from you regarding alternative locations for the proposed bus storage facility in the event the project move forward.

Sincerely,
Barnes Equipment Company

Bruce W. Barnes

cc: Mr. Harry Newhall, Speedway via fax 415-495-4129
Mr. Francis Mathews, MDC Properties via fax 415-389-1948
Mr. Dan Cliff, Cliff Companies via fax 415-648-1086

BEC
12-16-02.ltr

BARNES EQUIPMENT COMPANY

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July 5, 2001

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Ms. Joan A. Kugler
EIR Project Manager
San Francisco Planning Department
City and County of San Francisco
1600 Mission Street, Suite 500
San Francisco, Ca. 94103-2414

Reference: Transbay Terminal Project - Proposed Bus Storage Parking
Stillman Street - 2nd to 4th

Dear Ms. Kugler;

We are the Owners of the property at 169 Stillman Street in San Francisco. I spoke with you briefly after the presentation at City Hall on the evening of April 4, 2001 regarding one component of the proposed project that we are troubled by in our Neighborhood. That element is the proposed bus storage and parking facility location!

The last several years our Neighborhood has been bracing for the *temporary loss* of the two (2) public parking lots under the west approach structure to the Bay Bridge between 2nd and 4th located on land owned by the State of California. The Neighborhood (owners, tenants and residents) depend on the two (2) lots for public parking. When the Cal Trans seismic retrofit project of the west approach was disclosed to the Neighborhood 5 years ago, we were advised of the *temporary loss* of the parking during portions of the seismic retrofit and reconstruction work currently scheduled to start in the Fall of 2001. The public parking was scheduled to be returned to the Neighborhood when the project was completed. *Cal Trans promised this in a public meeting.*

The bus storage and parking component of the Trans Bay Terminal project ("Project") currently being circulated for comment and consideration has targeted the public parking area under the west approach to be used for Golden Gate Transit and AC Transit bus storage and holdover facility to service the Project. Apparently no other areas were considered which may be more appropriate for bus storage and parking than underneath an elevated structure fronted on two sides by a narrow a right of way consisting of one way streets, sidewalk, limited parking, and loading zones for our Neighborhood.

Some of the very apparent problems we foresee based on the limited details provided to date are the following;

1. The existing west approach overhead roadway structure over the proposed bus facility is heavily concentrated with large concrete abutments and columns closely spaced to support the west approach structure overhead. The lot configuration and circulation for buses is very inefficient. A tour of the numerous bus transit storage facilities in the Bay Area will demonstrate how inefficient and problematic it would be to place buses idling underneath a confined overhead structure full of bridge piers and columns.

2. The Neighborhood already has already been impacted by a heavy concentration of vehicle emissions from the west approach roadway. The existing emissions in the air at the elevated roadway level impacts the upper floors of the Buildings along Stillman and Perry with operable windows at the freeway level. It also impacts HVAC systems for these Buildings that must circulate outdoor air from roof top levels where emission are discharged from the vehicles on elevated roadways. Adding approximately 230 buses under the elevated roadway will add a significant new element of emissions and air quality problems to our Neighborhood. It will be a significant burden and impact on the businesses and residences that directly front the street level of Stillman and Perry.

3. The proposed bus storage area is bounded on the North by Perry Street with a only 35' right of way and on the South by Stillman Street with a 35'- 40' right of way with extensive encroachment into the right of way from the west approach concrete columns and abutments that line the North side of Stillman Street.

4. The businesses and residents along Stillman Street will be severely impacted by buses circulating on the existing very narrow one way street (20-22' in width from the sidewalk to the exist concrete bridge columns encroaching the right of way) in front of the Buildings on Stillman between 3rd and 4th Street. It will not be possible to unload delivery vehicles or park in the very limited street right-of-way parking if buses are circulated up and down Stillman Street and Perry Street. There will be new grid lock on the Streets that are already *choked or closed* when deliveries are made.

5. Some existing Building occupancies have City Building Code occupancy classifications that require *a minimum* of 20' clear roadways (without sidewalk, encroachment, loading zones or parking spaces) for emergency vehicles. Buses circulating up and down Stillman Street will significantly impact the traffic, loading, unloading and emergency vehicle access. It is not uncommon for portions of the street to be blocked and closed while deliveries and pickups are made with large trucks and trailers that serve the businesses and residents on the Streets.

6. The Neighborhood is already forced to endure what is currently scheduled to be 5-6 years of disruptive heavy construction work. Many of the businesses and residences on Stillman Street are within 20' of the elevated west approach roadway that will be demolished and rebuilt. Now, we are being informed that after we endure 5-6 years of disruption, the only public parking in the Neighborhood will be taken, and in its place a permanent disruption is planned - circulating and storing some 230 buses in a confined area bound by a limited right-of-way along two one way streets that are already heavily impacted.

7. The 140 Golden Gate transit buses proposed to be stored between 3rd and 4th street will have to cross 5 lanes on 3rd street to access the proposed ramps in the proposed storage area between 2nd and 3rd. This lot already has low clearance because of the existing grades and the elevated roadway. The plan for a possible Muni Central Subway in the 3rd street corridor is another obstacle. It will take years to relocate utilities and place underground structures below grade for a Central Subway up the 3rd street corridor. Buses circulating and leaving a storage area between 3rd and 4th will have to cross 3rd street to access the proposed stacked bus ramps planned to serve the Project. It is difficult to imagine the construction of a Subway project in the middle of the two proposed bus storage facilities.

It is also difficult to imagine the impact the proposed bus storage facility will have on the Neighborhood with 230 buses running and circulating in and out of the two (2) confined lots between Stillman, Perry Street, Second and Fourth Streets. The proposal to operate 230 buses out of this confined area can't be justified to the Neighborhood, nor can the additional noise, traffic and air quality impact be mitigated. Bus transit and storage facilities are planned and designed with open air storage areas without columns, roof tops and other obstruction that hinder circulation and trap emissions from idling diesel engines.

Buses idling and circulating around and under the existing west approach structure designed to support an interstate freeway rather than store buses is a poor option to spend tax payers money studying. There are existing residential units on Stillman street and more new units currently under construction.

Our Neighborhood is currently preparing for the west bay approach reconstruction project that is finally scheduled to start this fall. We would all like to see a light at the end of the reconstruction project for the Neighborhood. Our Neighborhood wants the parking back that we were promised, we do not want it turned into a bus yard full of idling diesel buses circulating in and out of the Neighborhood to the proposed Transbay Terminal.

I recently received a copy of a letter addressed to you from by Mr. Francis Mathews regarding the bus storage impact in the Neighborhood. The five alternative locations mentioned in the letter appears to be a good place for the project team to start scoping for the proposed bus storage facility element of the Project. I am sure the project team could find many additional suitable sites for the bus facility that would not have the significant impact on a Neighborhood that is already severely impacted by noise, vehicle emissions, a planned multi year major construction project, and restricted right of way and access at Street level. These sites should all be addressed in your Draft EIR as additional alternatives to study from your scoping process.

We look forward to hearing from you regarding alternative locations for the proposed bus storage facility.

Sincerely,
Barnes Equipment Company

Bruce W. Barnes

cc: Ms. Maria Ayerdi, Mayor's Transporation Advisor
Mr. Francis Mathews, MDC Properties
Neighborhood Distribution List from Meeting on April 23, 2001.

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7-05-01.ltr

REED H. BEMENT
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SAN FRANCISCO, CA 94105

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December 9, 2002

Mr. Paul Maltzer
Environmental Review Officer
S.F. Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103-2414

Re: Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project

Dear Mr. Maltzer:

I am writing concerning the draft EIS/EIR for the above projects (hereafter "EIS"). My wife and I have lived on Folsom Street since 1992 and I am a member of the Transbay CAC.

The comments which follow relate solely to the Redevelopment Project portion of the EIS.

The EIS should contain as an additional alternative a proposal for development within or close to the existing height and bulk limits which prevail in the neighborhood of Folsom Street, namely 200-250 feet in height. The two alternatives presented involving buildings 350-400 feet high are far higher than what presently exists and is allowed. One or more alternatives closer to what presently exists would provide the public and the decision makers with a clearer understanding of what is proposed and its impact.

The EIS also needs to more fully take into account the combined impact of other projects and plans for the larger South of Market area involved, including the proposed rezoning of Rincon Hill, the two proposed projects for 300 Spear Street and 201 Folsom Street, the Cruise Ship facility, Mission Bay and the Ball Park.

For example, although the EIS recognizes that more fire suppression personnel may be required, it does not quantify the need or discuss the financial implications of it. With the other proposed 35-40 story towers on the South Side of Folsom Street the need will be obviously even greater. These combined needs, financing, etc. need to be discussed.

Similarly, the combined impact of the other projects with this Redeveopment Project needs to be taken into account in the discussion of such issues as traffic, parking, wind, shadows,

air quality and visual impact. As to visual impact, it is particularly important that the other projects also be considered in that what is proposed for both sides of Folsom Street is greatly out of proportion to what presently exists and is allowed. What is proposed by these various projects combined, including the Redevelopment Project, would drastically alter the character, views and light of the existing and still developing residential community along and close by Folsom Street. The impact of such a drastic change needs to be thoroughly explored in the EIS.

I also note what would appear to be inconsistencies between Table 5.1-1 and Figures 5.1-2 and 5.1-3. In Table 5.1-1 the Height/Bulk District shown for Block 3739 for both the Full Build and the Reduced Scope Alternatives is 350-S. Figure 5.1-2, for the same block for the Full Build Alternative, shows 400-S for one part of the block and 350-S for the remainder. Figure 5.1-3 for the same block for the Reduced Scope Alternative shows 350/400-U. Similarly, for Blocks 3736, 3737 and 3738, Table 5.1-1 shows 400-S for the Reduced Scope Alternative while Figure 5.1-3 shows 350/400-U.

The EIS also needs to consider how the needs of the combined project areas for schools, parks, supermarkets and other amenities will be met. With the Planning Department projecting 7750 more residential units than would otherwise be built under its proposed rezoning for the Rincon Hill Mixed Use District, plus over more than 5000 residential units approved for Mission Bay in addition to the 3400 to 4700 more units projected as a result of the present project, an additional population of at least 20,000 people more than would otherwise be expected would be living in this rather small area. The EIS needs to address how the needs of such a large population for parks, schools, retail and other amenities will be met.

As the South of Market area is already where most all of the new housing in the City has recently been constructed and will continue to be constructed (e.g. Mission Bay), to allow an even greater percentage of the overall new construction for the City to occur there will adversely affect the quality of life for those who now or hereafter live and work in the area. The much higher density resulting from these projects should be specifically contrasted with the density of other residential areas of San Francisco to provide a meaningful discussion of what is proposed. The type of units to be offered and the anticipated price range need to be included in the EIS so that it can be determined whether there is a realistic need for such units in San Francisco. The large number of units presently available (e.g. Bridge View Towers, Yerba Buena Lofts), as well as those already approved or under construction (e.g. Mission Bay, 333 First Street, 325 Fremont Street, 200 Brannan) should also be factored into this evaluation.

Over the past ten years a vibrant residential community has developed and continues to develop in the area along and nearby Folsom Street. The neighborhood is not a "clean slate" for someone to experiment on with a design considered appropriate for a theoretical or abstract urban neighborhood. The building of downtown-sized office buildings in this area which are out

of proportion to the buildings presently in the area would destroy its intended and existing character. The EIS needs to present a full and fair disclosure and discussion of the many issues raised by this and the other projects mentioned previously so as to enable the public and the various governmental agencies involved to determine whether what is proposed is in the best interests of the neighborhood and the City.

I can be contacted at the above address or by telephone at 415/781-5088 (work) or 415/882-7871 (home).

Very truly yours,

Reed H. Bement

Reed H. Bement

William Blackwell, Architect

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Telephone/FAX: (510) 654-4456
e-mail: wdbmlb@ix.netcom.com

December 2, 2002

Paul E. Maltzer, Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco CA 94103

Re: Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project
Draft EIS/EIR dated October 2002
Comments (Environmental Issues) due December 6, 2002

Dear Mr. Maltzer:

I am pleased to submit the following comments on the subject document and appreciate the opportunity to do so.

In a letter dated April 16, 2001, to Joan Kugler, EIR Project Manager, I suggested an alternative Caltrain extension plan coupled with underground pedestrian connectors and an efficient terminal design. This alternative offered significant advantages consistent with the primary purposes listed on page 1-1.

Subsequently, I have amended that document to incorporate results of additional research, and am enclosing a revised version as Attachment No. 1. Many of my comments on this Draft EIS/EIR are with respect to material in this attachment, which, for purposes of identification, I am referring to as the "Blackwell Alternative".

Attachment No. 2 adds research on reversing direction of Caltrains. Attachment No. 3 is a copy of my suggested alternate plan for the bus levels that was also included in my April 16, 2001, letter to Mrs. Kugler.

Please give the material in these attachments the same weight and careful consideration that you give the comments listed herein by page number.

COMMENTS

Page 1-10. The one-mile "gap" will be partially erased for those Caltrain riders who transfer to BART at Millbrae.

Page 1-11. I don't have a copy of an August 1996 ridership report by Charles River Associates, but a later report by the High-Speed Rail Authority* put the loss at 110,000 annual riders (not 200,000) if HSR is terminated at 4th & Townsend. Assuming weekend and holiday travel at 70 per cent of normal, this loss is only 332 riders per workday. The same report places the cost of HSR extension to the Transbay Terminal

site at $270 million, which would be an incredible amount to pay for a net gain of only 332 daily riders—less than one half of one per cent of the total riders.

Simply providing long- and short-term parking spaces at 4th & Townsend would probably increase San Francisco HSR riders by double or triple that number.

* California High-Speed Rail Authority "Revised Staff Recommendations for VHS Route Adoption" July 14, 1999, page 14, stated that "By terminating the Peninsula VHS routing at the 4th & Townsend Station site, about $270 million can be saved in construction costs while reducing the length of the system by less than one mile...ridership and revenue for long-distance travelers would only be slightly less than the Transbay Terminal alternative ...110,000 less riders per year which leads to $4 million less revenue per year." Total annual riders was 23.1 million at that time, and now is projected to be 36 million.

Page 1-28. Table does not show the street vacation procedure that is required for the taking from Minna Street of a ten foot strip (510 feet long) between 1st & 2nd Streets. Minna Street is only 35-feet wide. This encroachment is unnecessary. Attachment No. 3 shows an alternate one-level plan that accomplishes everything needed within the155-foot width of the existing State property.

Page 2-3. (a) Electrification of Caltrain is currently funded only to 4th & Townsend. (b) Electrification need not necessarily be in place prior to implementation of Caltrain extension. Push-pull electric locomotives have been used in the past to move diesel-powered trains through tunnels in urban areas, notably at Pennsylvania Station in NYC.

Page 2-6. The diagram shows an underground connection to BART as a design option. The summary on page S-7 says this pedestrian connection would be to the Embarcadero Station, rather than to Montgomery Street. There is only one short paragraph in EIS/EIR (Page 5-118) and the choice of BART stations is not discussed. The BART connection is evidently not in the cost estimate.

A pedestrian concourse with horizontal passenger conveyors (Blackwell Alternative) from the Transbay Terminal to Montgomery St. BART station puts commuters closer to the center of District C-3E and, in conjunction with a 2nd Street rail platform, presents an opportunity for sublime pedestrian circulation. Moreover, Montgomery St. has the highest number of entries and exits of the Market Street BART stations (Page 3-8). These connecting links would obviously improve access to bus and rail services for a great majority of transit riders, a primary purpose of these projects (Sec. 1.1). See also Attachment No. 1.

Page 2-9. Needlessly re-locating the bus levels 40 feet and 60 feet above the street level does not improve public access to bus service, a primary purpose of these projects (Page 1-1).

Page 2-11. The West Ramp alternative itself should include an alternative that combines on one level the upper and lower bus levels proposed. See Attachment No. 3, a drawing that shows the same number of bus stations, turnout lane, turning radius, etc. on one level that are proposed for two levels. Electronic signboards at the foot of the escalators would let patrons know which of the two platforms to use, and there is

no loss in AC Transit flexibility. In the Blackwell Alternative, this bus level would be at the 20-foot level, the west ramp elevation would remain essentially as is, and retail would be partially on the street level and partially on the pedestrian concourse level below the street. See Attachment No.1 for more detail.

Page 2-35. (a) The grade crossing planned at Common Street will prevent use of these tracks by HSR. (b) The six platform tracks on the surface cannot be used for trains continuing to the downtown terminus – such as non-electrified trains, for example. See page 2-3 (b) comment re electrification. (c) The platforms for the surface tracks are not long enough for special event trains. Caltrain has said that 1,000 feet is needed.

Page 2-36. (a) The Blackwell Alternative deletes the need to acquire 18 parcels of land and demolish eleven buildings for the HSR curve into the Terminal.

Page 2-46, Redevelopment Scenarios. BART, MUNI, Caltrain, and AC Transit stations, when fully inter-connected, will provide San Francisco with a regional commuter transit facility of unparalleled convenience in the heart of the downtown. Current market conditions not withstanding, the buildable parcels within a ten-minute walking distance of the Caltrain terminus, the Transbay Terminal, BART/MUNI Montgomery and Embarcadero Stations, and even the Ferry Building would ideally be predominantly office space. Office space development within close proximity would give maximum reinforcement to the investment in a regional transit facility. Ten minutes, incidentally, equates to a walking distance of one-half mile at 3 mph, a dimension that should be adjusted for topography.

The predominantly residential component proposed for both scenarios of the redevelopment activity is appealing because it addresses housing needs, but it has several disadvantages: (1) It displaces office space as outlined above, contributing to downtown sprawl. (2) It brings a new layer of pedestrian and vehicle traffic to an already congested downtown— moving vans, delivery trucks, more taxi and private cars, and on the sidewalks, more seniors, joggers, small children, baby carriages, and pets.

Housing that will enable more people to live near where they work is an urgent necessity, but there are many parts of the City with residential amenities already in place—schools, shopping, parks and playgrounds—that are far better suited for residential development than is the heart of the downtown. These neighborhoods need only improved transportation to be close to the downtown area.

Page 2-47. The reasons given for not renovating the existing terminal building tend to vanish in light of the Blackwell Alternative. Caltrain and high-speed rail are cleanly separated from the terminal; removal of the east bus ramp is still feasible. The single level plan shown in Attachment No. 3 could be implemented on the existing bus level. An elegant new roof could be installed over the bus platform. The lower floors plus sub-level (now garage) of the existing terminal offer ample opportunity for revenue-generating joint development. A Minna Street underground concourse link to Caltrain at 2nd St. and thence to BART Montgomery, is a simple addition. Opportunities for major improvements in space utilization, passenger circulation, signage, security, and safety are not precluded. Renovation would require the ablest architects and engineers, but it is certainly not out of the question.

Page 2-49, Alternatives Considered and Withdrawn, does not include the Blackwell Alternative described in Attachment No. 1. This is a carefully researched and reasonable alternative that was submitted within the public comment period prior to commencement of this Draft EIS/EIR.

Page 2-50. The Essex St. stub-end technical analysis is erroneous on several counts. Caltrain at present operates successfully with sub-end, not "pass through" tracks. Storage/by-pass tracks can also be provided at the stub-end. Reversing train direction is routinely done now and, in any case, does not present an operating problem that would impact schedule. Most northbound and southbound trains will make station stops at both 4th & Townsend and at the downtown terminus. See Attachment No. 2. Internal passenger circulation (with, for example, horizontal passenger conveyors) can be as clear and elegant as in the proposed, better even because the tracks do not need to be so far underground. The paragraph does not address the advantages of separating Caltrain extension form the Transbay Terminal Improvement Project.

Page 3-31 (bottom) - Setting the south boundary of the traffic study area at Bryant Street excludes 16th Street (as well as the extension of Common Street) from consideration in this EIS/EIR. Unless these streets are closed to vehicular traffic or grade separation is provided, there can be no high-speed rail service to downtown San Francisco.

Common Street might be closed but Sixteenth Street between 3rd & 7th Streets is classified as a major arterial. The balance to the Misson Street BART Station is classified as a secondary arterial. MUNI ultimately plans a surface light rail line on 16th Street. It is unlikely that this street can be closed. If an underpass is provided, access to 7th will be curtailed and there will be other traffic impacts. On the other hand, if all of the tracks are undergrounded before reaching 16th Street, the plans for the surface tracks at 4th & Townsend (page 2-25 and 2-26) no longer apply. There would also be a conflict with the major sewer collector on piles (shown in the profile drawing on page 2-24) to be resolved.

Page 5-93, bottom paragraph - Assuming similar sleek structural designs for the one-level ramp, the stacked ramps illustrated in Figure 5.16-2 would <u>not</u> be less visually obtrusive than a single ramp. (The title of the simulated drawing is confusing – should be" looking NW on Howard St. from about 2nd Street")

Page 5-94. The upper elevation drawing shows that the portion of the proposed terminal that crosses over both 1st and Fremont Streets begins about 20-feet above the street level and extends to the terminal roof height of 109-feet. The existing building also begins about 20-feet above street level but is only 40-feet high. The Blackwell Alternative would also have only one level (but of improved design) crossing these streets. As in Figure 6.16-2, a simulated visual comparison should be shown that illustrates the significant adverse impact of the proposed design on the views up and down on both 1st and Fremont Streets.

Page 5-118. Pedestrian tunnel if under Fremont Street would be to the BART Embarcadero Station rather than Montgomery Street. See comment, page 2-6. These spacious pedestrian tunnels with moving walkways would greatly <u>enhance public access to bus and rail services</u>, a primary purpose of these projects. See the detail

drawing of the underground pedestrian intersection at 2nd & Minna included with Attachment No.1.

Page 5-159. Table 5.20-4 shows 658,100 cubic yards of excavation materials for the terminal, but Table 5.21-1 on page 5-168 shows only 125,000 cubic yards for the terminal and a very low truck volume. Why the discrepancy? At 2,500 cubic yards per workday (180 trucks) this trainbox excavation will take about one year. The Blackwell Alternative deletes this requirement for a very deep and costly trainbox excavation.

Page 6-8, Table 6.6-1. I have been told that Proposition 42 can be expected to provide at most only $100 million for these projects, not the $600 ± million shown. How is this shortfall to be made up?

OTHER: Conservation of Natural Resources and Energy

This item is not included in the Draft EIS/EIR but might be significant enough to be included.

More than any other single factor, size determines the quantity of materials required for a project. The "Blackwell Alternative" effectively changes the design of the terminal from 5-1/2 levels to 3 levels without curtailing services. As a first approximation, this is a 45 per cent reduction in size that would reduce the consumption of building materials, and the energy required to manufacture and transport the materials, by a like amount. In this case, the opportunity to conserve natural resources and energy by size reduction is very substantial and might well be evaluated in an EIS/EIR concerned with environmental impacts.

Please call if you have any questions.

Sincerely,

William Blackwell

William Blackwell

Enclosures: Attachments (3)
Copy: Steve Heminger, MTC

The "Blackwell" Alternative

The Transbay Terminal plan approved by the Executive Committee of the Transbay Panel includes an underground six-track, three-platform rail terminal 50 feet below the surface for Caltrain and high-speed rail. Trains enter and leave by way of a two-track tunnel from 4th & Townsend that proceeds north under Second Street and then makes a wide turn into an underground train box. Tail tracks may be added beyond the terminal to store and stage trains. Until the time when tracks are extended to a new transbay tube, all of these tracks are stub end tracks. A design option is included for possible future pedestrian connection to the BART/Muni Metro Embarcadero Station, but funding is not provided for this option.

A two-track, one-platform rail terminus at 2nd and Minna Streets, in conjunction with underground pedestrian concourses connecting to BART at Montgomery Street and to an efficient station at the Transbay Terminal (TBT), is an attractive alternative to the approved plan. It is an arrangement that enhances connectivity and reduces cost.

Horizontal passenger conveyors (people movers) on the train platform and in the underground concourses, in effect, "shorten" the travel distances between all three of the major transit elements. Proximity of TBT and Caltrain to the BART/Muni Metro Montgomery Street Station, rather than to the Embarcadero Station, is a major bonus for commuters employed in the financial district. From the point of view of virtually all transit users, this is a beneficial arrangement. It also greatly simplifies construction. See drawing on page 7.

PRINCIPAL ADVANTAGES

- Enhances connectivity between Caltrain and other major transit systems.
- Reduces travel time and adds convenience for both bus and train riders.
- Reduces the combined cost of TBT and Caltrain extension.
- Meets the requirements of San Francisco Proposition H. The present plan does not.
- Allows Caltrain extension to proceed independently of TBT, which has several problems that could delay construction, possibly for years; conversely, allows TBT to be constructed without waiting for Caltrain Extension.

DISCUSSION

1. Does a two-track platform on Second Street have enough capacity for the level of train service contemplated, now and in the foreseeable future?

Two stub-end tracks and a wide passenger platform can be constructed underground within the Second Street R.O.W. The platform can accommodate horizontal passenger conveyors down the center that will effectively shorten walking distance—especially

important if quarter-mile long platforms are needed for HSR. There are no existing underground utilities under Second Street that restrict construction.

With an average dwell time of two minutes—the time allotted for high-speed rail stops at intermediate stations—and another 60 seconds for trains to enter and leave the station, two stub-end platform tracks can accommodate 40 trains per hour. Keep in mind that trains now travel backwards as easily as forward.

Caltrain:

Caltrain currently runs 76 trains in and out of 4th & Townsend every weekday, but never more than 8 per hour even at the height of the morning commute, according to the timetable effective August 26, 2002. For the horizon year of 2020, the Caltrain operating scenario in the Draft EIS/EIR assumes 170 trains a day but never more than 12 trains per hour during a.m. and p.m. peaks. Curiously, the number of trains per day increases by 124 per cent but the peak hour increase is only 50 per cent.

A platform with a capacity for 40 trains per hour will accommodate five times the current Caltrain peak and three times the year 2020 forecast peak.

At present, Caltrain commuter trains are only five cars in length. A 750-foot long platform at the downtown extension can easily accommodate 8-car trains. With 8-car trains, a two-track platform has a capacity that is eight times the current peak hour Caltrain activity!

In addition to two mainline tracks, Second Street is wide enough for three storage/by-pass tracks that provide operational flexibility at the stub-end. The concept would also retain intact (although underground) tracks at 4th & Townsend for train storage, staging, and light servicing that is within two minutes of the stub-end. The Long Island Railroad successfully operates 452 trains a day in and out of Pennsylvania Station in NYC using storage yards that are remote but within two minutes.

High-Speed Rail:

Unless 16th Street is closed to cross traffic, which seems unlikely because of its importance to Mission Bay, or grade separation is provided, there can be no high-speed rail service to San Francisco.

The final report of the Intercity High-Speed Rail Commission, December 1966, stated that "to attain the safety record of high-speed trains in other countries, California's system must be entirely fenced and grade separated (no rail/roadway intersections)." The June 2000 final business plan of the California High-Speed Rail Authority said, "The system will be completely grade separated, with no potential for conflict with pedestrian or vehicular traffic."

Assuming, however, that an engineering solution is found that permits grade separation at 16th Street, the year 2020 timetable for high-speed rail shows 132 trains per day in and out of San Francisco – but never more than 10 trains per hour. Thirty-six of the 132 trains provide service to Sacramento by way of Los Banos and Fresno.

Ten trains per hour could be on the high side. Dan Leavitt, Deputy Director of the California High Speed Rail Authority, said that because of traffic and other concerns, only express trains might continue to the Transbay Terminal, the remainder terminating at 4th & Townsend. Alternatively, some trains slated for San Francisco might be routed from San Jose up the East Bay side to Oakland and eventually to Sacramento by an improved Capital Corridor route.

Two stub-end platform tracks provide nearly twice the capacity needed for the combined peak hour service projected for Caltrain and HSR in the horizon year of 2020.

Reductions in dwell time could increase the capacity of a two-track platform by 50 per cent or more. Caltrain dwell time at intermediate stations is currently less then 2 minutes but BART dwell time is less then 30 seconds! Unlike Caltrain, BART cars have only one level and station platforms are at the height of the car floors—there are no steps to impede passenger flow— and several sets of entrance and exits doors are provided in each car.

The inescapable conclusion is that the rail plan developed by MTC consultants is far more elaborate then needed to meet present and future downtown rail requirements.

Adding more platform tracks allows longer dwell times but does not increase the maximum throughput of a station. No matter how many platform tracks are provided, the throughput will be governed by the maximum feasible in a two-track tunnel, never likely to exceed 60 trains per hour, the limit with BART's new advanced automatic train control system.

The MTC consultant's report states that the rebuilt Transbay Terminal has the capacity for 300,000 daily train/bus passengers. This is 4 times the number of riders projected for the year 2020 and would require 4 times the number of trains and buses. The number of bus bays cannot possibly be quadrupled nor can the number of train platform tracks. Even if the terminal had the capacity for this number of train platforms and bus bays, there is not the street and sidewalk capacity for 300,000 daily riders nor is there isn't enough land available anywhere near the terminal to build 45 million square feet or so of additional office space needed for this number of new commuters. At present, the whole of the financial district has only 44 million square feet of office space.

2. BART/Muni Metro Connection

Proposition H requires the terminal design to "yield the highest possible transit use by residents and commuters." It also requires that the terminal design "afford senior citizens, persons with disabilities, and other commuters with the most convenient connections between regional bus lines, Muni, Caltrain, and BART."

The most convenient connection from TBT to BART/Muni Metro is an underground concourse with moving sidewalks to the Montgomery Street Station, a trip that will take the average commuter slightly over five minutes on the people mover. The same trip

over surface sidewalks and three street crossings takes from 7.5 to 9 minutes – longer for persons slowed by luggage, small children, age, disability, or inclement weather.

If Caltrain terminates at 2nd & Minna Streets, approximately at the mid-point of this underground concourses linking TBT and BART, train access will be very convenient for commuters going either to the financial district or to the terminal. It will take just over 2 minutes to go from the train platform to the BART / Muni mezzanine level at 2nd & Market, and about 3 minutes to reach the center of the Transbay Terminal.

Commuters are almost always in a hurry. Even on a perfect weather day, many will choose the underground concourse because it saves time.

High-speed rail passengers and BART SFO passengers with luggage will most assuredly prefer a people mover to interconnect between TBT buses, BART/Muni, HSR, and Caltrain.

Although the Embarcadero BART/Muni Metro Station is closer to the Transbay Terminal and Ferry Building, the Montgomery Street Station at 2nd & Market is closer to the heart of the financial district, which has two-thirds of all office space in San Francisco. In fact, early studies for Caltrain extension scored location options based on relative proximity to 2nd & Market. The underground route from the TBT via 2nd & Minna to Montgomery & Market Streets is ideal for connecting with Caltrain.

Morning BART trains from the East Bay discharge riders at both Embarcadero and Montgomery Stations, which means there will be at least standing room for westbound passengers to board at Montgomery Station. Because it is near the end of the line, Muni-Metro will also have room for passengers in both directions.

The underground concourses can be a lively aspect of the terminal, featuring retail stores and restaurants that have "breakthroughs" to shops and stores on the street level. Underground satellite restaurants have been hailed as the most successful feature of the recent remodeling of Grand Central Station in New York City.

3. COST

Prop H requires the design to "result in the lowest feasible combined costs for construction of the bus terminal and the Caltrain station, without sacrificing the aesthetic qualities of the terminal and station and their interface with surrounding development."

Ending Caltrain at 2nd & Minna results in a lower combined cost than the proposed design. The shorter rail route is also shallower, deletes one curve under buildings, can be constructed in part with cut and cover, deletes the huge excavation and shell needed for the trainbox under the terminal, and deletes the tail tracks.

Deleting the curve alone deletes the acquisition and demolition costs of 18 parcels of land with 11 buildings [Draft EIS/EIR page 2-36.]

If the terminal design were revised consistent with the Caltrain extension and underground concourse in this proposal, it would have only three levels rather than the

proposed 5-1/2 levels, and its staggering $1 billion cost would come down roughly in proportion.

An underground concourse with horizontal passenger conveyors to BART/Muni Metro is not included in the TBT plan, although the concept is clearly mandated by Proposition H. If this feature had been included, added cost of the conveyors would be nil.

The 2nd Street rail concept is entirely underground and can have no possible adverse effect on aesthetic quality.

A larger issue is the very low cost/benefit ratio of the Caltrain Extension Project when compared with other transportation projects. See the table on page 13.

Cost of the extension project is now $849 million. Electrification of Caltrain at $602 million and Phase 1 of the Caltrain Express Project (Baby Bullet) at $127 million are separate and additional JPB projects. The grand total is $1.58 billion.

The Caltrain ridership forecast in the Draft EIS/EIR is for 29,307 train riders per weekday at the Transbay Terminal in the year 2020. This number equates to roughly 15,000 commuters per day who will directly benefit from the expenditure.

Caltrain extension, incidentally, is not necessarily dependent on electrification of the entire Caltrain system, a project that might best be delayed until it can be done jointly with high-speed rail. For air quality reasons, New York City prohibited steam and diesel powered locomotives within city limits. Until all commuter rail systems converted to electric, Penn Station successfully used supplemental electric locomotives to move trains underground in and out of the city.

A related consideration is BART extension to SFO, that will enable Caltrain passengers to transfer to BART at Millbrae and reach downtown destinations near any of the four BART station locations on Market Street. The new Millbrae Station is designed for cross-platform transfer between BART and Caltrain.

The BART fare from Millbrae to Montgomery Street Station will be $4.70. The trip will take 32 minutes plus the time to transfer. BART makes 11 intermediate stops.

Only 75¢ will be added to the train fare for peninsula commuters who elect to remain on Caltrain to 4th & Townsend. The Caltrain ride from Millbrae to 4th & Townsend takes 29 minutes with 5 intermediate stops. Most commuters must then add transfer time, $1 Muni fare, and at least 10 minutes more travel time to reach downtown destinations.

4. Supplemental Notes

a) For the foreseeable future, the northern California terminus of HSR likely will be at the San Jose Diridon Station rather than in San Francisco. Senate Bill 1856, authorizes a $9 billion general obligation bond for the November 2004 ballot, which is enough to construct high-speed rail from Los Angeles to San Jose (by way of Fresno and Los Banos) but is not enough to continue HSR to San Francisco. Rod Diridon has stated that an additional $2 billion is needed to reach San Francisco. Thus, for a period of unknown

duration, San Francisco bound HSR passengers will transfer to the Caltrain "Baby Bullet" at San Jose, which puts added importance on the extension of Caltrain to the downtown financial district of San Francisco. The Baby Bullet trip from San Jose to 4th & Townsend is expected to take 55 minutes or less.

Without the possibility of a new transbay tube, San Jose has a strategic advantage over San Francisco for the location of the HSR terminus that may be difficult for San Francisco to overcome.

b) Even with a downtown extension, Caltrain plans to retain a station stop at 4th & Townsend Moreover, the 4th & Townsend site has major advantages for HSR—notably much more space, better traffic access, lower cost, and reduced travel time. Unlike Caltrain, HSR has space requirements for ancillary activities such as postal and freight, car rental, passengers with luggage requiring auto and taxi service, etc. The provision of long- and short-term parking at 4th & Townsend would be a major enhancement for HSR in competition with air travel and for Caltrain reverse commuters. San Jose and Oakland airports each provide about 5,000 parking spaces for air travelers. A like number can be provided at 4th & Townsend but would be impossible to provide at the Transbay Terminal site, even if desirable.

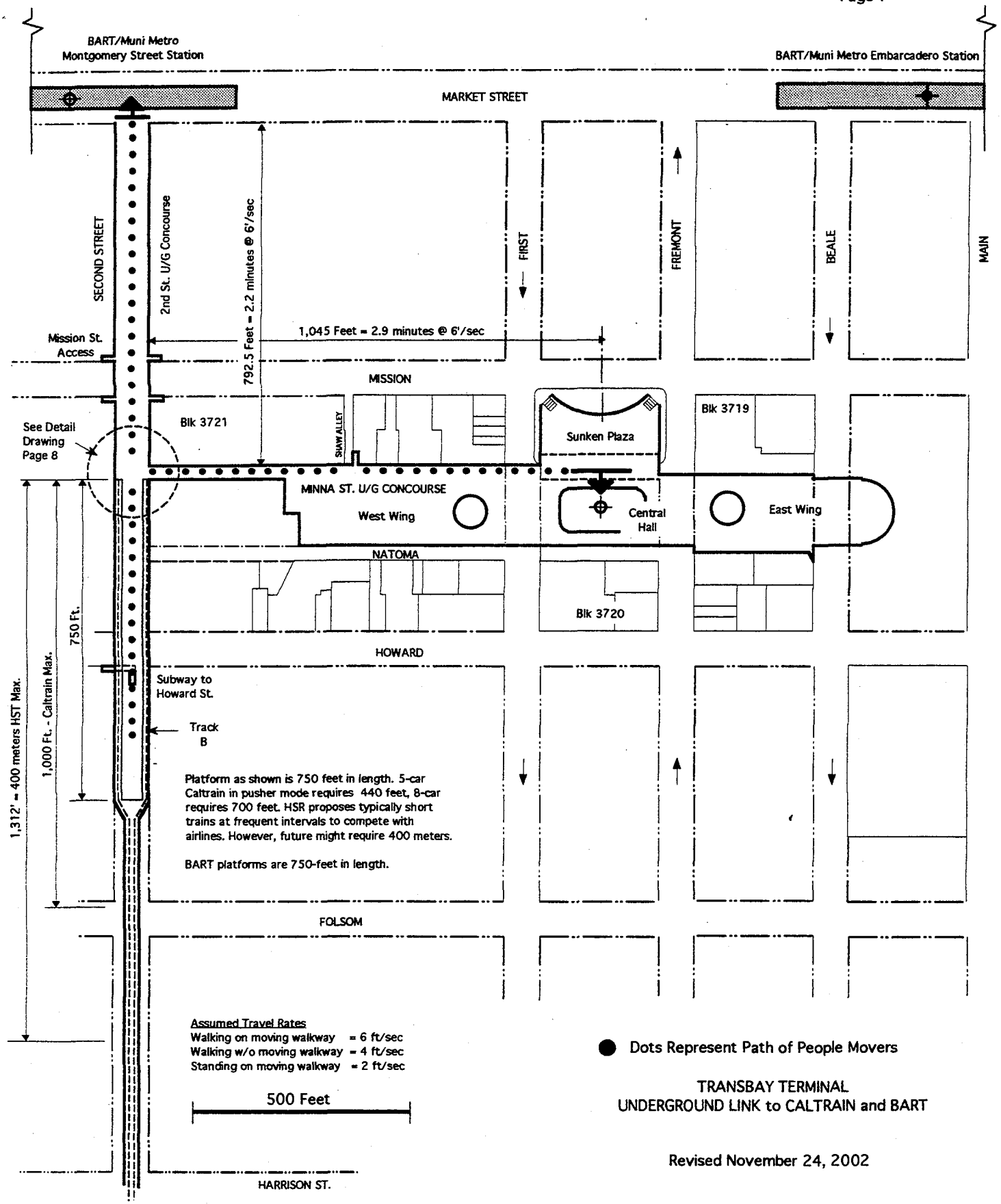
The City of San Francisco has an opportunity for two great facilities— a grand train station with all the amenities at 4th & Townsend and a downtown multi-modal facility providing commuters with unparalleled public transit convenience.

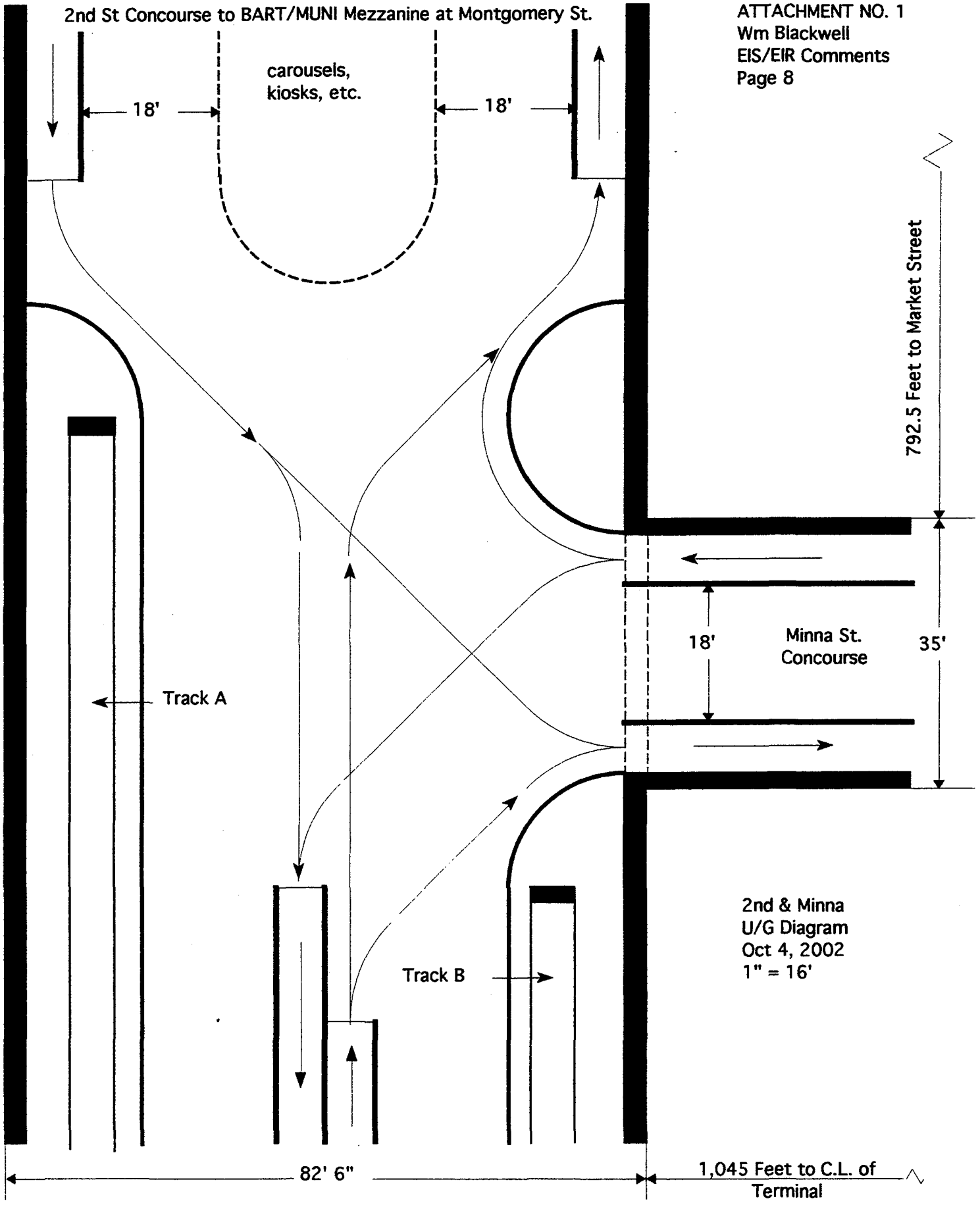
c) Financing: In 1999 the City Controller's statement on Proposition H stated that "as a member of the Joint Powers Board, the City of San Francisco would be responsible for one third of the cost of capital improvements." At that time, the cost of the capital improvements was $621 million for the extension and $254 million for Caltrain electrification. The cost of rebuilding the Transbay Terminal was not included.

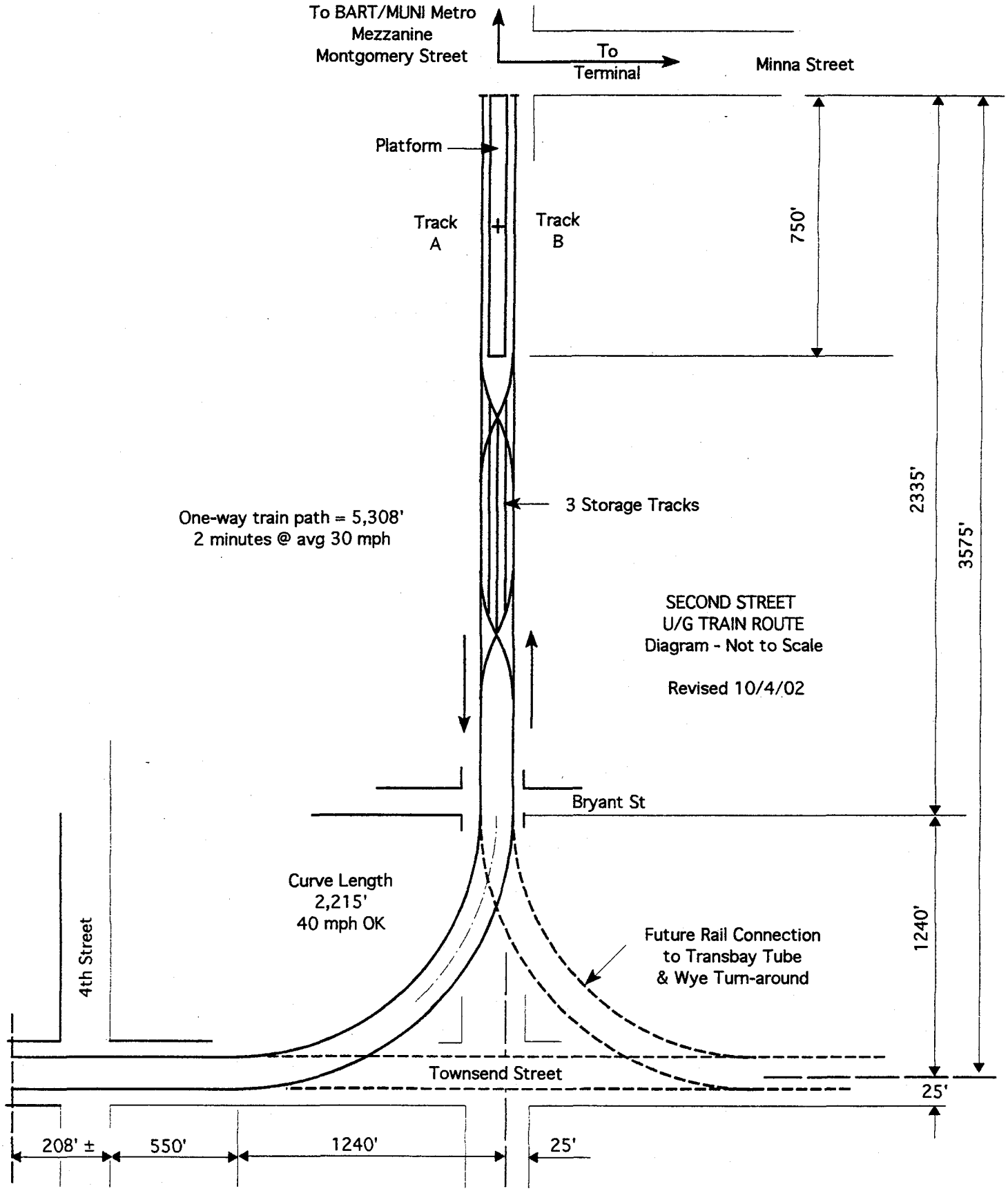
These Caltrain extension costs are now at $849 million and $602 million respectively. San Francisco's obligation under Proposition H has increased from $292 million to $484 million in just three years.

The Controller assumed that this funding would be by state and federal governments and by regional transportation agencies, and not from General Fund monies. However, the Controller said that the Caltrain Extension Project "would compete with other transportation projects, and funding this project may mean that other transportation projects important to the City would not be funded." Thus, there is added incentive for the San Francisco County Transportation Authority to ensure that San Francisco gets the highest value for each transportation dollar spent on these projects.

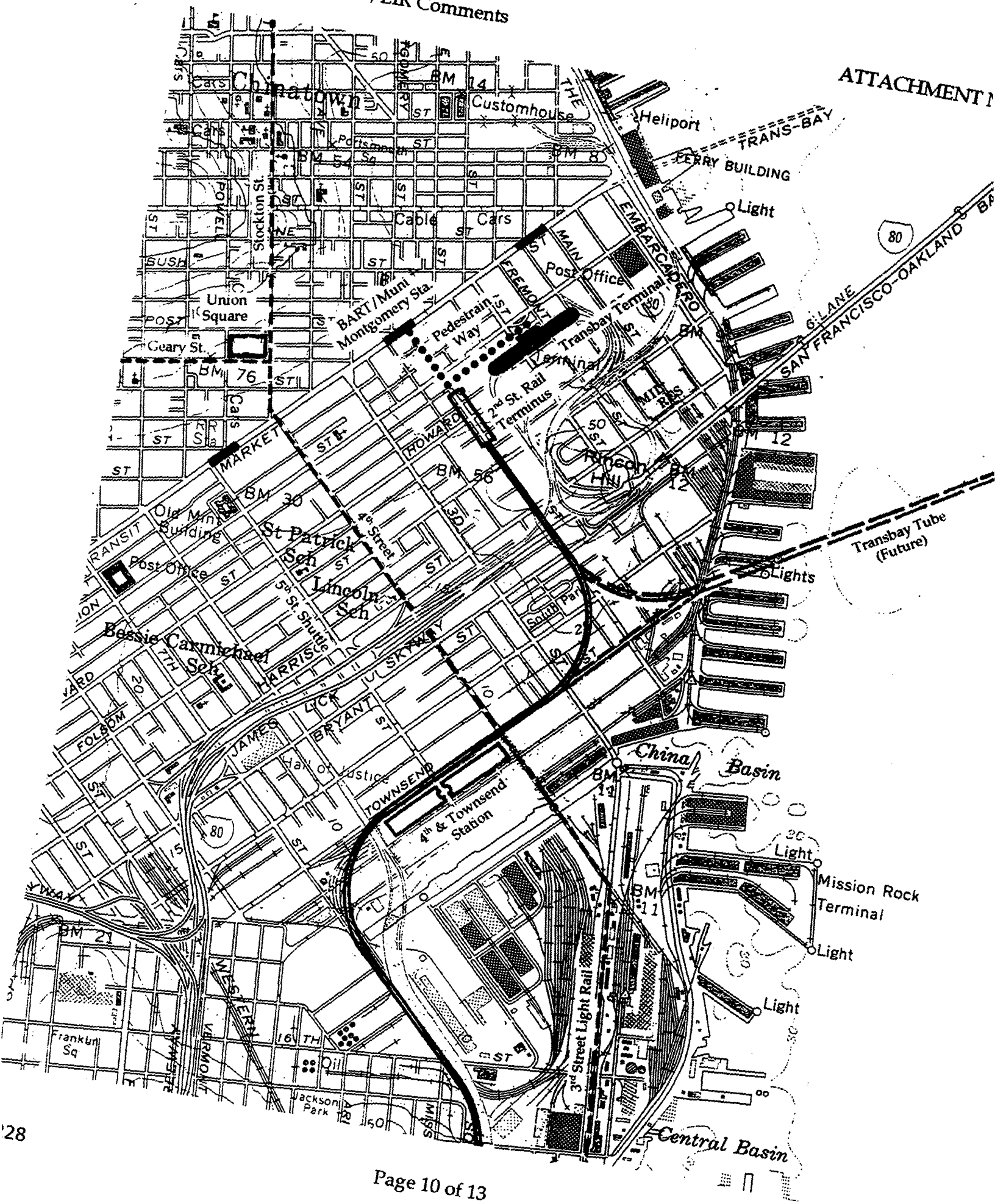
# # #


BART/Muni Metro
Montgomery Street Station
BART/Muni Metro Embarcadero Station
MARKET STREET
SECOND STREET
2nd St. U/G Concourse
792.5 Feet = 2.2 minutes @ 6'/sec
FIRST
FREMONT
BEALE
MAIN
1,045 Feet = 2.9 minutes @ 6'/sec
Mission St.
Access
MISSION
See Detail
Drawing
Page 8
Blk 3721
SHAW ALLEY
Sunken Plaza
Blk 3719
MINNA ST. U/G CONCOURSE
West Wing
Central
Hall
East Wing
NATOMA
Blk 3720
HOWARD
750 Ft.
1,000 Ft. - Caltrain Max.
1,312' = 400 meters HST Max.
Subway to
Howard St.
Track
B
Platform as shown is 750 feet in length. 5-car Caltrain in pusher mode requires 440 feet, 8-car requires 700 feet. HSR proposes typically short trains at frequent intervals to compete with airlines. However, future might require 400 meters.
BART platforms are 750-feet in length.
FOLSOM
HARRISON ST.
Assumed Travel Rates
Walking on moving walkway = 6 ft/sec
Walking w/o moving walkway = 4 ft/sec
Standing on moving walkway = 2 ft/sec
500 Feet
Dots Represent Path of People Movers
TRANSBAY TERMINAL
UNDERGROUND LINK to CALTRAIN and BART
Revised November 24, 2002

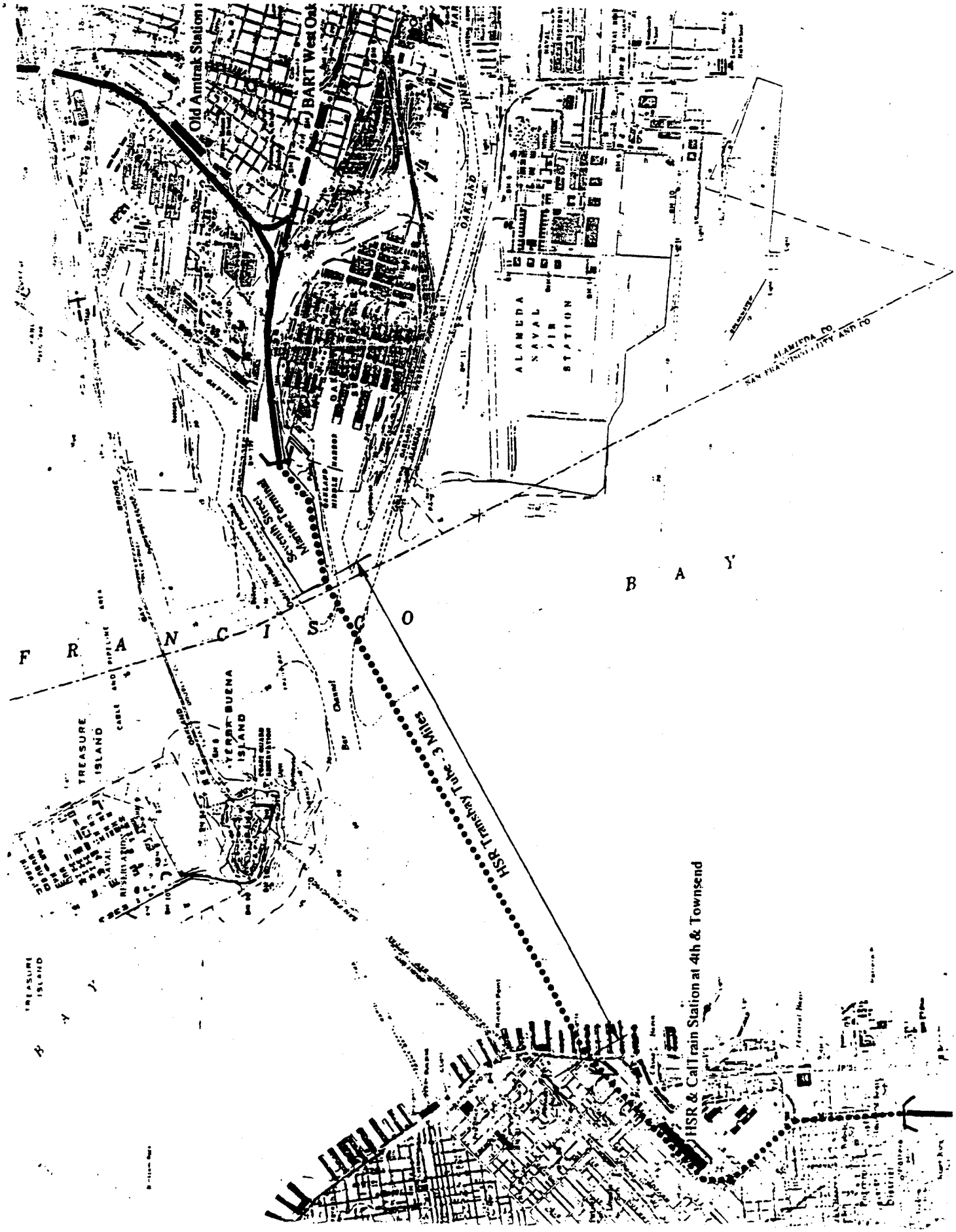

2nd St Concourse to BART/MUNI Mezzanine at Montgomery St.
carousels,
kiosks, etc.
18'
18'
792.5 Feet to Market Street
18'
Minna St.
Concourse
35'
Track A
Track B
2nd & Minna
U/G Diagram
Oct 4, 2002
1" = 16'
82' 6"
1,045 Feet to C.L. of
Terminal

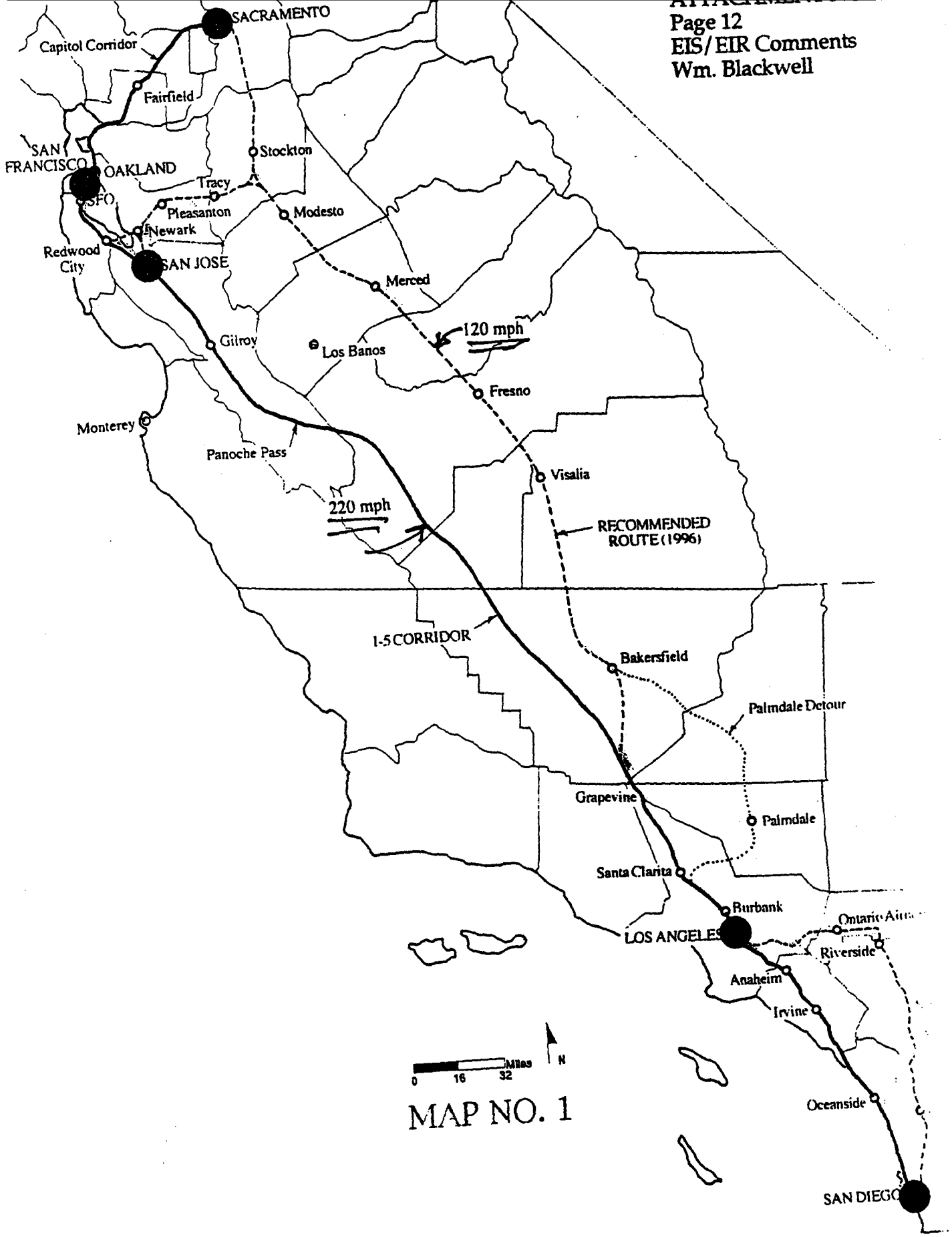

To BART/MUNI Metro
Mezzanine
Montgomery Street
To
Terminal
Minna Street
Platform
Track
A
Track
B
750'
2335'
3575'
3 Storage Tracks
One-way train path = 5,308'
2 minutes @ avg 30 mph
SECOND STREET
U/G TRAIN ROUTE
Diagram - Not to Scale
Revised 10/4/02
Bryant St
Curve Length
2,215'
40 mph OK
Future Rail Connection
to Transbay Tube
& Wye Turn-around
1240'
4th Street
Townsend Street
25'
208' ±
550'
1240'
25'

ATTACHMENT



28


Old Amtrak Station
BART West Oak
ALAMEDA NAVAL AIR STATION
ALAMEDA CO.
SAN FRANCISCO BAY
Seventh Street Marine Terminal
F R A N C I S C O
B A Y
TREASURE ISLAND
YERBA BUENA ISLAND
HSR Transbay Tube - 3 Miles
HSR & CalTrain Station at 4th & Townsend


SACRAMENTO
Capitol Corridor
Fairfield
SAN FRANCISCO
OAKLAND
SFO
Tracy
Stockton
Pleasanton
Modesto
Newark
Redwood City
SAN JOSE
Merced
120 mph
Gilroy
Los Banos
Fresno
Monterey
Panoche Pass
Visalia
220 mph
RECOMMENDED ROUTE (1996)
I-5 CORRIDOR
Bakersfield
Palmdale Detour
Grapevine
Palmdale
Santa Clarita
Burbank
LOS ANGELES
Ontario Airport
Riverside
Anaheim
Irvine
Oceanside
SAN DIEGO
0 16 32 Miles
N

MAP NO. 1

COMPARATIVE PROJECT COST PER DAILY USER

Note	Project	Approx. Cost (millions)	Number of daily users*	Cost per Daily User	Multiple to equal TBT
a	TRANSBAY TERMINAL, bus only	$ 1,052	20,000	$ 52,600	0.0
b	Caltrain Extension	$ 849	15,000	$ 56,600	0.9
c	BART Extension to SFO	$ 1,500	46,600	$ 32,189	1.6
d	SFO New International Terminal	$ 840	32,877	$ 25,550	2.1
e	Bay Bridge - East Span	$ 2,620	228,500	$ 11,466	4.6
f	Pacific Bell Park	$ 300	42,000	$ 7,143	7.4
g	Penn Station Remodel	$ 800	250,000	$ 3,200	16.4
h	Grand Central Station Remodel	$ 391	250,000	$ 1,564	33.6

NOTES:

a Total project development cost dated 1/26/01 is $1,052,302,227; includes temporary facilities. MTC year 2020 daily bus ridership is 35,000 -- equates to about 20,000 daily commuters*

b Cost is Caltrain extension as of Dec 19, 2001 (MTC Draft RTEP). Year 2020 daily Caltrain riders is 29,307 (Draft EIS/EIR October 2002), which equates to about 15,000 commuters. Caltrain electrification ($600 million) is not included.

c $1.5B cost and ridership of 68,000 per day (Vicky Wills BART PIO 3/14/01.); Assume 25,200 are air passengers and remainder are daily commuters, total user per day = 46,600.

d SFO Fact Sheet 7/2000, 12 million international passengers in year 2006 = 32,877 per day

e 282,000 vehicles per day (Year 2000) at avg. 1.62 persons per vehicle (Caltrans 1991); divided by 2 = approx. 228,500 commuters; cost of $2.62 B is as of April 5, 2001.

f Cost and number of seats 1/24/99 - SF Examiner

g NY Times, 12/10/2000 - 300,000 train + 200,000 subway passengers = 250,000 commuters Only 7.4% are Amtrak, others are commute lines. 750 trains per day, 21 platform tracks.

h NY Times, 8/2/1998 - Cost includes $110 million for network of u/g passageways 550 commuter trains per day on 45 platform tracks.

* For weekday commuter systems such as Caltrain, riders per day divided by two equals approx. number of daily commuters. In the case of AC Transit, however, car-pooling in the a.m. changes number of daily users to about 60% of total AC Transit cross-bay ridership. AC Transit accounts for about two-thirds of total daily bus ridership. Hence, estimate of 20,000 commuters for bus-only terminal with 35,000 riders per day as shown in table on page 3, MTC consultants brochure, January 2001.

Reversing Train Direction

The success of the "Blackwell Alternative" to extend Caltrain to 2nd & Minna, where there is room for only two platform tracks, depends on short turnaround times. If short turnaround times are feasible, a two-track station may be all that is needed for the level of downtown service contemplated by both Caltrain and the California High-Speed Rail System.

According to trainmen at 4th & Townsend, northbound Caltrains are typically in the "pusher" mode, i.e., with the locomotive at the rear and the operating engineer in a cab car at the front. Commuter trains have five cars and are less than 500 feet in length including the locomotive. Special event trains are longer. At present, trains with more than eight cars require two locomotives. All Caltrain cars are bi-level, which increases seating capacity but also increases the time needed to load and off-load at stations.

When operating outside of yard limits, an operating engineer must be at the front of the train. When operating within yard limits, however, only a conductor is required at the front.

The trainman said that it takes between five and ten minutes to reverse the direction of a train. The operating engineer must relocate from the locomotive at one end of the train to the control cab at the opposite end, or visa versa. The operator is then required to test the controls before the train leaves the yard.

The time needed depends mainly on train length. At 3 mph, it takes about two minutes for an operator to walk the length of a five-car train and three minutes to walk the length of an eight-car train. The time to test the compressed air system in particular also varies according to the number of cars in the train and is roughly equal to the walking time. Thus, the five-minute turnaround time is for the shortest trains and the 10-minute time is for the longest.

HOWEVER, if a train is operating within yard limits, it can reverse direction without shifting operator location or testing the controls. A train can proceed in a reverse direction as soon as a crewman turns on the headlights at the front end. The trainman who gave me this information said he believed that stub-end tracks such as I propose — even if a mile or more in length — would qualify as within yard limits since public access is only at the boarding platforms and there are no grade crossings en route. If so, crew transfer and testing could always take place at the 4th & Townsend yards.

In the morning, operator transfer and control tests would take place at 4th & Townsend before the train leaves the yard for the journey south. There would be ample track storage space at 4th & Townsend and scheduling would not be impacted. In the afternoon, operator transfer could take place at 4th & Townsend before the train proceeds to the downtown terminus for the evening commute.

During off-peak hours, operator transfer could also take place at the downtown station by utilizing the storage/bypass tracks. Platform tracks would not be tied up, and train arrival and departure schedules would not be impacted.

In either case, the quick turnaround needed for a 2nd & Minna Station with only two platform tracks is evidently feasible.

To illustrate further, northbound trains arriving in the pusher mode during the morning commute would discharge some passengers at 4th & Townsend and then continue underground to the 2nd St. stub-end, off-load and load, and return to 4th & Townsend. At this point, reverse commuters that boarded at the downtown station would experience a delay while train crews change ends for the southbound trip. However, fully 90 per cent of reverse commuters live in parts of the City that are more accessible to 4th & Townsend than to a downtown location. These commuters will board at 4th & Townsend and would not be delayed. The evening commute would have a reverse scenario.

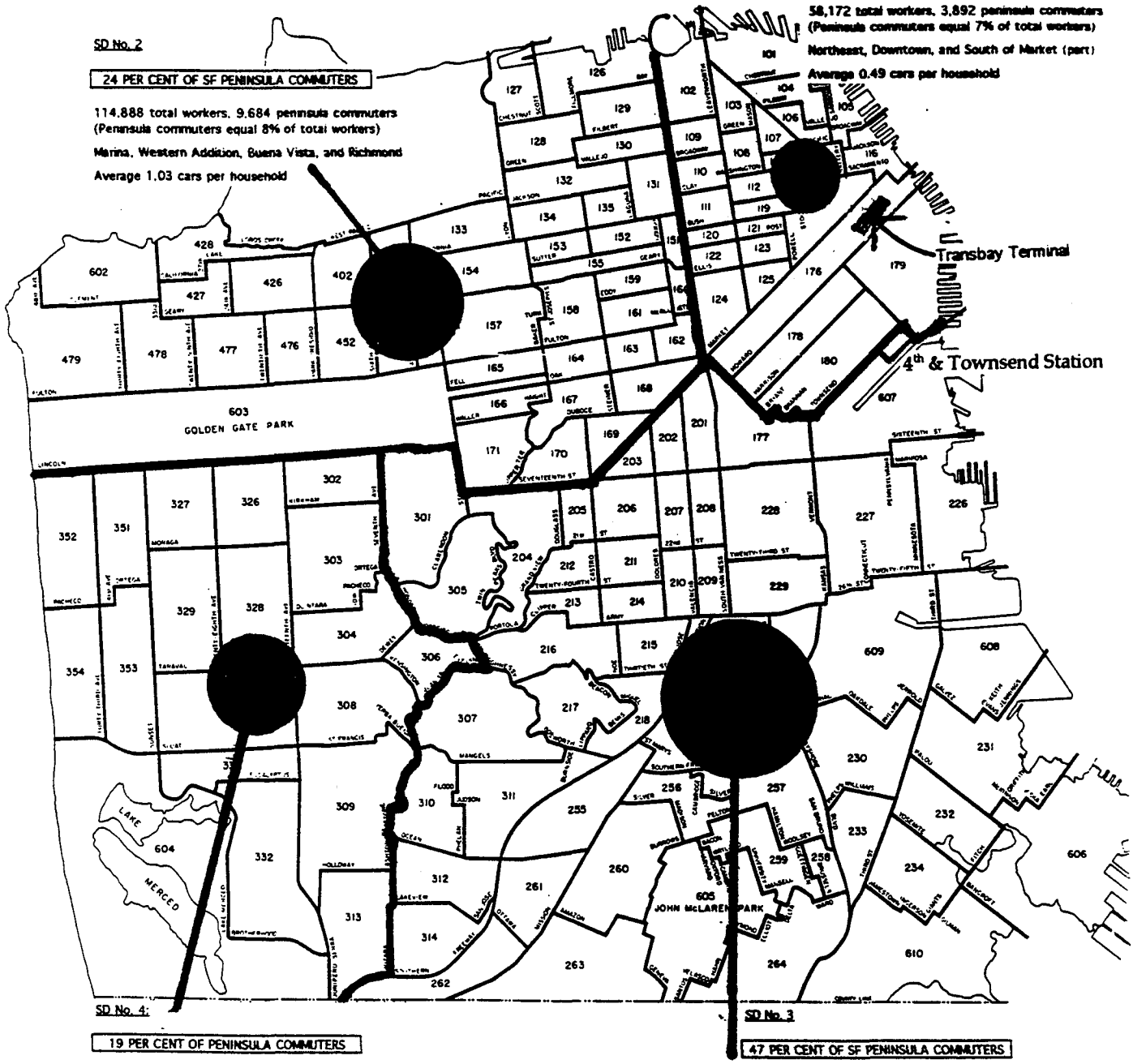
The diagram on page 3 is based on MTC data and shows the city wide reverse-commute pattern as it was in 1990.

This tilt in favor of 4th & Townsend for the reverse commuter would be further enhanced if additional short-term and long-term parking were provided at 4th & Townsend. Unlike Transbay, the 4th & Townsend site can accommodate several levels of parking conveniently located directly above train platforms. These parking spaces would unquestionably enhance ridership for both Caltrain and high-speed rail.

One other option is worth consideration. Although diesel exhaust poses an air-quality problem in downtown San Francisco, it may not be necessary to electrify the entire 77-mile Caltrain system before tracks can be extended underground to the downtown. I have been told that electric "push-pull" locomotives have been used successfully at Penn Station in NYC and elsewhere to power diesel trains for trips comparable to the round trip between 4th & Townsend and the stub-end at 2nd & Minna. Coupling and de-coupling of the electric locomotive can be accomplished quickly, and a crew shift is not required.

# # #

PENINSULA COMMUTERS - 1990



SD No. 1

10 PER CENT OF SF PENINSULA COMMUTERS

58,172 total workers, 3,892 peninsula commuters
(Peninsula commuters equal 7% of total workers)

Northeast, Downtown, and South of Market (part)

Average 0.49 cars per household

SD No. 2

24 PER CENT OF SF PENINSULA COMMUTERS

114,888 total workers, 9,684 peninsula commuters
(Peninsula commuters equal 8% of total workers)

Marina, Western Addition, Buena Vista, and Richmond

Average 1.03 cars per household

SD No. 4:

19 PER CENT OF PENINSULA COMMUTERS

61,556 total workers, 7,781 peninsula commuters
(Peninsula commuters equal 12.6% of total workers)

Ingleside (part), Inner and Outer Sunset

Average 1.42 cars per household

SD No. 3

47 PER CENT OF SF PENINSULA COMMUTERS

144,305 total workers, 18,993 peninsula commuters
(Peninsula commuters equal 13.2% of total workers)

South of Market (part), Mission, Central, South Bayshore, Bernal Heights, South Central, and Ingleside (part)

Average 1.24 cars per household

San Francisco Total

Average 1.06 cars per household

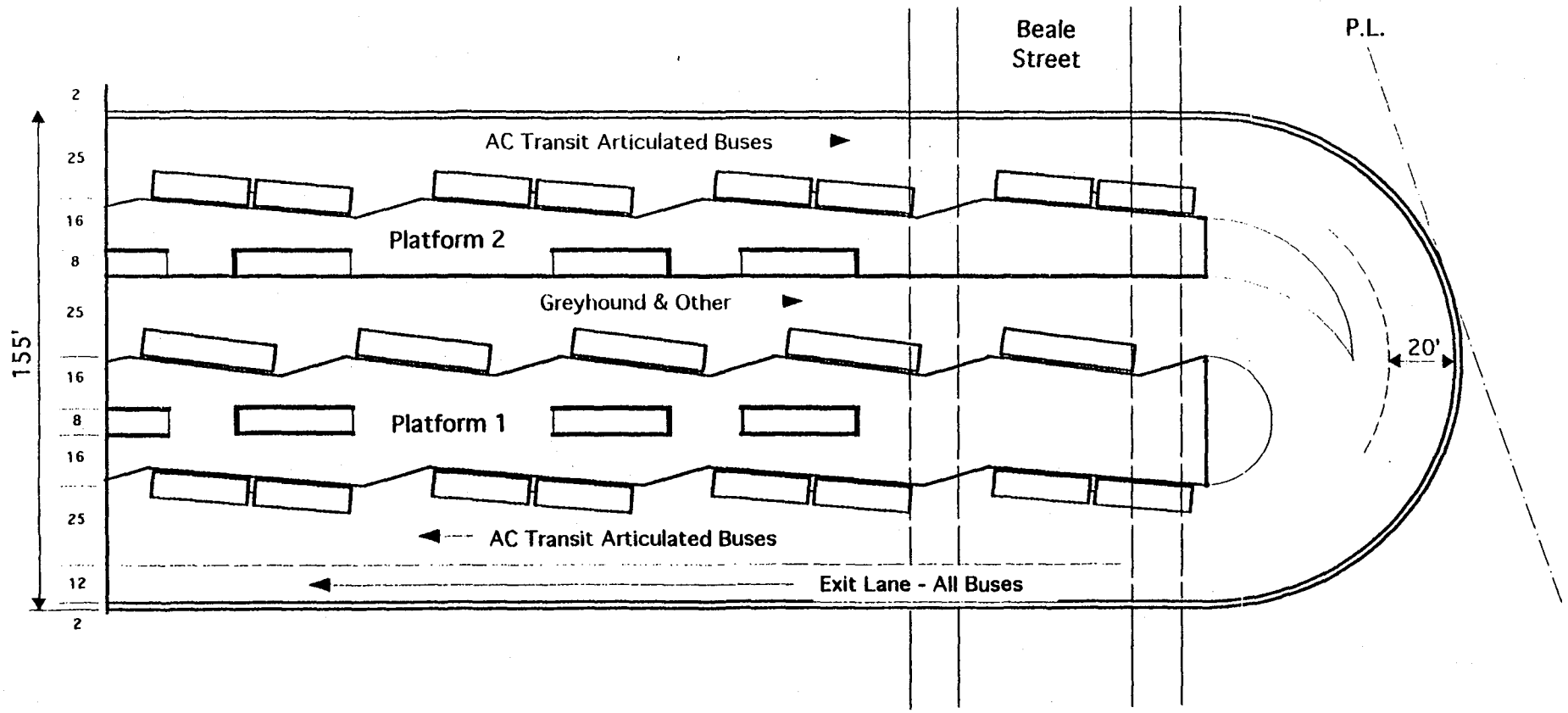
378,921 total workers, 40,440 peninsula commuters
(Peninsula commuters equal 10.7% of total workers)

Of these, only 2,236 (5.5%) commute to SD No. 9, Silicon Valley

For planning purposes, the MTC has subdivided the land area of the nine Bay Area counties into 34 "superdistricts". Four of these superdistricts are in San Francisco. This map shows the number of San Francisco residents living in each of the superdistricts whose jobs are located in the peninsula, i.e., southbound reverse commuters.
Data is from the 1990 Census.

Source: Detailed Commute Characteristics in the San Francisco Bay Area, MTC Working Paper #7, March 1994.

ATTACHMENT NO. 2
Page 3



TRANSBAY TERMINAL - SINGLE BUS LEVEL @ El. +20'
East End Only is Shown

WmB Apr 4, 2001 Scale 1" = 50' (1:600)

This drawing illustrates the feasibility of a single deck for all of the bus bays required by the BATA program. It replicates the busbays shown on the 40' and 60' levels in the current proposal.

RECEIVED
NOV 1 4 2002
PARSONS
San Francisco, CA

William Blackwell, Architect

451 Pala Avenue
Piedmont CA 94611-3744
Telephone/FAX: (510) 654-4456
e-mail: wdbmlb@ix.netcom.com

November 12, 2002

Dave Mansen
Parsons Transportation Group
120 Howard Street, Suite 850
San Francisco CA 94105

Dear Dave:

Enclosed for your consideration is an updated version of the material previously sent on the Caltrain Extension Project. Please use this copy when making your review.

The EIS/EIR Notice states that reasonable alternatives will be reviewed and evaluated in the EIS/EIR. Despite Joan's explanation that the wording of the notice was misleading, it is my understanding that CEQA guidelines as well as federal statutes require an appropriate response. Otherwise, why ask for citizen participation?

EIS/EIR Figure 2.3-1, Alternatives Considered and Withdrawn, does not include my proposal. However, if it had been considered, I suppose that the objections would be similar to those given on page 2-50 for the Essex Street stub-end alignment that you pointed out after the SPUR meeting.

In response to those particular objections, I note the following:

Although the train platform is not directly under the terminal building, it is nonetheless an integral part of the multi-modal transit facilty. Passenger circulation by means of moving walkway and ease of transfer from one mode to another are probably the most attractive features of my plan. Caltrain commuters have direct links not only to the bus terminal but also to BART/MUNI Metro at Montgomery Street, a connection that is not even in the consultant's plan. Transfer between AC Transit, Caltrain, and BART is frictionless. Greyhound passengers or BART SFO passengers transferring with luggage have a virtually effortless transfer via the moving sidewalks. Train levels are 25 feet below the surface rather than 50 feet. The plan has one bus level at the terminal that is 20 feet above the street, not two levels that are 40 and 60 feet above the street. Escalator travel is reduced by 50 per cent or more. Transfer to street level taxis, buses, limousines, and private cars right at the front door of the bus terminal is a major improvement that is also not in the consultant's plan.

The orientation of my plan does not allow for trains to pass through the station to a storage track. Instead, three storage/by-pass tracks are provided at the station that are equally accessible to the two platform tracks. One train does not block another. Caltrain at present operates with 12 stub-end platform tracks without "tail" tracks. These yards are within two minutes of the stub-end and would be retained in my plan. They would be underground on one level, however, as would all tracks at 4th & King.

My research shows that train direction can be reversed without reducing operating efficiency. See the enclosed "Notes."

On other items, Joan Kugler insisted that an underground connection to BART is in the TBT project. It is not in the cost estimate, however, and otherwise ignored in the EIS/EIR. I think the underground concourses with moving walkways connecting BART, Caltrain, and TBT are the links that make a multi-modal facility.

I am also bothered about developing a very costly terminal design that accommodates HST without at the same time showing how it is possible for HST to enter San Francisco. I recall that Maria Ayerdi was adamant that Proposition H includes HST. As you noted, the grade crossing at 16th St. prohibits HST.

I found on page 2-24 the sewage treatment plant and underground collector pipe you mentioned, and now understand why the track slope begins where it does. I assumed that tracks would come in underground beginning at the tunnel entry near 23rd St., 16th St. would remain open, and the entire Caltrain yards at 4th & King would be one level below grade, an arrangement ideal for a fine terminal at street level. The 4th & King site with a spur connection to TBT has the potential for a great station, with the downtown multi-modal commuter transit complex as an indispensable adjunct. From the 4th & King site, a new transbay tube could eventually provide straightforward continuation for HST to Sacramento and a second East Bay commuter rail line.

Even without HST, the 16th Street grade crossing is a problem. I put a stopwatch on the train crossings one morning. If the increase in peak hour trains is in proportion to the projected increase in Caltrain ridership, the railroad crossing gates at 16th Street will block cross traffic about 60 per cent of the time! How would motorists accept that?

SB 1856 does specify the Transbay Terminal as the ultimate destination for HST but, according to Rod Diridon, the $9 billion bond issue is only enough for the LA to San Jose portion. In spite of the commitment to downtown San Francisco, Section 1 (e) allows the Authority to set the limits of the route without extending to San Francisco. Diridon said that an additional $2 billion is needed to bring HST up the peninsula. Incidentally, I noticed Caltrain electrification is funded only to 4th & King.

Although less grandiose than the proposed, my alternative plan for Caltrain extension is an economical approach that is worthy of consideration. If the terminal design follows consistently, it would have only three levels rather that the proposed 5-1/2 levels and its cost would come down proportionately. This plan clearly benefits the commuter—thereby encouraging transit use—meets all of the requirements of Proposition H, and provides a level of rail service that is more than adequate for the foreseeable future.

I look forward to your comments.

Sincerely,

William Blackwell

William Blackwell

Copy: Maria Ayerdi
Joan Kugler
Darrel Maxey
Jim Chappell, SPUR

SPUR, Friday Nov 8, 2002

My question is for Mrs. Kugler.

Eighteen months ago, after the EIS/EIR kick-off meeting at City Hall, I sent written comments to you that included an alternative plan for the extension of Caltrain.

This plan enhances connectivity and reduces cost without detracting from the concept of a major multi-modal transit facility in the heart of downtown San Francisco.

There may even be a precedent at Pennsylvania Station in NYC for the operating scenario that I propose, which, at the least, demonstrates that the concept is feasible.

The official EIR notice said that "any ... reasonable alternatives that emerge" would be reviewed and evaluated in the EIS/EIR. In fact, I have been told that this is a legal requirement.

Hence, my question has two parts:

Why wasn't my alternative reviewed and evaluated in this draft?

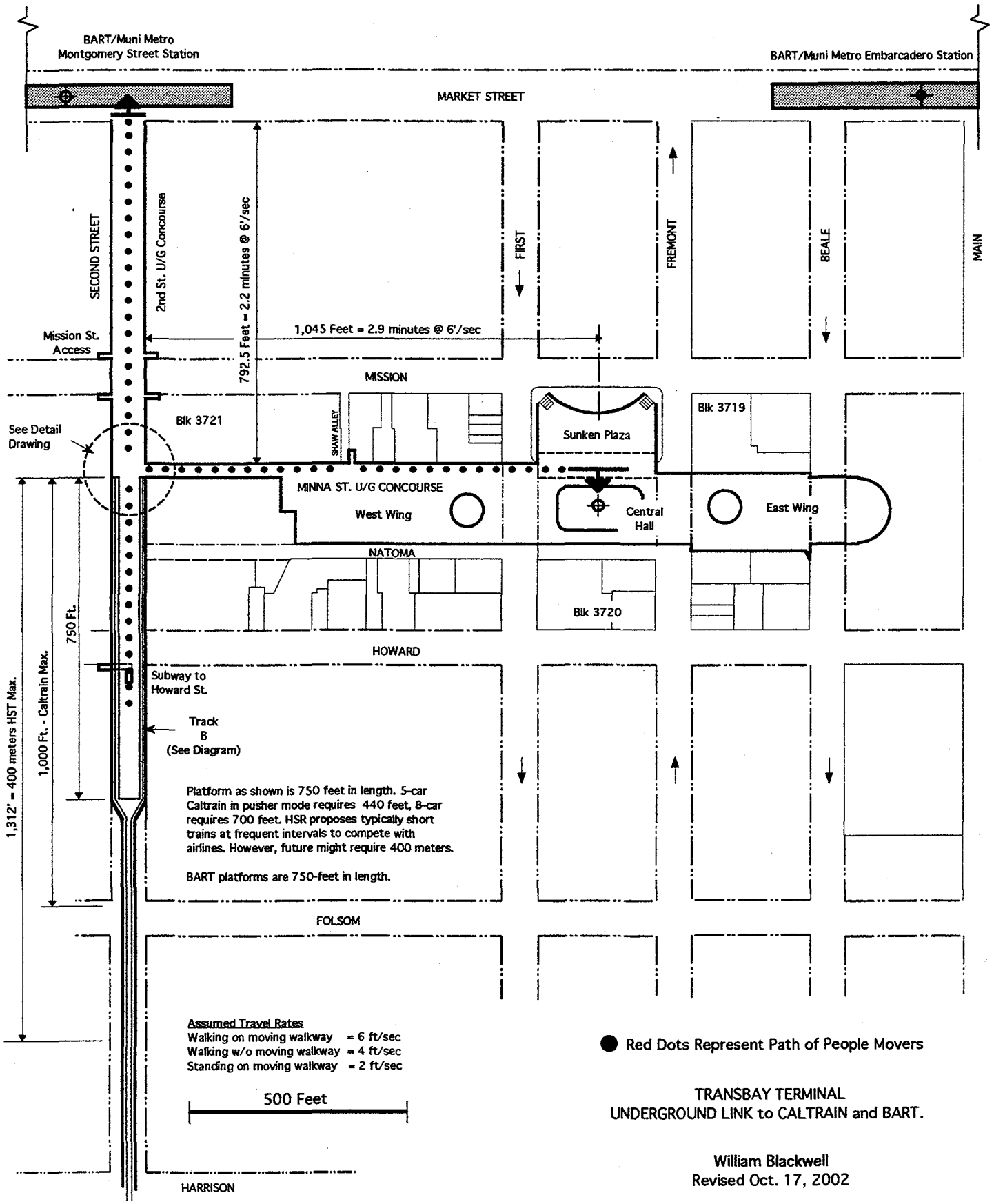
What expectation do I have that it will be properly reviewed and evaluated from this point forward?

MAR 16 2001

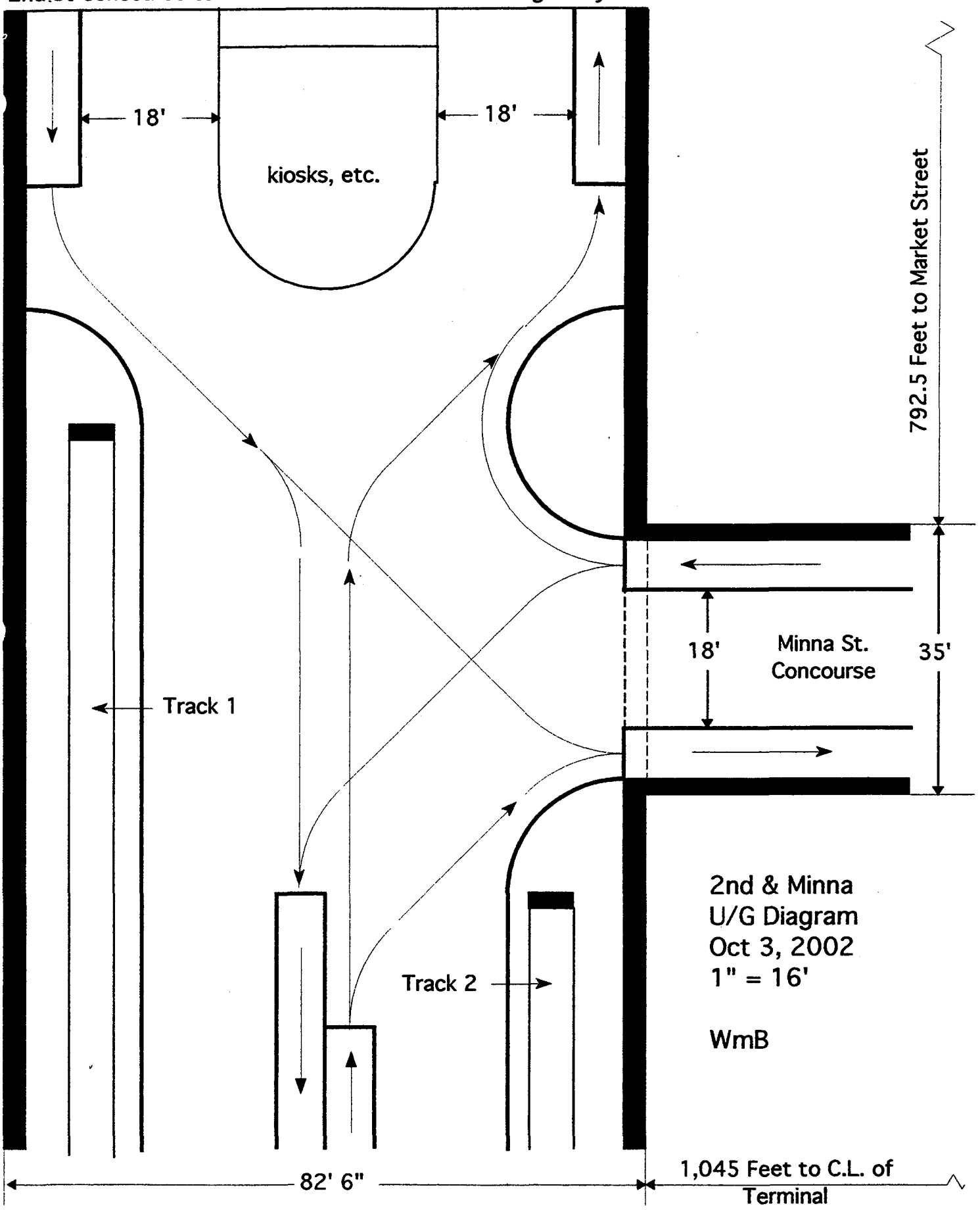
NOTICE OF PREPARATION/NOTICE THAT AN EIR IS REQUIRED
San Francisco Transbay Terminal / Caltrain Downtown Extension Project
Environmental Impact Statement/Environmental Impact Report (EIS/EIR)

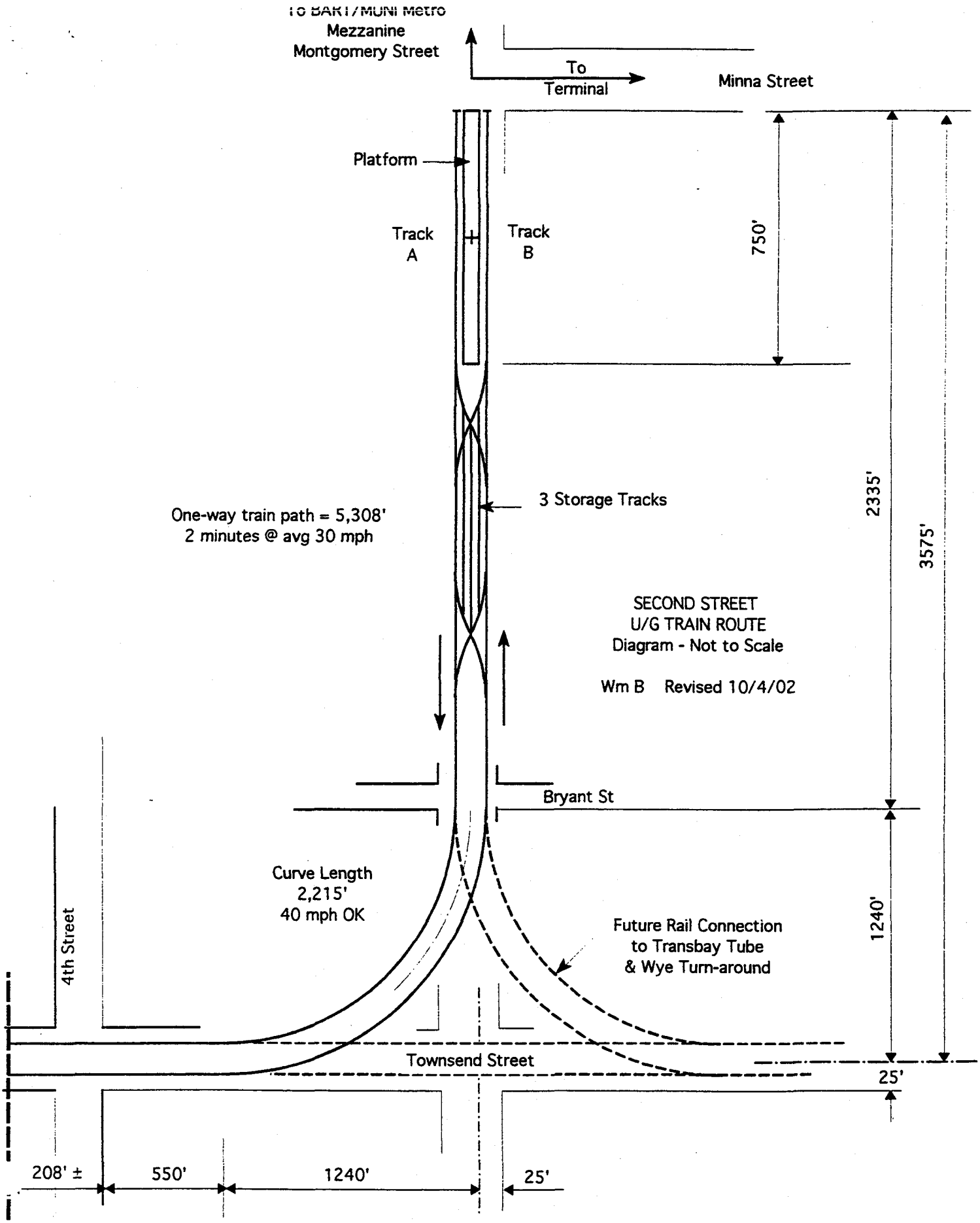
The Project and Project Alternatives

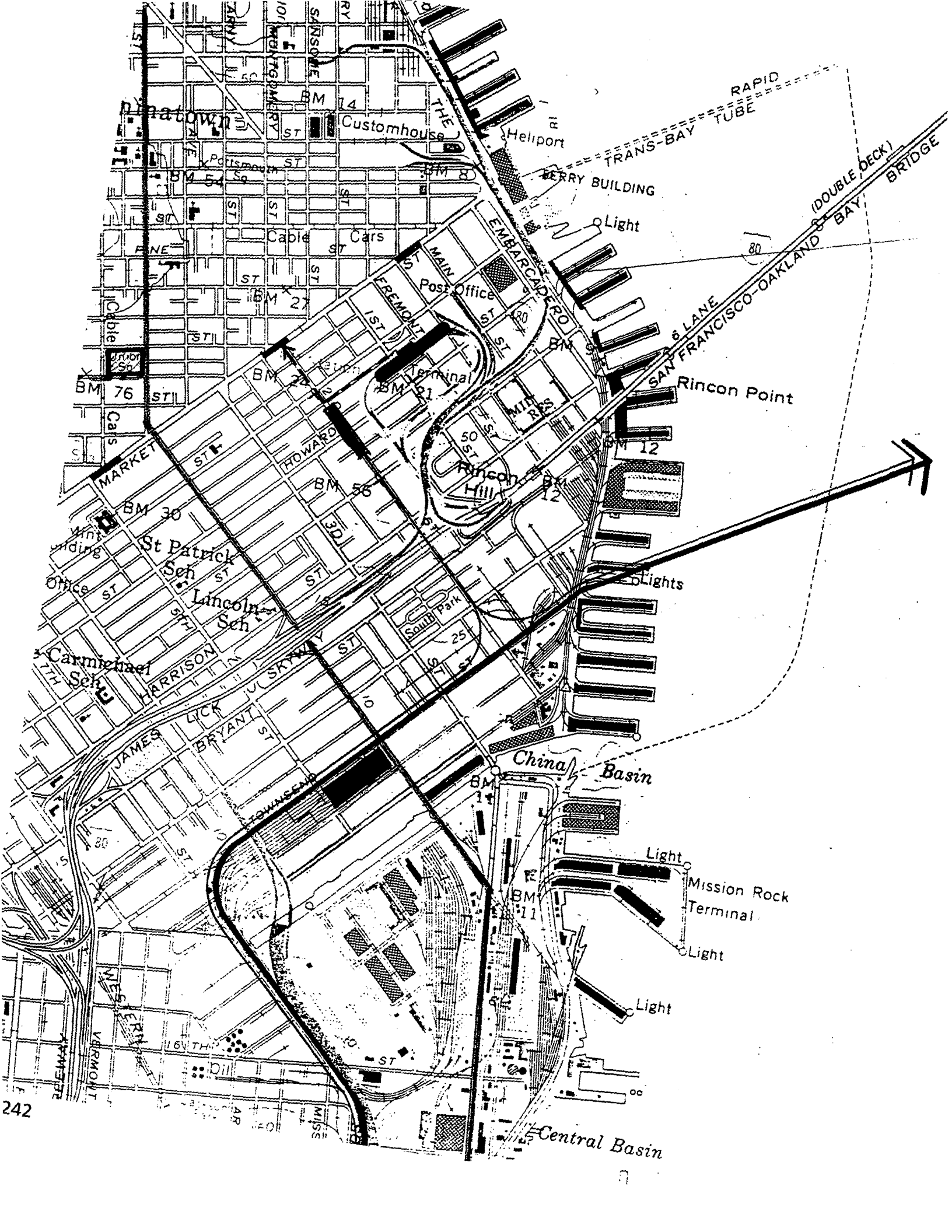
Alternatives to be reviewed in the EIS/EIR include a No-Project Alternative, a Build Alternative, and any additional reasonable alternatives that emerge from the scoping process. Variations and design options of the Build Alternative will be evaluated.


BART/Muni Metro
Montgomery Street Station
BART/Muni Metro Embarcadero Station
MARKET STREET
SECOND STREET
2nd St. U/G Concourse
792.5 Feet = 2.2 minutes @ 6'/sec
FIRST
FREMONT
BEALE
MAIN
1,045 Feet = 2.9 minutes @ 6'/sec
Mission St.
Access
MISSION
Blk 3721
SHAW ALLEY
Sunken Plaza
Blk 3719
See Detail
Drawing
MINNA ST. U/G CONCOURSE
West Wing
Central
Hall
East Wing
NATOMA
Blk 3720
HOWARD
Subway to
Howard St.
Track
B
(See Diagram)
Platform as shown is 750 feet in length. 5-car Caltrain in pusher mode requires 440 feet, 8-car requires 700 feet. HSR proposes typically short trains at frequent intervals to compete with airlines. However, future might require 400 meters.
BART platforms are 750-feet in length.
750 Ft.
1,000 Ft. - Caltrain Max.
1,312' = 400 meters HST Max.
FOLSOM
HARRISON
Assumed Travel Rates
Walking on moving walkway = 6 ft/sec
Walking w/o moving walkway = 4 ft/sec
Standing on moving walkway = 2 ft/sec
500 Feet
Red Dots Represent Path of People Movers
TRANSBAY TERMINAL
UNDERGROUND LINK to CALTRAIN and BART.
William Blackwell
Revised Oct. 17, 2002

2nd St Concourse to BART/MUNI Mezzanine at Montgomery St.




To BART/MUNI Metro
Mezzanine
Montgomery Street
To
Terminal
Minna Street
Platform
Track
A
Track
B
750'
2335'
3575'
3 Storage Tracks
One-way train path = 5,308'
2 minutes @ avg 30 mph
SECOND STREET
U/G TRAIN ROUTE
Diagram - Not to Scale
Wm B Revised 10/4/02
Bryant St
Curve Length
2,215'
40 mph OK
1240'
Future Rail Connection
to Transbay Tube
& Wye Turn-around
4th Street
Townsend Street
25'
208' ±
550'
1240'
25'



RAPID
TRANS-BAY TUBE
Heliport
FERRY BUILDING
Light
(DOUBLE DECK)
BAY BRIDGE
SAN FRANCISCO-OAKLAND
6 LANE
Rincon Point
Lights
China Basin
Light
Mission Rock
Terminal
Light
Light
Central Basin
Customhouse
Cable Cars
Post Office
Terminal
Rincon Hill
St Patrick Sch
Lincoln Sch
Carmichael Sch
South Park
MARKET
HOWARD
FREMONT
MAIN
EMBARCADERO
HARRISON
JAMES LICK SKYWAY
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TOWNSEND
BM 14
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BM 27
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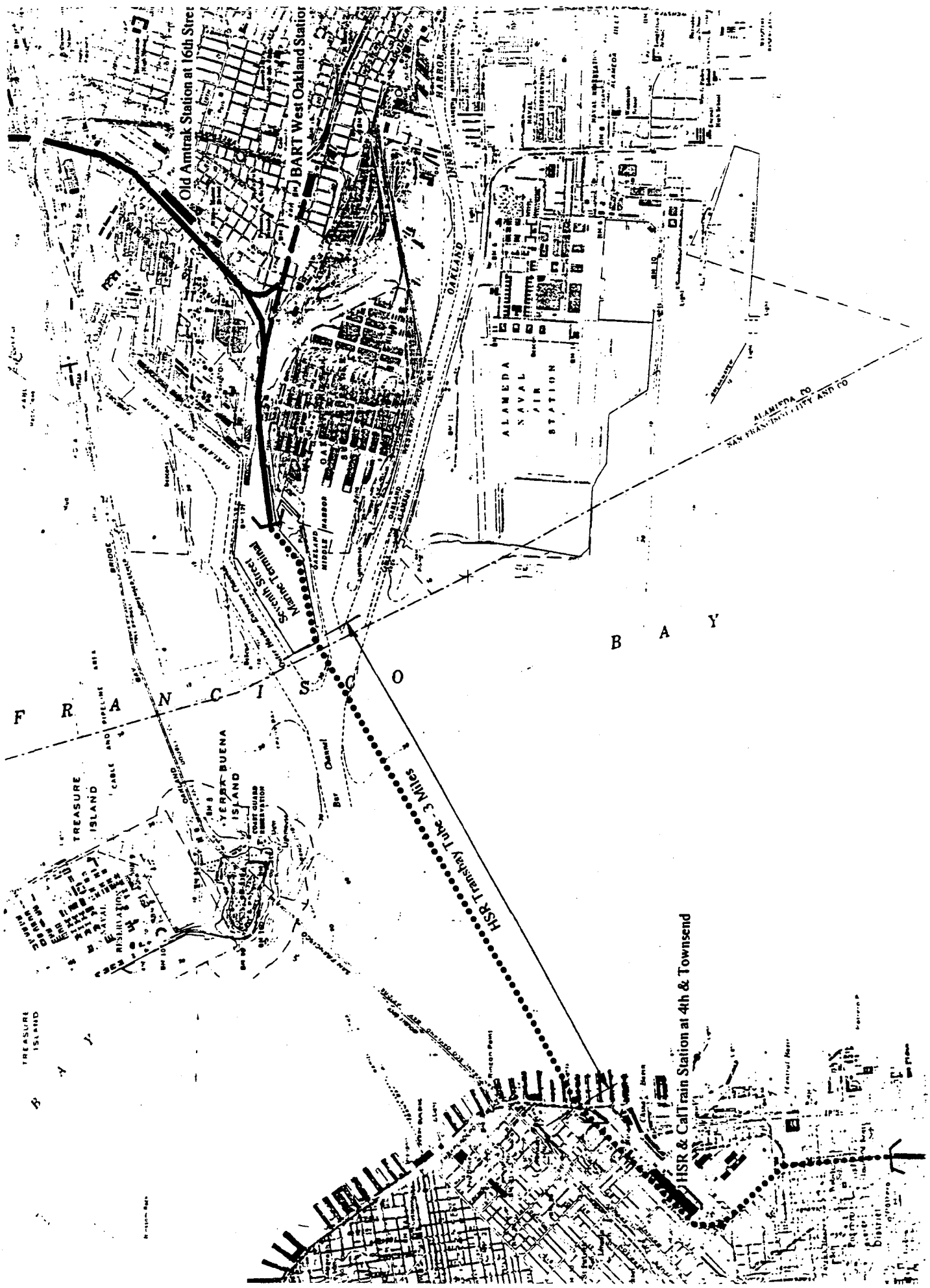
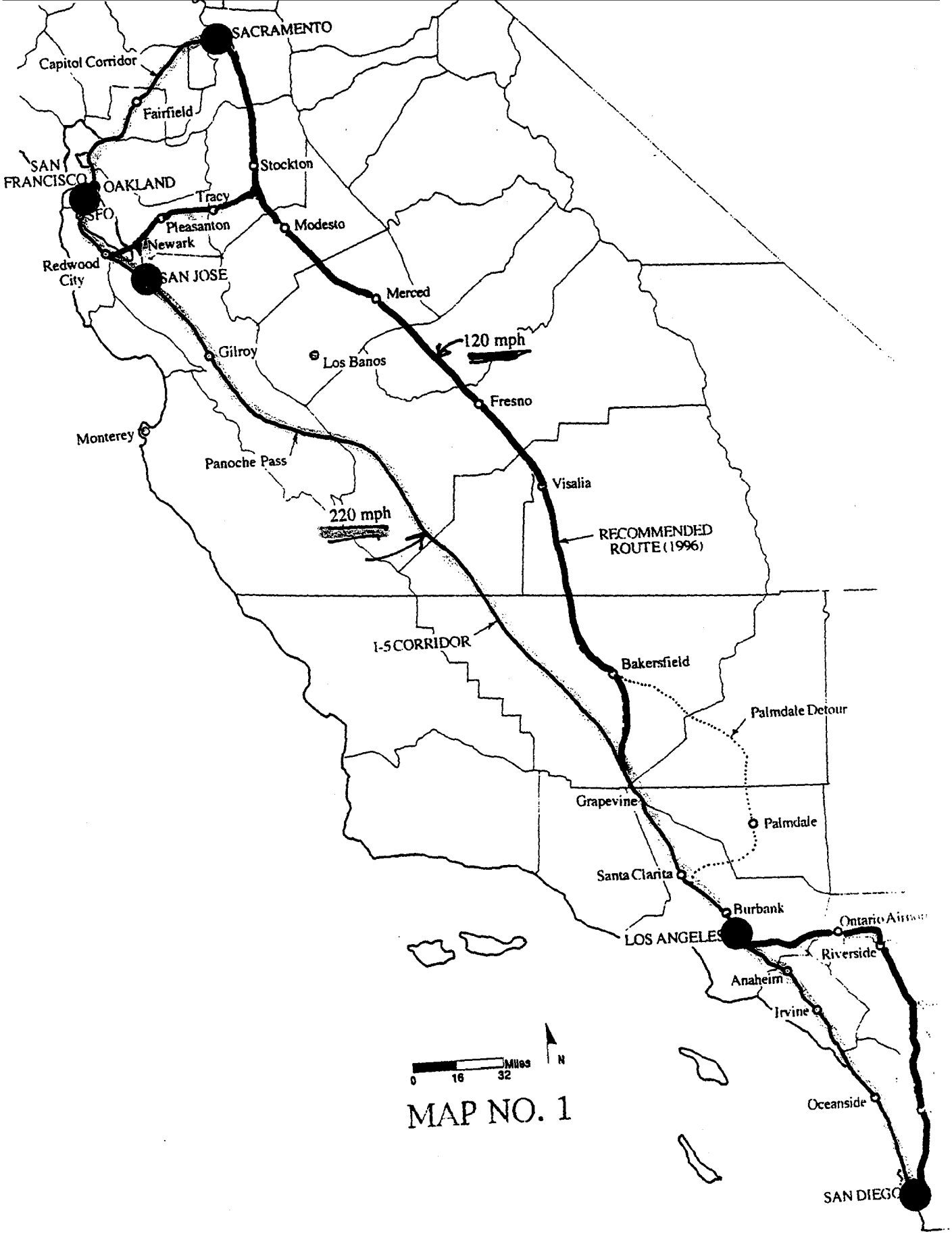
BM 21
BM 56
BM 30
BM 12
BM 11


Old Amtrak Station at 16th Stree
BART West Oakland Station
ALAMEDA NAVAL AIR STATION
ALAMEDA CO.
SAN FRANCISCO BAY
Seventh Street Marine Terminal
HSR Transbay Tube - 3 Miles
TREASURE ISLAND
YERBA BUENA ISLAND
HSR & CalTrain Station at 4th & Townsend


SACRAMENTO
Capitol Corridor
Fairfield
SAN FRANCISCO
OAKLAND
SFO
Stockton
Tracy
Pleasanton
Modesto
Newark
Redwood City
SAN JOSE
Merced
120 mph
Gilroy
Los Banos
Fresno
Monterey
Panoche Pass
Visalia
220 mph
RECOMMENDED ROUTE (1996)
I-5 CORRIDOR
Bakersfield
Palmdale Detour
Grapevine
Palmdale
Santa Clarita
Burbank
LOS ANGELES
Ontario Airport
Riverside
Anaheim
Irvine
Oceanside
SAN DIEGO
Miles
0
16
32
N

MAP NO. 1

SUMMARY

The Transbay Terminal plan approved by the Executive Committee of the Transbay Panel includes an underground six-track, three-platform rail terminal 50 feet below the surface for Caltrain and high-speed rail. Trains enter and leave by way of a two-track tunnel from 4th & King that proceeds north under Second Street and then makes a wide radius turn into an underground train box. Tail tracks may be added beyond the terminal to store and stage trains. Until the time when tracks are extended to a new transbay tube, all of these tracks are stub-end tracks. An option is included for possible future pedestrian connection to the BART/Muni Metro Embarcadero Station, but no funding is provided for this option.

A two-track, one-platform rail terminus at Second and Minna is an alternative arrangement that enhances connectivity and reduces cost. Horizontal passenger conveyors (people movers) link the train platform to the Transbay Terminal and to the BART/Muni Metro Montgomery Street Station. From the point of view of a transit user, it is a very efficient arrangement. It also simplifies construction.

MAJOR ADVANTAGES

- Enhances connectivity between Caltrain and other major transit systems.
- Reduces travel time and adds convenience for both bus and train riders.
- Reduces the combined cost of TBT and Caltrain extension.
- Meets the requirements of San Francisco Proposition H. The present plan does not.
- Allows Caltrain extension to proceed independently of TBT, which has several problems that could delay construction, possibly for years; conversely, allows TBT to be constructed without waiting for Caltrain Extension.

DISCUSSION

1. Does a two-track platform on Second Street have enough capacity for the level of train service contemplated, now and in the foreseeable future?

The Second Street R.O.W. can accommodate two stub-end tracks and a very wide passenger platform. There is ample room for horizontal passenger conveyors down the center of the platform that will effectively reduce walking time. There are no existing underground utilities under Second Street that restrict construction.

With an average dwell time of two minutes—the time allotted for high-speed rail stops at intermediate stations—and another 60 seconds for trains to enter and leave the station, two stub-end platform tracks can accommodate 40 trains per hour. Keep in mind that trains now travel backwards as easily as forward.

Caltrain:

According to the timetable effective August 26, 2002, Caltrain runs 76 trains in and out at Fourth & King every weekday, but never more than eight per hour even at the height of the morning commute. A platform with a capacity for 40 trains per hour can accommodate five times this current peak.

Moreover, at present Caltrain commuter trains are only five cars in length. A 750-foot long platform at the downtown extension can easily accommodate eight car trains. With eight-car trains, a two-track platform has a capacity that is eight times the current peak hour Caltrain activity!

In addition to two mainline tracks, Second Street is wide enough for three storage/by-pass tracks that provide operational flexibility at the stub-end. The concept retains intact (although underground) 12 to 15 tracks at 4th & King for train storage, staging, and light servicing that are within two minutes of the stub-end. Pennsylvania Station in NYC has operated for 50 years or more with storage yards that are remote but within two minutes. Caltrain, of course, has stub-end platform tracks at 4th & King. Tailing tracks are not provided.

High-speed Rail:

Unless 16th Street is closed to cross traffic, which seems unlikely because of its importance to Mission Bay, or the tracks are under grounded before reaching 16th Street, there can be no high-speed rail service to San Francisco.

> The final report of the Intercity High-Speed Rail Commission, December 1966, said that "to attain the safety record of high-speed trains in other countries, California's system must be entirely fenced and grade separated (no rail/roadway intersections)." The June 2000 final business plan of the California High-Speed Rail Authority said, "The system will be completely grade separated, with no potential for conflict with pedestrian or vehicular traffic."

Assuming, however, that the 16th Street grade crossing problem is resolved, the timetable for high-speed rail in the year 2020 shows 132 trains per day in and out of San Francisco – but never more than 10 trains per hour. Thirty-six of the 132 daily trains are between San Francsico and Sacramento. The HST peak period does not correspond to the Caltrain peak period.

Ten trains per hour might well be on the high side. Dan Leavitt, Deputy Director of the High Speed Rail Authority, said that because of traffic and other concerns, only express trains might continue to the Transbay Terminal, the remainder terminating at Fourth & King. Alternatively, some trains slated for San Francisco might be routed from San Jose up the East Bay side to Oakland and eventually to Sacramento by an improved Capital Corridor route. As it stands, it is cheaper and faster to go by car (88 miles) than to make the 282-mile trip to Sacramento via high-speed train. Greyhound bus from San Francisco to Sacramento beats the time of local high-speed trains and at one-third the fare.

Conclusion

Two platform tracks with a capacity of 40 trains per hour permits a five-fold increase in Caltrain peak-hour service and has ample track capacity for high-speed rail well beyond the year 2020.

Moreover, reductions in dwell time could increase the capacity of a two-track platform from 40 up to 60 trains per hour. Caltrain dwell time at intermediate stations is currently less then 2 minutes but BART dwell time is less then 30 seconds! This is because there are no steps to impede passenger flow - BART cars have only one level and station platforms are at the height of the car floors – and because several sets of entrance and exits doors are provided in each car.

The inescapable conclusion is that the rail plan developed by MTC consultants is more elaborate then needed to meet present and future downtown rail requirements.

Adding more platform tracks does allow longer dwell times but does not increase the maximum throughput of a station. No matter how many platform tracks are provided, the maximum number of trains per hour in and out of any downtown terminal arrangement will be governed by the maximum feasible in a two-track tunnel, never likely to exceed 60 trains per hour with current technology.

The consultant's report said that the rebuilt Transbay Terminal would have the capacity for 300,000 train/bus passengers. This is four times the number of trains and buses projected for the year 2020, and, thus, questionable. The number of bus bays cannot be quadrupled nor can the number of train platform tracks. But even if the terminal had the capacity for this number of train platforms and bus bays, there is not enough land available anywhere near the terminal site for the 45 million square feet or so of additional downtown office space needed for this number of new commuters. The whole of the financial district has only 44 million square feet of office space.

2. BART/Muni Metro Connection

Proposition H requires the terminal design to "yield the highest possible transit use by residents and commuters." It also requires that the terminal design "afford senior citizens, persons with disabilities, and other commuters with the most convenient connections between regional bus lines, MUNI, Caltrain, and BART."

The most convenient connection from TBT to BART/Muni Metro is an underground concourse with moving sidewalk to the Montgomery Street Station, a trip that will take the average commuter slightly over five minutes on the people mover. The same trip over surface sidewalks and three street crossings takes from 7.5 to 9 minutes – longer for persons slowed by luggage, small children, age, disability, or inclement weather.

If Caltrain terminates more or less at the mid-point of this underground connector, commuter trains will be most conveniently located for passengers going either to the financial district or to the terminal. It will take just over 2 minutes to go from the train

platform to the BART /Muni mezzanine level at Second & Market, and about 3 minutes to reach the center of the Transbay Terminal.

Commuters are almost always in a hurry. Even on a perfect weather day, many will choose the underground concourse because it saves time.

High-speed rail passengers and BART SFO passengers with luggage will most assuredly prefer a people mover to interconnect between TBT buses, BART/MUNI, HSR, and Caltrain.

Although the Embarcadero BART/Muni Metro Station is closer to the Transbay Terminal and Ferry Building, the Montgomery Street Station at 2nd & Market is closer to the heart of the financial district, which has two-thirds of all office space in San Francisco. In fact, early studies for Caltrain extension scored location options based on relative proximity to 2nd & Market. Moreover, the underground route from the TBT to Montgomery Station is ideal for connecting with Caltrain on Second Street.

Morning BART trains from the East Bay discharge riders at both Embarcadero and Montgomery Stations, which means there will be at least standing room for westbound passengers to board at Montgomery Station. Because it is near the end of the line, Muni-Metro will also have room for passengers in both directions.

The underground concourses, incidentally, can be a lively feature of the terminal. It naturally follows that some retail shopping and restaurants would be at this level with "breakthroughs" to the street level. Critics have described the underground 'satellite' restaurants as the most successful feature of the recent remodeling of Grand Central Station in New York City.

3. COST

Prop H requires the design to "result in the lowest feasible combined costs for construction of the bus terminal and the Caltrain station, without sacrificing the aesthetic qualities of the terminal and station and their interface with surrounding development."

If otherwise feasible, ending the Caltrain portion at 2nd & Minna results in a lower combined cost than the proposed design. There are some trade-offs, but the shorter rail route is also shallower, deletes one curve under buildings, can be constructed in part with cut and cover, deletes the huge excavation and shell needed for the trainbox under the terminal, and deletes the tail tracks.

Moreover, if the terminal design were revised consistent with the underground concourse concept I propose it would have only three levels rather than the proposed 5 1/2 levels and its staggering one billion-dollar cost would come down roughly in proportion.

An underground concourse with horizontal passenger conveyors to BART/Muni Metro is not included in the TBT plan, although I think it is clearly mandated by Prop H. If this feature had been included, added cost due to the conveyors would be nil.

The 2nd St rail concept is entirely underground and can have no possible adverse effect on aesthetic quality. In theory, the current TBT design could remain unchanged, except, of course, the underground trainbox would be deleted.

The larger issue is the very low cost/benefit ratio of the Caltrain Extension Project when compared with other transportation projects. See the attached table.

Cost of the extension project is now $849 million — $450 million per mile! Electrification of Caltrain at $602 million and Phase 1 of the Caltrain Express Project (Baby Bullet) at $127 million are separate and additional JPB projects.

The Caltrain ridership forecast in the Draft EIS/EIR is 29,307 train riders at the Transbay Terminal in the year 2020. This number equates to roughly 15,000 commuters who will benefit.

Caltrain extension, incidentally, is not dependent on electrification of the entire Caltrain system, a project that might best be delayed until it can be done jointly with high-speed rail. For air quality reasons, New York City prohibited first steam, and then diesel powered locomotives within the city. Until the time when all commuter rail systems converted to electric, Penn Station successfully employed supplemental electric locomotives to move trains underground in and out of the City.

A related consideration is BART extension to SFO, that when open will enable Caltrain passengers to transfer to BART at Millbrae and reach downtown destinations near any of the four BART station locations on Market Street. One Caltrain/BART platform at the new Millbrae Station will provide for cross-platform transfers.

The fare from Millbrae to Montgomery Street Station on BART will be $4.70, whereas remaining on Caltrain to 4th & King adds only $0.75 to the fare. The trip on BART will take 32 minutes plus the time to transfer. BART makes 11 intermediate stops. The trip on Caltrain from Millbrae to the 4th & King station takes 29 minutes with 5 intermediate stops. A timetable and fare schedule has not yet been published for the Caltrain Baby Bullet.

4. Supplemental Notes

a) It seems likely that, for the foreseeable future, the northern terminus of the California high-speed rail system will be at the San Jose Diridon Station rather than at a station in San Francisco. Senate Bill 1856, authorizes a $9 billion general obligation bond for the November 2004 ballot, which is enough to construct high-speed rail from LA to San Jose (by way of Fresno and Los Banos) but not enough to continue HSR to San Francisco. Rod Diridon said an additional $2 billion is needed to reach San Francisco. For an interim period, San Francisco bound HSR passengers will transfer to the Caltrain "Baby Bullet" at San Jose, which puts added importance on the extension of Caltrain to the

downtown financial district of San Francisco. The Baby Bullet trip from San Jose to 4th & King is expected to take 55 minutes or less.

Without the possibility of a new transbay tube, San Jose has a strategic advantage over San Francisco for the location of the high-speed rail terminus that may be difficult for San Francisco to overcome.

b) Even with a downtown extension, Caltrain plans to retain a station stop at 4th & King. Moreover, the 4th & King site has major advantages for high-speed rail—notably more space, better traffic access, lower cost, and reduced travel time. Unlike Caltrain, HSR has space requirements for ancillary activities such as postal and freight, car rental, passengers with luggage requiring auto and taxi service, etc. Although controversial, the provision of long- and short-term parking would be a major enhancement for both HST in competition with air travel and for Caltrain reverse commuters. San Jose and Oakland airports each provide about 5,000 parking spaces for air travelers. A like number can be provided at 4th & King but is probably impossible to provide at the Transbay Terminal site, even if desirable.

The City of San Francisco has an opportunity for two great facilities — a grand train station with all the amenities at 4th & King supplemented by a downtown multi-modal facility providing commuters with unparalleled public transit convenience.

c) Financing: In 1999 the City Controller's statement on Proposition H said that "as a member of the Joint Powers Board, the City of San Francisco would be responsible for one third of the cost of capital improvements." At that time, the cost of the capital improvements was $621 million for the extension and $254 million for Caltrain electrification. The cost of rebuilding the Transbay Terminal was not included.

These costs are now at $849 million and $602 million respectably. In other words, San Francisco's obligation under Proposition H has increased from $292 million to $484 million in just three years. The Controller assumed that this funding would be by state and federal governments and by regional transportation agencies, and not from General Fund monies. However, the Controller said that the Caltrain Extension Project "would compete with other transportation projects and funding this project may mean that other transportation projects important to the City would not be funded." Thus, there is added incentive to see that San Francisco gets full value for the money spent on this important project.

PROJECT COST vs. NUMBER OF DAILY USERS

Note	Project	Approx. Cost (millions)	Number of daily users*	Cost per Daily User	Multiple to equal TBT
a	TRANSBAY TERMINAL, bus only	$ 1,052	20,000	$ 52,600	0.0
b	Transbay Terminal, bus + train	$ 1,885	40,000	$ 47,125	1.1
c	BART Extension to SFO	$ 1,500	46,600	$ 32,189	1.6
d	SFO New International Terminal	$ 840	32,877	$ 25,550	2.1
e	Bay Bridge - East Span	$ 2,620	228,500	$ 11,466	4.6
f	Pacific Bell Park	$ 300	42,000	$ 7,143	7.4
g	Penn Station Remodel	$ 800	250,000	$ 3,200	16.4
h	Grand Central Station Remodel	$ 391	250,000	$ 1,564	33.6

NOTES:

a Total project development cost dated 1/26/01 is $1,052,302,227; includes temporary facilities. MTC year 2020 daily bus ridership is 35,000 -- equates to about 20,000 daily commuters*

b Cost is Caltrain extension and rebuilt Transbay Terminal as of Dec 19, 2001 (MTC Draft RTEP). Year 2020 daily transit ridership for bus and train is given as 75,000 (MTC brochure Jan 2001) which equates to roughly 40,000 daily commuters. Caltrain electrification ($600 million) is not included.

c $1.5B cost and ridership of 68,000 per day, Vicky Wills BART PIO 3/14/01; assume 25,200 are air passengers and remainder are daily commuters, total user per day = 46,600.

d SFO Fact Sheet 7/2000, 12 million international passengers in year 2006 = 32,877 per day

e 282,000 vehicles per day (Year 2000) at avg. 1.62 persons per vehicle (Caltrans 1991); divided by 2 = approx. 228,500 commuters; cost of $2.62 B as of April 5, 2001.

f Cost and number of seats 1/24/99 - SF Examiner

g NY Times, 12/10/2000 - 300,000 train + 200,000 subway passengers = 250,000 commuters Only 7.4% are Amtrak, others are commute lines. 750 trains per day, 21 platform tracks.

h NY Times, 8/2/1998 - Cost includes $110 million for network of u/g passageways 550 trains per day on 45 platform tracks.

* For weekday commuter systems such as Caltrain, riders per day divided by two equals approx. number of daily commuters. In the case of AC Transit, however, car-pooling in the a.m. changes number of daily users to about 60% of total AC Transit cross-bay ridership. AC Transit accounts for about two-thirds of total daily bus ridership. Hence, estimate of 20,000 commuters for bus-only terminal with 35,000 riders per day, and 40,000 commuters for terminal with Caltrain extension (75,000 riders per day).

SECTION 2. As part of the extension of Caltrain downtown, a new or rebuilt terminal shall be constructed on the present site of the Transbay Transit Terminal serving Caltrain, regional ~~and~~ intercity bus lines, MUNI, and high speed rail, and having a convenient connection to BART and MUNI Metro. Said terminal shall be so designed and constructed as to: (a) yield the highest possible transit use by residents and commuters; (b) afford senior citizens, persons with disabilities, and other commuters with the most convenient connections between regional bus lines, MUNI, Caltrain, and BART; (c) produce the highest density of foot traffic, in conjunction with foot traffic from the Caltrain station, to accommodate mixed use retail development; (d) provide the lowest possible operating costs for MUNI and regional public bus lines; and (e) result in the lowest feasible combined costs for construction of the bus terminal and the Caltrain station, without sacrificing the aesthetic qualities of the terminal and station and their interface with surrounding development.

Notes after 8/15/02 visit to the 4th & King Caltrain Depot:

The success of my proposal to extend Caltrain to 2nd & Minna, where there is room for only two platform tracks, depends on short turnaround times. If short turnaround times are feasible, a two-track station may be all that is needed for the level of downtown service contemplated by both Caltrain and the California High-Speed Rail System.

According to trainmen at 4th & King, northbound Caltrains are typically in the "pusher" mode, i.e., with the locomotive at the rear and the operating engineer in a cab car at the front. Commuter trains have five cars and are just less than 500 feet in length including the locomotive. Special event trains are longer. At present, trains with more than eight cars require two locomotives. All Caltrain cars are bi-level, which increases seating capacity but also increases the time needed to load and off-load at stations.

When operating outside of yard limits, an operating engineer must be at the front of the train. When operating within yard limits, however, only a conductor is required at the front.

The trainman said that it takes between five and ten minutes to reverse the direction of a train. The operating engineer must relocate from the locomotive at one end of the train to the control cab at the opposite end, or visa versa. The operator is then required to test the controls before the train leaves the yard.

The time needed chiefly depends on train length. At 3 mph, it takes about two minutes for the operator to walk the length of a five-car train and 3 minutes to walk the length of an eight-car train. The time to test the compressed air system in particular also varies according to the number of cars in the train and is roughly equal to the walking time. Thus, the five-minute turnaround time is for the shortest trains and the 10-minute time is for the longest.

HOWEVER, if a train is operating within yard limits, it can reverse direction without shifting crews or testing the controls. A conductor simply turns on the headlights and the train can reverse direction. The trainman who gave me this information said he believed that stub-end tracks such as I propose — even if a mile or more in length — would qualify as within yard limits since public access is only at the platforms and there are no grade crossings en route. If so, crew transfer and testing could always take place at the 4th & King yards.

In the morning, operator transfer and control tests would take place at 4th & King before the train leaves the yard for the journey south, but there is plenty of track storage space at 4th & King and scheduling would not be impacted. In the afternoon, operator transfer could take place at 4th & King before the train proceeds to the downtown station for the evening commute.

Alternatively, operator transfer can take place at the stub end station by utilizing the storage/bypass tracks. Platform tracks would not be tied up, and train arrival and departure schedules would not be impacted.

In either case, the quick turnaround needed for a 2nd & Minna Station with only two platform tracks is evidently feasible.

To illustrate further, northbound trains arriving in the pusher mode during the morning commute would discharge some passengers at 4th & King and then continue underground to the 2nd St. stub-end, off-load and load, and return to 4th & King. At this point, reverse commuters that boarded at the downtown station would experience a delay while train crews change ends for the southbound trip. However, fully 90 per cent of reverse commuters live in parts of the City that are more accessible to 4th & King than to a downtown location. These commuters will board at 4th & King and would not be delayed. The evening commute would have a reverse scenario.

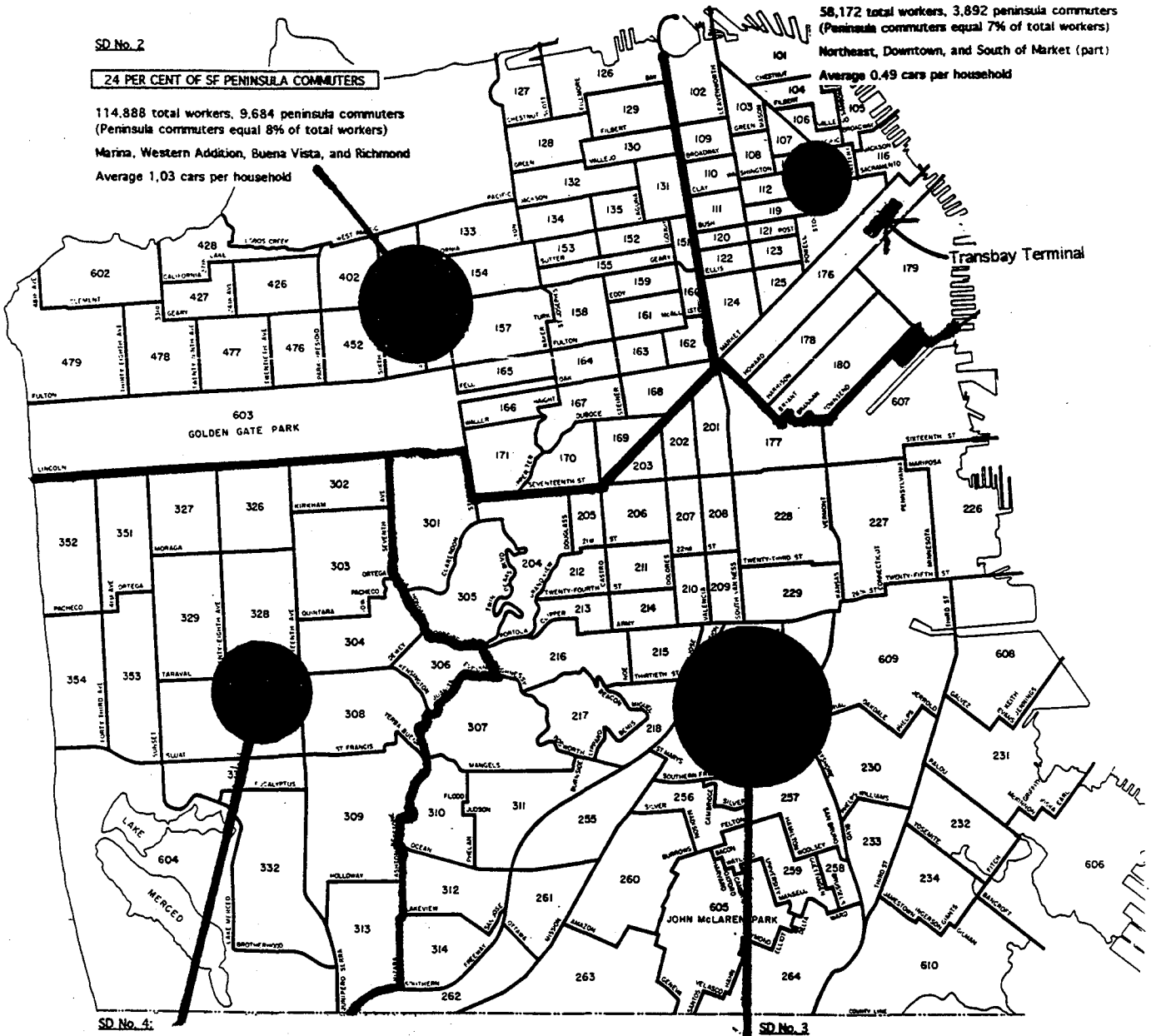
The attached diagram based on MTC data shows the city wide reverse-commute pattern as it was in 1990.

This tilt in favor of 4th & King for the reverse commuter would be further enhanced if additional short-term and long-term parking were provided. Unlike Transbay, the 4th & King site can accommodate several levels of parking conveniently located above train platforms. These spaces would unquestionably enhance ridership for both Caltrain and high-speed rail.

One other option is worth consideration. Although diesel exhaust poses an air-quality problem in downtown San Francisco, it may not be necessary to electrify the entire 77-mile Caltrain system before tracks can be extended underground to the downtown. Electric "push-pull" locomotives have been used successfully at Penn Station in NYC and elsewhere to power diesel trains for trips comparable to the round trip between 4th & King and the stub-end at 2nd & Minna. Coupling and de-coupling of the electric locomotive is accomplished quickly, and a crew shift is not required.

# # #

PENINSULA COMMUTERS - 1990



SD No. 1

10 PER CENT OF SF PENINSULA COMMUTERS

58,172 total workers, 3,892 peninsula commuters
(Peninsula commuters equal 7% of total workers)

Northeast, Downtown, and South of Market (part)

Average 0.49 cars per household

SD No. 2

24 PER CENT OF SF PENINSULA COMMUTERS

114,888 total workers, 9,684 peninsula commuters
(Peninsula commuters equal 8% of total workers)

Marina, Western Addition, Buena Vista, and Richmond

Average 1.03 cars per household

SD No. 4:

19 PER CENT OF PENINSULA COMMUTERS

61,556 total workers, 7,781 peninsula commuters
(Peninsula commuters equal 12.6% of total workers)

Ingleside (part), Inner and Outer Sunset

Average 1.42 cars per household

SD No. 3

47 PER CENT OF SF PENINSULA COMMUTERS

144,305 total workers, 18,993 peninsula commuters
(Peninsula commuters equal 13.2% of total workers)

South of Market (part), Mission, Central, South Bayshore, Bernal Heights, South Central, and Ingleside (part)

Average 1.24 cars per household

San Francisco Total

Average 1.06 cars per household

378,921 total workers, 40,440 peninsula commuters
(Peninsula commuters equal 10.7% of total workers)

Of these, only 2,236 (5.5%) commute to SD No. 9, Silicon Valley

For planning purposes, the MTC has subdivided the land area of the nine Bay Area counties into 34 "superdistricts". Four of these superdistricts are in San Francisco. This map shows the number of San Francisco residents living in each of the superdistricts whose jobs are located in the peninsula, i.e., southbound reverse commuters.
Data is from the 1990 Census.

Source: Detailed Commute Characteristics in the San Francisco Bay Area, MTC Working Paper #7, March 1994.

GZPM

PROPERTY MANAGEMENT

December 3, 2002

Paul E. Maltzer
Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103

RECEIVED
DEC 05 2002
PLANNING DEPT

RE: Transbay Terminal EIR

Dear Mr. Maltzer,

This letter is written on behalf of Bryant St. Associates, the owners of property located at 55 Stillman St., San Francisco.

I have reviewed the Draft EIR and find it lacking in assessing the impact of the proposed permanent relocation of bus storage during the day to an area between Stillman and Perry Streets, from 2nd St. to 4th St., San Francisco.

In determining the impact of this aspect of the Transbay Terminal Plan, the EIR fails to reference proposals currently under study by the City Planning Department to rezone much of the SOMA area, particularly the areas adjacent to the proposed bus storage yard. Part of the rezoning is to include residential uses.

If the City is actually looking to encourage housing in these areas, then the impacts of a permanent bus storage yard on such housing should be discussed. As an alternative to the proposed bus storage location referenced above, the document should consider alternative locations which would not impact potential housing contemplated by the rezoning.

The EIR should also consider whether daytime storage for AC Transit and/or Golden Gate Transit should be accommodated at all. Currently Samtrans, which provides routes which interface with Transbay Terminal, does not store buses near Transbay during the day. Perhaps a lesser cost alternative, and possibly a lesser impact-generating alternative, would be for AC buses to travel back to the East Bay after their morning runs, where such buses could be re-utilized more effectively during the day for East Bay transit riders. A similar analysis should be looked at for Golden Gate Transit buses, where such buses could be re-used during the day to serve San Francisco-Marin transit demand.

If the project removes the existing ramp structure, with its own attendant impacts, to generate an impact in a different location, then the general impact is not mitigated, just shifted to a new location. A re-assessment of the desirability of accommodation of daytime bus storage for commuters should be in order.

Thank you for your consideration.

Bryant Street Associates
GZPM, Managing Agent

Edward A. Green
Executive Vice President

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RECEIVED
NOV 12 2002
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November 8, 2002

Via fax and U.S. mail:
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Environmental Review Officer
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Fax 558-5991

Planning Commissioners by fax:

Sue Lee 558-6409	Rev. Edgar Boyd	921-4966
Lisa Feldstein 221-8552	Michael Antonini	558-6409
Kevin Hughes 558-6409	William Lee	558-6177
Shelley Bradford Bell 558-6409		

RE: Urgent information regarding your upcoming meeting on November 12th for the Transbay Terminal Project.

Dear Mr. Maltzer and San Francisco Planning Commissioners:

I represent the owners of 25 Stillman Street and 35 Stillman Street. I am writing to request an extension of the public comment period for the Transbay Terminal DEIS/EIR. Further, I am requesting that you require a more in-depth analysis of the negative impact to the area of the proposed Bus Storage Area along Stillman and Perry Streets. Both of these requests should be granted for the following reasons:

- My clients and others in the Stillman/Perry Street neighborhood publicly voiced their concern regarding this bus storage proposal at the DEIS/EIR Scoping Meeting on April 4th, 2001, during the tape-recorded session for public comment. Notwithstanding this fact, Stillman and Perry Street buildings are not even mentioned in the report.

- Many people also followed up these comments with letters, again asking that the DEIS/EIR include analysis of noise, air quality, and traffic. Instead of covering these issues, there was only one small paragraph in the entire DEIS/EIR which mentioned the noise impact on the Second St. Clocktower building. There are many other residential and commercial buildings in the area, including a large, low-income project on 3rd and Perry, that would be even more severely impacted and they were not

included in the mitigation measure identified in the DEIS/EIR. We request that a quantitative analysis of noise impacts from the bus storage yard be prepared for the sensitive receptors adjacent to the proposed bus storage area, and that the mitigation measure be expanded as necessary.

- There is no analysis in the air quality section of the impact of diesel emissions on nearby residences adjacent to the bus yard. In fact, there is no mention of any change in diesel emissions. While there may not be any increase in regional emissions because the new Terminal might not increase the number of buses or distance traveled, there will be changes in the locations of diesel emissions with the new bus storage yard. Most emissions from diesel engines are relatively heavy particulates that are local problems. We request that a quantitative analysis be carried out of the impacts of additional diesel emissions using the methodology developed by the California Air Resources Board in their publication entitled "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles" in Appendix VII (published in 2000).

- The west approach span of the Bay Bridge is a lid to the proposed storage area that is boxed in between Stillman & Perry. This configuration would force the toxic diesel fumes into the many residence and offices of this densely populated neighborhood. Most if not all of the buildings in this two-block area rely exclusively on open windows/external air for their ventilation.

- I am informed that several people, and possibly many more, who requested to be notified when the EIS/EIR was published, never received notification. My clients were not notified although their names were on the circulation list. They found out about it weeks later through a chance conversation with a friend. The public needs more time to respond.

- The area currently has to deal with the negative impact of the Bay Bridge at its doorstep. Further, those along Stillman and Perry will have to live with the 5-8 year demolition and rebuilding of the west approach of the Bay Bridge. They may also have to tolerate their main exit artery (2nd St.) being torn up for the proposed rail system. Any tenant or owner who sticks it out during this extended construction period (potentially a decade or more) shouldn't be asked to tolerate permanent health and noise hazards that this storage area would impose. If you put in a permanent, 2-block diesel bus storage area, you are effectively condemning the buildings in this two-block area.

I am enclosing some recent studies showing the toxic effects of diesel exhaust. I strongly urge that you make a site visit to the area and meet with the residents/tenants to more fully understand the impact of this proposal. Once you have done this I think you will agree that other sites would be more suitable for the bus storage area.

Because of the impending deadline for the public comment period, please respond to me in writing by November 14th regarding extending the public comment period and including a more in-depth analysis of the proposed bus storage area and site alternatives.

Thank you for your prompt attention to this important matter.

Very truly yours,

John R. Capron

JRC:rtc

Enclosures

cc: Francis B. Mathews
Jan Mathews

EPA: Diesel Fuel Exhaust Likely to Cause Cancer
03 Sep 2002 19:40 GMT

WASHINGTON (Reuters) - U.S. environmental regulators in a new report on Tuesday formally classified for the first time diesel exhaust from trucks and buses as likely to cause cancer in humans.

Green groups are seizing on the new report from the Environmental Protection Agency as proof the Bush administration needs to crack down on polluting diesel fuel emissions.

"This will underscore that diesel exhaust is a health hazard and should be controlled," said Frank O'Donnell at the Clean Air Trust, who called the report "the most in-depth health assessment to date" on diesel fumes.

Environmental groups are worried the Bush administration will roll back clean air regulations for diesel fuel.

The EPA in early 2001 issued standards to reduce diesel emissions from trucks and buses by more than 90 percent.

The administration said it backed those rules, but later said it might permit diesel engine makers to trade emission-reduction credits instead of producing cleaner trucks and buses.

The EPA is considering similar clean diesel standards for construction and farm equipment.

In addition to concluding that diesel fumes likely cause lung cancer, the EPA found diesel exhaust triggers asthma and other respiratory problems.

The agency said its report is based on exposure from diesel engines built prior to the mid 1990s. As new diesel engines with cleaner exhaust emissions replace existing engines, the report's conclusions will have to updated, it said.

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Diesel Fumes Mean Cancer for Thousands of Americans

By Cat Lazaroff

WASHINGTON, DC, March 15, 2000 (ENS) - More than 125,000 Americans may get cancer from breathing diesel fumes from buses, trucks and other diesel engines, says a new analysis by state and local clean air regulators. The officials are calling on the U.S. Environmental Protection Agency, which is planning to release new restrictions on sulfur in diesel fuel within two months, to take strong action to address this health risk.



Diesel vehicles are among the prime sources of the pollution that leads to smog (Two photos courtesy EPA)

The analysis, by the State and Territorial Air Pollution Program Administrators and Association of Local Air Pollution Control Officials (STAPPA and ALAPCO), comes as the oil industry seeks to kill a proposed EPA plan to clean up diesel buses, trucks and diesel fuel. The EPA proposal is still under review by the White House Office of Management and Budget.

Calling diesel emissions an important health hazard, the EPA has announced it will release a new rule by the end of April requiring sharp cuts in the amount of sulfur allowed in diesel fuel.

Diesel engines are significant contributors to air pollution. The hazardous mixture that comprises diesel exhaust contains hundreds of different chemical compounds that wreak havoc on air quality, playing a role in ozone formation, particulate matter, regional haze and acid rain.

Diesel exhaust contains more than 40 chemicals that are listed by

the EPA as toxic air contaminants, known or probably human carcinogens, reproductive toxins or endocrine disrupters.



Vehicle exhaust also contributes to acid rain, and can lead to illness in humans

"There is no pollution more disgusting than the thick, noxious, suffocating smoke that billows from trucks and buses," said Becker. "But even worse, these fumes are putting us at risk of cancer - risk that can be almost completely eliminated with modern pollution controls."

Last fall, the South Coast Air Quality Management District, which sets air standards for the Los Angeles, California region, released a report analyzing the cancer risk in the region from exposure to diesel particulates. The agency concluded that mobile sources are responsible for about 90 percent of the cancer risk in the area, and that 70 percent of the total cancer risk is attributable to diesel particulates.

That study prompted STAPPA and ALAPCO - the national associations of state and local air quality control officers in the states and territories and more than 165 metropolitan areas across the country - to extend the evaluation to other cities nationwide.

Among their results: Over a lifetime of exposure to diesel fumes, an estimated 119,570 people in metropolitan areas, and an additional 5,540 in suburban and rural areas, will develop cancer. Large cities, including Los Angeles, New York City and Chicago, Illinois, could see thousands of cancer cases each.



STAPPA and ALAPCO want the EPA to require trucks to operate as cleanly as current laws mandate
(Photo courtesy Daimler Chrysler Corp.)

STAPPA and ALAPCO have joined major health and environmental groups in urging EPA to issue tough new diesel standards. Among their recommendations, the groups said EPA should set an extremely strict national limit on the amount of sulfur in diesel fuel - capping sulfur at less than 15 parts per million - by no later than mid-2006. The groups also want an intermediate cap of 30 parts per million to take effect by 2004.

The EPA has not yet released any specific numbers that will be included in its new sulfur rule.

Sulfur is a poison for diesel pollution control devices, much as lead was a poison to catalytic converters in the 1970s. The groups noted that California recently set a diesel sulfur cap of 15 parts per million for urban buses that continue to use diesel fuel. The groups said the national standards should apply not only to truck and bus fuel, but also to fuel used in "nonroad" diesel engines, such as construction equipment.

Oil refiners warn that the technology does not yet exist to produce fuel clean enough to meet the groups' requirements. Developing such fuel would be prohibitively expensive and could drive some refiners out of business, warned the American Petroleum Institute (API), a trade group. But API and other groups have volunteered to reduce sulfur by 90 percent from its current cap of 500 parts per million, bringing the sulfur content of diesel down to 50 parts per million. That reduction could add five or six cents to the price of a gallon of diesel fuel, said API spokesperson Edward Murphy.



Oil refiners say dramatic cuts in sulfur could prove prohibitively costly (Photo courtesy North Atlantic Co.)

Officials from the National Petrochemical Refiners Association (NPRA) and Petroleum Marketers Association of America sent a letter Tuesday to EPA Administrator Carol Browner warning that sharp sulfur reductions could result in dramatic cost increases and an unreliable supply of diesel fuel and related products.

"EPA's proposal for diesel sulfur is likely to reduce the supply of diesel fuel as well as heating oil and even gasoline," the letter said. "It is our understanding that the EPA proposal calls for a reduction of the onroad diesel sulfur cap from 500 parts per million (ppm) to 15 ppm in 2006. The proposed cap and timeframe are in excess of what is feasible or advisable from either an energy supply or environmental standpoint."

STAPPA and ALAPCO also want the EPA to set tough standards for diesel soot and smog-forming nitrogen oxide emissions from new trucks and buses by 2007. Emissions could be reduced by at least 90 percent through use of low-sulfur fuel and advanced exhaust emission controls, they noted.

STAPPA and ALAPCO want emissions reductions for construction equipment as well



(Photo courtesy Nebraska Machinery Co.)

Equivalent emission standards should be set for construction equipment and other big nonroad diesel engines, the groups advised.

Big diesel trucks, buses and nonroad engines should be required to operate as cleanly in use as they are supposed to, the groups said. The groups noted that for more than a decade, seven of the biggest diesel engine makers installed illegal "cheater" devices on well over a million trucks, allowing them to pollute more on the road than in pre-sale tests. These same engine makers are now trying to weaken the Consent Decrees that were reached last year with EPA and the Justice Department to settle these environmental violations.

The Clinton administration is taking actions to reduce pollution from trucks and other large vehicles. The Department of Energy (DOE) announced earlier this month it will partner with the heavy duty vehicle industry in a $30 million to $50 million research project to develop cleaner and more fuel efficient trucks. Over the next five years, the joint research effort will help researchers develop more energy efficient trucks, ranging from pickup trucks/sport utility vehicles to eighteen wheelers. Seven teams from the industry will join the DOE to develop clean energy technologies that will make trucks cleaner, more fuel efficient, and promote the use of alternative fuels.

"The research partnerships between the federal government and the private sector are critical to reducing America's reliance on imported oil, maintaining economic viability of our industries, and improving air quality," said Energy Secretary Bill Richardson. "With projections indicating that trucks will use twice as much fuel as cars by 2020, it is critical that we look to improve fuel efficiency and clean energy technologies."

About $5 million will be awarded this fiscal year. Three teams will develop hybrid propulsion systems utilizing a natural gas engine an electric powertrain for buses and urban duty trucks, such as delivery vans and heavy-duty vehicles. The teams will match DOE funding dollar for dollar. Four other research teams from industry will develop advanced components to reduce the fuel consumption and emissions from truck diesel engines. Because these projects are considered more risky, these teams will spend $3 for every dollar granted by DOE.

Becker noted that dozens of human epidemiological studies have found a link between diesel soot and lung cancer. STAPPA/ALAPCO's nationwide cancer projection "is an extremely conservative figure," using a method similar to that used by regulators in California to estimate diesel-related cancers there, he noted.

"In fact, the actual number of cancers could easily be ten times higher," Becker said, adding that "the important thing to keep in mind is that we are facing a cancer risk - a risk we cannot avoid

unless EPA takes decisive action."

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RECEIVED
PLANNING DEPT

October 31, 2002

Joan Kugler
AICP, EIR Project Manager
San Francisco Planning Department
1660 Mission Stree, Suite 500
San Francisco, CA 94103-2414

Dear Ms. Kugler,

I have become aware of a plan to use the Stillman Street parking lots between 2nd and 4th Streets for bus storage. This is not a good idea. This is a heavily populated area 24 hours a day, especially during working hours when all of the adjacent buildings are full of working tenants and residents.

I have been a tenant at 35 Stillman since 1991, when this neighborhood was next to nowhere. I've seen the dot com boom come and go, experience the snarling foot and car traffic of Giants games, and expect the Bridge retrofit to cause a major disruption sometime soon.

Idling buses should not be added to the mix! Please consider the alternatives.

Thank you,



Steve Caramia
Caramia Design
35 Stillman, Suite 108
San Francisco, CA 94107

Elizabeth Carney
George Canciani
461 Second Street, #459
San Francisco, CA 94107

Nov. 26, 2002

To: Joan Kugler
AICP, EIR Project Manager
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103

Dear Ms. Kugler,

While we are all in favor of efficient and effective public transportation, the concerns of the 127 families at the Clocktower Lofts (Second St. at Bryant) have not been adequately taken into account in the development of the Trans Bay Terminal Plans, specifically the development of the bus storage and maintenance area indicated in the Draft EIR/ EIS and the construction and operation of the trains and tunnels.

This project is complex and the issues require more time to study. Now that we, as residents, understand how complex, we need more time to consult experts and analyze these issues. We think that a better project will result in the future if we take the additional time now to take more comments from residents and businesses. Also a new draft EIR should be prepared and circulated for comment because impacts on environment (eg. Diesel emissions) have not been presented and analyzed.

TransBay Tunnel and CalTrain Extension
Other Solutions Can Be Found
Bus rapid transit could replace the rail system proposed here at much lower cost.

There are many impacts during the construction and operation of the CalTrain extension tunnel. What are those construction impacts? What is the damage to the building that might result and how can those risks be managed? Is there blasting? Would the construction structurally undermine the building? While we believe the Clocktower is on rock, the geological studies contained and reported in the EIR conflict with other reports on hand regarding the quality of the rock, with more sand and sandstone than reported. This is a 127 family work / live loft building, with requirements for access and functioning during work hours and in the evening and night. The construction plans do not take this into account.

What are the impacts during tunnel operation: of vibration, from exhaust, from noise from the operation of the trains must be studied in detail, as the EIR fails to even recognize the hallway as a part of the residence.

Bus Storage and Maintenance
Located between Second and Fourth Streets at Stillman, facing our building, the bus yard would be an atheistic issue and concentrate congestion, vibration, noise and diesel emissions in an enclosed area not appropriate for the high density residences and businesses.

EIR Not Responsive to Residents
We already expressed our concerns at the Public Hearing April, 2001, and in writing, requesting a study of the Effects of Emissions on the many residences and businesses. We are concerned that public safety needs are not being met and we are considering legal action. Until now, we have been nearly ignored in the process, we are not on the distribution list for information, nor is the Clocktower—an historic building—listed in the EIR/ EIS roster of buildings of historic merit. Where we do appear in the EIR, the sound wall

mitigation is directed to the wrong side of the property. (The Clocktower is on the East side of the property in question).

Other Locations Can Be Found
The function of day storage of AC Transit Buses, and Golden Gate Transit Buses can be contained within the TransBay terminal and adjoining buildings. For example, as David Baker and Associates Architects have recommended, it could be the first level of a multi- level residential development such as the Spear or Folsom projects. Adjoining the terminal project itself, its location there or at an alternative location would be more appropriate than in the middle of a dense residential and small business area–this is not an empty vacant area of abandoned lots.

Other possible locations could be explored, such as:
Widen the area now used for this bus storage and leave it where it is
Caltrans paint yard at Bryant and Main (Build double deck with bus storage below)
4th and King
Port Property- vacant piers
Ground level of property being developed adjacent to Transbay Terminal- such as 201 Spear and 300 Folsom.

When contemplating the new locations. given the carcinogenic classification of Diesel particulate, staging of buses should be inside, allowing the filtering of ventilation. New models of buses which use of particle traps, new clean burning diesel buses (or vegetable oil technologies) or electricity can be utilized.

Combination of Impacts: Existing Planning Already Puts Hardship Burdens on Neighborhood Families and Small Businesses
In the San Francisco Planning Document for the new Giants Stadium EIR and "Pacific Bell Park Transportation Management Plan", April, 1999, the area in question for the proposed bus yard is already part of the parking plan and mitigations to accommodate the needs of the Giants and neighborhood during games. In the same document the Second Street area has been designated a walking and bicycle zone, not a bus bridge. Many mitigations have been made already to accommodate the Giants plans. Please do not add additional burdens on this neighborhood. Parking is already very difficult here for small business and residents alike.

The Transportation Management Plan notes " An important objective of the Pacific Bell Park parking plan is the program to protect residential parking supplies in neighborhoods nearby the ballpark. The San Francisco Redevelopment Agency Rincon Point-South Beach Citizens Advisory Committee (CAC) has indicated that residents and businesses...are very concerned about not being severely impacted by baseball traffic or parking..."

The planned demolition and rebuilding of this area for the Bay Bridge approach will eliminate approximately 1,000 spaces of the parking and add construction for upwards of five to ten years. Please do not add additional burdens on this neighborhood's small business and families.

Traffic Congestion already High
The pressures on Second Street, Third and Fourth Street and around the Bay Bridge approaches during the evening rush hour are already very intense for this neighborhood. Contemplating a heavier use by adding buses to exit on these streets seems unlikely to succeed.

Health Issues and Public Safety Need to Be Addressed
Diesel fumes are carcinogenic and funnel directly into the building in the current plan. Fumes will accumulate under the low bridge approach and funnel directly into the first level of the building. New CalTrans designs will make it worse with the first deck even closer to the building. No on seems aware of the air pollution issues from the EIR team. Have there been visits made looking at this issue? A study of Air Pollution Emissions should be made, especially with respect to diesel emissions.

The Clocktower has 127 families, including small children for whom diesel fumes are especially dangerous. Stillman Street is also a high density residential and small business population. Both we and our neighbors rely on open windows for ventilation.

Noise and vibrations from buses will adversely affect occupants. Safety to pedestrians needs to be enhanced in the walk down Second Street.

The Clocktower is an historic building in an historic area. Every effort should be made to have aesthetic approaches to these problems. As we have just received the 500 page EIR/ EIS document, there has not been time to study, consult experts and analyze all of the effects of the proposed plan on the Clocktower Building and neighborhood. Please extend the public input comment period, it will enrich the final solution. We and the Clocktower join all the comments submitted by everyone else regarding the TransBay Terminal. We request to be placed on the notice list for all documents, proceedings and for a copy of the "Response to documents" when prepared.

I enclose a petition signed by residents.

Thank you for your attention to our concerns.

Sincerely,

Elizabeth Carney
George Carciani

cc. Planning Commission
Redevelopment Authority

A Petition Against the Proposed Transbay Terminal AC / Golden Gate Transit Storage Area

We, the undersigned, do not want the parking lots on Stillman between 2nd St. and 4th St. to be used for AC / Golden Gate Transit bus storage for the following reasons:

1. The Bay Bridge retrofit project is scheduled to have a major impact on our neighborhood for over 5 years (for most of us, right at our front door step). We should not be subjected to additional noise, pollution and inconvenience which this bus storage would impose.
2. The structure of the bridge approach over the Stillman St. parking lots creates a "tunnel" effect, which would further compound the impact of the bus exhaust on the air quality in the area. This not only affects pedestrians, but also impacts the many buildings in the area that use open windows as their only form of air circulation.
3. Since this lot is close to the Giant's stadium, it is used extensively for overflow parking during the day and evenings.
4. There is a real need for parking in this area -- not only for the commercial buildings - but also for the large number of live/work lofts in the area.

Signature	Name	Address	(Optional) E-mail or phone (for updates on this issue)
	Elizabeth Carney	461 Second St #459 SF 94107	ecarney@tribalcode.com
	Robert Reeves	461 2nd St #309 SF 94107	
	Thomas Chiang	461 2nd St. # 310 SF 94107	
	Linda Hahn	461 2nd St #552 SF CA 94107	
	A. Wulfers	461 "	
	Sebastien Troupin	461 Second Street #119 SF, CA 94107	
	GEORGE CANCIANI	461 SECOND ST. #459 SF CA 94107	
	Molly M. Last	461 2ND St #113 94107	LastMM1bo@aol.com
	Edward Pallak	461 2nd St. #104 SF CA 94107	epallak@aol.com
Ed Short	J. Edward Short	461 2nd St. #C-328 SF 94107	edshort39@earthlink.net
	Ann SHORT	461-2nd St #C-328 SF 94107	aaphilo@earthlink.net
	Charles Wallis	461 2nd St #T560 SF CA 94107	
	MONICA DUCLAUD	461 2nd St. #230, SF, CA 94107	duclaud@pacbell.net

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Signature	Name	Address	(Optional) E-mail or phone (for updates on this issue)
	Tom Burkhart	461 2ND St #151, 651, SF, CA	
	Chris McMaster	461 2nd St #151, SF	
	Joseph Sima	461 2nd St #151 SF CA	
	Brian Zajicek	461 2nd St #151 SF CA.	
	Lorraine Summers	461 2nd St #151 SFCA	
	Pamela Hunt	461 2nd St #151 SFCA	
	Carol Burkhart	461 2nd St #151 SF, CA	

A Petition Against the Proposed Transbay Terminal AC / Golden Gate Transit Storage Area

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4. There is a real need for parking in this area -- not only for the commercial buildings - but also for the large number of live/work lofts in the area.

Signature	Name	Address	(Optional) E-mail or phone (for updates on this issue)
[illegible]	ANNA EWINS	461 2nd St C336 SF	415-543-5435
[illegible]	DAVID HOFMANN	461 2nd St #661	415-546-9262
[illegible]	GEORGE CANCIANI	461 SECOND ST #459	415-442-0262
[illegible]	ARTHUR MEADER	461 2nd St #1455 SF	243-0735
[illegible]	RICHARD BRECHIN	461 2nd St #551	8966900
[illegible]	RICK KELLETT	461 2ND ST #204	543 2790
[illegible]	Linda Winn	461 2nd St #224	281-3846
[illegible]	Stephen Hiley	461 2nd St #134	371-1655
[illegible]	AARON ZEFF	461 2nd St #561	495-6625
[illegible]	TOM BURKHART	461 2nd St #651	543.9963
[illegible]	Susan Verba	461 2nd St. #231	546.7832
[illegible]	Greg Lynch	461 2nd St. #202	546.7832
[illegible]	Chih We Mou	461 2nd St. #106	415-777-5246
[illegible]	Ala Mou	461 2nd #116	415-401-9010
[illegible]	ZELJKO HARKOVIC	461 2nd St. #302	415-546-6356
[illegible]	REBECCA MAHMOUD	461 2nd St #658	415.826.1340
[illegible]	ALAIN MAHMOUD	"	"
[illegible]	LYNDA ZMAK	49 ZOE St #6	—
	[illegible]	119 KIRKHAM ST	415 566-5458

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4. There is a real need for parking in this area -- not only for the commercial buildings - but also for the large number of live/work lofts in the area.

Signature	Name	Address	(Optional) E-mail or phone (for updates on this issue)
Emily Bell	Emily Bell	461 2nd St. #112	415-348-0016

November 7, 2002

Joan Kugler
AICP,EIR Project Manger
San Francisco Planning Department
1660 Mission Street: Suite 500
San Francisco, CA 94103-2414



THE ORIGINAL
MICROFIBER TOWEL
COMPANY SINCE
1990

Dear Joan Kugler:

I am writing this letter to you to implore you to reconsider using the Stillman Street parking Lots between 2nd and 4th streets as bus storage. Stillman street residents and businesses will already be severely affected by the rebuilding of the bridge approach, do we also need to be subjected to reduced air quality by bus emissions?
If you visit our little neighborhood of businesses and homes you will see that the parking lots are a closed environment. The freeway overhead closes in the lots that are closely bordered on each side by buildings. These buildings house our businesses and our families. This is not an industrial park, this is a neighborhood.
Please help us to continue the growth of our area, not contribute to its demise.
I am sure that you can find a great alternative area in a place that would not be as negatively affected as our street. May I suggest 4th and King, or the Pier across from Bayside, or Port property, or how about under some of the property being built adjacent to the Transbay Terminal?

Thank you,

Myron Chadowitz
Operations Manager
Britanne Corporation

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COMMENTS REGARDING THE TRANSBAY TERMINAL EIR/EIS

To: Joan Kugler, EIS/EIR Coordinator, City Planning Dept., San Francisco
From: Bernie Choden
(85 Cleary Ct., # 11, S.F., 94109 @ 415-9297714/fax:15).
Nov. 16, 2002

CEQA law permits a challenge of the fiscal feasibility necessary to assure mitigation of environmental concerns. **Are there sufficient economic means to pay for the necessary mitigation depending upon what is proposed? Are the mitigation concerns sufficient to deal with cumulative impacts?**

It is not only that this EIR/EIS document does not specify how to pay for mitigations, this document doesn't say what the needed mitigations are (as the document should have done in Chapters V and VI). For example, this document cites traffic impacts as immitigable and, yet, does not acknowledge the impact of unmitigated traffic impacts on the cost of doing business or living in this area. The document does not cite other economic and environmental mitigation needs of adjacent business and residential uses that now exit or would be exacerbated or be created by the project. Vaguely, this document says that there may be an examination of these issues after the approval of this document. **Mitigation is an essential component of an EIR; without identification of mitigation need and mitigation measures, this document is not certifiable.**

Mitigation revenue resources appears almost solely dependent on project internal subsidies from tax increments. Tax increments, alone, are the least advantageous means of repaying public investment for this high environmental impact.

> Almost a third of redevelopment increments are directed by law to go to school districts off the top. Secondly, the inflationary cap on increments is 2%; that means that the value of a dollar now will be only $0.50 later given normative rates of inflation. It also means that developers receiving tax increment assistance now will be paying off that assistance 10 years from now will do so with dollars worth half as much.

To provide adequate long-term mitigation revenues, I strongly suggest the project use of ground rents from public land ownership underlying the entire redevelopment project as the best means of paying (a) for the project, (b) mitigating environmental design and social impacts and, (c) controlling future design and development. The reasons are:

1. **Market rate development prospects remain relatively high despite a national economic downturn.** Mid-level and high-end rents in the City continued to inflate above 10% last year. A ground rent of a normative 3% on the value of development would only add) 0.5% to the operators' annual cost of a project, definitely too little to discourage investment in this premier market. (Regardless of what you've heard)
2. **Ground rents (G.R) remain in constant dollars unlike tax increment dollars.** They will still be worth a real dollar years from now.

3. **Front-end money** will come from the sale of development rights just at it would, and almost in same amount, from the sale of the title to the land.
4. The R.A. would receive the equivalent of tax increments (possessory interest taxes) anyway in addition to GR. As a result, the R.A. (and city) would receive, initially, **four times** as much cash flow as from T.I. only.
5. Further, **the use of G.R. would be much more flexible than for T.I.** such as the ability to match it to developer incentives and operators underwriting (think non-profits).
6. **The value of G.R. would increase with value of investments.** The developers would be able to go in cheap and pay out when they were profitable.
7. **Contracts regarding G.R. could control the design and operations of the project as a the most efficacious legal means of protecting the public investment and the future design of the terminal area.**. We should look to the Embarcadero Center as a good design example of how to provide residential uses within a high intensity commercial area.

I request an economic study directed toward the means and amount of cash flow from the project needed to provide environmental mitigation. Necessarily, approval of the terminal should be contingent how the redevelopment economics shapes up, particularly regarding other city resource needs and, in particular, the provision of a high quality, high-density residential environment within and adjacent to the project. **Design isn't just about how the environment looks; it is also about how it works far into the future.**

My experience with the Martin Luther Towers project in the Western Addition # 1 Redevelopment Area challenges the assumption that the Redevelopment Agency can be trusted to mitigate the Terminal's environmental impact. In the MLT situation, the RA stated that it would be selective as to what project areas it would honor regarding contractual obligations between the Agency and a beneficiary should the project become deactivated. **The Terminal project, therefore, requires an objective environment monitor (as in the Mission Bay Project) who can ensure enforcement of the R.A.'s public contractual obligations regarding development and mitigations.**

Summary:

This city needs improved rail transit access, but this proposal requires the integration of rail transit design with the design of the other uses necessary to make this project:

1. An integral, attractive and beneficial part of the city.
2. A means to pay for the project and its environmental impact measures

This document spends so much effort describing the transit project that, apparently, there is little space and effort applied to identifying and providing a clear list of mitigations, their costs, how to pay for mitigation, who will be responsible, and how implementation will be monitored. **This is not, as presented, a certifiable EIR/EIS document.**

21 Stillman Street, #2
San Francisco, California 94107
415-543-5114
dk-sf@pacbell.net

18 November, 2002

Paul E. Maltzer
Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, California 94103

SUBJECT: DEIS/DEIR/Section 4(F) Evaluation for the Transbay Terminal/ Caltrain Extension/Redevelopment Project

Dear Sir,

I live in the project area. The neighborhood needs parks. I am concerned that an opportunity to establish a park where my dog can play will be lost. Especially, when I read that all that is foreseen in the Redevelopment are 'two new "green" open spaces'. What does this '"green" open space' mean? (5.5.1 (p.5-39))

Car-boosting and homeless encampments are quality-of-life issues for the street. The proposed Off-Site Bus Storage Facility between Perry and Stillman and Second and Fourth Streets is under the jurisdiction of the Transbay Terminal. Will transit agency police patrol the lot, or will SFPD? Did the police union agree that by reorganizing existing staff no additional officers would be needed? I am concerned that the police will be spread thin and crime will increase on Stillman St. (5.4.2.2) and (5.4.4.2).

Since the Off-Site Bus Storage Facility is proposed right across the street, I read that section carefully. There is no Air Quality analysis of the bus storage lot (5.7.2). With all those buses idling underneath the freeway with nowhere for the air to go, I think it is fair to ask about Carbon Monoxide "pooling" on Stillman Street. The building in which I live is mixed-use. Five of the six units are residential and rely on open windows for cooling and ventilation. Diesel fumes and particulate impacts of the proposed bus storage lot are not addressed in the report (Table 5.7-3); therefore, the project does not conform with 40 CFR Part 93 especially section 116 (5.7.3).

I am pleased that noise mitigation is proposed for the bus storage facility. My concern is that the report mentions my neighbors in the Clock Tower without reference to other residential buildings on Stillman Street and a low-income residence on Perry, Yerba Buena Commons (5.8.7). Will noise mitigation apply only for those who live in the Clock Tower?

The report does not specify that the access ramp from the storage lot to the Terminal will be grade separated at Second Street but it does state at-grade mid-block crossing of Third Street (5.19.1.1, page 5-114 and 5-115). If the all buses in the two-block long storage lot cross Second Street and Third Street mid-block at-grade in order to return to the Terminal during the afternoon rush hour, I think that that will have an impact on vehicular traffic on Second Street. It is not addressed (Table 5.19-5) or (5.19.4.3). Third Street is defined out of the project area.

Why not locate the bus storage above the new terminal as they do at the Port Authority of the Hudson bus station in New York City? If it has to be across the street, I am looking to ensure the most beneficial impact.

The tunneling option for the Caltrain Extension is better for the area because it destroys fewer historic buildings in the neighborhood (Table 5.14-1) and has less construction impact on our street (5.20).

Construction impacts to streets (Table 5.21-3) does not address the mid-point access for construction of the tunnel on Second Street near Brannan Street mentioned in the last paragraph on page 5-155 (5.20.2).

Visual and aesthetic impact is hard to quantify. If we can try to improve the project keeping in mind its overall sculptural qualities and incorporating ornamentation and variation of form with the fabric of the district architecture, I hope that this will last another seventy-five years. The ramps need to be more than just 'less visually intrusive due to their uniform appearance and minimal supporting structures' (5.16.2 page 5-93). That sounds like a causeway to me. The sound-walls of the proposed off-site bus storage facility likewise must be architecturally related to the street. Overall, the Redevelopment District needs to have a variety of heights, mass, texture, and style. Please not another Embarcadero Center One, Two, Three, Four!

Thank you,

James Wittmann Dear

askmar
610 Gilbert Avenue, Suite 19
Menlo Park, CA 94025
mark@askmar.com

November 18, 2002

Joan Kugler
City and County of San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103
(415) 558-5983
joan.kugler@sfgov.org

Dear Ms. Kugler:

This letter provides my comments in regards to the draft environmental impact statement for the proposed TransBay terminal, Caltrain extension, and redevelopment.

(1) Although Muni has no interest, there would be cost savings and reduced total overall environmental impact to the City of San Francisco if the depth of the trench was increased on 2nd Street from Townsend to Mission, to be sufficient to run Muni on an upper level, and heavy rail on a bottom level. (This would be instead of the proposed 3rd Street Muni underground line extension.) I would suggest that Muni could make a dogleg from 2nd down Mission, stopping at the Convention Center, and proceeding down 3rd for the remainder of the line as planned. In addition, it is my understanding that the mezzanine level of the TransBay terminal could accommodate Muni light rail trains, were this connectivity so desired, and this approach would enable this to happen.

(2) While some have questioned if six platforms offer adequate capacity, my suspicion is that the combination of tail tracks at the TransBay terminal and sidings at 4th and Townsend, can be sufficient with efficient operations. However, loading and handling of luggage for passengers traveling to SFO and on future high-speed rail service may cause capacity problems due to excessive dwell times. (As a side note, it appears that the terminal does not have any special provision for passenger luggage, i.e. it appears to assume everyone uses carry-on luggage.)

(3) Obtaining the maximum density in the immediate areas around the TransBay terminal makes good sense from a planning viewpoint. It also improves the economics and feasibility of the terminal, and reduces potential taxpayer liabilities.

(4) There exists a question in my mind as to whether there is sufficient redundancy and capacity in the efficient and compact TransBay design to accommodate accidents and equipment failures without undue delays.

Sincerely,

Mark Duncan

RECEIVED
DEC 20 2002
PLANNING DEPT

December 19, 2002

Via Fax and US Mail
Paul E. Maltzer
Environmental Review Officer
San Francisco Planning Department
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FAX 558-5991

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Rev. Edgar Boyd 921-4966
Michael Antonini 558-6409
William Lee 558-6177 – needs our number

Dear Mr. Maltzer,

As the owners of 25 Stillman St., 35 Stillman St., 470 Third St. and 585 Howard St, we ask that you read and respond to our concerns regarding the Transbay Terminal Project EIR/EIS.

- The Stillman St. site is unsuitable for bus storage because it is a highly populated area with hundreds of residences, and many high-density office buildings in this two-block site.
- Most if not all of these buildings have operative windows and employ external air as their sole source of ventilation. The diesel exhaust, noise and additional traffic impact of a bus storage site is inappropriate and dangerous in our highly populated neighborhood.
- The "San Francisco Planning Department SoMa Community Planning Process Rezoning Alternative" Draft Packet dated Nov. 19, 2002, shows that the plan for this neighborhood is to encourage an even higher percentage of residential and office use. Putting a bus storage site in the middle of this would not be a compatible use for this area.
- As there are families and a school site in this 2-block area, a much more extensive analysis of air quality, sound, vibration and traffic would have to be implemented. Please note that the State has now banned idling buses near schools. The California Air Resources Board passed this measure on Thursday, December 12th, 2002. Before expending a lot of money to do these extensive studies, I hope you instead determine, with the additional information that you have before you, that alternative sites should be considered instead.
- Traffic to and from the proposed bus storage would have a significant impact on the already burdened Third Street and Fourth Street corridors.

Alternative location for the Bus Storage Facility.

- Those buses that don't need frequent access to the Transbay Terminal should be stored in a more industrial area, away from residences and high-density office use. Alternatively, they should be put into circulation in Marin, the East Bay and San Francisco to make a more frequent and efficient bus service (see paragraph below on "Bus Rapid Transit").
- The buses that do need access to the Terminal should be stored in or closer to the Terminal. One option would be to use the 2 lots on both sides of Howard St. at Beale under the bus ramp. There is substantially more height clearance at this location and it is much closer to the Transbay Terminal.
- Alternatively, the bus storage could be designed into one of the adjacent re-development projects or into the Terminal itself.
- Traffic in the South of Market area would be much less impacted by a bus storage site closer to the terminal.

Bus Rapid Transit:
Both the "cut & cover" and the "tunneling" options for the Caltrain extension would be disruptive to our neighborhoods. Please do an analysis of a "Bus Rapid Transit" alternative.

- This would be more cost effective and less disruptive.
- It could utilize more of the "idle" buses during off peak times by setting up a system that would be fast, easy and encourage increased ridership. This would decrease the amount of space you would need for bus storage, and thus could incorporate the smaller storage site into the Transbay Terminal development site.

To quote Stuart Cohen of the Transportation and Land Use Coalition (San Francisco Magazine, Dec. 02) "Together, AC Transit and Muni already carry close to 60 percent of the transit riders in the Bay Area, and both bus companies say they could add a whole lot more with a few innovations. In the cities, they would introduce what's known as "bus rapid transit" on major arteries....These buses would operate like trains, traveling in their own lanes, with the ability to trip traffic signals so that they don't get stuck at lights. The buses would make fewer stops, and the bus shelters would be more like train stations, with protection from the rain and signs that give real-time projections about when the next bus is arriving. Throughout the cities, buses would be frequent and fast (even during off-peak times).....especially in neighborhoods where people don't have cars. .....Along two major corridors in Los Angeles, where "bus rapid transit" is a top funding priority, installing such a system has reduced bus riders' commute times by 25% and increased ridership by close to 40% (See :Trains vs Buses: The L.A. Lesson.")

Notices and Responses:
We are concerned about the lack of notice of meetings, the lack of response to our initial input at the scoping meeting and follow-up letters. Although we were on the "distribution list" for the EIR, we did not receive it and had to call to get a copy after finding out that it was available through a chance conversation with a friend.

- If you have not already done so, please add us to your list for notices of <u>all</u> meetings regarding the Transbay Terminal and any other meetings that deal with the Bus Storage Site, the 2nd St. Caltrain connection and the 3rd St. rail.
- Please send us the "Response to Comments" that addresses our letters and other letters submitted for the Transbay Terminal EIR/EIS.
- We would like our buildings to be included in the analysis of any other issues of the Transbay Terminal and related projects (i.e. Bus Storage, 2nd or 3rd St. rail projects)brought up by others regarding our neighborhood (2nd St., 3rd St., 4th St., Stillman St. and Perry St. as well as Howard St.)
- My husband spoke at the initial Scoping meeting in April 2001 and we reiterated our concerns in two subsequent letters (May 18, 2001 & Sept. 30th, 2002 – see attached) and at the Planning Commission meeting in November 2002. Our attorney, John Capron, also submitted a letter (attached) in November, 2002. Those comments are all incorporated by reference in these comments.

Sincerely,

Francis and Janice Mathews
35 Stillman St, #300, San Francisco, CA 94107

MDC
PROPERTIES, INC.

May 18, 2001

Ms. Joan Kugler
Environmental Planner
City and County of San Francisco
1660 Mission Street; Suite 500
San Francisco, CA 94103-2414

Subject: CalTrain/Transbay Terminal Connection.

Dear Ms. Kugler,

We are writing to express our concern over a proposal linked to the above mentioned project, requiring the closing of the Stillman Street parking lots between 2nd and 4th Streets. We understand that an EIR is underway and we would like the report to address the following:

Air Quality-the proposed bus parking lot is located under the concrete west approach to the Bay Bridge with residential and commercial buildings fronting both sides of the parking lot. Diesel fumes from idling buses would be trapped in this tunnel-like environment polluting the air that ventilates through the adjacent buildings. The Planning Department approved numerous live-work projects on Stillman Street; Clocktower lofts, 21 Stillman, etc combined with several existing apartment buildings, the bus parking lot certainly is not harmonious to our environment.

Recently we visited the Golden Gate Transit and Sam-Trans bus parking lots and were alarmed to find the buses idling with diesel fumes spewing out long before exiting the parking lots.

Our neighborhood will be severely impacted by the demolition and re-building of the Bay Bridge west approach as well as the potential construction of the 3rd Street Muni Line--- we should not be subjected to additional, ongoing noise and pollution from the bus storage.

Alternatives: We recommend the following alternative locations be considered for the bus storage:

1- CALTRANS paint yard on Bryant and Main, a two-story structure would allow for the maintenance yard and courtyard on top, and bus storage below.
2- Treasure Island
3- 4th and King Streets
4- Pier/Port property across from Bayside Village
5- Incorporated with the development, lower levels of adjacent parcels to the Transbay Terminal

Sincerely,

Francis Mathews

Brokerage & Development 35 Stillman Street, Suite 300 San Francisco, CA 94107 (415) 957-0463 Fax (415) 957-0495

MDC
PROPERTIES, INC.

September 30, 2002

Ms. Joan Kugler
Environmental Planner
City and County of San Francisco
1660 Mission Street, Suite 500
San Francisco, CA 94103-2414

Subject: Cal/Train/Transbay Terminal Connection Follow-up

Dear Ms. Kugler:

This letter is to follow up our letter dated May 18, 2001 regarding a proposal which would require the closing of the Stillman Street parking lots between 2nd and 4th Streets. We are seeking full disclosure on your EIR with regards to air quality and to address our increased concern regarding new national reports, particularly one from the National Institute for Occupational Safety and Health (NIOSH) regarding the CARGINOGENIC EFFECTS OF EXPOSURE TO DIESEL EXHAUST. The information in this report as well as others contend that exposure to diesel fumes should be reduced to the lowest feasible limits. We have also discovered that diesel exhaust contains more than 40 chemicals that are listed by the EPA as toxic air contaminants, known or probably human carginogens, reproductive toxins or endocrine disrupters. If the diesel fumes from the idling buses were sustained over any period of time, they would be potentially very dangerous to all residents and commercial tenants of our neighborhood. These are health risks that we cannot accept. We cannot allow a known carginogen to be introduced into an environment where we live and work every day.

We sincerely hope that you will explore every alternative to this proposal and take our concern very seriously. We are willing to work with you to find a viable solution and have already recommended several alternative locations which much less environmental impact.

Sincerely,

Francis Mathews

Cc: Bruce Barnes
Elizabeth Carney
Janice Mathews

Brokerage & Development 35 Stillman Street, Suite 300 San Francisco, CA 94107 (415) 957-0463 Fax (415) 957-0495

EPA: Diesel Fuel Exhaust Likely to Cause Cancer
03 Sep 2002 19:40 GMT

WASHINGTON (Reuters) - U.S. environmental regulators in a new report on Tuesday formally classified for the first time diesel exhaust from trucks and buses as likely to cause cancer in humans.

Green groups are seizing on the new report from the Environmental Protection Agency as proof the Bush administration needs to crack down on polluting diesel fuel emissions.

"This will underscore that diesel exhaust is a health hazard and should be controlled," said Frank O'Donnell at the Clean Air Trust, who called the report "the most in-depth health assessment to date" on diesel fumes.

Environmental groups are worried the Bush administration will roll back clean air regulations for diesel fuel.

The EPA in early 2001 issued standards to reduce diesel emissions from trucks and buses by more than 90 percent.

The administration said it backed those rules, but later said it might permit diesel engine makers to trade emission-reduction credits instead of producing cleaner trucks and buses.

The EPA is considering similar clean diesel standards for construction and farm equipment.

In addition to concluding that diesel fumes likely cause lung cancer, the EPA found diesel exhaust triggers asthma and other respiratory problems.

The agency said its report is based on exposure from diesel engines built prior to the mid 1990s. As new diesel engines with cleaner exhaust emissions replace existing engines, the report's conclusions will have to updated, it said.

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NIOSH ISSUES CANCER ALERT FOR DIESEL EXHAUST FUMES

One reason why people often oppose a new facility is increased truck traffic. Trucks are big and noisy and subject to accidents, and when accidents occur involving trucks, there's a high likelihood of fatalities.

However, the federal government has recently concluded officially that there is another good reason to be concerned about increased truck traffic in your neighborhood: five separate studies in the last 3 years have shown that diesel exhaust certainly causes cancer in laboratory animals, and two studies of railroad workers show that it causes cancer in humans as well. As a result of this determination, the National Institute for Occupational Safety and Health (NIOSH) has issued a special publication, CARCINOGENIC EFFECTS OF EXPOSURE TO DIESEL EXHAUST, offering this recommendation: "As prudent public health policy, employers should assess the conditions under which workers may be exposed to diesel exhaust and reduce exposures to the lowest feasible limits." Citizens may reasonably ask: if NIOSH believes workers should not be exposed to diesel exhaust because of the cancer hazard, can health officials in other parts of government believe that the general public should continue to be exposed to diesel exhaust? Taken in this light, risk assessments that discuss only the traffic hazards associated with a facility are missing the major point: diesel trucks can evidently kill innocent people even if no traffic accidents occur.

Diesel engines are more efficient than gasoline engines; they produce more horsepower per gallon of fuel, and they use a less-refined (thus cheaper and more plentiful) fuel. When diesel fuel burns in an engine's combustion chamber, the resulting exhaust contains gases and particles (soot). The gases include nitric oxide, nitrogen dioxide, oxides of sulfur, and hydrocarbons (e.g., ethylene, formaldehyde, methane, benzene, phenol, 1,3 butadiene, acrolein, and polynuclear aromatic hydrocarbons [PAHs], several of which are known carcinogens). Of the particles in diesel exhaust, 95% are less than 1 micron in diameter and thus they are respirable, which is to say they are easily taken into the deepest portions of the human lung where they may lodge forever. The core of each particle is made up of pure carbon, but as many as 18,000 different chemicals from the gaseous portion of the exhaust may be adsorbed (attached) onto the carbon core, and thus diesel exhaust can carry a whole host of exotic, toxic and carcinogenic chemicals into the deepest portions of your lung-down in the region where the transfer of gas occurs to put oxygen into your blood stream and to take carbon dioxide out.

As recently as 1986, NIOSH concluded that diesel exhaust did not cause cancer in laboratory animals. However, in the period 1986-1988, five long-term animal studies, and two epidemiologic studies of humans, all concluded that exposure to diesel exhaust causes lung cancer. As a result, NIOSH reversed itself and in August, 1988, issued a special "current intelligence bulletin" to

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Environment

Diesel Fumes Mean Cancer for Thousands of Americans

By Cat Lazaroff

WASHINGTON, DC, March 15, 2000 (ENS) - More than 125,000 Americans may get cancer from breathing diesel fumes from buses, trucks and other diesel engines, says a new analysis by state and local clean air regulators. The officials are calling on the U.S. Environmental Protection Agency, which is planning to release new restrictions on sulfur in diesel fuel within two months, to take strong action to address this health risk.



Diesel vehicles are among the prime sources of the pollution that leads to smog (Two photos courtesy EPA)

The analysis, by the State and Territorial Air Pollution Program Administrators and Association of Local Air Pollution Control Officials (STAPPA and ALAPCO), comes as the oil industry seeks to kill a proposed EPA plan to clean up diesel buses, trucks and diesel fuel. The EPA proposal is still under review by the White House Office of Management and Budget.

Calling diesel emissions an important health hazard, the EPA has announced it will release a new rule by the end of April requiring sharp cuts in the amount of sulfur allowed in diesel fuel.

Diesel engines are significant contributors to air pollution. The hazardous mixture that comprises diesel exhaust contains hundreds of different chemical compounds that wreak havoc on air quality, playing a role in ozone formation, particulate matter, regional haze and acid rain.

Diesel exhaust contains more than 40 chemicals that are listed by

the EPA as toxic air contaminants, known or probably human carcinogens, reproductive toxins or endocrine disrupters.



Vehicle exhaust also contributes to acid rain, and can lead to illness in humans

"There is no pollution more disgusting than the thick, noxious, suffocating smoke that billows from trucks and buses," said Becker. "But even worse, these fumes are putting us at risk of cancer - risk that can be almost completely eliminated with modern pollution controls."

Last fall, the South Coast Air Quality Management District, which sets air standards for the Los Angeles, California region, released a report analyzing the cancer risk in the region from exposure to diesel particulates. The agency concluded that mobile sources are responsible for about 90 percent of the cancer risk in the area, and that 70 percent of the total cancer risk is attributable to diesel particulates.

That study prompted STAPPA and ALAPCO - the national associations of state and local air quality control officers in the states and territories and more than 165 metropolitan areas across the country - to extend the evaluation to other cities nationwide.

Among their results: Over a lifetime of exposure to diesel fumes, an estimated 119,570 people in metropolitan areas, and an additional 5,540 in suburban and rural areas, will develop cancer. Large cities, including Los Angeles, New York City and Chicago, Illinois, could see thousands of cancer cases each.



STAPPA and ALAPCO want the EPA to require trucks to operate as cleanly as current laws mandate
(Photo courtesy Daimler Chrysler Corp.)

STAPPA and ALAPCO have joined major health and environmental groups in urging EPA to issue tough new diesel standards. Among their recommendations, the groups said EPA should set an extremely strict national limit on the amount of sulfur in diesel fuel - capping sulfur at less than 15 parts per million - by no later than mid-2006. The groups also want an intermediate cap of 30 parts per million to take effect by 2004.

The EPA has not yet released any specific numbers that will be included in its new sulfur rule.

Sulfur is a poison for diesel pollution control devices, much as lead was a poison to catalytic converters in the 1970s. The groups noted that California recently set a diesel sulfur cap of 15 parts per million for urban buses that continue to use diesel fuel. The groups said the national standards should apply not only to truck and bus fuel, but also to fuel used in "nonroad" diesel engines, such as construction equipment.

Oil refiners warn that the technology does not yet exist to produce fuel clean enough to meet the groups' requirements. Developing such fuel would be prohibitively expensive and could drive some refiners out of business, warned the American Petroleum Institute (API), a trade group. But API and other groups have volunteered to reduce sulfur by 90 percent from its current cap of 500 parts per million, bringing the sulfur content of diesel down to 50 parts per million. That reduction could add five or six cents to the price of a gallon of diesel fuel, said API spokesperson Edward Murphy.



Oil refiners say dramatic cuts in sulfur could prove prohibitively costly (Photo courtesy North Atlantic Co.)

Officials from the National Petrochemical Refiners Association (NPRA) and Petroleum Marketers Association of America sent a letter Tuesday to EPA Administrator Carol Browner warning that sharp sulfur reductions could result in dramatic cost increases and an unreliable supply of diesel fuel and related products.

"EPA's proposal for diesel sulfur is likely to reduce the supply of diesel fuel as well as heating oil and even gasoline," the letter said. "It is our understanding that the EPA proposal calls for a reduction of the onroad diesel sulfur cap from 500 parts per million (ppm) to 15 ppm in 2006. The proposed cap and timeframe are in excess of what is feasible or advisable from either an energy supply or environmental standpoint."

STAPPA and ALAPCO also want the EPA to set tough standards for diesel soot and smog-forming nitrogen oxide emissions from new trucks and buses by 2007. Emissions could be reduced by at least 90 percent through use of low-sulfur fuel and advanced exhaust emission controls, they noted.

STAPPA and ALAPCO want emissions reductions for construction equipment as well



(Photo courtesy Nebraska Machinery Co.)

Equivalent emission standards should be set for construction equipment and other big nonroad diesel engines, the groups advised.

Big diesel trucks, buses and nonroad engines should be required to operate as cleanly in use as they are supposed to, the groups said. The groups noted that for more than a decade, seven of the biggest diesel engine makers installed illegal "cheater" devices on well over a million trucks, allowing them to pollute more on the road than in pre-sale tests. These same engine makers are now trying to weaken the Consent Decrees that were reached last year with EPA and the Justice Department to settle these environmental violations.

The Clinton administration is taking actions to reduce pollution from trucks and other large vehicles. The Department of Energy (DOE) announced earlier this month it will partner with the heavy duty vehicle industry in a $30 million to $50 million research project to develop cleaner and more fuel efficient trucks. Over the next five years, the joint research effort will help researchers develop more energy efficient trucks, ranging from pickup trucks/sport utility vehicles to eighteen wheelers. Seven teams from the industry will join the DOE to develop clean energy technologies that will make trucks cleaner, more fuel efficient, and promote the use of alternative fuels.

"The research partnerships between the federal government and the private sector are critical to reducing America's reliance on imported oil, maintaining economic viability of our industries, and improving air quality," said Energy Secretary Bill Richardson. "With projections indicating that trucks will use twice as much fuel as cars by 2020, it is critical that we look to improve fuel efficiency and clean energy technologies."

About $5 million will be awarded this fiscal year. Three teams will develop hybrid propulsion systems utilizing a natural gas engine an electric powertrain for buses and urban duty trucks, such as delivery vans and heavy-duty vehicles. The teams will match DOE funding dollar for dollar. Four other research teams from industry will develop advanced components to reduce the fuel consumption and emissions from truck diesel engines. Because these projects are considered more risky, these teams will spend $3 for every dollar granted by DOE.

Becker noted that dozens of human epidemiological studies have found a link between diesel soot and lung cancer. STAPPA/ALAPCO's nationwide cancer projection "is an extremely conservative figure," using a method similar to that used by regulators in California to estimate diesel-related cancers there, he noted.

"In fact, the actual number of cancers could easily be ten times higher," Becker said, adding that "the important thing to keep in mind is that we are facing a cancer risk - a risk we cannot avoid

unless EPA takes decisive action."

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get the word out that diesel fumes are dangerous. NIOSH estimates that 1.35 million American workers are routinely exposed to diesel exhausts.

Get: CARCINOGENIC EFFECTS OF EXPOSURE TO DIESEL EXHAUST [CURRENT INTELLIGENCE BULLETIN 50; DHHS (NIOSH) PUBLICATION NO. 88-116]. Cincinnati, OH: Division of Standards Development and Technology Transfer, NIOSH, Robert A. Taft Laboratories [4676 Columbia Parkway, Cincinnati, OH 45226], August, 1988; phone (513) 5338287. It's 30 pages and free.

--Peter Montague

October 25, 2002

MDC
PROPERTIES, INC.

Joan Kugler
AICP, EIR Project Manager
San Francisco Planning Department
1660 Mission Street; Suite 500
San Francisco, CA 94103-2414

HAND-DELIVERED TO:
30 Van Ness Avenue
4th Floor; Room 4150
San Francisco, CA

Re: Stillman and Perry Streets, proposed bus storage, and the EIR.

Dear Ms. Kugler,

I am hand delivering this letter, along with copies of our previous correspondence dated May 18, 2001 and September 30, 2002, and copies of studies which show significant impact and danger from diesel fumes. The EIR did not address this very important issue. We are already exposed to pollution of all kinds from the traffic on the approach to the Bay Bridge; buses idling and coming and going to and from a rather enclosed storage area under this unventilated approach would escalate the air and noise pollution to unacceptable levels. I am hoping that this will get your attention and that we will be able to halt all further forward motion on this proposal

I was quite dismayed to discover that not only did we not receive a copy of the EIR as requested, but in reviewing a Stillman Street neighbor's copy, Stillman and Perry Streets were completely absent, with the exception of a brief mention of noise pollution from the proposed bus storage. We raised these issues at the April 4, 2001, Scoping Meeting. Why weren't these issues evaluated in the EIR?

Although we are concerned with noise pollution, we are also greatly concerned with the impact of diesel fumes on air quality, the dissolution of all parking between 2nd and 4th Streets in the established lots. I think it is important to note, these parking lots were listed in the Pac Bell Ballpark EIR as important to that facility. Also the greatest concentration of commercial development, hence parking demand, is on Second Street. In conclusion we are concerned and suspicious of the desire to push through this proposal without exhausting other alternatives.

We have distributed petitions to our concerned friends and neighbors and these shall be returned to you as soon as all signatures are in. Letters are also forthcoming.

We look forward to seeing you at City Hall on November 12th.

Sincerely,

Francis Mathews

Brokerage & Development 35 Stillman Street, Suite 300 San Francisco, CA 94107 (415) 957-0463 Fax (415) 957-0495

LAW OFFICE OF ARTHUR L. MEADER, III
701 Pennsylvania Ave., Ste. 101 San Francisco, CA 94107 Phone: (415) 641-4880 Fax: (415) 641-4490

December 19, 2002

Joan Kugler
Planning Dept.
City and County of San Francisco
1660 Mission St., #500
San Francisco, CA 94103

Re: Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project

Dear Ms. Kugler:

I am a resident at the Clocktower at 461 2nd Street, San Francisco, California. I have reviewed as best I can the EIR on the Transbay Terminal/Caltrain/Redevelopment project and offer the following comments.

I disagree strongly with the suggestion of a bus storage facility across the street from the Clocktower. Literally, it seems, hundreds of buses may be stored there. The EIR does not adequately address the issue of pollution (noise, fumes, particulate matter) that will result from these buses being stuffed under the freeway ramps in that area. Clocktower residents are not the only people living in the area: there are residences on Stillman and Harrison Streets, I believe, that would be affected as well.

Even more woefully inadequate is the discussion of resulting traffic problems which can be expected from ferrying buses to and from the new transbay terminal. Several of the intersections in the area are already "worse case scenario" at peak traffic times (see the EIR for the Giants' stadium and the EIR for some proposed high rises also in this same general area). I can tell you from firsthand experience that peak traffic times go well beyond typical rush hour scenarios now, including weekends. There are "horn concertos" many nights of the week already.

Other options for the buses would be much more appropriate. I suggest housing them at the transbay terminal itself or at some other location closer to the terminal (I know you don't want to take up space where other high rise buildings are likely to be proposed in the near future and that the honchos at Charles Schwab, Gap, etc. don't want the buses in their neck of their woods either–better to squeeze'em in with hapless homeowners).

Regarding the analysis of expected noise and vibration from running a huge tunnel right down Second Street, literally feet away from the Clocktower building, the EIR seems so far off base as to be from the world of science fiction and junk science. So unacceptable noise in the hallway is not the equivalent of unacceptable noise in the house? Even though this is all in the same building, it doesn't matter?

I'm sure you are aware of the fact that the Clocktower is already at Ground Zero for another huge construction project, viz., the re-do of the western approach to the Bay Bridge. Exactly where is the study showing what the cumulation of that and the proposed mega-project now before you (and the proposed three- and four-hundred foot towers just blocks away) will be? What happens when each EIR says such-and-such intersections are already at maximum traffic degradations but makes little or no reference to the combination of all these proposals?

Discussion in the EIR is totally lacking about what happens to access to the Clocktower garage when our block of Second Street is "closed" (this is not a "delivery entrance," as mentioned in the report).

A few other comments, even though outside the purview of the EIR:

Where is the money coming from for this 2-billion dollar project (the state budget deficit currently looks to be over $30 billion and the federal deficit is soon to follow this steep, upward curve, what with war and tax cuts)?

How many people does Caltrain actually move and do the projections for increased ridership, even if to be believed, justify a project of this magnitude now?

I believe the EIR needs substantial work yet.

Very truly yours,



ARTHUR L. MEADER, III

RECEIVED
[illegible] 2002
PLANNING DEPT

Arthur L. Meader, III
461 2nd St., #T-455
San Francisco, CA 94107

November 22, 2002

To: Joan Kugler
AICP, DIR Project Manager
S.F. Planning Dept.
1660 Mission St., Ste. 500
San Francisco, CA 94103

Dear Ms. Kugler:

I am a resident at the Clocktower, near ground zero for the proposed TransBay terminal bus storage facility (2nd and Stillman Streets). To put it nicely, you've picked a lousy location, pretty much guaranteed to pour lots of diesel fumes and particulate matter into people's homes, not to mention the accompanying noise that can be expected. Someone's brain was not in gear when this plan was developed or have you not ever seen the chaotic traffic mess present in the area nearly every night (weekends not excluded but not quite as bad). If you want real problems, I suggest adding lots and lots of buses to the mix per your idea.

There should be plenty of areas actually closer to the Bay and to the proposed terminal where the buses can be housed. Let me guess: the Powers That Be didn't want these pollution-spillers in their backyard(s) so why not foist them off on hapless residents in the area (there are residents on Stillman and other parts of Second Street as well as Clocktower people that will be affected). I say why not nestle these babies right next to the Gap headquarters or under the Charles Schwab building. You won't convince me that those locations aren't as practical or more so than your apparent choice.

Thanks also for the extensive advance notification. At least with projects such as the Third Street rail line I get periodic mailers,which are very helpful. I have yet to hear peep one from your office or any other agency involved in this deal.

Please reconsider this ill-advised proposal.

Very truly yours,

ARTHUR L. MEADER, III

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www.duanemorris.com

November 24, 2002

Hand Delivery
Paul E. Maltzer
Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103-2414

RE: Public Comment on Draft Environmental Impact Statement / Environment Impact Report for Transbay Terminal / Caltrain Extension / Redevelopment Project

Dear Mr. Maltzer:

This letter responds to Caltrain's letter of October 4, 2002, which (1) transmitted a copy of the Draft Environmental Impact Statement/Environmental Impact Report ("Draft Report") for the above referenced Transbay Terminal Project ("Project"), and (2) requested public comments on the Draft Report be directed to your attention. The following comments are submitted on behalf of a consortium of architects, engineers, urban planners and others (the "Consortium") interested in the successful development of the Project. As set forth in letters dated January 29 and February 1, 2002 (Attachments A and B), the Consortium submitted an alternative proposal ("Alternative") for the Project. Although the Consortium's proposal spelled out how the Alternative could save almost a billion dollars in construction cost and considerable time in completion of the Project, the Draft Report does not address the Alternative. As set forth below, the Draft Report's failure to evaluate this viable alternative is a breach of the federal and state environmental review requirements for the Project. Moreover, given the significance of the Project for San Francisco and the entire Bay Area, it is essential that all reasonable alternatives be reviewed. This is particularly important today because the unusually high cost of constructing and financing the Transbay Terminal as proposed in the Draft Report is likely to doom any prospect of completing this critical link in Bay Area transportation for many years to come.

AC Transit Dictated Site Selection

The present Transbay Terminal was built in the 1930's to handle commuter trains from the East Bay. The long narrow terminal with its sweeping ramp structure was designed to accommodate multi-car trains using elevated tracks for easy connection to the lower deck of the Bay Bridge. When trains were removed from the bridge in the late 1950's, AC Transit started bus service to the terminal using the same ramps and station platforms previously used by

commuter trains. AC Transit and other bus lines continued to use the terminal without significant alteration, but the 1989 Loma Prieta earthquake made it clear the aging terminal had to be replaced or substantially upgraded to meet modern seismic standards.

In the early 1990's the City and County of San Francisco and other public agencies studied several alternatives. With the help of a Citizens Advisory Committee, the Main/Beale site next to the present terminal was picked as the best location for a new terminal. On March 4, 1996 the San Francisco Board of Supervisors approved the Main/Beale site as the preferred alternative. Preliminary designs were prepared for a Main/Beale terminal but AC Transit was not happy with the initial layouts. AC Transit then sued the City contending that the Main/Beale site was not adequate for its purposes and that only the present terminal location should be considered. In order to settle this litigation, the Board of Supervisors passed a resolution in February 1999 that backed away from the Main/Beale site and urged the "City and County of San Francisco to work expeditiously with AC Transit...to retain AC Transit bus service at the current Transbay Terminal site." As a result, the Draft Report only considers rebuilding the terminal at its present location.

Penalties for Reusing Existing Site

Reuse of the existing site, with its long narrow footprint and extensive elevated ramp structure, creates several problems for design of the new Transbay Terminal. For example, to accommodate AC Transit and the other bus lines, the proposed terminal will be as large or larger than the current terminal (approximately 1300 feet long, 165 feet wide, and almost 100 feet tall) - the equivalent of the Empire State building laid on its side. Like the old terminal, the new terminal will stretch over three major streets (and several alleys), blocking view corridors north and south, and together with connecting ramps dominate the surrounding neighborhood as much or more than the existing terminal. To counter the enormous scale of the new terminal, the exterior is designed as a largely transparent glass cage set in a steel frame. This high tech effort to create an attractive presence for the new terminal may be successful, but is likely to be substantially more expensive than a standard building exterior.

Furthermore, the long narrow configuration of the terminal is inherently less efficient than a more square-shaped building. First, interior corridors must be added so passenger can get from one end of the terminal to the other –in this case an entire floor (the Concourse Level) is used as a pedestrian walkway connecting the ends of the bus terminal, and a second floor below ground (the Train Mezzanine Level) serves a similar function for train passengers. Transit buildings typically have more efficient centralized circulation areas where passengers walk fewer steps to get to their train or bus. Second, long narrow buildings are inherently less efficient because they have a much higher ratio of exterior surface to interior floor space. The proposed terminal would have a perimeter of almost 3000 feet with floors of approximately 215,000 square feet. By comparison a building which is 400 by 600 feet has a perimeter of only 2000

feet but provides 240,000 square feet of space on each floor. In this example, the proposed Transbay Terminal is approximately 60% less efficient than the more compact terminal in terms of the interior floor space created per foot of exterior wall. This of course leads to large differences in construction cost per square foot, particularly in this case where the proposed exterior wall treatment is very expensive.

The existing site is also a difficult place to put a rail terminal. At a width of 165 feet, the new terminal will accommodate only six train platforms. Moreover, the terminal can only be accessed on tight 500-foot radius curves and does not have room for straight platforms in excess of approximately 1000 feet. This presents problems for California's High Speed Rail Authority which has requested tracks with a radius of at least 650 feet on all curves and station platforms at least 1300 feet in length. The proposed terminal site is at best a marginal fit for high-speed rail, and clearly provides no expansion space for new rail service from the East Bay and beyond. As the Draft Report indicates, in the long run the large majority of terminal patrons will be train riders, especially when rail service to the East Bay becomes available. Unfortunately, the proposed design calls for an enormous investment in facilities for bus riders and comparatively little investment for rail passengers.

Finally, reusing the old terminal site adversely impacts the Project's development prospects. The old terminal site along Mission street has the highest development potential because height limits in that area are 400 to 500 feet providing the greatest density and value for development. However, the proposed terminal design precludes most development along Mission Street. Instead, the Draft Report proposes a substantial change in San Francisco's zoning, moving high rise development two blocks south along Folsom Street:

> "[The Project] would change the zoning ... to allow for development of greater heights – up to a maximum of 400 feet on the north side of Folsom Street – 200 feet higher than is currently permitted." (Report, p 5-97).

It is unclear whether the City would allow this rezoning because to do so would permanently change the character of the neighborhood along Folsom Street. Without it, however, redevelopment would generate considerably less money to pay for the terminal.

Advantages of Main/Beale Site

The City and the Citizens Advisory Committee originally chose the Main/Beale site because it has several important advantages. One of the most obvious is that it is a largely vacant site on which a new terminal can be quickly constructed while the old terminal stays in operation. This eliminates the need to build a temporary terminal and ramp for use while the old terminal is torn down and rebuilt, thereby saving considerable time and tens of millions of dollars in construction cost. Most important, it is an efficient site on which to locate a new

terminal because of the larger, almost square blocks between Main and Beale and Folsom and Mission. At 300+ feet in width, the site can accommodate up to 10 train platforms, including two 1300-foot long platforms required by high-speed rail with no sharp curves in the approaching track. It is closer to the Embarcadero Bart/Muni Station, making an underground pedestrian connection between the terminal and Bart/Muni feasible. Because of its North/South alignment the Main/Beale site requires shorter, less costly ramps to connect buses to the Bay Bridge, and a shorter tunnel connection for Caltrain. Finally, the Main/Beale site maximizes development along Mission Street as called for by the City's Master Plan, and retains existing zoning along Folsom Street. Further details of the Main/Beale Alternative are provided in Attachment C.

One and a Half Billion Dollars in Savings

The Draft Report estimates the Transbay Terminal Project will cost approximately two billion dollars to construct and another billion to finance, or three billion dollars total. The Alternative is estimated to cost somewhat more than a billion dollars to construct, and perhaps another half billion to finance for a total cost of just over one and a half billion dollars. It is easy to see where the savings are:

1. The Alternative avoids approximately $30 million in construction cost by eliminating the temporary terminal and ramps.

2. Permanent ramps for the Alternative design are much shorter and simpler, saving $100 to $200 million, depending on which ramp design is selected for the proposed terminal at the existing site.

3. The Alternative terminal is much more compact, reducing exterior size while preserving usable space within the building. Moreover, because the Alternative design has a smaller impact on the neighborhood (only a pedestrian bridge crosses one major street) there is less need for an expensive façade treatment. As a result, as much as $300 million can be saved in constructing the terminal building.

4. Caltrain's connection to the terminal is shorter and easier, reducing costs for the rail portion of the project by approximately $200 million.

5. The Alternative design allows development of more valuable land along Mission Street, increasing the project's total revenues by some $50 million.

Finally, financing costs for the Alternative are greatly reduced, not only because construction costs are much lower to start with, but also because revenues would be available from development and other sources to pay approximately half these costs at the time of construction. As a result the total debt to be financed would be closer to half a billion dollars

under the Alternative, versus a billion and a half-dollars under the project as proposed in the Draft Report.

Limited Funds Available

The higher cost of the terminal proposed in the Draft Report might be ignored if funds were readily available for the Project. However, just the opposite is true. As acknowledged in the Draft Report, a final financing plan cannot be offered at this time because sufficient sources of funding cannot be identified. The Draft Report suggests that future revenue sources may develop at state and local levels, but these are dependent on factors beyond the Project's control. The Draft Report also proposes to pay approximately twenty percent of total costs through Passenger Facility Charges (PFC's) of $2 to $3 per day collected from each commuter using the terminal - a novel concept for a local transit project - which would increase by fifty percent commute costs for a typical AC Transit rider. Finally, the Draft Report suggests approximately $600 million could be borrowed from the federal government under its TIFIA loan program, but it is unclear what additional source would be used to repay the TIFIA loan. In summary, the level of available funding is adequate for the Alternative but not for the three billion dollar project proposed in the Draft Report.

Conclusion

AC Transit's position is that it likes the current Transbay Terminal and sees no urgent need for change, except for a seismic upgrade to be paid for by the State. If forced to move, AC Transit will only approve a new facility that meets all its demands regardless of cost - a Taj Mahal for buses. The result is an enormous white elephant that is neither functional nor financeable, which is perhaps the outcome intended by AC Transit from the outset. Fortunately, the environmental review laws that apply to the Project do not permit AC Transit to play dog-in-the-manger and frighten away competing alternatives with lawsuits and similar behavior. Instead, federal and state regulations require the consideration of all viable alternatives as a precondition to project approval. We therefore request the Alternative be fully evaluated prior to completion of the final Environmental Impact Statement/Environmental Impact Report for the Project.

Sincerely,

Oliver L. Holmes

SOLEM & ASSOCIATES
Public Relations and Public Affairs

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January 29, 2002

Marie Pang
Engineer
Peninsula Corridor Joint Powers Board
1250 San Carlos Avenue
San Carlos, CA 94070-1306

Dear Marie,

It was good to talk with you briefly by phone today. I'm glad you have had a chance to look at the booklet about the New Alternative for replacing the Transbay Terminal which we sent you last week.

If you have any questions, please feel free to give me a call.

Sincerely,

Jonathan Kaufman
Executive Vice President
Corporate Affairs

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February 1, 2002

Mr. Jerome Wiggins
Transit Planner
Federal Transit Administration
201 Mission Street, Suite 2210
San Francisco, CA 94105

Dear Jerome,

It was good to talk with you briefly by phone today. I'm glad you received the booklet about the New Alternative for replacing the Transbay Terminal which we sent you last week.

If you have any questions, please feel free to give me a call.

Sincerely,

Jonathan Kaufman
Executive Vice President
Corporate Affairs

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December 6, 2002

VIA HAND DELIVERY

Paul E. Maltzer
Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103-2414

RE: Public Comment on Draft Environmental Impact Statement / Environment Impact Report for Transbay Terminal / Caltrain Extension / Redevelopment Project
NOTICE OF CHANGE OF ADDRESS

Dear Mr. Maltzer:

On November 26, 2002, this office filed public comments on the above reference project with your office. This letter will serve as formal notification of a change of address for our office. Any future correspondence with regard to the Transbay Terminal Project or our public comments should be directed to my attention at:

Duane Morris LLP
One Market, Spear Tower, Suite 2000
San Francisco, CA 94105-1104

Sincerely,

Oliver L. Holmes

OLH/psb
SF\35721.1

Matthew Morrison

246 Second Street #902
San Francisco, CA 94105

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Paul Maltzer, EIR officer
SF Planning Dept.
1660 Mission Street #500
San Francisco, 94103-2414

Mr. Maltzer,

I am a resident of 246 Second Street in San Francisco, and would like to make some comments on then draft EIR for the Transbay Terminal/CalTrain downtown Extension/Redevelopment Project.

I have lived on Second Street for 2 years, and I believe this project will bring many benefits to the area. However, I would like to make the following comments:

- Please be aware that although there are many businesses in the area, there are also a number of residents. Too often in the past, construction projects have been given permission to operate at night, unaware that there are people living in the area. As the project progresses, I hope you'll keep in mind that this is a mixed-use neighborhood, and that people live here.

- I am concerned at the large number of buildings that will be demolished for this project. One of the attractive aspects of the SOMA area is the number of historic and interesting buildings built on a human scale. I am particularly thinking of Second Street between Mission and Folsom. I hope we can keep the demolition to a minimum, as I'm afraid that if these building are destroyed, they will be replaced by large, ungainly, and uninteresting buildings whose only purpose is to maximize the profit for the developer.

- I hope the possibility of tunneling is explored as much as possible, as I believe it will significantly lessen the impact to the neighborhood.

- I hope you'll reconsider the location of one of the staging areas from Howard and Second. That is only half a block from 246 Second Street, and the noise, especially at night, will be extremely disruptive.

- In section 5.21.10.1, there is a mention of noise measurements done at our building, which recorded a reading of 57dBa. However, this measurement was taken during evening rush hour—perhaps the noisiest time of day. At night the area is much quieter, and I hope a more accurate measurement of the noise levels will be taken and used as the basis for enforcing the noise ordinance.

- Figure 5.2-3 illustrates (by red shading) buildings scheduled to be demolished by the construction. This figure seems to indicate many more buildings slated for demolition than is indicated in the text. I hope that can be minimized.

- If it is necessary to close Second street to all traffic, I hope there will be provisions made to provide parking to the residents who will not have access to their parking garage. This will be a major inconvience.

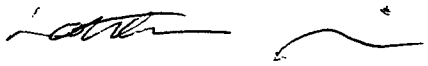
- There are a number of mentions of daily cleanup (such as watering down the dust and cleaning up contraction debris). However, a construction project of this size will greatly impact the buildings nearby, and I hope there is some provision for a through power washing and or painting of 246 Second after the project is completed, as I am sure its appearance will be adversely affected by the construction dirt and debris.

- I understand that state-of-art building techniques will be used. However, I am concerned that all the digging and impact so near our building may weaken its foundation and potentially cause some problems during an earthquake. I hope the city is fully aware of the

risks and is ready to mitigate any possible problems caused by the construction to the structural integrity of 246 Second Street.

As the project progresses, I am sure there will be a number of issues that will arise. I sincerely hope that we can work together to make this project a success and that you will be sensitive the needs and concerns of the people who make this neighborhood their home.

Sincerely,



Matthew Morrison

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Patrick Moyroud
P.O. Box 225068
San Francisco, CA. 94122 USA
415/731-0911 Fax 731-6451
pjmoy@attglobal.net

6 December 2002

Mr. Paul Meltzer
San Francisco Planning Dept.
1660 Mission St. Suite 500
San Francisco, CA. 94103

Subject: public comment, Transbay Terminal reconstruction

Dear Mr. Meltzer:

I am writing in response to the proposed redesign of the Transbay Terminal for use as a combined commuter rail and high-speed rail station. While the overall design is beautiful and efficient, I am very concerned about the rail capacity limits imposed by the unusually small number of tracks proposed (six) within or beneath the terminal. If you look at any major multi-modal rail station, in the USA or in Europe, you will see a much greater number of tracks to accommodate the frequent service required of such a facility. Even in San Francisco today, the existing Caltrain terminal has ten tracks, just to handle one commuter rail line and a few special trains. Major terminals that handle high-speed and commuter rail traffic, such as Washington Union Station and Paris Montparnasse Station, have *two or three times* as many tracks that are in heavy use from early in the morning until late at night. I do not see how the current proposed Transbay Terminal design could accommodate the kind of frequent arrivals and departures expected when the high-speed rail service begins.

The potential for congestion is increased by the fact that the proposed tracks will be underground. Mechanical breakdowns or accidents, no matter how slight, are likely to shut down tunnels and create serious disruptions. For example: anyone who has lived in San Francisco for more than a few years can tell you what a major error it was to build a two-track "stub-end" underground terminal at the Embarcadero Muni Metro station. Every weekday trains would back up in the tunnels, creating massive delays. When a breakdown occurred, the entire system was gravely affected. This problem was only solved when, 17 years later, a multi-track turnaround was constructed beneath the Embarcadero roadway. No one wants to see such an expensive error repeated in the new Transbay Terminal. I hope you agree.

Sincerely yours,



Patrick Moyroud

Tricke & Co.

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December 16, 2002

PAUL E. MALTZER, ENVIRONMENTAL REVIEW OFFICER
SAN FRANCISCO PLANNING DEPARTMENT
1660 MISSION STREET. SUITE 500
SAN FRANCISCO, CALIFORNIA 94103

Ref: DRAFT ENVIRONMENTAL IMPACT STATEMENT/DRAFT ENVIRONNMENTAL IMPACT REPORT/SECTION 4(F) EVALUATION (DEIS/DEIR) FOR THE TRANSBAY TERMINAL/CALTRAIN DOWNTOWN EXTENSION/REDEVELOPMENT PROJECT

Dear Sir:

The following are comments I ask the Environmental Review Officer to look at and respond to concerning the subject EIR:

1. **The CalTrain Extension (Section 5.2) calls for an analysis of a two switch or three switch approach into the new Transbay Terminal. The Three Switch approach requires the taking of considerably more property and much more cut and fill. This alternative seems to be a poor one and will cost considerably more. Why is it being considered as a viable alternative?**

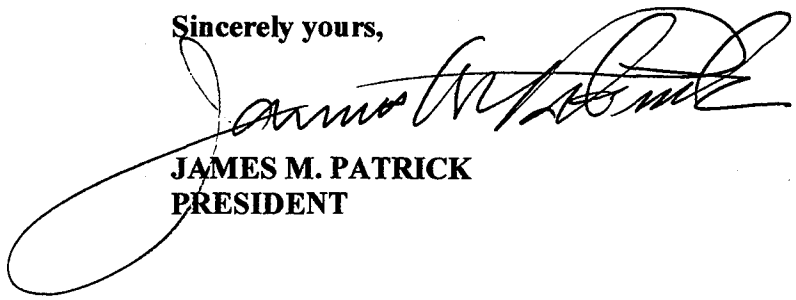
2. **The CalTrain Extension (Section 5.2) calls for the taking of 90 Natoma Street, Block 3721 number 47 for both the two and three switch alternatives. The taking of 90 Natoma appears to be not necessary relative to the Two Switch approach. Are we being too aggressive in our assumptions here?**

3. **I found no plans for any use of the properties that were acquired and demolished once the project was completed. Has any consideration been given to parks and/or public areas or will the land be sold to the highest bidder?**

4. **How likely is this project to be funded given the current State of California funding crisis?**

Thank your for your consideration.

Sincerely yours,



JAMES M. PATRICK
PRESIDENT

Paul Maltzer, EIR officer
SF Planning Dept.
1660 Mission Street #500
San Francisco, 94103-2414

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Dear Mr. Maltzer & SF Planning Dept.,

I am a resident and owner at 246 2nd Street. I am writing to voice important concerns about the Transbay Terminal Project.

I am not opposed to improving the Transbay Terminal. What needs to be heard loud and clear, however, is that the proposed project area and changes (as well as the construction process itself) will affect not just business, but the increasing number of currently overlooked San Francisco residents in that same area. Also critical is the character, historical buildings, and quality of life for this growing residential area.

There are many areas of the EIR that are not clear, and it doesn't specify or limit the kind of development and changes in several cases. This is very concerning, given the potential change to the entire development area, and the influence and political power of large developers whose interests are not necessarily in line with those of the city or its residents.

There are, however, some areas of the EIR that are clear and pose a threat to the history and character of the city. As it stands, many of the historical buildings on the north-west side of Howard Street at 2nd street would be demolished (and possibly replaced with parking structures). Once torn down, historical buildings will not come back, and an important character and personality of the city will be lost. This is our neighborhood, and part of San Francisco's unique character will be lost through these demolitions. Similarly, once built, the Transbay Terminal will stay for many years, so should be designed with the long-term character of the city in mind.

There must be designs and development plans that will only enhance the city, rather than hurt its historical buildings, character and residential neighborhoods.

Sincerely,
A concerned resident and 5th generation San Franciscan,

Greg Patterson

p.s. Please find more detailed comments attached.

Urban Design. The publication of this EIR/S is premature in a number of areas. Only the Caltrain Extension project is sufficiently realized and well developed at this time to warrant publication and comment in this EIR/S. However, impacts associated with the design of the Terminal and the design of the many buildings that will be constructed in the proposed Redevelopment Area which surrounds it are difficult to analyze since there is so little information available at this time.

The Terminal design shown is apparently just a schematic possibility and not a real design. Urban Design impacts are impossible to assess since the schematic shown was developed specifically for preliminary study and the architecture shown is apparently conjectural. Have Guidelines been developed to assist the eventual project architect? Will there be a signature style of architecture for the Terminal that is in any way similar to what is suggested by the sketches in Figure 5.16-1?

Redevelopment Area zoning and height and bulk limits would be widely different in the Full Build and the Reduced Scope scenarios making the impacts difficult to determine (see p. S-8 and Figure S-2 opposite). Furthermore, in a Redevelopment Area, the zoning and height-and-bulk limits can all be superseded. Since the Redevelopment Area has not yet been instituted, so even the boundaries of it as stated in the EIR/S might not be fixed. The City's Master Plan and Urban Design Plan are barely acknowledged in this document.

Guidelines must be developed to guide the long-term efforts of architects and developers over the many years that the numerous sites within this Redevelopment Area will be under construction. A public process must guide the preparation of these Guidelines. Paramount among the issues that must be addressed in the Guidelines are: reuse of historic fabric and contextual treatment of new buildings when they are juxtaposed with older buildings. The EIR/S does not indicate whether Guidelines will be developed.

With so little specificity regarding the Redevelopment Area in the EIR/S, what is shown as a design concept in Figure 5.16-4 on p. 5-101 and Figure 5.16-5 on p. 5-102 is misleading in this official document. These drawings were apparently developed for another project and have nothing to do with this Redevelopment Area about which so little is known. Placing these computer visualizations in this EIR/S document gives the false impression that considerable planning has gone into the guidelines for the Redevelopment Area. These drawings should be removed from the document. It should be acknowledged that so little is known at this time about the Redevelopment Area that the treatment of it in this document is inadequate even for consideration as Program EIR. A complete EIR for the Redevelopment Area should be produced as a separate, later document, or possibly a Supplemental EIR, that is recirculated for public comment, when the planning has evolved and can be studied. The chart of proposed square footages mounted on a faded, microscopic, unreadable block diagram (Figure S-2 on p. S-9) makes the Redevelopment even more unknowable. Acceptance of this document's treatment of the Redevelopment Area in this EIR/S as an adequate environmental evaluation under CEQA could be readily challenged.

Historic Fabric. In the three historic districts that are affected by the layout of the rail lines, **a number of buildings which contribute greatly to these districts would be demolished under the cut-and-cover alternative.** Even under the tunneling alternative, **a number of buildings at the corner of Second Street and Howard Street would be lost**. The geologic study, which would reveal whether tunneling is not only possible but economically feasible, is not yet complete. It may be argued that it is not possible to support structurally a tunnel under the Second and Howard corner since the tracks here would have to cover a wider area in order to accommodate rail track-switching.

However, an alternative route underground should be studied to see whether it is possible to alter the tunnel alternative slightly in order to save more of the historic resources at Second and Howard. See the example provided (Mylnarik) which shows a fine-tuning of the route at this corner in order to preserve more of the threatened buildings. In any case, a strategy could be developed to remove the subject buildings or parts of them. For historic integrity of the buildings in these districts, the front facades of the threatened buildings could remain propped and stabilized in place while the tunneling is going on, and reconstructed afterwards. In this scenario, only those parts of buildings which must be removed would be removed.

The more difficult, and less desirable, solution would be to have the three contributory buildings at Second and Howard relocated during construction and then moved back. The EIR/S states that this could be done if a place were found to put the structures. The preservation of all the threatened buildings should be required to be listed as a mitigation measure for the consideration of the decision makers and sites for temporary location should be found.

Some of the historic resources are well described (Chapter Five, pp.5-71 to 5-91) but curiously the present TransbayTerminal Building is not shown graphically or described in this section.

Graphic Description of the Project. The route of the Caltrain Downtown Extension rail layout through the city (Figures 2.2-9 through 2.2-17) is shown in nine separate maps, each of which has a different compass orientation and none of which has a North arrow. One overall location map should have been shown in smaller scale as a key to the position of each of these map sections. The only guidance one has is the "match lines". Street names are absent and have to be supplied using an automobile route map from one's glove compartment. This reader had to have Figures 2.2-9 through 2.2-17 xeroxed and then pasted together the map segments along the match lines, resulting in a snake-like collage of angled map juxtapositions that can only be folded by an origami artist. While acknowledging that this project is a complex one extending over many blocks, there are better means of presentation to make it legible for readers.

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1624 Trona Way
San Jose, CA 95125

(408) 265-3281
mikeroth@svpal.org

December 19, 2002

Comments re:
Transbay Terminal/Caltrain Extension/Redevelopment Draft EIS/EIR

Paul Maltzer, Environmental Review Officer
San Francisco Planning Department
1660 Mission Street, Suite 500
San Francisco, CA 94103-2414

Dear Mr. Maltzer,

The Draft EIS/EIR provides a comprehensive view of the project, project alternatives, why it is needed, its overall potential scope, impacts, benefits and costs. The initiating item, as made clear in the document, was the seismic problems of the existing Transbay Terminal and need to replace it with an earthquate-safe terminal. I commend staff of all agencies involved in this project for recognizing, early-on, the opportunity this provided to expand the project scope to include both redevelopment of the surrounding area and extension of Caltrain into a new terminal be built to accommodate its operation.

The need to replace the current terminal is clear and the opportunity to redevelop the surrounding area should be done where feasible, under either of the "Build" alternatives. However, I believe the Caltrain extension into the terminal should be eliminated from the planning process for the following reasons:

(1) such proposed extension, estimated to cost in the $800 million range, is far too costly for the potential ridership gain involved.

(2) the severe funding difficulties in the current economic environment, likely to continue indefinitely, will work against the Caltrain extension proposal and probably keep it from being funded, especially considering its weak economic features and more financially-attractive and cost-effective aspects of competing projects. The current official state budget shortfall, more than $34 billion, will result in severe state funding cutbacks for proposed transportation projects and there are Federal cutbacks to also be considered. Therefore, the Caltrain extension component should be dropped so the terminal replacement and area redevelopment aspects of the proposal would not be hindered by failure to secure funding for the Caltrain extension component.

(3) other potentially greater cost-effective approaches benefiting both Caltrain and MUNI Metro riders are either available now, or potentially available, and they can be implemented more quickly and should be developed.

(4) the extension puts all the burden to seek funding and build the Caltrain extension on the project partners (San Francisco Planning Department, the San Francisco Redevelopment Agency, and the Peninsula Rail Joint Powers Board), though it will be designed to allow High Speed Rail trains reach downtown San Francisco. This "piggy-backing" on these three agencies' efforts to reach downtown San Francisco, without itself seeking, obtaining and constructing its own downtown access, is unfair and unethical, and works to divert costs that otherwise should be borne by the California High Speed Rail Authority. (In fact, its own web site, regarding funding and building the system, assumes 15% of the right-of-way is in public ownership and *"will be provided to the system at no cost. This cost avoidance amounts to between $373.5 and $499 million".*) High speed rail should bear its own construction costs.

What is the funding situation of current Caltrain and MuniMetro projects?

(1) Regarding Caltrain, the DEIS/DEIR notes that Caltrain electrification is based on the assumption that the line will be electrified and new electric powered rolling stock will be purchased. It notes that should electrification not proceed, dual-mode diesel-electric locomotives would need to be purchased and the cost, estimated to be $235 million, added to the Downtown Extension component of the Transbay Terminal project. Peninsula Corridor Joint Powers Board draft minutes, for the October 31, 2002 meeting, notes that the funding availability is what is driving the electrification project and without money, there is no way the project could move ahead. In that event, I do not believe spending $235 million for the alternative approach, buying dual-mode engines, is either wise or feasible. I certainly do not believe it should be made a part of the Transbay Terminal project scope and its cost borne by the overall project.

(2) Regarding the MuniMetro, state money, if not cut due to the budget shortfall, should allow the design phase of the northern (Central Subway) portion of the 3rd Street light rail line to be completed. However, there is no funding for its construction, estimated, in 1997, to cost $750 million. In current dollars, the figure would be even higher.

What can be done? In place the highly-cost-ineffective Caltrain downtown extension proposal, there are some cost-effective approaches that should be investigated, and design proposals and cost estimates prepared for. The costs for some are almost negligible, compared with the proposed $800 million cost range for the Caltrain extension. I recommend the following be studied:

(1) Construct a covered pedestrian bridge over (or a pedestrian tunnel under) the westbound King Street traffic lanes, to provide a direct connection between the existing Caltrain 4th and King Street terminal and the MuniMetro 4th Street station. This would not only allow riders to go from one system to the other without needing to wait at red traffic lights at that intersection to turn green but also provide protect them from inclement weathe. It should attract additional riders to Caltrain and the MuniMetro extension along the Embarcadero and into the Market Street subway.

(2) Give MuniMetro trains on the surface extension to the 4th Street station complete traffic signal pre-emtion capability, i.e., have all signals turn green along the route whenever a MuniMetro train approaches in either direction. This will speed up the time it takes for riders to get from Market Street to the Caltrain terminal. It should attract yet more riders to Caltrain and the MuniMetro extension along the Embarcadero and into the Market Street subway.

(3) Increase the frequency of MuniMetro trains between the Market Street subway and the Embarcadero and the Caltrain terminal, as warranted by increased ridership.

(4) Develop a joint design of the Central Subway portion of the 3rd Street light rail line to include Caltrain single level electric trains, that could run directly into it from the peninsula. Multiple use of this subway would result in shared costs between Muni and the JPB, resulting in lower costs for both agencies and make it easier to secure funding to build it, as it would become a more cost-effective project with the multiple use I propose. Caltrain would need to be equipped with new single-level diesel-electric motive unit (D/EMU) equipment compatible with the tunnel infrastructure. Being standard gauge, it could possible share common trackage with the MuniMetro trains, or it could be built with separate tracks on its own level, as part of a single construction project. This would be similar to the Market Street Subway, where the two levels housing MuniMetro and BART tracks, and common stations and mezzanines, were built in a single cost-effective project. The new Caltrain D/EMU equipment would run using overhead electric line when in the Central Subway, and would run using the on-board diesel engines (generating electricity to power the wheel motors) when on the existing Caltrain right-of-way between San Francisco and San Jose. Should that line get electrified, this equipment would then get power from the overhead electric line and continue to be used. This would be a more cost-effective solution, when compared with the DEIR/EIS proposal to buy a new set of electric engines for Caltrains, needed to access the Transbay Terminal, costing $235 million. With joint use of the Central Subway and enhanced attractiveness of the MuniMetro surface extension into the Market Street subway, Caltrain riders will have two cost-effective ways to get downtown.

Sincerely,

Michael Rothenberg

Michael Rothenberg



CLARUS CONSULTING LLC

October 24, 2002

Joan Kugler
AICP, EIR Project Manager
San Francisco Planning Development
1660 Mission Street, Suite 500
San Francisco, CA 94103-2414

Dear Joan:

I am writing to express my strong opposition to the proposed bus storage in parking lots between 2nd and 4th streets running along Stillman Street.

The diminished air quality and increased noise that would come as a result of bus storage would render this area uninhabitable for businesses and residential tenants alike.

Sincerely,

Art Wagner
President

35 Stillman Street, Suite 203, San Francisco, CA 94107 • Ph 415.896.5110 • Fx 415.896.2367 • art@clarusconsulting.com

Francis Wong
P.O. Box 1411
Mountain View CA 94042-1411

November 22, 2002

Paul Maltzer, Environmental Review Officer
San Francisco Planning Department
1660 Mission St Ste 500
San Francisco CA 94103

Sir, these are my comments for the DEIS/DEIR for the Transbay Terminal & Caltrain Downtown Extension Redevelopment Project.

Para S.7. Concur, except that I prefer the Second to Mission option; and the Market to Mission pedestrian tunnel build or no build should be in the Superior Alternative statement. This tunnel should be built as part of the initial construction.

Para 2.2.2 and page 2-26, 2-27. The two track segment between station 41 and station 70 must be widened to three or four tracks to match the design on both ends of this segment. This intentional choke point imposes permanent severe operational limitations and prevents any flexibility to adapt to mechanical or other breakdowns. This creates congestion that completely negates any capacity improvements in the terminal or the first ten miles south. The benefit of the four track Townsend Street station cannot be exploited since the crossovers at station 44 do not provide adequate signal separation to expedite a following outbound train. On the inbound route, reducing the 4th track at station 40 is an impractical design, since any train waiting at the platform will foul the overtaking movement.

Page 2-33. By adjusting platform spacing, the two platforms angled toward Mission could be fully functional island platforms serving two tracks each and providing needed separation of Caltrain Regional Rail from Amtrak and HSR (High Speed Rail) trains. Since the ticketing, loading, provisioning, and pre trip servicing requirements are different between short and long distance trains, separate platform areas, and their comparable passenger mezzanines above, would encourage smooth passenger flow within the terminal.

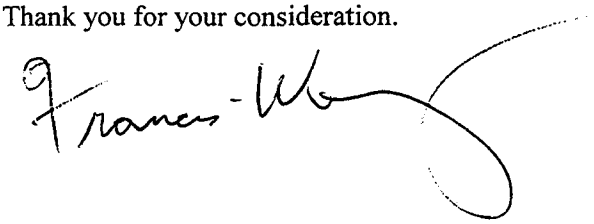
The 2nd to Mission option affords a direct high speed connection to any projected new transbay tunnel for HSR and Capital Corridor trains to Oakland, Sacramento, and east. While a new tunnel could connect to the Main Street option, it entails sharp curves and extended low speed approaches that negate the benefits of HSR.

Page 3-23. The California rail plan envisions conventional long distance passenger trains between San Francisco and Los Angeles under the Amtrak California brand by the end of 2004. It is logical that these trains would originate and terminate from the Transbay Terminal after it opens.

Page 5-113. If a diamond lane is established on both Beale and Fremont, surface rail connection should be provided from Market Street for E and F line tripper service at the Transbay Terminal. This would share use of 600 volt trolley with Muni lines 5 and 6. The incorporation of heritage trolley service at the Transbay Terminal provides both a historic link and practical direct connection to the Waterfront for both daily commuters and off peak tourists.

Page 5-118. This tunnel would be a catalyst not only for the one block Fremont Street corridor between the Transbay Terminal and Market Street, but then the area adjoining the perimeter of the Embarcadero station mezzanine concourse. A comfortable climate controlled passageway from work to transit would extend from First and Folsom to Market and Drumm. The pedestrian count for this tunnel underestimates the potential uses and benefits for the redevelopment area.

Thank you for your consideration.



GEORGE YAMAS

585 HOWARD STREET
SAN FRANCISCO, CALIFORNIA 94105
415/908-1290
FAX: 415/908-1292

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DEC 16 2002
PLANNING DEPT

Via Fax & U.S. Mail
Paul E. Maltzer
Environmental Review Officer
San Francisco Planning Department
1660 Mission Street #500
San Francisco, CA 94103-2414
Fax: 558-5991

December 11, 2002

Re: Caltrans & Transbay Terminal Project / Objection To Proposed Bus Storage At Stillman Street Area Between Second & Fourth Streets

Dear Planning Commission:

This letter is a follow-up to my oral objection on the referenced subject at the Planning Commission's 11/26/02 hearing.

I am the Managing General Partner and majority owner of a commercial building at 51 through 53 Stillman Street in San Francisco. My partners and I have owned this building since 1977 and have watched the neighborhood develop into a true mixed-use area where millions upon millions of dollars have recently been invested in both upgrading existing buildings as well as new development into retail, residential and commercial uses. The new proposed rezoning plans all call for more residential use in this area which seems consistent with the general location and overall quality of living this area offers.

Obviously, the permanent parking of hundreds of buses in the middle of this mixed –use area has significant negative impact on it and is totally incompatible with its current and proposed future uses due to noise, health-safety issues, traffic, parking, and other reasons already stated by other owners.

One can argue back and forth as to just how damaging the exhaust fumes are to the local residents and tenants but no one can seriously argue that the relocation of the buses to this area does not seriously diminish the quality of life for the tenants and residents as well as negatively impacting property values. To illustrate my point please imagine this bus storage facility was being relocated in front of your place of residence. What would be the day to day impact on your quality of life? If you own your residence how do you expect it would affect the long-term value of your home?

The impact is so negative that those affected have no choice but to oppose this relocation by any and every means they have, including litigation.

Clearly, the developers of the new projects making the bus relocation necessary have or, should have the burden of finding a lower impact site for the buses. Their responsibility for the impact of their project on other property owners seems clear and is similar to well established shaping or view-blocking issues where the party causing the negative impact is responsible to compensate the affected parties.

My suggestion is to urge any approval of the subject project's be conditioned upon the new project's developers finding a less dense, more suitable and less controversial site for their buses to be relocated on.

Staying with the current site is a lose-lose situation for everybody. The City loses property tax values, one of its' most successful mixed-use areas as well as excellent future residential sites where residents can truly walk to most work places. The locals lose their quality of life and investment value. Lastly, the developers of the sites surrounding the Transbay Project are likely to be delayed needlessly as those opposed to this bus relocation fight it. Why put unnecessary obstacles on a project that appears to be good for the City? Doesn't it make sense to help the project by eliminating this serious flaw as soon as possible?

Thank you for your consideration.

Sincerely,

George Yamas
Managing General Partner
George Yamas & Lorilane

TO ALL PLANNING COMMISSIONERS by fax

IX. Public Meeting Transcripts

CERTIFIED COPY

REDEVELOPMENT AGENCY

OF THE CITY AND COUNTY OF SAN FRANCISCO

PUBLIC MEETING)
CALTRAIN / TRANSBAY TERMINAL)
_____)

Public Meeting

November 12, 2002

Cathryn Bauer
CSR 12676
106847

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Los Angeles (310) 207.8000 | Irvine (949) 955.0400 | San Jose (408) 885.0550 | Woodland Hills (818) 702.0202 | Riverside (909) 686.0606 | San Diego (858) 455.5444 | Palm Springs (760) 322.2240 | San Francisco (415) 433.5777

REDEVELOPMENT AGENCY

OF THE CITY AND COUNTY OF SAN FRANCISCO

CITY HALL, ROOM 416

1 DR. CARLTON B. GOODLETT PLACE

SAN FRANCISCO, CALIFORNIA 94102

Tuesday, November 12, 2002

4:00 p.m.

Cathryn Bauer, Certified Shorthand

Reporter No. 12656

BARKLEY
Court Reporters

APPEARANCES:

Michelle, W. Sexton, President

David Habert, Moore Iacofano Goltsman, Inc.

Norman Rolfe

Jim Haas

Jan Johnston

Francis Mathews

Margaret Okuzumi

Ken Bukowski

Andrew Sullivan

Richard Mlynarik

Michael Kiesling

James Dear

Bruce Barnes

Andy Chow

Tom Dillon

PRESIDENT SEXTON: I would like to clarify any confusion regarding the location of today's public hearing on the TransBay Draft EIS/EIR. When the Draft EIS/EIR was released on October 4th and the initial plans for the public hearing were being made, it was assumed that as is customary, there would be a joint public hearing between the Redevelopment Agency and the Planning Commission. However, as a new Planning Commission has just been confirmed by the Board of Supervisors, the Planning Commission will be scheduling a separate public hearing on the Transbay Draft EIS/EIR. The public will be notified of the Planning Commission's public hearing when the date is set.

For the public's information, the public comment period that was scheduled to end on November 25th will be extended to allow the public hearing by the newly seating Planning Commission and the public will be notified of the new closing date for public comment.

Notices have been placed on the bulletin board of the Legislative Chambers, and a staff person has been placed near the entrance to direct interested members of the public to this meeting room. I apologize for any inconvenience to the public. Thank you.

SECRETARY TANJUAQUIO: Madam President and commissioners, the next order of business is the hearing on the Transbay Terminal, Caltrain extension, Draft Environmental Impact

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Statement report. Madam Director.

MARCIA ROSEN: Thank you, Mr. Secretary. EIS CalTrans -- Caltrain extension. A senior planner, David Habert, will give a presentation on this item. And then as you know, the main purpose of this item is to hear public testimony.

DAVID HABERT: Good afternoon, President Sexton, Vice President Palamountain, members of the Commission, and Director Rosen. This is an assisted hearing device. Helps assist me in hearing you so I can hear you correctly. That's out of the way. Before we start the hearing on the Draft EIS/EIR, there are two points I would like to make. Again, just to echo President Sexton's statement that there was a confusion over the room, signs have been posted. There are people directing folks up to this room for the hearing. Second of all, this is the first of three public hearings on the Draft EIS/EIR. The second will be held tomorrow -- that's November 13th -- down in San Carlos, 1250 San Carlos Avenue, the headquarters of Caltrain and SamTrans, then a subsequent public hearing that the Planning Commission will hold. That has not been scheduled yet. Everyone will be notified when that is scheduled. I'd like to also point out, um, there are several people who have been instrumental in helping to get this together. Maria Ayerdi from the Terminal Joint Powers Authority. Joan Kubler from the Planning Department. Paul Maltzer from the

Planning Department. From the City Attorney's office, John Cooper. David Mansen.

MICHELLE SEXTON: Can you stand up so the commissioners will know --

DAVID HABERT: Yes, the scores of people whom -- will you stand up please -- who have helped put this together. It's been a very good effort in terms of the City family working together.

MICHELLE SEXTON: For the commissioners, can you identify the individuals.

DAVID HABERT: Yes, John Cooper.

BERTHA ONTIVEROS: From the City Attorney's Office.

MICHELLE SEXTON: Which office?

DAVID HABERT: I'm sorry. Paul Maltzer, Department of City Planning. Joan Kubler, Department of City Planning, Maria Ayerdi, CalTrans -- Caltrain. Sorry. David Mansen, who is the Transportation Group -- who is the consultant heading the team doing the EIS --

SHARON KYLE: Sharon Kyle.

DARSHAN SINGH: I didn't hear you.

SHARON KYLE: Sharon Kyle from Moore Iacofano and Goltsman.

DAVID HABERT: Okay. Again, um, the purpose of this meeting is solely to hear public comment on the adequacy and accuracy of the Draft Environmental Impact Statement/ Environmental Impact Report. The draft was issued on

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October 4th pursuant to -- we're within the 45-day review period of the Draft EIR/EIS. Again, the 45-day review period would have ended on November the 25th. However, as a new Planning Commission has just been installed, and will have their first meeting later this week, the public review period will be extended to accommodate the Planning Commission here. Once the Planning Commission releases the date for the public hearing, you and the public will be notified of the date. You may also keep abreast of the items with respect to the Draft EIS/EIR by contacting the Planning website which is http colon slash www dot sfc dot www dot sfgov dot org slash sfra slash planning. The Redevelopment which is the same as Planning is http colon slash www dot sfc dot www dot sfgov dot org slash tjpa.

Upon closing of the review period, staff will respond to all comments in writing. The draft with modifications and the responses to all of the comments will constitute the final Environmental Impact Statement/Report. Finalization and certification of the EIS/EIR is expected for the middle of 2003.

At this point, I would like to turn the floor back to the Commission to receive public testimony on the adequacy and accurateness of the Environmental Draft Impact Statement and so forth.

MICHELLE SEXTON: Yes.

SECRETARY TANJUAQUIO: I have speaker cards. The first speaker is Norman Rolfe, followed by Jim Haas. Mr. Rolfe?

NORMAN ROLFE: Good evening. I'm Norman Rolfe of San Francisco. We are in the process of preparing our comments and suggestions on possible changes in the rulings, and construction, and so forth and so on. I'll just hit some highlights of what I see coming down the line.

And, uh, generally, we support these projects, want to see them go ahead. But there are some modifications we're going to suggest. One thing we want to do is draw the attention of the agency to Proposition H in November 9 which says we shall not approve projects which might interfere with Caltrain, or the terminal, or so forth, including high-speed rail in the future. One of the things that should be done is that the attraction should actually go underground starting from the north end of Tunnel Number 1. Starting at 16th, the tracks would go underneath. This is going to be necessary in the future when this high-speed rail gets here, as we hope it will. That can be financed by not installing some of the ground storage tracks they have in the city. Those could be surface tracks. It's really critical that that be done.

And we also suggest the study authors engage in extensive ground evaluation engineering because of the sort of things that have been mentioned or will be mentioned,

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that they should be encouraged to examine and minimize effects on surrounding properties. That is, I believe -- we hope these drawings illustrate this, that they could reduce the taking of property by some little, slight changes, slight changes of right-of-way, and so forth and so on. And the terminal itself, might be possible to defer certain parts of it, certain aspects in the future, and get the thing going a little easier that way.

I believe that is, uh, all I will have to say at the moment. As I have said, we will hopefully produce quite an extensive little report for our suggestions so how some of these impacts can be mitigated a little better. Thank you.

SECRETARY TANJUAQUIO: Mr. Haas, followed by Jan Johnston.

JIM HAAS: Madam President, commissioners, I'm Jim Haas. I have been a member of many other committees, TransBay, CAC, and actually four prior committees to that. So I've been involved in this close to 15 years. I've seen an EIR be stopped and begin again, so it gives me great satisfaction to be here and see that it's almost at the completion stage. I went through it. It's a very dense document. And I'm sure that people having specific focuses on particular issues will have some comments on its accuracy and completion.

I want to make a comment on the larger question which relates to the money. And if you look on page 6 dash 8, in

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the chart there, there is a item that is numbered number 8 which is about $600 million. The source of the funding is very vague, and includes such things as Proposition 51 which is defeated by state voters last week, and some other very problematic things. That $600 million hole is going to be hard to fill.

Now, when this project, um, uh, came together in its present manifestation, San Francisco said in a fairly loud voice that we think this is so important that we're going to pay for a good deal of it. And therefore, I think we need to give thought, and this EIR needs to give thought to provide more local funds and cover that $600 million hole.

The first thing I think needs to be addressed in that EIR is the current configuration of the Redevelopment District with the holes in it that deal with developed properties. This means, that means that the increment for those six or seven holes are not going to be available for this project. There may be, um -- let me also say that I think that we also need to consider, and this should be discussed in the EIR -- is extending the district to the south to cover, particularly the two big parking lots on the south side of Folsom Street being contemplated for large numbers of housing units. That also could be a major source of tax increment for the area. And then, thirdly, I think -- this needs to be discussed in the EIR -- we're on the

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three-minute rule -- that the tunneling does not in any way make it impossible for major developments to go forward. And there is one on Mission Street which I think needs to be addressed specifically, for that matter, relating to the question of the demolition of buildings for the tunnel, particularly in the Historic District. Again, the choice of demolishing all these historic buildings for cut-and-cover as opposed to tunneling should be fairly obvious here. The EIR does not agree that you could build over those parcels where there is no choice but that there has to be demolition. And we should have in the EIR some idea of what can be built.

SECRETARY TANJUAQUIO: Jan Johnston, followed by Francis Mathews. Please state your name.

JAN JOHNSTON: Jan Johnston. I'm speaking on behalf of the management of 88 Perry Street in Yerba Buena Gardens which is a fairly new project with about 260 low-income apartments at 3rd and Perry. It's adjacent to the proposed bus storage where the diesel buses would be stored for the Golden Gate and AC Transit. And the concerns which were not addressed that we could see in the study is that, um, this building has operative windows, relies exclusively on the outside air for ventilation. And it is, you know, directly next to this proposed bus storage site. So we would like to have, um, studies done on the effects, the carcinogenic effects of

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diesel fumes. I know there are studies now on that.

Also, there's concerns about noise, and also traffic issues with the buses, especially on 3rd and 4th Streets. So pretty much, we're asking that you consider an alternative site closer to the Transbay Terminal. Thank you.

SECRETARY TANJUAQUIO: Francis Mathews. Followed by Margaret Okuzumi.

FRANCIS MATHEWS: I'm Francis Mathews. And um, we, I manage several properties along Stillman Street which like the previous speaker is adjacent to the new bus storage area that's proposed for the new Transbay Terminal. We weren't given a lot of advance notice, that we have letters that will be going out that will be more specific. But you know, our properties, you know, um, are both residential and commercial. They're lower-rise buildings with operative windows for ventilation. The EIR didn't address any of the added impacts of the, the diesel bus fumes, or the additional noise that would be associated with parking several hundred buses right next to, um, our properties.

This neighborhood is going to be severely impacted over the next 10 years during the seismic upgrade of the west approach to the Bay Bridge and followed, at the same time bringing the Third Street Rail Project down through the neighborhood and -- possibly the, you know, bringing a

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high-speed rail down Second Street. And we are in favor of the Transbay Terminal. We just feel that, um, um, um, we've been -- we are going to be severely impacted by all these other projects, and to, you know, wait all that out just to push the, um, bus storage facility down on our backs is unreasonable. We'd like to see, um, other alternatives investigated, including, um, in some of the redevelopment projects, restoring the buses down the lower level with those, widening the existing ramps where AC Transit buses are currently stored, or looking into other areas in mission Bay for the buses. So that, that sums it up. Thank you for your attention.

SECRETARY TANJUAQUIO: Ms. Okuzumi, followed by Ken Bukowski, and then Andrew Sullivan.

MARGARET OKUZUMI: Margaret Okuzumi speaking on behalf of Bayview Alliance, a grassroots riders groups with members throughout the Bay Area, particularly concentrated along the Caltrain line from San Francisco to Gilroy. Our organization strongly supports the Transbay Terminal project, including the CalTrain Downtown Extension, and we're very pleased those projects are moving forward and making progress. We're still reviewing the EIR, and hope to ask some of our questions tomorrow during open house.

Just some initial comments for the record, one is that we ask that the, the area encompassed by the EIR be extended

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to include 16th Street and a possible upgrade separation there. We think this is important for the future operations and efficiency of the train service through that area and also a degree of separation.

We also think of the some of the impacts of the building might possibly be adjusted to reduce impacts, and to realize a cost savings to be used to grade separate those areas which have a great potential for conflicts with Muni service and proposed future Muni service, especially along 16th Street.

Um, just a note that the, the projected bicycle parking figure at a Transbay Terminal seems pretty low. It's listed as 105. I'm sure that the San Francisco Bicycle Coalition might have some more input on this. I know the Palo Alto bike station is currently parking 60 bikes a day. And ridership at that station is lower than projected at the Transbay Terminal, especially 20 years from now.

So I think that Norman Rolfe, who spoke first, made a lot of comments that we agree with. So we would ask you to consider, I won't repeat all his comments. And we'll be submitting comments before the end of the period.

SECRETARY TANJUAQUIO: Mr. Bukowski.

KEN BUKOWSKI: I'm a councilmember from the City of Emeryville; followed this project the last 10 years or so. I want to make a couple of points about the proposal

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currently out there to take out the bus ramps. It's really in the East Bay, sued CalTrans on account of taking down the ramp. A settlement was entered into where they were going to take the ramp down and proposed to put it back. It doesn't make sense to put it back without it being part of the new project. Somebody should look into that. We want to make sure that the terminal has viability.

Another concern is that when B.A.R.T. to San Francisco Airport is completed, that CalTrans will lose ridership. We have to be careful here. We want to keep the viability of this terminal so we don't lose it. Also I would hope that you would look at alternatives to building the expensive project before you. Maybe a lesser project was make it happen as opposed to this.

I'm going to submit detailed comments.

SECRETARY TANJUAQUIO: Mr. Sullivan, followed by Richard Mlynarik.

ANDREW SULLIVAN: I'm With Rescue Muni, the San Francisco Train Riders Association. We have been in favor of this project for many years, and so we are speaking on behalf of the project largely as written in the EIR, though of course we would like to urge the project team to pursue opportunities for cost reduction where it doesn't lead to reduction in service quality. We think it is a very, very important project for the region at large. Not only does it

serve the commuter population and make the Caltrain service more useful, but it also serves the high-speed rail service that has to terminate in Los Angeles to be useful. California high-speed rail running from the Transbay Terminal, the Grand Central Terminal for San Francisco would be much more useful if it terminated in L.A.

We are pleased the terminal design has been put in place to lead to that ultimate project. A lot of years went into planning Grand Central Terminal a century ago in New York City. We're still benefiting from it today. It makes sense to repeat that experience here. A few specifics here that we'd like to make recommendations on. We know there's a choice among underground alignments for the service. We favor the Mission service that leads to a potential transbay tube. If rail will go across the Bay -- it could happen at some point, and we think it should -- we think through a new tube is the way to go that connects high-speed rail here to high-speed rail in the East Bay via high-capacity infrastructure. That makes sense because of, we don't think it's necessary to keep that terminal loop nor the buses, as long as the buses can maintain the same level of service which appears to be the case in the design as we've looked at it here. You can take that bus loop down, and use the land to fund the project, and reduce the cost to taxpayers which in this time of economic uncertainty is particularly

appropriate. Plan for rail across the Bay in a not-too-distant future when high-speed rail is being extended beyond the initial network.

Couple of initial suggestions. We favor an underground connection to Muni Embarcadero station. It's important, much like in Europe where we have connection to SBahn and UBahn to the underground connection. It needs to be considered as part of the ultimate plan so users can stay out of the weather. This doesn't refer to the proposed Folsom alignment. We don't think that's necessary. A Pine Street alignment would make no sense. These are largely details. A very good job. We'd love to see this terminal get built for San Francisco with all deliberate speed.

SECRETARY TANJUAQUIO: Mr. Mlynarik.

RICHARD MLYNARIK: Our organization has been involved in regional transit issues, including marginally on the Transbay Terminal, for over a decade now. We're extremely pleased at the direction that process has taken. Something that needs to be borne in mind when you have people up here having a lovefest about how promising the Environmental Draft Report is, this is largely the outcome of an over-two-year Metropolitan Transportation Commission happened with the cooperation of Caltrain, CalTrans and from City Redevelopment. I think that's part of the reason that we're heading in the right direction. This isn't just one

document, but an outcome of a great deal of study by a great number of individuals.

I'd like to include in my comments many things said already. Mr. Rolfe who spoke first said things about the -- separating the Caltrain alignment at 16th Street so we don't have to come in and dig in freshly-dug tunnels once separation becomes necessary. For specific issues, alternatives in the Environmental Impact Report as written, I believe the Mission Street alignment is superior because it has more capability of accommodating high-speed rail service in the future.

I think it's imperative the full development program be carried out. This is a premiere site to have transit-oriented development anywhere this side of New York City. It would be an abdication of San Francisco's responsibilities in the region and nationally to put up three- or four-story buildings. I think it's important to note this really is an integrated project. Transbay Terminal for bus service, Caltrain extension is what links them together. It's redevelopment which helps it work and helps the redevelopment work. So I think that's quite clear. This is documented. I encourage you to think of it this way.

I will also be making more detailed comment in the future of a more technical nature. I think it's important

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to note we have potentially an excellent project here. I look forward to you, and the city, and original agencies working to see it come to fruition.

MICHELLE SEXTON: Just for the people who have entered the hearing room, if you'd like to speak on this item, number 4(d) on the agenda, you can fill out a public speaking card and hand it to the secretary. If you could please speak into a microphone.

MICHAEL KIESLING: Good evening. Michael Kiesling of San Francisco. I've been involved in this project for quite some time also. Over the last decade, it's been refreshing in the last couple of years to see San Francisco take a role in this and conduct a professional study that's coming up with real answers and solutions into finding out how the project can be built and finished. In the past, if you followed this study, there were a lot of strange little studies that went along with this that had diesel trains running down Brannan Street or down Market Street. It's good to see the Commission and the city working to get the synergy of redevelopment in the transbay area, and bring transportation from the East Bay and Peninsula together in one place.

I will also be making comments. I agree with many of the previous speakers. We have an ability to clean up almost every property that has been languishing down there

for a long time. The Transbay Terminal has anguished over what has been going to happen to it for about 30 years now. Also, it's important to remember like the previous speaker said that this is probably the premiere opportunity in this country for the fusion of land use and transportation. And we're lucky that we're able to take some of the profits coming from development, the opportunity to develop the land there to work on the terminal to show when it comes time to get the funding in line that, um, San Francisco is making a large contribution to this project locally. That's about it. Thank you. Have a good evening.

SECRETARY TANJUAQUIO: Last card I have is from James, I believe it's Dean.

JAMES DEAR: My name is James Dear. I speak on behalf of homeowners at 21 Stone Street. We're concerned about the fumes from the storage unit. I mean the bus storage unit at the proposed site between Second Street and Fourth Street, concerned about the traffic impact on Second Street if buses are going to be grade separated, going to go on a rim across or above Second Street, then again between the storage, Third and Fourth Street, if we're going to cross that grade or be above Third Street. It's a very heavy-use street, Third Street.

Also concerned about the transit impacts for the residents in the nearby area. Document says 125 will be

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canceled, the 45, the 30, the 10, and all we get is a central subway. As far as I read, we're going to have a stop on Third and King, and, and then again at Moscone Center. Three blocks either way. I count four bus lines. It doesn't seem that San Francisco is friendly for the people living in the immediate area. We have an opportunity for open space, for parks. We live in a lot of concrete there. I don't see a lot of green space proposed, especially for dogs and such like that.

SECRETARY TANJUAQUIO: The next card I have is from Bruce Barnes. Mr. Barnes.

BRUCE BARNES: Good evening. I'm from 169 Stillman Street between 3rd and 4th Streets. My primary concern this evening is the proposed bus storage transit facility that's being proposed between 3rd and 4th in the area of Stillman. We've gone on the record with a letter quite some time back regarding some of the issues we'd like to see addressed specifically with regards of the bus storage facility and its impact on the neighborhood. I think that -- in reviewing the EIR report, I only saw a brief paragraph that considered the impact on the neighborhood. I'd like to see more time on some impact we perceive on diesel fumes, health effect on the neighborhoods. We have a lot of businesses, now housing going in that area. Our building is -- right now, we're in negotiating for a charter school, 15-20 feet

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away from where the bus storage facility is being proposed. I'd like you to reconsider the location. There are a lot of areas that would better serve that type of facility, especially with not having a lid over the top of it like the current freeway is. Thank you.

SECRETARY TANJUAQUIO: Andy Chow.

ANDY CHOW: Hi. I'm Andy Chow. IÆm director of BayRail Alliance. Basically, I personally support this, this this proposal to, for new Transbay Terminal, and a new station for Caltrain, and a new extension. This project is really unique in a way that instead of relying on City -- instead of subsidizing the cities of redevelopment which unfortunately some other projects in this Bay Area are kind of like. The land use supports the project. Whatever development process came from the government, can use to expand transportation. This is what it is. This is reality in other countries, where they have intensive land use. Integration of transportation needs to happen in San Francisco. It is about time.

Regarding the EIR, it seems to me that the ridership for Caltrain could be higher. I think that the ridership has been somewhat conservative, and a little bit too strict in terms of their, uh, assumptions of the Caltrain service levels. I think that if they can play around with what kind of service levels that there is and possibly include

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high-speed rail, and maybe -- perhaps, there will be much greater ridership, more than enough to justify the project. Now, the project projection does justify it. But I believe there will be more. Thank you.

SECRETARY TANJUAQUIO: That's all the cards I have, Madam President.

MICHELLE SEXTON: Is there anyone in the public who wishes to address, could you come up, please.

TOM DILLON: Hi. My name is Tom Dillon. I just think that the rebuilding of Transbay Terminal or a transit terminal will be absolutely wonderful. I think that CalTrain needs to be -- speedier trains. The whole system needs to be much speedier. We live a rapid-moving world. Going around down to San Jose in a one-hour trip is just too long. I'm looking forward tremendously to the high-speed connection between Los Angeles and San Francisco, and I hope they utilize the absolutely best technology which we have. I'm a resident in the United States, employed by NASA. Thanks a lot.

MICHELLE SEXTON: Thank you. Public comment on this matter's closed. Any more comment? Not seeing any more comment. Public comment on this matter's closed. Thank you.

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Dated: Nov. 25, 2002

Cathryn Bauer

Cathryn Bauer
C.S.R. 12676

TRANSBAY TERMINAL/CALTRAIN DOWNTOWN EXTENSION/

REDEVELOPMENT PROJECT

DRAFT ENVIRONMENTAL IMPACT STATEMENT/

DRAFT ENVIRONMENTAL IMPACT REPORT

PUBLIC HEARING

11/13/02

---oOo---

San Mateo County Transit District
1250 San Carlos Avenue, Second Floor
San Carlos, California

REPORTER'S TRANSCRIPT

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SAN CARLOS, CALIFORNIA, WEDNESDAY, NOVEMBER 13, 2002

7:07 P.M.

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MS. PANG: Good evening, and welcome to the second public hearing for the Transbay Terminal/Caltrain Downtown Extension and Redevelopment Project.

I hope you had a chance to stop by across the hall there at the open house and chat with the team members about the various components of the project and their impact on the environment.

My name is Marie Pang. I'm staff to the Caltrain JPB, and I'll be facilitating the hearing tonight.

For the record, this is the official public hearing on the Draft Environmental Impact Statement/Environmental Impact Report for this project. Throughout this evening, we'll be referring to this document as the Draft EIS/EIR.

The Draft EIS/EIR was released for public review on October 4th, and the public comment period is scheduled to end on November 25th.

This hearing is being conducted on behalf of the project co-lead agencies: the City and County of San Francisco, the San Francisco Redevelopment Agency, the Caltrain Joint Powers Board, and the federal lead

agency, the Federal Transit Administration. This hearing is being recorded by a court reporter.

After a brief presentation by staff, we want to devote the rest of the evening to hear from you. Please be sure to fill out one of those speaker forms. If you haven't done so, please raise your hand, and Sharon will give you one.

The purpose of this -- Sharon?

The purpose of this hearing is to receive your comments. No responses will be given tonight. However, they will be addressed in the Final EIS/EIR and will become part of the administrative record for the project.

You can also submit your comments in writing to Paul Maltzer, environmental review officer for the City and County of San Francisco. His address is in the newsletter that's on the table back there. Written comments will also be responded to in the Final EIS/EIR.

At this time, I would like to turn the meeting over to Maria Ayerdi, executive director of the Transbay Joint Powers Authority. And many of you also know her as a director on the Caltrain Joint Powers Board, and she's also the project director for this project.

Maria.

MS. AYERDI: Thank you, Marie.

Good evening, everybody. Thank you very much for coming here tonight. It's a pleasure to have you. We're very excited about this project.

As you know, it includes the building of a new Grand Central Station in downtown San Francisco. We have partnered up with San Mateo County and Santa Clara County here, the Joint Powers Board, to help build a new facility and extend Caltrain into it.

It's an exciting project, because not only will it be a transit hub for buses and rail, but it also will be designed to accommodate future high-speed rail operation.

As you know, the senate -- or the legislature and the governor passed Senate Bill 1856. It goes to the voters in 2004; and if it passes, the first segment that will be built will be from Los Angeles Union Station into the San Francisco Transbay Terminal.

Eventually there's a possibility for the trains to continue on to the East Bay via an underwater tube under the bay and connect to the capitol corridor. So some day you'll be able to take the train from Los Angeles into the terminal for a two-and-a-half-hour ride and connect on to Sacramento and the rest of the country. So we're very excited about it.

The project also includes the development of

the surrounding land, approximately 4,700 new residential units, retail, indus- -- commercial and entertainment opportunities also abound.

So what I'd like to do is introduce Joan Kugler who's here with us tonight. She's our senior environmental officer from the Department of City Planning on this project; Darrell Maxey, Caltrain; he's the chief engineer.

We also have Sharon Kyle with us in the back here today. She's our MIG public outreach consultant. I see Paul Maltzer in the back there from the Department of City Planning for the City and County of San Francisco. You will address your comments to him. We have Dave Mansen, our consultant in charge of the environmental document from Parsons Transportation Group. I also see Gui Shearin in the back there.

And if I miss anyone, I -- I'm sorry. But thank you all for being here, and we look forward to hearing your comments. And I will now turn it over to Joan Kugler.

MS. KUGLER: Okay. We have a short presentation that gives you a broad generalized overview of the project, and so that's what I would like to do.

As Maria and Marie said, that the EIS/EIR is being circulated. It went out October 4th. And the

close of the public review period will be -- is now scheduled for November 25th.

This EIR -- EIS/EIR is just the latest of a lot of study that has gone into the terminal and for looking at SamTrans, Caltrans, AC Transit. All these agencies have had input into our work.

The Transbay Terminal is one block south of Market Street in downtown San Francisco. As you would come in over the bridge from the East Bay, you see downtown San Francisco, and the purple is where the new Transbay Terminal would be. It is at the site of the existing Transbay Terminal.

We've got three major project components for this in the environmental document. There's a Transbay Terminal replacement, the extension of Caltrain 1.3 miles from its existing terminus to the new Transbay Terminal, and a redevelopment plan to do transit-oriented development on the public lands around the terminal.

Our objectives are to provide a new terminal which would be a multi-modal facility to extend Caltrain and to establish the Redevelopment Plan.

First part is the Transbay Terminal itself. We have -- We are -- In the environmental document, we looked at two potential alternatives: the west ramp and

the loop ramp alternatives.

The proposed -- This particular slide shows what the west ramp alternative would look like. The new terminal would be in yellow where -- at the site of the existing terminal. Because it will be on the site of the existing terminal, we will need to put in a temporary terminal for buses and -- to use during the time that the new terminal is under construction. That's shown in yellow.

Caltrain would come up Seventh Street and then swing into the basement of the new terminal, and the bus -- new bus ramps from the freeway would link up the freeway and the new terminal.

There would be a need for additional bus storage, and we have allocated two sections underneath the freeway between Second and Fourth Streets. And that's those two areas there.

The MTC study that was completed in January of 2001 came up with a concept for a new terminal, and this shows one of their conceptual drawings for a multi-level terminal with a conceptual capital cost for the conceptual terminal being about a billion dollars.

In section view, we would have the train level in the lower basement. Then there would be a train mezzanine, which would be a cueing area and ticketing

area.

Additional ticketing would be at the ground level along with Muni transit, and there would also be some retail and other uses.

The concourse level would be a level where people would start to get up to the bus areas, additional ticketing, additional ability to have retail and/or cultural space.

The AC Transit level would be where most of the AC buses would come in, and passengers would board or exit. And then other buses and paratransit would be at the topmost level.

We have carried a optional pedestrian connection from the Transbay Terminal to BART and Muni Metro, and that is one block away on Market Street.

The other -- next project component is the Caltrain downtown extension. As -- We have two potential alternatives that we're looking at: Second-to-Main and Second-to-Mission.

Okay. If you look at this area, No. 5 is the existing Caltrain station. The underground alignment would go down Townsend S- -- go east on Townsend Street and then come -- turn into Second Street, go north until it swung into -- to the Transbay Terminal, which is No. 1 on this map.

In both alternatives, that segment is exactly the same. The differences come in where the tail track would be. Number 3 is the Second-to-Mission alternative, and No. 4 is the Second-to-Main.

There will also be some work that will need to be done in the Caltrain yard and in the existing Caltrain area. Go down Townsend Street, turn the corner, swing up Second Street. Go up Second Street until you reach the area where the new terminal will be. And then you see in the red is the Second-to-Mission, and the yellow is the Second-to-Main alternative.

Transbay Terminal is an extremely important transportation connection from the freeway from the East Bay to San Francisco. Autos can come off the freeway and be right there by the terminal. AC Transit and Greyhound. You see here the two-commuter rail.

Muni will continue to serve the area as well, we mentioned, the potential connection betw- -- to the BART and Muni and then, of course, Samtrans and Golden Gate Transit. So all those elements come together at that one hub.

The third project -- major project component is the Redevelopment Plan. We're also looking at two alternatives for this. One would be what we call the Full Build alternative, which has about 7.6 million

square feet, 4,000 -- approximately 4,700 dwelling units, and then the Reduced Scope alternative, which has approximately 4,700 square feet and would have 3,400 units, dwelling units.

We're looking at the development of the publicly owned land, which is shown in red. Both of the alternatives will be within that blue boundary, which would be the new Redevelopment Plan area.

MTC study looked at both the existing area around the Transbay Terminal and then what could be in the future with the new terminal. They had the 7.6 million square -- square feet is included in hotel, and -- plus -- which would be right by the terminal, plus other buildings that would be along Folsom and, I guess, Main.

Okay. Cost estimate. We worked out -- In Chapter 6, we have cost estimates for all the alternatives, but when -- we put this slide together as a indicator of what one of the alternatives could cost.

This is the west ramp terminal option with the Second-to-Main tunnel in a tunnel configuration and the Second-to-Main alternative for Caltrain. To re- -- The cost estimate is approximately one point three point -- 1 billion 3.1 million dollars to rebuild the terminal, and $786 million for the downtown extension.

Because we would be looking at loan, we would need debt service, which would add to the cost; and then we're hoping to do value engineering and perhaps come down with a reduction in cost. So the grand total would be 2 billion 668.6.

The funding plan shows where we have located the probable funds for the downtown extension: local sales tax; federal moneys: We talked about -- TIFIA, which is Transit Integration Facilities Act, and that's a loan program; other federal moneys; state; and then there's a number of local measures that could be used.

So looking at a pie chart, federal funds would be approximately 21 percent, state funds 15 percent, and local funds would actually be 64 percent because the bridge toll funds and other local funds would add up to that.

In the environmental process, we had scoping meetings in April 2001. There was a scoping meeting right here in this room. We reevaluated the alternatives according to the public comments that we had gotten. We did some engineering to further refine the project components; and then, of course, we went into the environmental evaluation phase and prepared the Draft EIS/EIR, which has been circulating for the last month.

Long-term environmental impacts would be displacements. Both terminal alternatives would displace two nonresidential uses, and the downtown extension alternatives range from 23 to 60 residential units, 40 to 58 businesses.

There would be noise and vibration impacts from bus storage east of Second Street. We're talking about mitigation with a sound wall. Vibration impacts were also found which would be mitigated with track fasteners or tie systems that would be resilient.

The redevelopment component would eliminate approximately 1,950 off-street parking spaces. However, we are adding a parking garage at Fourth and -- Street, and also the project is expected to encourage a great increase in transit use.

During the construction phase, which is a temporary phase, there will be some need to close block by block Seventh Street with detours.

The tunneling option would also require detour plans and parking removal for at least one block. And then for the temporary terminal, we would need to do contra-flow lanes and remove some parking and traffic lanes on Beale, Folsom, and Main Street.

Again, during the construction phase, parking would be removed on sections of Townsend, Second and

Third Street as would the tunneling option also would remove some parking, much more limited amount.

Construction noise and vibration could affect nearby residents and workers, and we have a set of mitigation measures which will reduce that impact.

We did come and find unavoidable adverse impacts. The No. 1 was demolition of buildings that are either eligible or on the National Register of Historic Places. Both options would require the demolition of the current terminal and loop ramp, which are contributing elements to the Bay Bridge.

If cut-and-cover is the selected construction methodology, that would require the demolition of 13 buildings that are eligible for the National Register. Tunneling reduces that by ten buildings but still would require the demolition of three eligible buildings.

We found traffic congestion which exceeded our thresholds of significance at these seven intersections [indicating].

Our environmental schedule is to -- we released the document on October 4th. Last night we had a hearing in front of the Redevelopment Commission. Tonight is the Joint Powers Board public hearing. The San Francisco Planning Department Planning Commission

will also have a hearing.

Due to a change in the way the Planning Commission members are appointed, we haven't had a Planning Commission since last June. So their first meeting is actually tomorrow; and at that point, they will set the rest of their calendar, and we will have a date to put instead of "TBD," which stands for to be determined.

The close of the comment comm- -- public comment period is scheduled for November 25th. If the Planning Commission schedules their hearing after the 25th, we would hold open the public comment period. But I would suggest to everyone who will be writing additional comments in -- in addition to what they say tonight to think about getting their comments in by November 25th.

Project milestones. In 2000 -- In April of 2001, the Transbay Joint Powers Authority was formed.

The Transbay Terminal project was listed in the Regional Transportation Plan in 2002. We've gotten the Draft EIS/EIR and circulating.

The next step after the close of the public comment period will be to select what we term a locally preferred alternative for purposes of doing the Final EIS. And that in the federal process, we need to come

up with one alternative in each of the three components so that we can prepare a Final EIS. In late spring, early summer, we hope to have EIR certification and an EIS Record of Decision.

Groundbreaking for the temporary terminal will be scheduled in the latter portion of 2004.

And the Transbay Terminal would be completed 2008, 2009.

So thank you very much for your attention. We really wanted to hear from you tonight, and so I hope that you'll fill out a speaker card and give us your comments on the Draft EIS/EIR. Thank you.

MS. PANG: Okay. Is there anybody who hasn't filled out one yet who wishes to?

Thank you.

MR. LYSYY: [Unintelligible.] Why do you want to . . . so much?

MS. PANG: Excuse me. I'm sorry. Would you mind filling out a card so that, you know, we can pick it up and you can speak. Sharon will give you a card, and you can --

MR. LYSYY: [Unintelligible.]

MS. PANG: Yes, and you'll get a turn, okay? Thank you. When you finish filling that out, could you give it to Sharon and -- yeah. There are other people

who wish to speak, and they will take a turn.

MR. LYSYY: [Unintelligible] . . . come?

MS. PANG: Yes, please, yes.

Okay. Now --

MR. LYSYY: I'm sorry.

MS. PANG: Yes.

We now come to the most important part of the evening. As Joan said, we want to hear from you; and so everyone who filled in a card will get a chance to speak tonight.

I have Patrick Moore here.

When you come to the podium, please spell your name for the court reporter. Patrick? Are you here?

MR. MOORE: My name is Patrick Moore, P-a-t-r-i-c-k, last name M-o-o-r-e.

The question -- The concern I have is that talking to Darrell before the meeting, it looks like that the tunnel envelope going from the Fourth and King station to -- onto just short of the Transbay Terminal would be constricted to two to three tracks.

Considering that Caltrain is planning on spending a lot of money to four-track their entire system and considering also that this section of track will probably be a fairly slow section, it seems like there needs to be better planning for at least four

tracks and, you know, maybe trying to fit five in somehow, although I don't know how you can do it.

But constricting ourselves -- yourselves down to two tracks in a section where it would be very difficult to add other tracks seems to be a real bad idea, especially considering the probability of having to make deadhead moves along that same section of track.

MS. PANG: Thank you.

The next speaker is Adrian Brandt.

MR. BRANDT: Adrian Brandt is spelled A-d-r-i-a-n, B-r-a-n-d-t.

I just want to speak in support of the whole project and the plan. But what I am concerned about is that you really only have one chance to do it right the first time, and I'm sort of taking a slightly different tack than the prior speaker is that I'm worried about having enough tracks in the facility itself to accommodate sort of the future demand that I would expect to see with Caltrain and high-speed rail in the same facility.

And I -- There's a -- I've seen drawings that are more creative than those in the two official alternatives that seem to shoehorn a lot more tracks and platforms by using a little bit more creative alignments, and I would really like to have this body do

all that it can to explore what it would take to do something along those lines.

I mean, maybe not that exact thing, but in the spirit of that, I -- I'd like to see, you know, more than two long platforms for high-speed rail, you know, like this other drawing I'm referring that I've seen on the -- on the World Wide Web has four tracks. The platforms aren't, you know, straight and narrow, but they -- they -- it's a much -- it seems like a much more creative plan.

And I'd like to see a little bit more creativity in trying to get this thing as -- as -- get the capacity up to the maximum possible from the start, because once it's built, there's really extreme pain involved in ever trying to do that, so -- in the future.

So I just want to see that explored a lot more aggressively. That's the key comment. Thanks.

MS. PANG: Thank you.

Next we have Eugene Bradley.

MR. BRADLEY: Yes. My name is Eugene Bradley. First name is spelled E-u-g-e-n-e. Last name is spelled B-r-a-d-l-e-y.

Speaking as somebody who has used major terminals before in New York City with Grand Central Station, with Penn Station; looking at this project, my

concern is -- is that you do not have enough train tracks to accommodate not only any future high-speed rail, but also Caltrains' current expansion plans. You're going to need, from what I can see, at least eight tracks or more in order to accommodate Caltrains as well as high-speed rail.

My other concern is: I'm still a little bit caught up between the cut-and-cover and the tunneling. Traditionally tunneling can be very expensive and very dangerous, particularly you're going underneath, as I understand, land, former salt, former mud that the area is now in.

My concern is -- is that I haven't seen any real cost controls. As much as I like this project, my own concern is: I don't want to see the cost of this project double like it has with the Bay Bridge.

But for the most part, I am for this project with the concerns that I had stated. Thank you.

MS. PANG: Thank you.

Margaret Okuzumi.

MS. OKUZUMI: Good evening. Margaret Okuzumi, M-a-r-g-a-r-e-t, O-k-u-z-u-m, as in Mary, -i. And I'm speaking on behalf of Bayrail Alliance.

We strongly support the Transbay Terminal project. And as some of you may know, we raised a

massive lobbying campaign to get the governor to transfer the land -- for the state to transfer the land to make this project possible.

And my board -- it is -- has still -- we're still compiling our comments on this whole project. So we will be submitting written comments before the close of the comment period.

But there are a couple of concerns I do want to lift up. Again, we strongly support this project. One is that we ask that the scope of the EIR be extended southward to encompass 16th Street and the grade separation there. Muni has frequent service along that street, and we foresee a lot of conflicts if a grade separation is not included there.

Also in the -- this Draft EIR, the -- it talks about how the CPUC has approved a grade crossing at Common Street. I wonder if that would include approval for four tracks across Common Street, because based on what I've seen of their -- what they've been willing to approve in Santa Clara County, it just -- I'm presuming that that approval was based on -- on two tracks, not four.

So I'm concerned that that would need to be grade separated also. So I'd like for some more information on that.

Also, the amount of bicycle storage at the terminal seems a bit low. I mentioned last night that the Palo Alto Bike Station is currently parking 60 bicycles a day, and their patronage is not as high as -- as Fourth and King right now, especially projecting out 20 years into the future, and it seems low.

Overall, I think as far as the alternatives are concerned, the west ramp alternative looks like it has -- you know, it's a superior ramp alternative because it allows for more redevelopment. Just aesthetically also it's better. And so I think we would support that.

There are some concerns about whether the Second-to-Main alternative does a good job of accommodating high-speed rail. So we'll have better questions about that.

And then as far -- let's see. Oh. And then we support the full build, you know, that provides the most return to the project. It makes the most sense. We have this incredible nexus of public transit and land use, and we need to keep that very strong for this project.

So I think -- well, I think that's -- you know, so there's some comments to chew on for now, and we'll

be submitting more. Thank you.

MS. PANG: Thank you, Margaret.

Jeff Carter?

MR. CARTER: Thank you and good evening. My name is Jeff Carter; that's J-e-f-f, C-a-r-t-e-r. I too support this project and the Caltrain downtown extension. It's been studied to death, and we need to get it done as quickly and as efficiently as possible.

I haven't had a lot of time to read the report because October has been extremely busy for me with World Series and Halloween. So I'd like to, you know, take a little time to read more into the -- the document.

But as previous speakers have said, the project needs to provide enough capacity to support high-speed rail, projected increase in Caltrain service, inner city Amtrak service and all -- you know, whatever else, you know, we can -- we have.

Also, I would support the idea of the Mission Street alignment so that there is the possibility of a future transbay tube in -- parallel to the existing BART transbay tube so we can turn San Francisco into a true world-class transit system with a, i.e., Grand Central Station in San Francisco.

Other concerns I would have is to decrease the

radius as much as possible of the curves so that the trains could, you know, go as quickly as possible through the project. You know, you look at the maps, and there are some very sharp curves which do restrict the speeds of the trains; and, you know, getting the speeds up there as much as possible is going to attract more people to the -- to the train.

So that concludes my comments. Thank you very much.

MS. PANG: Thank you.

Onnolee Trapp?

MS. TRAPP: Onnolee Trapp, O-n-n-o-l-e-e, T-r-a-p-p. I'm with the Legal Women Voters, and we will be submitting written comments before the deadline from the whole Bay Area league.

And we have some concerns about the financial projections, especially if the full build is not done.

We also have some questions about the platform configurations for the train. It's not entirely clear how many train cars could unload at one time and at what speed, what space between trains, that sort of thing, from the drawings in the book. The previous several years ago go-around had a little more explicit information, so I was looking for that this time and not finding it.

We are very happy to see that part of the project does include housing, especially affordable housing, but we will make more comments later.

MS. PANG: Peter Sheerin, Sheerin. Sorry. Probably mispronounced.

MR. SHEERIN: No. That was -- That's correct. The last name is spelled S-h-e-e-r-i-n. And I've got basically four or five comments.

I'd like to reiterate the concern that several other speakers have made about the number of tracks. I feel that four -- at least four tracks is critical to supporting the local trains, express trains and long-distance. And, you know, if you've got all three of those, maybe you need five or six to support that and deadheading. But at least four seem to meet the minimum that you need to be able to load both local and express trains in both incoming and outgoing directions.

And I think the whole project should be built as close as possible to Market Street because that's where you've got the greatest number of people commuting through, and the transit corridor is all right there with the surface rail and the Muni and the BART.

And if you live further away, even with an underground terminal, the further away you make it from Market Street, the longer that transit time is and the

longer people's overall commute is. And you really need to make sure that connections are short, simple, easy, and direct as possible.

I'm also concerned that there don't seem to be any plans with the Ferry Building or the Ferry terminals; and it seems to me that by -- I don't know if it's possible, but by shifting it a block east, it might be possible to make another underground connection to the Ferry terminals or overhead pedestrian passways to make it possible to have more direct connections possibly even with a small people mover.

But I think that's very important that you get people an easy way to get from the Ferry Terminal to the integrated terminal.

And I'm also concerned that some of the sketches I've seen here of multiple levels on the platform separates the ground level from the train and bus terminals by two or more levels, and that seems to me like that will also make it more difficult and cumbersome for people to make connections. You have to deal with elevators and escalators and staircases.

And in that case, it seems to me if you could -- maybe it's not possible to do on one level, but eliminate the intermediate mezzanine level if at all possible so that the -- again, the travel time is

decreased.

And that's basically it. Thank you for your time.

MS. PANG: All right. Thank you.

Is there anybody else who wish to speak?

Sir?

MR. ATTENDEE: Want to speak?

MS. PANG: Would you like to speak?

MR. LYSYY: Yes, yes, yes. I finish.

MS. PANG: Oh, you may speak if you like.

MR. LYSYY: Yeah.

MS. PANG: Yeah. And you can also submit it in writing.

MR. LYSYY: Yeah, sure. I still don't understand: Why do you want to --?

MS. PANG: Please come to the podium, yes, please, so that we can all hear you.

MR. LYSYY: I'm sorry. I still don't understand: Why do you want to -- to put -- to put the train -- to put the train to buses?

MS. PANG: Yes. Excuse me. Can you just stop for a minute? Could you say your name to --

MR. LYSYY: My name.

MS. PANG: -- the court reporter?

MR. LYSYY: My name, yeah.

MS. PANG: -- court reporter?

I'm sorry. I'm sorry. I forgot. My name is Yevgeniy Lysyy of Sunnyvale.

THE REPORTER: Please -- please spell your name, sir.

MR. LYSYY: Sure. Y-e-v-g, like a George, -e-n-i-y.

THE REPORTER: Thank you.

MS. PANG: Thank you.

MR. LYSYY: I'm sorry. I'm sorry.

MS. PANG: Thank you.

MR. LYSYY: Question is: Why do you want to put -- exactly to put a train to buses instead of for -- why can't just buses go to the train station, the train station? What's the reason for this project?

MS. PANG: Wait. I'm sorry. We're not going to respond to comments tonight, but we will respond to your comment in the Final EIS, okay? Thank you.

MR. LYSYY: Because I don't understand what's the reason for this project. Problems now some are prejudiced over existing?

MS. PANG: Yes.

MR. LYSYY: Sure. Yes, I believe, yes. But there's -- there are much more important problems in the United States and by people in the Bay Area, in

particular, the transportation field.

Caltrain, I admire Cal- -- admire Caltrain. It's -- it's very -- very smart way and like for stupid European multiple units.

But one train in half an hour, it does not very good service. Trains would be -- Trains could be short just for two cars but around every 10 to 15 minutes. Free to commute cut costs. Must be twice as big, yes.

MS. PANG: Yes. Okay. Thank you, yes.

MR. LYSYY: There -- there must be a rapid transit across the bay. There is a bus, but it's also goes rarely, once a half an hour, and it's slow. It goes on city streets. It's convenient for people of Palo Alto and Union City but not for people of Sunnyvale on Amtrak, not the rapid transit. The Dumbarton train could be such transit. But why do you wait for a long time?

MS. PANG: Thank you very much for your comments.

MR. LYSYY: Then Altamont train is a -- Capitol trains are also -- they are one train in the -- more than one hour. It's stupid. It's commuter trains, it's called.

Then there is another one from San Mateo to Cupertino. It's 18 miles across the way. It could be

a -- like BART in this area, but now there's no passenger service at all.

So there are -- I mean, I'm from Russia, and the Russian off -- often call Americans "practical impractical Americans." And so what do we see? So-called practical Americans? I about to spend huge money. There is -- there is a reason. There is a reason for this project.

MS. PANG: Yes.

MR. LYSYY: Yes. But there are much more important -- important project. And I could show you picture, for instance.

MS. PANG: Well, thank you very much, sir. I do have your written comments.

MR. LYSYY: This picture [indicating] shows train -- train coming off. Train -- train comes every few minutes. Most -- most pleasant -- most pleasant subway here.

But some use ground transportation. You see many cars, buses, street cars there; and so trust me, all -- three or four trains must go train station to over here. And trust me, all the stuff, it's all been problems. This all structures. Facility over bus, about from here [indicating] 1,000 --

MS. PANG: Sir, I must ask that you -- excuse

me.

MR. LYSYY: -- from here to here.

MS. PANG: I must ask --

MR. LYSYY: And it's also --

MS. PANG: -- that you -- can you please confine your comment to just this project for this evening? That's the reason why we're here, and --

MR. LYSYY: I'm sorry.

MS. PANG: -- I -- yeah. I've heard your comments, and we thank you very much.

MR. LYSYY: I'm sorry. I have no comments to this project.

MS. PANG: Oh, all right. Thank you very much.

Is there anybody else who wish to speak?

MR. SHEERIN: Yeah. Can I add some additional comments?

MS. PANG: Sure. And please restate --

MR. SHEERIN: This is --

MS. PANG: -- your name.

MR. SHEERIN: -- Peter Sheerin again, last name S-h-e-e-r-i-n. And I just have a few additional comments.

In looking at the diagrams and listening to the last speaker, it occurred to me I don't see any large seating areas in this cross section of the terminal, and

that's been one of the -- I think, the biggest problems with the existing Caltrain terminal and much of the stations along the way.

It's -- There are a few benches, but not very many. And so if you've got a trainload of people waiting for the next train, they all have to stand; and that's not very inducive to con- -- convincing more people to mass transit and a train three quarters of your way to commute.

It's, you know -- especially like the end of the day: Tired people want to sit down, and you ought to need to let them do that on a train or in large seating areas, such as are found in other train terminals throughout Europe and the US.

And partially I'd like to address the last speaker's comments on why he doesn't think this project is necessary.

But to encourage people to take mass transit in greater numbers and more frequently, you need to make the connections as few as possible and as easy as possible; and the current location of the train station is not conductive to that, and not all of these designs are conductive to that.

You need to make the station layout have as few levels as possible, be as easy to get through, lots of

seating, easy connections to both trains, buses, the mass transit on Market Street, and the Ferry Terminal.

MS. PANG: Okay. Thank you.

MR. SHEERIN: Thank you.

MS. PANG: Anybody else?

Okay. Since we have no more speakers, this will conclude the public comment part of this hearing.

And now I just want to recap what Joan said about the next steps.

After the -- Following the close of the comment period and after considering all the public comments received and the information in the Draft EIS/EIR, the local lead agencies will select the locally preferred alternative from amongst the alternatives and design variations presented in the Draft EIS/EIR. The locally preferred alternative will then be evaluated in the Final EIS.

Upon completion of that EIS, each local agency, as Joan said, will cer- -- will certify the Final EIS to adopt the project. And then the Federal Transit Administration will approve the Final EIS/EIR and issue what we call a Record of Decision. And this will complete the environmental review process for the project. Okay.

This concludes the public hearing. Thank you

very much for taking your valuable time to come here tonight and to share your views about the project. Good night.

(Off record at 7:52 p.m., 11/13/02.)

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CERTIFICATE OF REPORTER

I, CHRISTINE M. NICCOLI, Certified Shorthand Reporter of the State of California, do hereby certify that the foregoing meeting was reported by me stenographically to the best of my ability at the time and place aforementioned.

IN WITNESS WHEREOF I have hereunto set my hand this 29th day of November, 2002.

Christine M. Niccoli

CHRISTINE M. NICCOLI, C.S.R. NO. 4569

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SAN FRANCISCO PLANNING COMMISSION

MEETING

November 26, 2002

Cathryn Bauer
CSR 12656
109208

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PLANNING COMMISSION

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SAN FRANCISCO, CALIFORNIA 94102

Tuesday, November 26, 2002

12:30 p.m.

Cathryn Bauer, Certified Shorthand

Reporter No. 12656

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APPEARANCES:

Michael J. Antonini, Vice President

David Habert, Moore Iacofano Goltsman, Inc.

Rick Cooper

Luis Belmonte

Monica DuClaud

Roger Brandon

Jan Johnston Matthews

Elizabeth Carney

Bruce Barnes

Norman Rolfe

Andrew Littlefield

Peter Winkelstein

Arthur Meader

Mary Anne Miller

Pamela Duffy

Jennifer Clary

George Yamas

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MICHAEL ANTONINI: If I could have everyone to have a seat, please, we'll get started on our next item momentarily.

We're officially back in session again. I ask Mr. Ionin to call the next item.

SECRETARY IONIN: The item is Case Number 2000.048E, Transbay Terminal Caltrain Downtown Extension Redevelopment Project, public hearing of the Draft Environmental Impact Statement, Draft Environmental Impact Report.

MICHAEL ANTONINI: Thank you. I see Mr. Cooper at the microphone. He wants to begin with a staff presentation on this item.

RICK COOPER: Good afternoon, commissioners; I am Rick Cooper, staff from the Environmental Analysis Section of the Planning Department.

The item before you is Case No. 2000.048E, a Draft Environmental Impact Statement/Environmental Impact Report on the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Plan. This is a joint environmental document and was prepared to satisfy the requirements of both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA).

Today's action is a public hearing on the adequacy and accuracy of the information in the Draft EIS/EIR for the project. There will be no decision today to approve or disapprove the project. We are here today to receive comments

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from the public and yourselves regarding the Draft EIS/EIR as a part of the environmental process as required by both the federal and state environmental laws.

The three major components of the project are the construction of a new multimodal Terminal at First and Mission Streets; an underground extension of Caltrain to a new terminus in the basement of the proposed new Terminal; and establishment of a Redevelopment Area Plan with related transit-oriented development projects. Other subordinate components of the project include a temporary bus terminal facility at Main, Beale and Folsom Streets to be used during construction of the new Transbay Terminal; a new, permanent, off-site bus storage/layover facility; reconstructed bus ramps leading to the new Transbay Terminal; and a redesigned Caltrain storage yard.

The draft document was advertised and released for public review and comment beginning October 4, 2002. Two public hearings have already been held -- the first on November 12, 2002 in front of the San Francisco Redevelopment Agency, and the second in San Carlos on November 13 for Caltrain -- the Peninsula Corridor Joint Powers Board. The period for written comments on this joint environmental document has been extended. The period during which staff will accept written comments will be extended from the previously noticed date of November 25th to Friday December 6th at close of business.

We have a court reporter here today who will be recording

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these proceedings. I ask you to speak slowly and clearly so that an accurate record can be made. Staff will take all the comments on the environmental documents and will be responding to all comments, both those received in writing, and those from the three public hearings, and get back to you with the comments and responses, hopefully by late spring or early summer. This environmental process will be completed before any decisions on the proposal for the new Transbay Terminal, the extension of Caltrain, and the creation of a Redevelopment Plan area will be made by the three co-lead agencies.

This concludes my presentation on this matter. And unless the commission members have any questions, I would respectfully suggest that the public hearing on this Supplement to the Draft EIR be opened.

Again, I would like to emphasize as did Director Green that we are taking comments on the adequacy and accuracy of the environmental document, and not on the rest of the project. Thank you.

MICHAEL ANTONINI: Commissioners, do you have any questions?

WILLIAM LEE: One question. If we meet the SEQA regulations, I assume we also meet the NEPA regulations since SEQA is more restricted than NEPA?

RICK COOPER: I believe that's correct, that generally, the SEQA requirements are greater.

WILLIAM LEE: Is there any federal property on the site?

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Because if there isn't, there's really no need to consider NEPA because we're already doing SEQA.

LAWRENCE B. BADINER: There's federal money involved. So we have to.

WILLIAM LEE: I don't know why we have to talk about NEPA. But there's federal money at stake, so it makes sense.

MICHAEL ANTONINI: Thank you, Mr. Cooper. Any other questions from commissioners? Okay. I think I'm going to officially open public comment. And we're going to limit comment to five minutes per speaker as we did with the earlier item. And as Mr. Green mentioned, our comments are on the adequacy of the Environmental Impact Report that is before us. So our first speaker is Luis Belmonte. Is that correct?

LUIS BELMONTE: Close enough. You're not the first person to mispronounce it. Luis Belmonte. I am one of the developers and one of the owners of the Yerba Buena Commons, 257-unit SRO project at the corner of Third and Perry Streets. And despite all of the rotten things said about SROs today, I think we have a fine place for people to live: 220 square feet of housing including a kitchen and bathroom, and for $600 a month, you get a furnished unit with utilities and cable television. It's safe, it's clean, and it's affordable. Our income threshold is approximately $22,000 a year, 40 per cent of the median.

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I have 257 residents who live immediately adjacent to the place that the EIR proposes to put all the buses, and I think that's an inappropriate place to put the buses. And I think that that impact should be looked into as part of this EIR. We get enough noise and pollution from the freeway. And from proposed freeway relocation, I think that this adds unnecessarily to the burden. And given, uh, uh, all of the cant that surrounds affordable housing, we actually have some here that was produced. And we shouldn't denigrate the lifestyle of the people who are living there by putting all the buses in the world right next to them. Thank you.

MICHAEL ANTONINI: Thank you. Next speaker is Monica DuClaud.

ELIZABETH CARNEY: My name is Elizabeth Carney. Monica had to go back to work. She asked me to speak for her. She wanted me to tell you she's quite concerned about putting the bus depot in the area of Stillman and Second Street where we all live in the Clock Tower which is 461 Second Street. And that she also wanted me to mention that the complexity of tunneling, the cut-and-cover plan really requires, uh, more of our study and analysis than we in the Clock Tower have had a chance to make.

There's 127 families that live in that building. And we've only recently, by accident, kind of, learned that this analysis process is going forward. As a result, we're

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hoping that, um, that comment period could be extended while we, uh, take the opportunity to look and see what are the impacts on our building.

And I wanted to tell you a small story. In the early 1900s, there was something called the Second Street Cut. The idea was that they were going to make the hill, at Rincon Hill, a little bit flatter, so it was much easier to bring wagons from Market and Mission down to the Bay. And the politicians got together and made a plan for doing that, and did so. They made a big cut in Second Street. Shortly after that happened, the houses that were on Rincon Hill fell off the hill. And that was the end of development for Rincon Hill for a very long time. So we're hoping that the planning process can have enough, um, um -- careful study and analysis at the beginning of the process that these kinds of futures will be something we don't repeat again. Thank you.

MICHAEL ANTONINI: Thank you. Our next speaker is Roger Brandon. He's going to be followed by Jan Johnston Matthews.

ROGER BRANDON: Members of the Commission, my name is Roger Brandon. I'm here about the proposal to move the downtown Caltrain terminal from its present location at Fourth and Townsend Streets to First and Mission Streets, going underground on Second Street, having two levels underground

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at First and Mission Streets. It is expensive to locate a railroad underground.

This project raises many other questions. How many trains will be waiting underground to unload at First and Mission Streets during the morning rush hour? It would be easier to find some other way to get into the downtown business district. If you're familiar with the, the train system, you know there could be 10 trains arriving in an hour, and several trains leaving in an hour. This proposal does not seem feasible. Many people do not realize that we already have a good connection with downtown transportation lines for incoming rail passengers. All they have to do is a cross to street to Fourth and Townsend Streets and board a Muni Metro line which will connect them with a transbay rail system.

We have a transbay connecting system in places. For good reason, San Francisco voters rejected the proposal on the San Francisco ballot one year ago. It is not necessary. It is impractical. This is another waste of money, spending money for the sake of spending money. The present terminal location at 4th and Townsend Streets is better for the city, and we should reject this underground terminal. We had better find some practical-minded fiscal managers for the city who do not want to put up a new building every time we find a surplus in the accounting. We find that the EIR

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overlooks many, many obvious problems and that the proposal, it is a, not realistic, not a good idea. And the voters, the voters decided against it a year ago on the ballot. Their good decision should not, should not be overturned. Thank you.

MICHAEL ANTONINI: Thank you. Our next speaker, Jan Johnston Matthews, please, followed by Ted Pollak.

JAN JOHNSTON MATTHEWS: Hi, my name is Jan Johnston Matthews. I wish to comment on the proposed terminal for bus storage. I don't feel that there was adequate environmental studies done on this site. In fact, although we spoke at the initial scoping meeting over a year ago about our concerns, Stillman and Perry Streets weren't addressed in the EIR.

This proposed site is a high-density area with hundreds of residents, low-income housing as well as office buildings. Many of these buildings use exterior air as their sole source of ventilation, mostly opening windows. So since Perry and Stillman Street is narrow, they're close to these lots. You've got the overpass close to this area, creating a lid effect which would exacerbate the noise and the toxic diesel emissions from the bus storage site, not only as they're entering and leaving, but as they sit there and idle to warm up. And I can go into more details in a letter.

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This storage would also impact traffic and safety issues in our community. I request again that you analyze alternative sites for buses that -- bus lines that need to access the Transbay Terminal. Incorporate their storage areas in or around the Transbay Terminal more closely to the Transbay Terminal site vs. blocks and blocks away. For those buses that don't need access to the terminal, store them, either at their existing sites, or in an industrial area that doesn't have a high density, residential and commercial usage that this area has.

In the SOMA community planning process, rezoning alternatives that was distributed and discussed at the November 19th meeting, it shows that this area, Stillman and Perry between Second and Fourth, is one of the areas being encouraged to be more residential. Would you allow a company to build, or a person to come and build a facility that have the emissions, the noise, and the diesel, and everything else that this bus storage site would? You know, impact, how it would impact our neighborhood.

So please consider that in your report, that this is a community, not just an area underneath the approach to the Bay Bridge. We already have to deal with the teardown and building of this rail at our doorsteps, and possibly the Third Street Rail, and the Second Street tunnel or tube. If you put a bus storage site in front of your doorsteps. It's

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like the nail in the coffin. There goes our community. So please, I ask that you do more detailed study on this, and also analyze alternative sites for the bus storage. Thank you.

MICHAEL ANTONINI: Thank you. Our next speaker is Ted Pollak, followed by Elizabeth Carney who actually already spoke, unless she's going to speak again on her own, I suppose.

TED POLLAK: My name is Ted Pollak, a resident of 461 Second Street, the Clock Tower Building. I am very concerned about the proposed bus parking facility under the freeway there for a number of reasons including noise, traffic and more importantly, the effects of the diesel fumes. If I may read a paragraph out of the Chronicle today concerning diesel, "Diesel exhaust from all sorts of vehicles, mostly trucks and buses, accounts for 70 per cent of the cancer that's from air pollution in California. The state estimates..." -- this is a number from the state. Environmental working groups and advocacy groups are using the same formula as the state which estimates that emissions account for 90 per cent of San Francisco's cancer risk. To put potentially 100 diesel buses in an area where children and people live and work is, uh, something that needs to be addressed. And I don't think it's adequately addressed in the EIR. Thank you.

MICHAEL ANTONINI: Thank you. Elizabeth Carney, and Bruce Barnes. And I would expect different comments --

ELIZABETH CARNEY: I spoke for Monica DuClaud. I'm sorry.

GERALD GREEN: Excuse me. Everybody must be treated equally. Everybody gets five minutes. You can submit your comments in writing. But we can't allow people to speak twice.

ELIZABETH CARNEY: For I was speaking for somebody else. I wasn't speaking for myself.

GERALD GREEN: Normally, you are allowed to speak one time. It has been the practice of the Commission to do so. Commissioners, if it's your desire to allow her to speak, go ahead. But in future, I would encourage you to keep track of speakers. If she spoke on behalf of someone else, normally, the Commission would not allow that. But if it is your desire, go ahead let her speak. She should also recognize that her friend could provide comments in writing, as well.

MICHAEL ANTONINI: I think I will allow you to speak. But I will ask you to keep your comments, not to echo the same comments that were spoken when you spoke on behalf of your friend. You may proceed.

ELIZABETH CARNEY: I promise I won't tell the same story. Thank you for the opportunity to speak. There are a number of us from the Clock Tower and from the neighborhood. A

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show of hands, who's here about this issue.

GERALD GREEN: Again, those people will be given a chance to speak.

ELIZABETH CARNEY: Some of them won't be. And I also have 30 people on a petition that I will submit that are also, um, neighbors and residents of the 127 families of the Clock Tower that are concerned about this issue. As I said, I hope that we'll have the chance to have the comment period extended because with respect to the tunnel construction, it's a very complex issue. Noise, vibration, air impacts. And we'd really like the opportunity to study this further so we can also assure that there won't be damage to this historical building.

The main thing that I wanted to speak to you about was that it seemed to me that the EIR does not deal with diesel emissions at all in the current draft. And it is my understanding that EPA is, has mentioned there's 40 toxicogenic air contaminants within diesel fuel. So I would hope that this omission could be replaced with an opportunity to study and analyze this further. The 127 families that live at Clock Tower all rely on air ventilation from windows. And the way that the bridge approach works, if the diesel buses were sited where it's proposed, that air would tunnel, um, along, underneath that approach and directly into our building which is open, and

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then directly into the units. So I would hope that the EIR study group could come and actually look at the site regarding this because there's nothing in the study so far that, um, that deals with this aspect at all.

The neighborhood has been going through other mitigations, The Giants Stadium has been a huge adjustment with the mitigations that were included in that transportation plan. It doesn't mention in the EIR that this neighborhood is, um, at all a part of other studies, but, um -- the earthquake project that CalTrans is working on also will take away parking during this construction and make chaos. This also is not mentioned in the EIR, that there are additional burdens that the neighborhood will be experiencing.

Finally, the traffic around the approach to the Bay Bridge is often, as you probably know, at a standstill. We have a hard time coming in and out of our building. And to consider that adding more buses to that mix, we don't think will be a very viable solution. The traffic is not addressed in the EIR, as well. So, um, thank you very much for the opportunity.

MICHAEL ANTONINI: Our next speaker is Bruce Barnes, to be followed by Norman Rolfe.

BRUCE BARNES: Is there a screen?

MICHAEL ANTONINI: Yeah.

GERALD GREEN: So you should go ahead and start speaking.

BRUCE BARNES: Good afternoon, Commissioners. My name is

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Bruce Barnes. I'm here speaking on solely with regard today on the, um, the bus, the temporary bus storage facility that is being proposed for the area bounded by Stillman Street, Perry Street, Second, and Fourth. It's a little hard to tell from this diagram; it's basically the area where the west approach of the Bay Bridge is, all the elevated ramps are -- it's used by CalTrans, surface parking operated by lot operators. There's about 700 parking spaces that serves the neighborhood and a lot of other areas.

My main concern is these diesel emission fumes and the health hazards in regards to the diesel emission fumes. I spoke at the earlier hearings, and I also wrote a registered letter in July of 2001. That letter specifically identified emissions as a major concern of the neighborhood, diesel emissions. At the time, I wasn't aware of the, um, finding with regard to cancer, and things that have recently been, uh, disclosed. And I found an EIR that -- my concerns that I addressed to the managers doing that project, they were not even addressed in the EIR report. It's silent in regards to diesel fumes in our neighborhood, and the impact of parking these buses underneath the west approach, it's been described here as basically a lid on the top of that area. Air quality is a problem down there. In our neighborhood, emissions is a problem. You know, you can go out on the rooftop of our two-story building that's 25 feet

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away from the west approach. When there's no traffic, there's no sense of smell. When there's traffic, a lot of traffic sitting there idling and backed up, there's a whole different sense of smell.

I think that other, alternative sites ought to be explored. The question came up earlier in the prior EIR that was being reviewed as to where the AC buses were going to be stored. Right now, as I read the report, they have not found a temporary home for the Golden Gate buses. But they're to be stored permanently -- based on this report, I shouldn't say permanently. Um, they're going to be housed during the day between Second, Fourth, excuse me, Third, Perry and Stillman. And the AC buses are supposed to be stored between Third and Second. There's roughly, roughly about 190 buses in the EIR report. I think more came out. But I think there will -- some buses are going to be stored on ramps, depending upon what alternative is finally decided on, how the, the loops are going to be done, and the ramps are going to go into the new facility.

Our neighborhood's been bracing for the last two to three years for the start of the reconstruction of the, um, overhead structure. Basically, five to six lanes are going to be rebuilt right in our front doors over the next roughly seven years. I understand the project -- the bids were received last week. It's ready to be awarded. You know,

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this neighborhood, we're losing parking, we're losing our street for periods of time during this construction. And, um, when we get all done, we'd like to see something back that we were promised which is adequate parking. And now that we're being faced with inheriting all the buses. We would like to see that the Commission really do their job on this EIR, and really look at alternative sites, especially when a site hasn't been identified for Golden Gate, where their buses will be stored while they build this facility. Maybe a bus storage facility should be designed early and built somewhere else that could not just be used in the interim, but could be permanent and a facility more conducive to -- maybe an open-air facility, and the emissions wouldn't be as much. The impact wouldn't be as much as on other places.

I currently have a school in my building, 18 of the last 22 years. We're in the process now of negotiating a lease with a new charter school for about 60 kids. Our building would be across from what looks like to be the entrance to the bus --

MICHAEL ANTONINI: Thank you, Mr. Barnes. Mr. Rolfe, Norman Rolfe, to be followed by Andrew Littlefield.

NORMAN ROLFE: I'm Norman Rolfe. I'm the transportation chair for San Francisco Tomorrow. We're in the process of working up our comments on this. It's going to be quite

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extensive. I'll hit a few highlights here as to what will be in it with the transportation aspects, though this may address other aspects.

And one of the things, as far as alternatives to the study are adopted, the tunneling alternative for the Caltrain downtown extension should be the preferred alternative. That's the one where there will be the least disruption and taking of property. I'll address that in a minute. It's very important that, that, that separation between 16th Street -- 16th -- start over. It's 16th Street. Can you hear me now? Again, very important to create, separate to accommodate the greatly increased number of transit that's anticipated in the future. Therefore, there should be an additional alternative study that has the Caltrain underground, just north of the north portal tunnel number one and then continue underground from there. There should be further study given to minor changes in routing. When we send our written comments in, we will enclose a drawing illustrating this additional underground and possible other small, little changes in route to reduce if amount of property taken.

Now as for the terminal itself, the second Commission alternative should be the preferred alternative. The reason for that, this is the one that allows platforms wide enough to accommodate high speed trains in the future. Our

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proposal for track arrangement is different than that one shown in the EIR. Once again, we'll have a drawing in the packet to illustrate that. We feel that this track arrangement will create a better operating environment and less impact than proposed in the EIR. The second alternative will not permit platforms long enough to permit high-speed trains. That should not be, should not be pursued. And the western bus alternative, that's the one which is not in the loop, should be preferred because that would offer the best potential for development, and also it will probably result in a superior urban environment. And at this point, I think I'll wind up for it now, as you can see, there's quite a bit more in this. You will receive a multipage letter which will address other things besides the transportation aspects.

MICHAEL ANTONINI: Thank you. Mr. Littlefield, Andrew Littlefield, to be followed by Peter Winkenstein (sic).

ANDREW LITTLEFIELD: My name is Andy Littlefield.

MICHAEL ANTONINI: Bring the mike up a little more.

ANDREW LITTLEFIELD: Hi. My name's Andrew Littlefield. I'm a resident of 461 Second Street, on the board of directors of the homeowners association.

We would like to request an extension in terms of the deadline associated with written responses to the EIR associated with this agenda item. Unfortunately, this EIR

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was only brought to our attention merely two weeks ago. It's a complex, comprehensive EIR. We would like to provide the appropriate response, particularly as today, they were a number of people very concerned with regards the impact of the diesel fumes, and the air quality inside their homes. What we'd like to request is a delay or a postponement of the deadline for written comment to January 30th, 2003. Thank you.

MICHAEL ANTONINI: Thank you. Our next speaker is Peter Winkelstein, to be followed by Arthur Meader.

PETER WINKELSTEIN: My name is Peter Winkelstein. I'm here representing SPUR, San Francisco Planning and Urban Research Association, and the Culture and Urban Policy Committee. We are reviewing this EIR, and we'll submit written responses next week.

And I just want to say today that SPUR has been involved with this project in the transbay area very actively for many years. And we support the project very strongly. We also support the preferred alternatives that Mr. Rolfe just pointed out to you. And, uh, we feel that in general, the EIR is an adequate EIR.

There are a few things in the financing which we have concerns about. And, uh, there seem to be some mathematical, possible mathematical errors. For example, both of the alternatives show the same income from the sale

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of the abandoned CalTrans land which, of course, is impossible because in one case, there's a loop that uses a lot of the land. In the other, there isn't. Similarly, the tax increment financing is shown to be the same which again can't be the same because you can't develop as much with the loop ramp alternative. We will submit the rest of our comments next week. And I thank you for your time.

MICHAEL ANTONINI: Thank you, sir. Our next speaker is Arthur Meader, to be followed by Mary Anne Miller.

ARTHUR MEADER: Good afternoon, ladies and gentlemen. I too live at the Clock Tower, Second and Bryant Streets. I'm would like to reiterate the other comments. I feel like this is a stealth report. I have no idea how much money is involved in these projects, but it's a heck of a lot of money. And I think we should be afforded some time to respond to some of the issues, particularly, to reiterate, concerning traffic, diesel, and wind issues around that area.

I know from personal experience that the traffic in that area is a nightmare. And that's quite a bit of the time. To add, I don't know how many buses into that mix will only make things worse. There have to be some better and more viable alternatives. Running closer to downtown, I think that's certainly possible.

The issue about air quality cannot be overstressed.

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Diesel pollutants are serious matters. And I do not believe that this report adequately addresses that at all. With regard to the Caltrain issue, and this may be somewhat of an editorial comment, there is a system in place now that I think the city already has spent a lot of money on, basically the N-Judah line which connects perfectly well with Caltrain at Fourth and Townsend. It's a great system. It works very well. I see absolutely no need for the disruption for God knows how long of Second Street or any other street to run an underground train so people from the Peninsula can get to work five minutes faster than they did already.

So I would ask that you again allow us additional time for comments, and to respond what is a complex issue involving matters of science. We're not engineers. And we need to have at least have an opportunity to hire people to address these issues. Thank you very much.

MICHAEL ANTONINI: Thank you, sir. Our next speaker, Mary Anne Miller, to be followed by Pamela Duffy.

MARY ANNE MILLER: Mary Anne Miller, adding to the San Francisco Tomorrow comments. But we'll have your letter to you by the end of next week. My assignment was to do the urban design issue and also preservation issues, just the adequacy of the document the friendliness of it to the public. We, after all, are just members of the public.

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So we are trying to discover, in fact, whether we can understand this project's graphics. I went to the Xerox shop. And I tried to paste together 13 drawings. And I don't even think I've got it right. Otherwise, you don't find the project described graphically. You see certain drawings in there, schematics; they don't say if it's the existing or the proposed. Some of them tell you it's one of the alternatives. But this was kind of fun to do. I recommend it to you. Go home, Xerox it, paste it together. On the match lines, I found one drawing missing. Drawing number 205 is just sort of not there. So I couldn't complete my little patchwork there. But it was helpful to do the patchwork on the effort here in order to understand what buildings will be demolished.

We have three historic districts, one a national registered historic district. San Francisco Tomorrow's very concerned about urban design and the overall impacts of this project on a part of the city that ought to be friendly to pedestrians. It surely is an opportunity for housing, retail, commercial as well as, of course, for this wonderful new terminal. There are no graphics that will help you to take the very well-evaluated historic resources that are in Chapter 5, I believe. And you can't take them and go find them on a map. So you have to paste together another series of things, and highlight with your yellow highlighter or

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whatever you want to do where those buildings are to be demolished. And you have to find the street labels, the north arrows to get all this right. So the graphics are really flawed. I don't want to belabor that. In trying to decide, whether -- you go from one alternative to another. You have three of the National Historic Register sites that will be lost in one alternative. You have 13 in another alternative.

This was told me by the planner, Joan Kubler, who is not here today. We met with her to try to get clarification on this document. It's very hard. She brought in cardboard boxes --literally two, and she had several more in her cubicle -- of the background reports that had been done for this EIR. Now, you know, I said to her, "Well, Joan, couldn't we have a bibliography so we can ask you in the future. This project is going to take 8 years, maybe another 20 with the Redevelopment Area; couldn't we have a bibliography with only one sentence of paragraph of the EIR? There's not a reference, footnotes, no bibliography. So we're just looking for -- how can the public access the information? How can you access the information to make the best possible decision?

San Francisco Tomorrow has this project, I mean, on a level of the approval as its highest priority. We need to do something about transit, transportation, regional

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transportation, etc. But urban design, you figure, well, maybe the Redevelopment Agency is going to solve all your problems with urban design. However, you want to look for information in documents, really evaluating, as it says three projects, the Transbay Terminal, the Caltrain Extension, the Redevelopment Area.

Let me take you to two pages in the whole document, pages 242 and 243, and they don't tell you much. They do talk about the Redevelopment Area a little bit. They say there's a full-build alternative and reduced-scope alternative. Then you go to the next two pages. You have a couple of fairly good graphics. You have a chart, anyway -- you can't really read it from this. But there's a chart there on 244, and then there's one over here -- which I find the most, it's an attempt at being informative. Here's the outline of the Redevelopment Area. But of course, it's so faded you nearly can't see it. All you can see is turquoise squares accompanied by areas that tell you how many housing units, how much this, and how much that. This is not an urban design evaluation. I don't know how I find out whether this is a good project or not. I looked in the back and saw a graphic. I was very hopeful when I saw it. Then I saw it's a computer simulation, here, this isn't coming to you. MICHAEL ANTONINI: Thank you, Ms. Miller.

MARY ANNE MILLER: All right. It's not adequate. If it

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were built that way, it would be a horror. And I think Redevelopment agreed with me when I talked with them on the phone.

MICHAEL ANTONINI: Thank you. Pamela Duffy, then Jennifer Jennifer Clary.

PAMELA DUFFY: Good afternoon, commissioners. My name is Pamela Duffy. I'm with Coblentz, Patch, Duffy and Bass. We represent the owners of 301 Mission Street which is probably probably adjacent to the transbay terminal to the east. We will, as will many others, have a detailed comment letter to submit before the closing of the comment period.

Off my agenda, but I do think with a project of this complexity, which at least as suggested has this kind of impact on a small community could withstand another couple of months for people to get comfortable with the document.

Fundamentally, we believe that our exciting, 320-unit housing project which is currently undergoing Planning Department review at 301 Mission Street, and the equally exciting and in fact essential Transbay Terminal may go forward in harmony.

COURT REPORTER: Please slow down for the record.

PAMELA DUFFY: You sound like my mom.

COURT REPORTER: Sorry, maÆam, itÆs my job to make the record.

PAMELA DUFFY: Fundamentally, we believe our housing project which is currently undergoing Planning Department review is adequate.

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An adequate Transbay Terminal is moving forward. But we believe the Transbay EIS/EIR could be more sufficient, particularly with regard to the impact from the second to mission alternative and acting as a disclosure document for you and other decisionmakers. That alternative from Second to Mission cuts a broad, 45-foot deep swath across our site, and also contemplates doing the same tunnels all the way down Mission Street.

I know that only from deduction. It actually doesn't discuss the cumulative impacts at all of that alternative. It neglects several important areas and doesn't adequately address economic impact, including the loss of the vital tax increment associated with 301 Mission Street which ironically is included in part of the economic feasibility analysis for the Redevelopment Project Area.

It fails -- in so failing to discuss the economic impacts of the Second to Mission alternative, it begs the question of what the economic feasibility of that alternative itself is. It proposes massive excavation the length of Mission Street, the cumulative impacts of which are ignored. There is no discussion of the hazardous materials effects, noise, air quality, or vibration effects on the properties adjacent to Mission Street once it runs on down.

The real focus ought to be the scientific information

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that's in the EIR about these alternatives, particularly the Second to Mission alternative. The graphics and the scientific engineering analysis is so vague as to make the feasibility of the Second to Mission alternative very doubtful. This is the reason we believe the EIS/EIR so radically understates the impacts of this 45-foot tunnel that starts out across the vast majority of 301 Mission, and then proceeds down Mission Street.

Fortunately, there is an alternative in the EIR/EIS, that is listed as the environmental preferred alternative and to which SPUR referred earlier. That alternative reduces the operating costs, eliminates two platforms, reduces acquisition costs, increases the tax increment, minimizes disruption on Mission Street, a traffic-preferential street, reduces excavation and the related air-quality effects, and is clearly far more compatible with surrounding economic opportunities. It generally reduces the impacts on land use, not very well covered in this EIS, displacement, socioeconomic fiscal noise vibration, existence of utilities. It also eliminates conflict with existing transportation and transit systems that would occur as the result of tunneling down Mission Street.

Frankly, when the EIS/EIR so clearly such a preferable alternative -- in fact, in the draft, reaches such

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conclusion -- we should pursue it. But if there's a suggestion, a preferred alternative positive Second to Mission Street, the EIR is woefully inadequate. As Commissioner Lee inquired about, the standards and alternatives are different from the California Environmental Quality Act and require a high degree of analysis for alternatives which the EIS/EIR does not present.

COURT REPORTER: Could I get the name of your organization again, ma'am?

PAMELA DUFFY: This is great. It's Coblentz, Patch, Duffy, and Bass. And I'll give you my card. Thank you.

MICHAEL ANTONINI: Thank you. Speaker Jennifer Clary, and if there's anyone else after that, we'll take them after that.

JENNIFER CLARY: I promise to take much less than five minutes. My name is Jennifer Clary. I'm president of San Francisco Tomorrow. As you can infer by the number of people here today, we're very, very interested in this project and this document. Norm Rolfe wanted to correct an earlier speaker, and to remind you that Proposition H in November 1999 passed with almost 80 per cent of the vote and designated an extension to Caltrain and a new Transbay Terminal, and continued urban design comments.

Also, Mary Anne was continuing with the urban design comments. One of the difficulties is the extent to which decisions are going to be made based on this EIR. We

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understand it's a Redevelopment Area. This is a program-level EIR, but rezoning will still occur based on this. Currently, there's nowhere for the design plan, no picture in the document saying where the EPA says is and what it will look like. There's no shade diagrams. You don't understand what the shadow impacts are going to be in the area. There's no urban design plan yet. We understand Redevelopment is behind and that they'll engage someone soon. But we feel there has to be a process in the EIR to have that completed. Either you incorporate a requirement for it in the EIR with some specific requirements, or you recirculate the EIR later, once you have the urban design component completed.

Really quickly, there are water impacts for this project. Whenever you increase the density of an area, there's increased pressure on our sewer system. We feel that needs to be weighted in this document. Also, we're very -- Joan Kugler was very helpful. We met with her. She showed us documents. We dug in the boxes. I was looking for the analyses of hazardous materials. I found a 1995 analysis which had an estimate for $5 million for disposal of hazardous materials. I'm not sure yet because they haven't gotten back to me yet as to what kind of update they did for the purposes of this document. I know that they did no new soil testing. But I was hoping that based on other,

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um -- projects in the area like Mission Bay and the ballpark that, that they have a better idea of the amount of soil removed and where it's going to have to disposed of, the level of toxicity in the soil. You'll get a lot of writing. Thank you.

MICHAEL ANTONINI: I think we had one more gentleman who wished to speak. Come forward, sir, and state your name.

GEORGE YAMAS: My name is George Yamas, Y-A-M-A-S. I'm the owner of a building on Stillman, and have been for 25 years. I wanted to basically support the people that feel it is not a compatible use to put the buses storage there for the obvious reasons, some of which we already heard; regard residential commercial usage etc.

I'd also like to point out to you that it seems to me that the developers that will be developing the project along with the Transbay Terminal have a responsibility to find a less dense, a less controversial, uh, place to store those buses as part of the project. And, um, there's no denying that putting that storage at that location is going to interfere with the quality of life of a lot of residents, a lot of tenants. And the diminish the value of people's property. That seems like an unfair transfer of wealth and sense from the developers to, to the local people. They've been supporting that for a long, long time in that area.

The other thing I'd like to point out is that all the

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proposals I've seen are stressing more residential construction in that area. It seems to me that's a very incompatible use, to encourage more residential use, then people can get sick with the diesel fumes, the traffic and safety issues, etc., involved with parking some buses there, thank you.

MICHAEL ANTONINI: Thank you. And I would ask if any other people wish to comment publicly on this item, please come forward now.

Saying that, I'm going to close public comment on item number seven on today's calendar, the Transbay Terminal Caltrain Downtown Extension Redevelopment Project. And I'd like to ask my fellow commissioners if they have any comments in regards to that at this time. Commissioner Bill Lee.

WILLIAM LEE: I think the, um, the issue regarding diesel is a major issue, and as you may be aware, the Board of Supes has requested Muni within the next four months convert all the buses to natural gas. But I think there's a misconception by the public that diesel is in itself a carcinogenic. Diesel is a mix of exhaust from oils that are burned. Some of it could be carcinogenic. Some of it could not be.

We talk about carcinogens. A lot of people have a misnomer. Quite a few of the things you eat and wear are

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carcinogenic. The question is, how potent is the carcinogen? I would ask the Planning Commission to work with the Bay Area Air Quality Management District and include in your report their reviews on diesel. If they don't have the information, go to EPA, and they will provide you with updated information regarding the diesel issue. I think the public also has a misunderstanding that under Bay Area quality management district standards included here. You should look at the particular matter, the standard. These are particular matters you're looking at with regards to diesel exhaust. That's particle size. If it's between one and ten microns, that is the size you breathe in and out. If it's larger, the likelihood of you breathing it in is small because it's too heavy and will fall out. Plus in your nose and mouth, it wouldn't go deep into your lungs. If it's less than one micron, you would breathe it in and it will go out again.

I think the public, we would be well served to educate the public regarding diesel. If there's any way for the Planning Department to do that, we would appreciate it.

GERALD GREEN: That might assist us in developing some response to this. In trying to form some response to this, your desire is to, that this document includes something educational in terms of what the standard is?

WILLIAM LEE: That is correct. So the public may read the

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document -- we used to have a cancer of the week. When they had it the last time was when they used, tested on bacteria, called the Ames Test. 90 per cent of the stuff was carcinogenic. The public believes if it's carcinogenic, you get it. But we should worry about mutagens which carry them to the next generation.

What I'm concerned about, everybody is using this as an issue about carcinogens. I think the risk management documents are out there by EPA and other regulatory agencies that will be very helpful in explaining the risks regarding diesel. Commissioner Hughes?

KEVIN HUGHES: Well, I believe that a environmental impact report that is adequate and accurate as it relates to this project should contain with respect to, to diesel emissions some study of what speed and wind direction as it relates to the freeway overpass. Um, I believe we should look at the graphics; the graphics do not fit, if they do not have a good working relationship with preceding, succeeding graphics, then we might review that. Certainly should include shadow impacts.

And with respects to a request for extension, I don't see any harm. I would lean towards, you know, an additional two weeks, on, on extension, I think January 30th is a little far out, far away. But I believe that, um, an additional two weeks would not unduly impact the Department.

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GERALD GREEN: No. It's not going to affect the Department. It might affect others. Your suggestion at this stage is to extend the written comment period for two weeks?

KEVIN HUGHES: Correct; right.

MICHAEL ANTONINI: Okay. Thank you, Commissioner Hughes. Any other comments from commissioners?

I just wanted to add, one thing I noticed in here, that deals with this diesel question. And there is allusions in the report to the possible inclusion of a, a tube to allow trains to run in other directions, perhaps under the Bay towards the East Bay as part of the project. I think that's very farsighted. Certainly, wherever possible, I would encourage projects like this, to you know, try to do electrification and wherever we can stay away from diesel. In reality, that is, most of the buses that come in from AC Transit and from the Marin buses are diesel or are going to be, at least above-ground-type things, in the foreseeable future. So I'm going to close comment on this item now. And the only thing that remains on our agenda is opening up public comment, unless you had some remarks.

GERALD GREEN: No, I heard. And I'm wondering whether that is the consensus of the commission that you'd like to see additional time for written comments. Other than that, we received a substantial amount of comments that we were going to get to work on. I'm not sure what two weeks will

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generate in terms of new or additional comments, but it is, it is going to affect the timeline. But nonetheless, it's your call. You are going to have to feel comfortable that the document is adequate before you're served by it.

MICHAEL ANTONINI: Director Green, do we need a motion to vote on this item?

GERALD GREEN: I think that if it's a consensus of the Commission, that that is probably enough.

MICHAEL ANTONINI: I don't know. Maybe we can poll the Commission.

LAWRENCE B. BADINER: Go ahead.

MICHAEL ANTONINI: I personally would vote not to extend. I would like to see what the other commissioners feel on this item.

BILL LEE: I can go halfway. Extend it for one week.

MICHAEL ANTONINI: Commissioner Sue Lee.

SUE LEE: I would support a two-week extension.

MICHAEL ANTONINI: Commissioner Hughes.

KEVIN HUGHES: I would support a two-week extension.

MICHAEL ANTONINI: We have two votes for two weeks.

SECRETARY IONIN: I just talked to the City Attorney --

GERALD GREEN: We're going to extend it to -- what I hear the commission saying, we're going to extend it to December 20th to provide more comments. And we'll go from there.

MICHAEL ANTONINI: Okay, very good, Director Green. So it's

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extended until December 20th.

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Dated: Dec. 8th, 2002

Cathy Bauer C.S.R. 12676