

RESOLUTION NO. 11-2005

Adopted January 25, 2005

ADOPTING ENVIRONMENTAL FINDINGS AND A STATEMENT OF OVERRIDING CONSIDERATIONS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT AND STATE CEQA GUIDELINES IN CONNECTION WITH THE ADOPTION OF A REDEVELOPMENT PLAN FOR THE PROPOSED TRANSBAY REDEVELOPMENT PROJECT AND RELATED DOCUMENTS AND ACTIONS; TRANSBAY REDEVELOPMENT PROJECT AREA

BASIS FOR RESOLUTION

1. The Transbay Terminal/Caltrain Downtown Extension/ Redevelopment Project (the "Project") is a project subject to the California Environmental Quality Act ("CEQA") and the National Environmental Policy Act ("NEPA"), whose principal components are a new Transbay Terminal at its current site, the extension of the Caltrain rail and accommodation of high speed passenger trains into a new Terminal building, a temporary terminal on the block bounded by Main, Beale, Folsom, and Mission Streets; reconstructed bus ramps from the permanent terminal to the Bay Bridge, an offsite bus storage/layover area under Highway Route 80 on the two blocks bounded by Perry, Stillman, 2nd and 4th Streets, a Caltrain storage yard and station near 4th and Townsend Street, and the adoption and implementation of a redevelopment plan for the Transbay Redevelopment Project ("Transbay Redevelopment Plan"), establishing the Transbay Redevelopment Project Area (the "Project Area").
2. The approval of the Project requires a number of actions by various public agencies which include the approval and implementation of the Transbay Redevelopment Plan and other actions (the "Actions") by the Redevelopment Agency of the City and County of San Francisco ("Redevelopment Agency"), more particularly defined in Attachment A, the CEQA Findings attached and incorporated hereto.
3. The City and County of San Francisco, acting through the Planning Department (the "Planning Department") and its Board of Supervisors, the Redevelopment Agency, and the Peninsula Corridor Joint Powers Board ("JPB"), acting as co-Lead Agencies, have previously certified the final environmental impact statement/environmental impact report for the Project (the "Final EIS/EIR"), which consisted of the draft EIS/EIR, the Draft Summary of Comments and Responses, revisions to the draft EIS/EIR, and related documents as follows:
 - A. On April 20, 2004, the Agency, at a duly noticed public hearing, certified the Final EIR by adoption of Resolution No. 45-2004, which found that

the contents of the Final EIS/EIR and the procedures through which it was prepared, publicized, and reviewed complied with the provisions of the California Environmental Quality Act (Cal. Public Resources Code sections 21000 et seq., hereinafter "CEQA") and the State CEQA Guidelines (Cal. Code of Regulations Title 14, sections 15000 et seq., hereinafter "CEQA Guidelines").

- B. On April 22, 2004, at a duly noticed joint public hearing, the Planning Commission and the Peninsula Corridor Joint Powers Board certified the Final EIR and made similar findings to those of the Agency in regard to CEQA and the CEQA Guidelines.
 - C. On June 15, 2004, at a duly noticed hearing concerning appeals of the Planning Commission's certification of the Final EIR, the Board of Supervisors, in Motion No. 04-67, rejected appeals from such certification and affirmed the Commission's certification of the Final EIR.
4. On April 22, 2004, pursuant to Federal Transit Administration guidelines and regulations, TJPA held a public hearing and adopted its Resolution No. 04-004, which approved the Preferred Project alternative (described in more detail in Attachment A, the CEQA Findings) that contains the following major components.
- A. A new, multi-modal Transbay Terminal on the site of the present Transbay Terminal;
 - B. 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
 - C. Establishment of the Transbay Redevelopment Plan, which provides for the new multi-modal Transbay Terminal and related development projects, including transit-oriented development on publicly owned land in the vicinity of the new Transbay Terminal.
5. The Final EIS/EIR is a project EIR for the Transbay Redevelopment Plan and related documents, prepared pursuant to Public Resources Code section 21090 and State CEQA Guidelines section 15180 and is also a Program EIR for the Project pursuant to State CEQA Guidelines section 15168.
6. The Final EIS/EIR files and other Project-related Agency files are available for review by this Agency and the public are available at 770 Golden Gate Avenue, 3rd Floor, and are incorporated by this reference as a part of the record before the Redevelopment Agency pertaining to the Project (collectively referred to as the "Project Record").

RESOLUTION

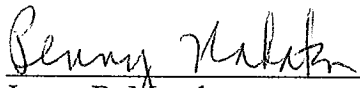
ACCORDINGLY IT IS RESOLVED by the Redevelopment Agency of the City and County of San Francisco as follows, based on its review and its review and consideration of the Final EIS/EIR, the Project Record, and the proposed Transbay Redevelopment Plan:

1. The environmental impacts of the Preferred Project alternative approved by TJPA as the Project are within the scope of the environmental impacts analyzed in the Final EIS/EIR, therefore no subsequent EIR is necessary or appropriate, based on Attachment A, the CEQA Findings, which support the following determinations:
 - A. Such modifications do not require important revisions to the Final EIS/EIR due to the involvement of new significant environmental effects or substantial increase in the severity of previously identified significant effects.
 - B. No substantial changes have occurred with respect to the circumstances pertaining to the Project or the Actions which would require major revisions to the Final EIS/EIR due to the involvement of new significant environmental effects, or a substantial increase in the severity of effects identified in the Final EIS/EIR.
 - C. No new information of substantial importance to the Project or the Actions has become available since the Agency's certification of the Final EIR that would indicate any of the following:
 - i. The Project or the Actions will have significant effects not discussed in the Final EIS/EIR;
 - ii. Significant environmental effects will be substantially more severe than discussed in the Final EIS/EIR;
 - iii. Mitigation measures or alternatives found not feasible in Attachment A, the CEQA Findings, which would reduce one or more significant effects have become feasible; and
 - iv. Mitigation measures or alternatives which are considerably different from those in the Final EIS/EIR, that would substantially reduce one or more significant unavoidable effects on the environment, have been identified.
2. The Redevelopment Agency hereby adopts Attachment A, the CEQA Findings, as its CEQA findings, which include determinations concerning consideration and rejection of certain Project alternatives, description of Actions within the

Agency's jurisdiction, mitigation measures and also contains a statement of overriding considerations in regard to significant unavoidable impacts.

3. The Redevelopment Agency also adopts the mitigation measures described in Exhibit 1 to Attachment A, the Mitigation Measures Presented and Analyzed in Final EIS/EIR ("Mitigation Measures"), which are within the jurisdiction and authority of the Redevelopment Agency which are adopted by and the mitigation monitoring program contained in Exhibit 2 to Attachment A, the Mitigation Monitoring and Reporting Program.
4. The Redevelopment Agency also finds and determines that those mitigation measures described in the Mitigation Measures which are outside of the Redevelopment Agency's jurisdiction have been adopted by the TJPA in Resolution No. 04-004 and by the City and County of San Francisco.

APPROVED AS TO FORM:


for James B. Morales
Agency General Counsel

ATTACHMENT A

TRANSBAY TERMINAL / CALTRAIN DOWNTOWN EXTENSION / REDEVELOPMENT PROJECT

CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS

REDEVELOPMENT AGENCY OF THE CITY AND COUNTY OF SAN FRANCISCO

1. INTRODUCTION

These Findings are made by the Redevelopment Agency of the City and County of San Francisco (the "Agency") pursuant to the California Environmental Quality Act, California Public Resources Code section 21000 et seq. ("CEQA") with respect to the Transbay Terminal/ Caltrain Downtown Extension/ Redevelopment Project ("Project"), in light of substantial evidence in the record of Project proceedings, including but not limited to, the Final Environmental Impact Statement/Final Environmental Impact Report ("EIS/EIR") prepared pursuant to CEQA, the State CEQA Guidelines, 14 California Code of Regulations Sections 15000 et seq., (the "CEQA Guidelines"), the requirements of the 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; and Executive Order 12898 (Environmental Justice)..

This document is organized as follows:

Article 2 describes the Project.

Article 3 describes the actions to be taken by the Agency.

Article 4 provides the basis for approval of the Project (the Locally Preferred Alternative identified in the Final EIS/EIR), a description of each alternative, and the economic, legal, social, technological, and other considerations that lead to the rejection of such alternatives as infeasible.

Article 5 sets forth Findings as to the disposition of each of the mitigation measures proposed in the Final EIS/EIR. Mitigation measures are grouped in the following categories:

- (1) Measures which are within the jurisdiction and responsibility of another governmental agency and which are recommended by the Agency for adoption by that agency; and
- (2) Measures which are within the jurisdiction and responsibility of the Transbay Joint Powers Authority (the "TJPA") that the TJPA adopted and incorporated into the Project by its Resolution No. 04-004, which is incorporated herein by reference; and,

Article 6 identifies the unavoidable, significant adverse impacts of the Project that have not been mitigated to a level of insignificance by the adoption of mitigation measures as provided in Article 5.

Article 7 contains a Statement of Overriding Considerations, setting forth specific reasons in support of the Agency's actions in light of the significant unavoidable impacts discussed in Article 6.

Exhibit 1, attached to these Findings, is a reference document that contains a statement of each mitigation measure. It shows mitigation measures, grouped by subject, in the order that they are proposed and analyzed in the Final EIS/EIR. Exhibit 2, also attached, contains the Mitigation Monitoring and Reporting Program. It provides a table specifying the agency responsible for implementation of each measure, establishes monitoring actions and a monitoring schedule.

2. PROJECT DESCRIPTION

2.1 Project Approvals

The Project consists of a series of actions that together define the terms under which the Project will occur (collectively the "Project Approvals"). The primary Project Sponsor for the elements of the Project related directly to the Transbay Terminal is the Transbay Joint Powers Authority ("TJPA"). The primary Project Sponsor for the Transbay Redevelopment Project Area Plan is the Agency.

The City and County of San Francisco, the Peninsula Corridor Joint Powers Board, and other governmental agencies and districts will be taking various approval actions related to the Project. The Project is composed of the following major permits and approvals, and related and collateral actions:

- 2.2.1 Adoption of the Transbay Redevelopment Project Area Plan.
- 2.1.2 Amendments to the General Plan of the City and County of San Francisco;
- 2.1.3 Amendments to the Zoning Map of the City and County of San Francisco;
- 2.1.4 Adoption of General Plan consistency/Planning Code § 101.1 findings in regard to various actions;
- 2.1.5 Approval of the Locally Preferred Alternative (LPA) elements as follows: West Ramp Transbay Terminal, Second-to-Main, Tunneling, and Full Build as the Preferred Terminal Project.
 - A. Acquisition of real property or easements that also may include eminent domain related to the terminal design or track alignments.
 - B. Granting of rights to use City right-of-way for rail purposes.

These approvals, along with implementation actions related thereto, are referred to collectively herein as the "Project." As described in Article III, actions related to general implementation of the Project and number 1 and potential number 6 are or will be before the Agency.

2.2 Project Description's Relationship to the Final EIS/EIR

The Project, described in detail below, is based on the Project Description contained in the Final EIS/EIR. Also, as set forth below, the TJPA, after a duly noticed public hearing on April 22, 2004 adopted the Locally Preferred Alternative as the Preferred Project in Resolution No. 04-004. 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 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.

2.3 Public Review of Draft EIS/EIR

A Draft Environmental Impact Statement/Environmental Impact Report ("Draft EIS/EIR") was prepared and distributed to the public 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. Over fifty 11" x 17" posters were posted throughout the Project area, including around the Caltrain terminal at 4th and Townsend Streets, along Second Street, around the Transbay Terminal and throughout the Redevelopment Project Area. 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 TJPA web site. Three hundred eighty two copies, both printed and compact disc versions, of the Draft EIS/EIR were mailed to agencies and individuals.

The document also was available for review at the following locations:

- Peninsula Corridor Joint Power Board (Caltrain) Headquarters, Second Floor Reception, 1250 San Carlos Avenue, San Carlos;
- San Francisco Central Library, 100 Larkin Street;
- City of Berkeley Central Library, 2090 Kittredge Street;
- San Francisco Planning Department, 1660 Mission Street, First Floor Public Information Center;
- San Francisco Redevelopment Agency, 770 Golden Gate Avenue, 3rd Floor;
- AC Transit Headquarters, 1660 Franklin Street, Oakland (Board Secretary); and,
- Main libraries of cities along the Caltrain Corridor.

Three public hearings were held:

- November 12, 2002 at 5:00 pm – San Francisco Redevelopment Agency in 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 Planning Commission on November 26, 2002, extended the comment period until December 20, 2002.

2.4 EIR Certification

The Agency, on April 20, 2004, and the Planning Commission and the Peninsula Corridor Joint Powers Board, on April 22, 2004, adopted certain findings in regard to the Final EIS/EIR and certified said document as accurate, adequate, and complete in compliance with CEQA and the CEQA Guidelines. Three separate groups appealed the Planning Commission's certification to the San Francisco Board of Supervisors. On June 15, 2004, after a duly noticed public hearing, the San Francisco Board of Supervisors, in Motion No. M04-67, affirmed the Planning Commission certification of the final EIS/EIR and rejected the appeals.

3. **AGENCY ACTIONS**

The Agency is considering various actions ("Actions") in furtherance of the Project, which include the following:

- 3.1 Adoption of these CEQA Findings, including a statement of overriding considerations, mitigation measures, and a mitigation monitoring and reporting program;
- 3.2 Approval of all actions required under the California Community Redevelopment Law (Health and Safety Code Sections 33000 et seq.) for adoption of the Transbay Redevelopment Project Area Plan and related implementation actions; and
- 3.3 Acknowledgement and approval of the TJPA's Locally Preferred Alternative ("LPA" or also referred to as the "Preferred Project") elements as they relate to the Agency's action. These elements include the following: West Ramp Transbay Terminal, Second-to-Main, Tunneling, and Full Build as the Preferred Terminal Project. The Preferred Terminal Project also includes a temporary terminal on the block bounded by Main, Beale, Folsom and Mission Streets, reconstructed bus ramps from the permanent terminal to the Bay Bridge, an offsite bus storage/layover area under Route 80 on the two blocks bounded by Perry, Stillman, 2nd and 4th Streets, and a Caltrain storage yard and station near 4th and Townsend Streets.

4. **CONSIDERATION OF PROJECT ALTERNATIVES**

This Article describes the alternatives and design options selected for the Project as well as those rejected. Included in these descriptions are the reasons for selecting or rejecting the alternatives and design options. This Article also outlines the Project's purposes and needs to provide a context for understanding the reasons for selecting or rejecting alternatives, and describes the project alternative components analyzed in the Final EIS/EIR. The Project's Final EIS/EIR presents more details on selection and rejection of alternatives. Many of the alternatives and design options considered for this Project, together and individually, have been under serious consideration for many years as part of numerous environmental, engineering, and planning studies (outlined in the Final EIS/EIR Section 1.2.1).

The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project is a large, complex, and highly interrelated project. In order to help the public and decision-makers better understand this project, the environmental analysis and planning studies were oriented towards three major components: the multi-modal Transbay Terminal, an underground extension of Caltrain to downtown San Francisco, and redevelopment of the Transbay Terminal area. For each of these components several alternatives and design options were considered in the Final EIS/EIR and in previous studies.

4.1 Development of Project Alternatives

As outlined in Chapter 2, Section 2.3 of the Final EIS/EIR, the Project has been the subject to a long series of environmental, engineering, and planning studies. These studies were used to help identify a series of alternatives for evaluation in the Final EIS/EIR planning process that began in early 2000. The Project is a complex and highly interrelated undertaking consisting of a multi-modal transit terminal, an underground rail line extension, and redevelopment of the surrounding area. In order to maximize the public’s ability to understand and help plan the project, the lead agencies decided to present the Project as three main components. For each of the components several alternatives were considered in the EIS/EIR (a detailed analysis of the alternatives is presented in Chapter 2 of the Final EIS/EIR), including a No Project alternative (“No Project Alternative”). The EIS/EIR presents the Project alternatives as the following components and alternatives:

1. New Transbay Terminal Project Component

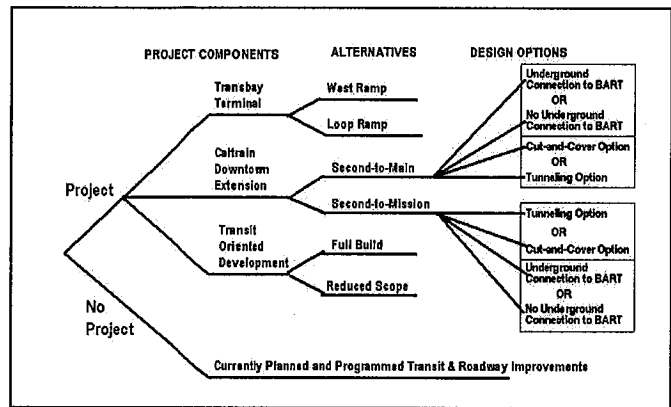
- West Ramp Alternative
- Loop Ramp Alternative

2. Redevelopment Project Area Plan Component

- Reduced Scope Alternative
- Full Build Alternative

3. Caltrain Downtown Extension Project Component

- 2nd-to-Main Alternative
- 2nd-to-Mission Alternative



Both alternatives for the Caltrain Extension include a design option for a pedestrian connection from the train mezzanine underneath Fremont Street to the BART Embarcadero Station.

In addition, two construction options were evaluated for the underground portion (from approximately Berry Street to the Transbay Terminal) of the Caltrain Extension:

- Cut-and-Cover Option – under this option cut-and-cover construction would be used for the entire length of underground alignment; or,
- Tunneling Option – under this option a tunnel would be constructed on the segment from Townsend/Clarence to Second/Folsom. Cut-and-cover construction would be used for all other underground construction.

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.

The Draft EIS/EIR presented a complete analysis of the environmental impacts of these alternatives. During the Draft EIS/EIR comment period members of the public and agencies suggested several additional alternatives or refinements to the alternatives. These alternatives and refinements were considered by the lead agencies and used to help define the Locally Preferred Alternative (LPA).

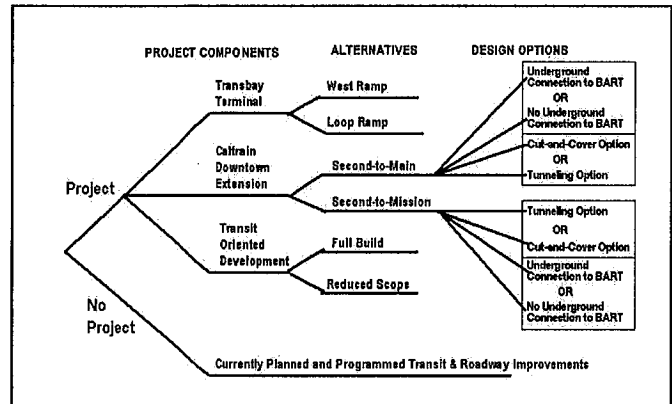
On March 28, 2003, the TJPA, following Federal Transit Administration guidelines and regulations, adopted the Project Locally Preferred Alternative (“LPA”) for inclusion in the Final EIS/EIR. The LPA Report (TJPA, March 2003) describes the characteristics, advantages and disadvantages regarding each of the alternatives. The TJPA selected the West Ramp Transbay Terminal, Second-to-Main, Tunneling, Full Build options as the LPA. The Final EIS/EIR describes the LPA impacts in detail.

On April 22, 2004, after a duly noticed public hearing, the TJPA, in Resolution No. 04-004, adopted the LPA design as its Preferred Project.

4.2 Project Need, Purpose and Objectives

As noted previously, the Project is based generally on the Project Description presented in Chapter 2 of the Final EIS/EIR

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.



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.

Undertaking the Project components would address the following purposes and 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 diverse mix of land uses that includes both market-rate and affordable housing;
- Facilitate transit use by developing housing in the area surrounding a major transit hub;
- Improve Caltrain service by providing direct access to downtown San Francisco;

- Enhance connectivity between Caltrain and other major transit systems including: BART, Muni, AC Transit, Golden Gate Transit, and Greyhound;
- 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.

4.3 Rejection of the No Project Alternative

The No Project Alternative consists of existing Caltrain service with funded improvements, and other committed bus, rail, and roadway improvements. It includes proposed development in San Francisco in the 2020 horizon year. Under this alternative the Agency would not implement a Redevelopment Plan for the Transbay Area, the state-owned properties in the Transbay Terminal would not be transferred to the TJPA and the City, and the existing Transbay Terminal would not be improved significantly beyond basic maintenance and required safety and accessibility improvements.

The No Project Alternative is rejected for the following reasons:

- Fails to Accommodate Year 2020 Transit Demand – The existing Transbay Terminal design cannot fully accommodate expected year 2020 transit demand, thus reducing the ability for transit to meet Transbay travel demand in future years and increasing private vehicle traffic (and its associated environmental impacts) in the Transbay corridor.
- Fails to Extend Caltrain to San Francisco – The No Project Alternative fails to extend Caltrain to downtown San Francisco thus reducing the attractiveness of public transit on the Peninsula and increasing traffic congestion, travel times, and air pollution in the corridor.
- Fails to Provide High Speed Rail Terminal in Downtown San Francisco – The No Project Alternative fails to construct a terminal for California’s planned high speed rail system in downtown San Francisco. This will eliminate the ability for a downtown San Francisco station leading to reduced high speed rail ridership, reduced economic development opportunities in San Francisco, and increased environmental impacts associated with more private vehicle transportation.
- Fails to Create a Multi-modal Transit Terminal in Downtown San Francisco – The No Project Alternative fails to create a new multi-modal transit terminal that efficiently connects all San Francisco’s major transit services in downtown San Francisco, thus reducing the attractiveness of transit and thereby ridership.
- Fails to Adhere to San Francisco Voter Mandates – By not constructing a new multi-modal Transbay Terminal and Caltrain extension, the No Project Alternative is inconsistent with the mandate of San Francisco voters as expressed in passage of

Proposition H in November 1999 and Proposition K in November 2003, as well as various State laws, such as California Public Resources Code section 5027.1(a), Streets and Highways Code section 30914(c)(22), which require a terminal designed to accommodate high speed rail.

- Fails to Revitalize Transbay Terminal and Transbay Terminal Area – The No Project Alternative could result in further deterioration of the existing terminal structure and continued use of a structure that does not meet current seismic safety requirements or space utilization standards. The No Project Alternative will not create an improved Terminal for passengers and the public to use and enjoy. It will not help alleviate the conditions of blight in the Transbay Terminal area and it will not revitalize the Transbay Terminal area with a more vibrant mix of land uses.
- Fails to Create and Support Housing – The No Project Alternative will not remove the existing conditions of blight created by the Terminal and associated ramps and therefore will discourage construction of affordable and market rate housing in the area.
- Fails to Create a Transit Oriented Development – The No Project Alternative will not facilitate the development of high density mixed use development in the Transbay Terminal area that would encourage the use of environmentally friendly transportation thereby reducing transportation impacts of the development.

For the economic, legal, social, technological, and other considerations reasons set forth herein and in the Final EIS/EIR, the No Project Alternative is rejected as infeasible.

4.4 Alternatives Considered and Reasons for Selection

This section outlines the alternatives that comprise the Preferred Project and the reasons for their selection.

4.4.1 New Transbay Terminal Component:

Two alternatives were evaluated for a new Transbay Terminal in the Draft EIS/EIR. 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.

The new terminal would include facilities for AC Transit, Greyhound, Greyhound Package Express, Muni buses and trolley coaches, Golden Gate Transit, basic service buses, taxi service, paratransit service, and easily accessible bicycle storage. Both alternatives would include space for retail and cultural uses.

The design for the new Terminal also would shift the existing Terminal footprint 150 feet in a westerly direction, as further described in the Final EIS/EIR Section 2.2. The combination of the modified Terminal footprint and the Second-to-Main track alignment described below in Section 3 (Caltrain Downtown Extension Component) results in the need to occupy the surface and subsurface of the 80 Natoma development site, currently a vacant property that is the subject of the property acquisition contemplated herein.

Preferred Project: West Ramp Alternative

The Agency acknowledges and approves the TJPA's selection of the West Ramp Alternative as the Preferred Project. This alternative is fully described in Final EIS/EIR Section 2.2.2.1. The West Ramp Alternative is selected for the Project because it has the following major advantages:

- Additional Development Opportunities – Under the West Ramp Alternative the blocks south and east of the Transbay Terminal at Beale and Howard Streets and Folsom at Beale and Main Streets would be open for development, which is not possible under the Loop Ramp Alternative.
- Improved View Corridors – Under the West Ramp 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.
- Lower Capital Costs – The West Ramp Alternative would have lower capital costs than the Loop Ramp Alternative.
- Visual and Economic Benefits from Modifying Terminal Footprint – The modified Terminal footprint has numerous advantages over the prior Terminal design which bridged Beale Street with a part of the Terminal structure that rose more than 60 feet above the street. This modified footprint results in engineering cost savings through the elimination of this design element. It also results in enhancing the visual character of the Beale Street corridor as well as providing for a better terminal user and retail environment on the street level. The modified footprint also opens up future development opportunities for a building on the east side of Beale between Mission and Howard and on a Howard Street parcel currently occupied by bus ramps that would be relocated. While some of the abovementioned economic benefits may be offset by the cost of acquiring the 80 Natoma site, the proposed configuration provides greater long-term benefits to the TJPA, the City, transit providers, transit users, and the public for the reasons set forth herein and elsewhere in the administrative record.

Numerous people who commented on the Draft EIS/EIR stated their preference for the West Ramp Transbay Terminal Alternative, and this 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, currently the main tenant in the existing terminal and one of the primary 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.

4.4.2 Redevelopment Component

Two alternatives were evaluated for the Redevelopment Plan Area: the "full build" and "reduced scope" development alternatives. These alternatives are not actual proposals but rather represent the range of reasonable development that could occur in the area. Within the overall redevelopment plan, actual development proposals would be defined and evaluated in subsequent steps of the redevelopment process. The two alternatives evaluated are described in detail in FEIS/FEIR Chapter 2 and are summarized in Table 1 below.

Preferred Project: Full Build Development Alternative

The Agency acknowledges and approves the TJPA's selection of the Full Build Alternative as the Preferred Project. The Agency also independently approves the element of the Preferred Project within its jurisdiction, the Full Build Alternative for the Transbay Redevelopment Project Area Plan. This alternative is fully described in Final EIS/EIR Section 2.2.4. The Full Build Alternative is selected for the Project because it has the following major advantages:

- Increased Transit Oriented Development – The Full Build Alternative would provide for more intensive land use around the multi-modal transit hub, providing a model for transit oriented development.
- Increased Revenues – The Full Build Alternative would produce more tax increment revenue and proceeds from the sale of surplus parcels than the Reduced-Scope Alternative, providing more funds for the new terminal and Caltrain Downtown Extension.
- Increased Market Rate and Affordable Housing – The Full Build Alternative will provide more market rate and affordable housing than the Reduced Scope Alternative, thus helping to address San Francisco's significant shortfall in housing.
- Reduced Automobile Use – Locating development next to a regional multi-modal transit center is likely to reduce the dependency of local residents, workers, and visitors 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.

In addition to these reasons, many members of the public expressed their support for this alternative as part of their comments on the Draft EIS/EIR.

Redevelopment Component Alternatives		
Development Type	Reduced Scope Alternative (in square feet)	Full Build Alternative (in square feet)
Residential	4,100,000	5,600,000
Office	0	1,200,000
Retail	260,000	355,000
Hotel	350,000	475,000
Total	4,710,000	7,630,000
Residential (in dwelling units)	3,400	4,700

4.4.3 Caltrain Downtown Extension Component

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 existing Transbay Terminal at First and Mission Streets, a distance of approximately 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 alternative alignments were analyzed in the Caltrain Extension in the Draft EIS/EIR:

- Second-to-Main Alignment; and,
- Second-to-Mission Alignment.

These alignments were the same from the present Caltrain terminus to approximately the intersection of Second and Tehama streets. At Second/Tehama, the alternatives differ in the exact alignment of Caltrain tracks into the new station below the Transbay Terminal, design of the rail station itself, and tail track configuration.

Preferred Project: Second to Main (Refined) Caltrain Alignment

The Agency acknowledges and approves the TJPA's selection of the refined Second-to-Main Alignment as the Preferred Project. This alternative represents a slightly refined version of the Second-to-Main Alternative described in the Draft EIS/EIR.

The refined Second-to-Main Alternative was developed in response to public comments on the Draft EIS/EIR which suggested a series of design modifications that improved the operation of the underground Caltrain/ high speed rail terminal. These modifications included changes to the track alignment, platform configuration, number of through tracks, and tail track layouts. They helped improve operation of the terminal by increasing terminal capacity and flexibility, increasing train storage capacity, reducing train dwell times, improving train accessibility, and reducing alignment curvature (thereby reducing train and track maintenance costs, increasing speed and terminal capacity, and reducing noise impacts). (The Second-to-Mission Alternative was also refined in a similar manner.)

The refined Second-to-Main Alternative was chosen for inclusion in the Project for the following reasons:

- **Transbay Terminal Rail Facilities** – The refined Second-to-Main Alternative provides increased platform lengths and length of straight (tangent) platforms over what was defined in the Draft EIS/EIR.
- **Reduced Development Impacts** – The refined Second-to-Main Alternative has fewer impacts on the proposed 301 Mission Street development and on the subsurface portion of the joint development hotel proposed north of the new terminal. While this alignment and modification of the Terminal footprint do result in the need to acquire the 80 Natoma development site, which currently is vacant, the cost of this acquisition is outweighed by the economic, engineering and other benefits stemming from this alignment and the modified Terminal footprint, as set forth herein and elsewhere in the administrative record.
- **Improved Passenger Circulation** – The refined Second-to-Main Alternative, by constructing the bus terminal directly above the train terminal would have more efficient passenger circulation and would channel more passengers through the

planned passenger concourse retail spaces than the refined Second-to-Mission Alternative. More efficient passenger flows would help increase transit ridership and channeling more passengers through the retail space would increase revenues available for Project construction.

- Increased Train Storage Capacity – Tail tracks for the refined Second-to-Main Alternative would provide greater train storage capacity – 7 five-car trains, as compared to 4 five-car trains for the refined Second-to-Mission Alternative.
- Improved Bay Crossing Options – The refined Second-to-Main Alternative is superior in terms of a new Bay Crossing than the refined Second-to-Mission Alternative, as it provides greater flexibility for future planning and has potentially fewer obstacles to the underwater crossing.

Section 2.2.3 of the Project’s Final EIS/EIR describes the refined Second-to-Main Alternative in detail.

4.4.4 Caltrain Downtown Extension: Underground Construction Options

Two alternatives were considered for constructing the underground Caltrain alignment between Townsend/Clarence and Second/Folsom: tunneling and cut-and-cover.

Preferred Project: Tunneling

This alternative consists of constructing the underground Caltrain alignment between Townsend/Clarence and Second/Folsom using the “stacked drift” tunneling method. The Agency acknowledges and approves the TJPA’s selection of this alternative as the Preferred Project because:

- Demolition of Fewer Historic Buildings – The tunneling alternative would require demolition of only three historic buildings; less than the 13 that would need to be demolished under the cut-and-cover alternative.
- Tunneling Technology – The stacked drift tunneling approach has been shown to be a very safe and effective technology.
- Reduced Traffic Impacts – The tunneling option will substantially reduce traffic impacts on Second Street.
- Lower Capital Cost – The tunneling option has lower capital costs.
- Strong Public Support – The tunneling option had strong public support.

Section 2.2.3.3 of the Project’s Final EIS/EIR describes the tunneling option.

4.4.5 Additional Project Elements

The underground pedestrian connection between the new Transbay Terminal and the Embarcadero BART Station is included in the Project subject to availability of funding. This is outlined in Section 2.2.3.1 of the Final EIS/EIR.

4.5 Other Project Alternatives Considered and Reasons for Rejection

This section outlines the alternatives rejected and the reasons for their rejection.

As mentioned above, the Project has been subject to numerous engineering, technical, and planning studies over the past 20 years. During this time period many different alternatives and design options have been considered and rejected. Furthermore, members of the public suggested additional alternatives and options as part of their comments on the Draft EIS/EIR. Therefore, in addition to the alternatives and design options evaluated in the Draft EIS/EIR, this section also summarizes some of the alternatives and reasons for their rejection as considered in previous studies and evaluated in the response to comments on the Draft EIS/EIR. The Final EIS/EIR describes alternatives rejected from further consideration in Section 2.3. Additional information on rejected alternatives can be found in documents incorporated by reference into the Final EIS/EIR including technical studies completed for the MTC's Transbay Terminal Improvement Plan Study, the 1997 Caltrain Downtown Extension Draft EIS/EIR, and the Caltrain Downtown Extension Project Design Options Screening Report, 1995.

The Agency has considered the aspects of the Project within the TJPA's jurisdiction, as well as the attributes and environmental effects of the Project and the Alternatives discussed in the Final EIS/EIR. This consideration, along with the reports from staff and considerable public testimony, has resulted in the Preferred Project reflected in the Transbay Redevelopment Plan, which contains the combination of features most closely meets the Project's purpose and need as summarized above and set forth in Chapter 1 of the Final EIS/EIR. Furthermore, the Agency also rejects all the Alternatives other than those identified in the Preferred Project, because the Agency finds that this program best meets the Project purpose and needs as described in Chapter 1 of the Final EIS/EIR.

The Agency rejects all the Alternatives other than those identified in the LPA, because the Agency finds that there is substantial evidence of specific economic, legal, social, technological and other considerations that make such Alternatives infeasible as outlined below and in the Project's Final EIS/EIR.

4.5.1 New Transbay Terminal Component:

Rejected Alternative: Loop Ramp Alternative

The Loop Ramp Alternative is fully described in Final EIS/EIR Section 2.2.2.2. The Loop Ramp Alternative is rejected for the following reasons:

- Reduced Potential for Neighborhood Revitalization – The Loop Ramp Alternative reduces the potential for neighborhood revitalization since it includes a significantly greater area of aerial freeway ramps than the LPA. This reduces the ability of the Project to serve as a catalyst for Transbay Terminal area revitalization, as less development will reduce the amount of housing, retail, and services in the area.
- Reduced Project Funding – The Loop Ramp Alternative provides less funding for the Project than the LPA since the alternative's greater area of aerial ramps reduces the land available for development and its aerial ramps blight adjoining parcels.
- Increased Visual Impacts – The Loop Ramp Alternative has increased visual impacts over the LPA since it includes more aerial freeway ramps crossing San Francisco streets.
- Higher Cost – The Loop Ramp Alternative is more expensive than the LPA.

Rejected Alternative: New Bus Terminal at Main/Beale Site

Construction of a new bus terminal at the Main/Beale streets site was evaluated between 1995 and 1999. It was evaluated in detail as part of the MTC's Transbay Terminal Improvement Plan study. This Alternative was rejected in February 1999, when the San Francisco Board of Supervisors passed a resolution repealing its prior endorsement of the site and urged the City to work expeditiously to retain regional bus service at the current Transbay Terminal site. The Main/Beale Alternative was rejected for the following reasons:

- **Poor Transit Service** – AC Transit, the Terminal's main bus operator, reported that the Main/Beale site would reduce the level of service to its riders since it was located further from the employment sites of its riders; this would reduce transit ridership.
- **Inefficient Transit Operations** – AC Transit operating costs would be higher for the Main/Beale Alternative than under alternatives at the Transbay Terminal site.
- **Terminal Orientation** – The existing Transbay Terminal orientation, a relatively long and narrow terminal with multiple entrances and exits spread widely along the street grid, has historically demonstrated an ability to accommodate a large volume of transit passengers (26 million annual passengers in the 1940s). The Main/Beale Alternative would re-orient the terminal, reduce the area within easy walking distance to terminal entrances, and reduce the passenger concourse's efficiency and attractiveness, when compared to alternatives that construct a new terminal at the existing Transbay Terminal site. These factors will reduce the attractiveness of transit at the new terminal site.
- **San Francisco Proposition H (November 1999)** – San Francisco voters passed Proposition H in November 1999. This proposition stated, "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..." (Emphasis added). The Main/Beale Alternative was thus in conflict with citizen mandate.
- **Poor Bus to Rail Connection** – The Main/Beale Alternative would only provide one transfer point between the bus and rail terminals while the alternatives that include a bus terminal directly above the rail terminal provide many transfer points. By reducing the number of transfer points the Main/Beale Alternative would make it more difficult to transfer between modes and thus reduce the number of transit passengers.
- **Reduced Development Opportunities** – The Main/Beale Alternative would construct a bus terminal in a prime development site. Furthermore, the 2003 Cooperative Agreement between the State of California, the TJPA, and the City/County of San Francisco which transfers state-owned properties in the Transbay Terminal area requires use of the current terminal site for the new Terminal. Thus the alternatives that include rebuilding the bus terminal at the Transbay Terminal site would keep the Main/Beale site land available for development and thereby increase both the revenues available for the project and the potential for revitalization of the project area.

Section 2.3.1.2 of the Final EIS/EIR outlines reasons for rejecting this alternative. Volume 2 of the Final EIS/EIR (Section 5.1.7) presents more details on rejection of the

alternative. Finally, the MTC Transbay Terminal Improvement Plan study also presents reasons for rejecting this alternative.

Rejected Alternative: “A Tale of Two Cities Terminal Alternative”

The Tale of Two Cities terminal alternative was developed as part of the planning done through the MTC’s Transbay Terminal Improvement Plan study. As part of the MTC Study, this alternative was rejected for the following reasons:

- **Reduced Development Opportunities** – The Tale of Two Cities terminal alternative occupied a large amount of land in the Transbay Terminal area and thus reduced the amount of land available for redevelopment. This reduced the amount of funding available for the Project.
- **Poor Circulation** – This alternative’s large size required passengers to walk long distances to transfer between modes and to circulate within the terminal. By increasing walking distances, the alternative would make it more difficult to transfer between modes and thus reduce the number of transit passengers.
- **Aerial Ramps** – The alternative would keep the existing aerial ramp arrangement, and therefore not reduce the significant blighting influence of the ramps on the Transbay Area.
- **High Cost** – The alternative, due to its large size, had the highest capital costs of any alternative evaluated in the MTC study.

This alternative is outlined in Final EIS/EIR Section 2.3.1.3. More details are available in the MTC’s Transbay Terminal Improvement Plan study.

Rejected Alternative: Renovated Transbay Terminal (with/without Aerial Caltrain Alignment)

Renovation of the existing Transbay Terminal has been considered in several previous technical and planning studies both with an aerial Caltrain extension alignment and as a stand-alone project (i.e. without extending Caltrain downtown). The main reason for rejecting this alternative is that it would not meet the project objectives. More specifically the alternative was rejected for the following reasons:

- **Insufficient Transit Capacity** – According to the MTC’s Bay Crossings Study (2002), the number of express buses using the Transbay Terminal in 2020 is expected to grow significantly. The renovated Transbay Terminal does not have the capacity to efficiently meet the expected future demand.
- **Poor Terminal Design** – While renovating the existing Transbay Terminal is possible, the renovations necessary to make the building seismically safe and fully accessible would lead to many compromises in efficiency and building design. These compromises would reduce the amount of development space available in the building and its attractiveness, thus reducing the revenues generated by the building that would be used to build and operate the terminal.
- **Increased Aerial Ramps** – Extending Caltrain to a renovated Transbay Terminal would require that additional aerial ramps be constructed for trains and that the bus ramps are raised higher in the air. The existing aerial ramps are already a

significant blighting influence on the Transbay Area, increasing the number and height of aerial ramps would result in a significant increase in blight.

- Aerial Operations – Operating trains on the aerial ramps would lead to noise impacts.
- Inefficient Use of Funds – Renovating the Transbay Terminal would cost a significant amount of money and result in a building that is not much improved over the existing terminal. Therefore, it is much more cost effective to demolish the existing structure and build a new terminal designed to meet future demand and current safety and accessibility standards.
- Poor Curve Geometry – The alignment’s curve from Essex Street into the Transbay Terminal would not accommodate the trains (rail vehicles) currently being considered for California’s high speed rail system. Thus, this alternative would eliminate the possibility of extending high speed rail to downtown San Francisco. Extending high speed rail to downtown San Francisco will create important economic, environmental, and social benefits to San Francisco.

Since this Alternative has been considered several times in the past, the reasons for rejecting it are included in several different planning documents. These reasons are summarized in Section 2.3.1.1. of the Final EIS/EIR.

4.5.2 Redevelopment Component

Rejected Alternative: Reduced Scope Redevelopment Alternative

The Reduced Scope Development Alternative is rejected for the following reasons:

- Reduced Revenues – The Project will receive tax increment revenues from the redevelopment area; these revenues would be reduced with reduced development in the area. The Project will also receive revenues for the sales of excess land in the project area; under the Reduced Scope Alternative the prices for land will be lower than under the Full Build Alternative.
- Reduced Housing – The Reduced Scope Alternative would provide less market rate and affordable housing than the Full Build Alternative.
- Reduced Transit Use – By reducing the amount of development in the Transbay Terminal area, the Reduced Scope Alternative would reduce the transit ridership on trains and buses using the Project’s multi-modal terminal. This represents a financial loss for transit operators and an environmental loss for regional transportation/air quality goals.

Section 2.2.4 of the Final EIS/EIR describes the redevelopment components.

4.5.3 Caltrain Downtown Extension Component

Rejected Alternatives: Draft EIS/EIR Second-to-Mission and Draft EIS/EIR Second-to-Main Alternatives

The original Second-to-Main and Second-to-Mission alternatives (described in the Draft EIS/EIR) were rejected in favor of refined alternatives developed based on Draft EIS/EIR comments. The refinements made to the alternatives consisted of a series of design

modifications that improved the operation of the underground Caltrain/ high speed rail terminal.

The original Draft EIS/EIR alternatives were rejected because they had reduced capacity, reduced flexibility, reduced train storage capacity, increased train dwell times, reduced train accessibility, and sharper curves (thereby increasing train and track maintenance costs, reducing speed and terminal capacity).

Rejected Alternative: Refined Second-to-Mission Alternative

The refined Second-to-Mission Alternative is rejected for the following reasons:

- Increased Development Impacts – The refined Second-to-Mission Alternative has greater impacts on the proposed 301 Mission Street development and on the joint development hotel proposed north of the new terminal.
- Degraded Passenger Circulation – The refined Second-to-Mission Alternative would construct the train and bus terminals in a slightly skewed alignment to each other. This means that terminal circulation systems (e.g. stairs, escalators, and elevators) would not be oriented in the same direction from the train level up to the bus level. Furthermore, fewer people would be channeled through the passenger concourse retail areas. Less efficient passenger circulation systems would be more expensive to construct and could be frustrating to passengers trying to transfer between modes. By reducing passenger flows through the retail space, terminal revenues would be decreased.
- Reduced Train Storage Capacity – The refined Second-to-Mission Alternative provides less train storage capacity than the refined Second-to-Main Alternative – 4 five-car trains, as compared to 7 five-car trains. This would increase operating costs and reduce terminal flexibility.
- Reduced Bay Crossing Options – The refined Second-to-Mission Alternative provides less flexibility for constructing a future Bay Crossing than the refined Second-to-Main Alternative, and has potentially more engineering obstacles to the underwater crossing.

The following Alternatives are rejected for the reasons set forth in the TJPA's CEQA findings, adopted as part of its Resolution 04-004, which approved the Locally Preferred Alternative as the Preferred Project. Said Resolution and its associated findings and related documents are in the Planning Department's files and are incorporated herein by reference as though fully set forth. These rejected Alternatives include: Essex Street Curved Alignment, Essex Street Stub-End Alignment, Market/Beale Terminal, Mission/Beale Terminal, King Street Caltrain Alignment, Brannan Street Caltrain Alignment, Angled Caltrain Terminal at First Street, First Street Terminal, Joint Caltrain/Muni Metro Tunnel on Second Street, West of Second Street Alternative, Second Street Terminal, Renovated Transbay Terminal with Aerial Caltrain Alignment.

4.5.4 Caltrain Downtown Extension: Underground Construction Options

Rejected Alternative: Cut-and-Cover Construction

This alternative consists of constructing the underground Caltrain alignment between Townsend/Clarence and Second/Folsom using the cut-and-cover method. This alternative was rejected because:

- Demolition of More Historic Buildings – The cut-and-cover option would require demolition of 13 historic buildings; only three would need to be demolished under the tunneling option.
- Section 4F Requirements – Importantly, the cut-and-cover option’s 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 cut-and-cover option must be rejected under federal law.
- Increased Traffic Impacts – The cut-and-cover alternative will substantially increase traffic impacts on Second Street over the tunneling option.
- Increased Capital Cost – The cut-and-cover option has higher capital costs.

4.6 Alternatives Proposed by Members of the Public

The Agency acknowledges and approves the TJPA’s selection of the alternatives described above as the Preferred Project because the Agency finds that there is substantial evidence of specific economic, legal, social, technological, and other considerations that make the LPA desirable as the Preferred Project. The Agency also independently approves the element of the Preferred Project within its jurisdiction, the Full Build Alternative for the Transbay Redevelopment Project Area Plan, because the Agency finds that there is substantial evidence of specific economic, legal, social, technological, and other considerations that make the LPA desirable as the Preferred Project.

The Agency also rejects all the Alternatives other than those identified in the LPA, because the Agency finds that there is substantial evidence of specific economic, legal, social, technological and other considerations that make such Alternatives less desirable than the LPA for the reasons outlined above and in the Project’s Final EIS/EIR.

During the public comment period, various property owners and commentors proposed alternatives to the preferred Project. These alternatives were described and analyzed in the Final EIS/EIR in Sections 2.9, 3, and 5 of Volume II of the Final EIS/EIR, Responses to Public Comments. These alternatives are rejected as infeasible for the economic, legal, social, technological and other considerations set forth in the Final EIS/EIR at the above mentioned citations.

In February and March 2004, more than one year after the close of the public comment period for the Draft EIS/EIR, the property owner of 80 Natoma proposed 4 conceptual alternate track alignments. The proposals were an effort to minimize conflicts with the proposed 400+ unit residential structure planned for 80 Natoma, which is adjacent to the terminal site. These proposed alternatives are rejected as infeasible for the economic, legal, social, technological and other considerations set forth in documentation attached to the TJPA’s Resolution No. 04-004 approving the LPA as the Preferred Project. These proposed alternatives, and refinements to them analyzed in May and June 2004, also are rejected as infeasible for the economic, technological, and other considerations set forth in the TJPA engineering report dated June 18, 2004. This report is contained in the Agency’s files and is incorporated herein by reference. In addition to the above alternatives, the TJPA staff proposed to the 80 Natoma property owner that

the parties explore a tunnel design for the rail tracks that would allow the planned residential structure to be built over the rail tunnel; however, the property owner rejected this proposal. As a consequence, the TJPA staff removed this proposal from further consideration at that time. For this reason as well as other considerations that favor the preferred Project from an engineering and economic standpoint, this proposed alternative is rejected as infeasible.

4.7 Alternative Proposed by the San Francisco County Transportation Authority

In July 2004, the San Francisco County Transportation Authority (SFCTA) initiated the study of another alternative design for the Transbay Project that would minimize conflicts with the 80 Natoma residential project, as described above in Subsection F. The SFCTA studies resulted in a design that would allow the 80 Natoma project to proceed in the near future with a revised foundation that could allow subsequent tunneling underneath the 80 Natoma structure for the Transbay rail tracks as they enter the Transbay Terminal. The SFCTA design also proposed tunneling under all buildings along the Second Street corridor north of Folsom Street as well as providing for the possibility of stacking the rail lines as they enter the Transbay Terminal. The SFCTA design would have required the Terminal to relocate off of the 80 Natoma site and return to its original location 150 feet to the east of the Terminal location in the Preferred Project. The SFCTA design also would have resulted in other modifications to the Terminal Project, including forcing the Terminal building to span Beale Street and lowering the entire Terminal structure to connect with the lowered profile of the underground rail tracks. As a result of the shift in the Terminal location, the SFCTA design also would have eliminated two development sites slated for redevelopment as described in these Findings in Subsection D.1. above.

The SFCTA proposal resulted in the presentation of two reports, one dated August 10, 2004 and the second dated September 28, 2004. After extensive testimony at SFCTA hearings on August 10 and 17, 2004, and September 28, 2004, the SFCTA ultimately decided to reject the SFCTA design on economic grounds and for other reasons including legal, social, technological and other considerations. The SFCTA instead authorized a release of its sales tax funding for the acquisition of the 80 Natoma site. On September 28, 2004, the Board of Supervisors, in reliance on the documents and testimony presented to the SFCTA, the SFCTA's decision, as well as other information, adopted a resolution of necessity to acquire the 80 Natoma site by eminent domain. As part of these decisions, both the SFCTA and the Board of Supervisors adopted CEQA findings that approved the Preferred Project and rejected all the Alternatives that had been considered. The Agency also rejects this Alternative, because the Agency finds that there is substantial evidence of specific economic, legal, social, technological and other considerations that make such Alternative less desirable than the LPA for the reasons outlined above and in the Project's Final EIS/EIR.

5. FINDINGS REGARDING MITIGATION MEASURES

The California Environmental Quality Act (CEQA) requires agencies to adopt mitigation measures that would avoid or substantially lessen a project's identified significant impacts or potential significant impacts if such measures are feasible.

The Agency finds that, based on the record before it, the measures proposed for adoption in the Final EIS/EIR are feasible, and that they can and should be carried out by the identified agencies at the designated time. The Agency also acknowledges that as part of its project approval action, the TJPA in Resolution 04-004 adopted, as conditions, all the identified mitigation measures within its jurisdiction. The Agency further acknowledges that the San Francisco Board of Supervisors, as part of its September 28, 2004 decision to exercise eminent domain over 80 Natoma, and the Planning Commission, as part of its December 9, 2004 and January 13, 2005 approvals related to adoption of the Transbay Redevelopment Project Area Plan, adopted all the identified mitigation measures within their respective jurisdiction. This Agency urges the

Peninsula Corridor Joint Powers Board (“JPB”) and others to adopt and implement applicable mitigation measures set forth in the Final EIS/EIR that are within the jurisdiction and responsibility of such entities. The Agency acknowledges that if such measures are not adopted and implemented, the Project may result in additional significant unavoidable impacts. For this reason, and as discussed in Article 6, the Agency is adopting a statement of Overriding Considerations as set forth in Article 7.

The Findings in this section concern mitigation measures set forth in the Final EIS/EIR. Mitigation measures are grouped in the following categories:

- (1) Specified measures which are enforceable by another public agency and which are recommended by the Agency for adoption by that agency and measures that are within the Agency's jurisdiction that are adopted herein; and
- (2) Measures which are within the jurisdiction and responsibility of TJPA that the TJPA adopted and incorporated into the Project by its Resolution No. 04-004.

All mitigation measures set forth in the Final EIS/EIR are summarized in Exhibits 1 and 2 to this document. None of the mitigation measures set forth in the Final EIS/EIR are rejected.

It should be noted that all mitigation measures are referenced in these Findings and attached Exhibits using a coded system. Each measure begins with one or more letters that describe the type of impact the measure is intended to address (e.g. mitigation measures for pedestrian impacts start with “Ped”), and then a number. Thus mitigation measures designed to address pedestrian impacts are coded “Ped 1”, “Ped 2”, etc. For more specific information on each mitigation measure refer to Exhibit 1. Responsibility for implementation and monitoring has been established pursuant to the Mitigation Monitoring and Reporting Program set forth in Exhibit 2 to this document. For specific information on implementation of mitigation measures refer to Exhibit 2. Exhibits 1 and 2 are attached hereto and incorporated by reference as though fully set forth.

5.1 Mitigation Measures Recommended by the Agency for Adoption By Other Agencies and Measures Recommended for Agency Adoption

The Agency finds that the following measures presented in the Final EIS/EIR will mitigate, reduce, or avoid the significant environmental effects of the Project. They are hereby recommended for adoption and implementation by public agencies with applicable jurisdiction as set forth below.

1. Wind

W 1 –The Agency shall mitigate or eliminate any wind hazard exceedances by adopting and implementing mitigation measure W 1 as described in Exhibit 1 and Exhibit 2.

2. Property Acquisition/Relocation

Prop 1 – The Agency, in accordance with federal and state law, shall mitigate the impacts of property acquisition and relocations required by the Project by adopting mitigation measure Prop 1 and providing information and relocation assistance to those as set forth therein. The Agency also acknowledges that the Planning Commission has adopted this measure as it relates to decisions within its jurisdiction and urges other affected City entities to take the same action.

3. Hazardous Materials/Waste – Operations

HWO 1 to HWO 6 - The Agency urges the JPB to mitigate potential impacts of a fueling facility by adopting mitigation measures HWO 1 to HWO 6 and by designing, constructing and operating any such facility with appropriate safety measures and equipment, as set forth therein.

4. Pedestrians

Ped 1 to Ped 5 - The Agency shall mitigate or eliminate pedestrian impacts by adopting mitigation measures Ped 1 and Ped 2 as described in Section 5.19.6.1 of the Final EIS/EIR to increase sidewalk width and remove obstacles. The Agency also acknowledges that the Planning Commission has adopted these measures and Ped 3 through Ped 5 as it relates to decisions within its jurisdiction and urges other affected City entities to take the same action.

5.2 Findings on Mitigation Measures Within the Jurisdiction of the TJPA That the TJPA Has Adopted and Incorporated into the Project.

The TJPA, in Resolution No. 04-004, adopted all the mitigation measures within its jurisdiction and incorporated such measures into the Project. As part of this Resolution, the TJPA also adopted a mitigation monitoring and reporting program as required by State law. Consequently, the Agency finds that all mitigation measures within the jurisdiction of the TJPA have been incorporated into the Project and determines that said measures can and will be implemented. This Agency further finds that such measures will mitigate, reduce, or avoid the Project's significant environmental effects. These mitigation measures include all the measures listed in Exhibit 1 that are not specifically listed in Subsection A above. The measures include mitigation in the areas of safety and emergency services, noise-operations and construction, vibration-operations and construction, soils/geology, utilities, cultural and historic resources, hazardous materials during construction, pedestrian safety, pre-construction safety, general construction measures, air emissions, and visual/aesthetics during construction.

5.3 Findings on Adoption of a Mitigation Monitoring and Reporting Program

The Agency finds that the Mitigation Monitoring and Reporting Program attached hereto as Exhibit 2 (the "Program"), is designed to ensure compliance during Project implementation. The Agency further finds that the Program presents measures that are appropriate and feasible for adoption and the Program should be adopted and implemented as set forth herein and in Exhibit 2.

5.4 Location and Custodian of Record

The public hearing transcript, a copy of all letters regarding the Final EIS/EIR received during the public review period, the administrative record, and background documentation for the Final EIS/EIR are located at the Planning Department, 1660 Mission Street, San Francisco. The Planning Commission Secretary, Linda Avery, is the custodian of records for the Planning Department and Planning Commission. Additional administrative record documents on the Final EIS/EIR are located at the San Francisco Redevelopment Agency at 770 Golden Gate Avenue, 3rd Floor, San Francisco. The Agency Secretary is the custodian of records for the Agency. The TJPA Secretary, Roberta Boomer, is the custodian of records for the TJPA. The TJPA records are located at the TJPA offices at 201 Mission Street, Suite 1960, San Francisco.

6. SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACTS

The Project includes many aspects and features that reduce or eliminate environmental impacts, which could otherwise be significant. In particular, the mitigation measures described or referred to above would reduce to a level of insignificance impacts in the following areas, as described in the Final EIS/EIR sections: Wind Impacts (5.1.2), Displacements and Relocation (5.2), Noise and Vibration (5.8), Geology and Seismicity (5.9 and 5.21.17), Utilities (5.12), Historic and Cultural Resources (5.14 and 5.21.14), Hazardous Materials (5.15 and 5.21.15), Construction Air Quality (5.21.9), and Construction Noise and Vibration (5.21.10).

As outlined above, the TJPA has incorporated all of the identified mitigation measures within its jurisdiction into the Preferred Project. There are some mitigation measures within the jurisdiction of the City and JPB. If these mitigation measures are implemented then impacts will be less than significant; however, all of these entities have yet to act on the mitigation measures. Because the Agency does not have the authority to impose all such measures, there could be a significant environmental impact of the Project if these entities do not adopt or implement the mitigation measures specified in the areas of wind, property acquisition/relocation, hazardous materials – operations, and pedestrian safety.

Furthermore, even under full implementation of all the mitigation measures described above in Article 5, some significant unavoidable impacts remain in the areas of traffic and historic resources. These are described in more detail below.

6.1 Traffic

The Project would add substantial numbers of vehicles to some movements that determine overall traffic level-of-service (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.

The Project's contribution to the following intersections would be considered adverse under 2020 cumulative conditions, and these are the same intersections that would experience adverse effects under the 2020 plus Project condition): (1) First/Market, (2) First/Mission, (3) First/Howard, (4) Fremont/Howard, (5) Beale/Howard, (6) Second/Folsom, and (7) 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 also result in a substantial increase in vehicle trips to and from new development projects, 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.

In summary, 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. Due to the lane geometry and other limiting factors (i.e. the lack of space to expand roadways in a highly developed downtown area) it is impossible to fully reduce these traffic impacts to a less than adverse level.

To 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.

6.2 Historic Impacts

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 of the Final EIS/EIR.

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.

The Tunneling Option for the Townsend Street to Folsom Street segment of the Caltrain Downtown Extension would result in the demolition of three buildings that are either individually eligible or that are contributors to a historic district that is eligible. 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. 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.

While the Project would have significant adverse impacts to historic resources under CEQA, the Project also proposes a comprehensive program for mitigating the loss of historic buildings. This program as described in Exhibit 1 under the heading of Cultural Resources, is set forth in a Memorandum of Agreement among the Federal Transit Administration and California State Historic Preservation Officer and the TJPA. (This Memorandum also is included as Appendix G of the FEIS/FEIR in its entirety). The program includes documenting the historic buildings that must be demolished, working with interest groups to salvage and preserve elements of the demolished buildings for display to the public, integration of a historic interpretation center into the new terminal, and funding an exhibition describing the Transbay Terminal. In addition to this comprehensive documentation program, it should be emphasized that the Project option selected

for tunneling demolishes only 3 historic buildings, ten fewer buildings than the cut and cover alternative option that was described and rejected in Article IV of these Findings.

7. STATEMENT OF OVERRIDING CONSIDERATIONS.

Notwithstanding the significant effects noted above, pursuant to CEQA Section 21081(b) and the CEQA Guidelines Section 15093, the Agency finds, after considering the Final EIS/EIR and based on substantial evidence in said document and as set forth herein, that specific overriding economic, legal, social, and other considerations outweigh the identified significant effects on the environment. In addition, the Agency finds that those Project Alternatives rejected above are also rejected for the following specific economic, social, or other considerations, in and of themselves, in addition to the specific reasons discussed in Article IV above:

- 7.1 The Project will encourage more people throughout the Bay Area to use public transit by significantly improving access to transit through construction of an efficient and modern multi-modal transportation terminal in downtown San Francisco. Improving the bus and rail access into downtown San Francisco and providing a highly efficient transfer center for the various public transit operators will encourage more people to use public transit, thus reducing transportation and air quality impacts of the expected future increases in private vehicle transportation demand.
- 7.2 The Project will provide an efficient, comfortable, attractive, and functional transit terminal designed to meet the future transit needs of the users of the San Francisco Municipal Railway, the Alameda-Contra Costa Transit District, the Golden Gate Bridge, Highway and Transportation District, Greyhound, Paratransit, SamTrans, Caltrain, High-Speed Rail and others. By making it more convenient and appealing to enter San Francisco by bus or rail and by facilitating the transfer between transit services, the Transbay Project will help reduce transit operating costs for these entities and for the public.
- 7.3 Regional transportation studies have indicated that travel in the Bay Bridge corridor will increase substantially by year 2025 and that, as a result, Transbay bus ridership could triple. It would not be possible for the existing terminal to meet this demand. The new Transbay Terminal has been laid out and arranged to ensure that the anticipated increase in bus patronage will be met.
- 7.4 Even in 1945, when 26 million passengers each year were using the Transbay Terminal and three separate passenger rail services were bringing train riders from the East Bay across the Bridge and directly into the Transbay Terminal, the Peninsula passenger trains terminated 1.5 miles to the south at 4th and Townsend. By extending Caltrain into the new Transbay Terminal in close proximity to the heart of the Financial District, the Transbay Terminal Project will close this rail gap. It is projected that extending Caltrain will result in an increase in ridership of at least 150% with an associated reduction in daily auto trips and improvement in air quality.
- 7.5 The Project fulfills the mandates of various local and State laws including San Francisco's Proposition H-Downtown Caltrain Station (November 1999), Proposition K-San Francisco Transportation Sales Tax (November 2002), California Public Resources Code Section 5027.1 (a), and California Streets and Highways Code Sections 2704.04 (b) and 30914 (c).
- 7.6 The Project will improve local and regional transportation conditions and air quality by providing a variety of benefits, including 1) removing more than 8,000 daily auto trips from the Peninsula corridor roadways by 2020; 2) increasing annual high speed rail ridership by over 200,000 trips annually as a result of constructing a downtown terminal; 3) saving 7,200 person hours, including 5,700 person hours for Caltrain riders and 1,500

person hours for roadway travelers, which represents an approximate savings of \$20 Million based on Federal Transit Administration standards, and 4) reducing parking demand in the Transbay Terminal area.

- 7.7 The Project fulfills the mandates of San Francisco's Transit First Policy as set forth in San Francisco Charter Section 16.102.
- 7.8 The Project will significantly improve the ability to transfer between different transit systems by constructing a safe, convenient, and efficient terminal and possible underground pedestrian link to BART. This multi-modal linkage will make it easier to use transit for a large variety of destinations.
- 7.9 The Project is designed to accommodate the planned California High Speed Rail system thus allowing high speed rail service to be extended to downtown San Francisco directly from Los Angeles Union Station and ultimately connecting to a state-wide 700-mile system. It is projected that there will be between 7.8 and 17 million annual high speed rail boardings and alightings at the Transbay Terminal by 2020, making it by far the most highly used station in Northern California.
- 7.10 The Project will provide new seismically safe aerial ramps connecting the Transbay Terminal to the Bay Bridge/I-80 for transit buses, removing this vehicular traffic from downtown streets. Furthermore, the Project will reduce the aerial extent of these ramps, thus supporting redevelopment efforts in the surrounding neighborhood.
- 7.11 The Project will alleviate blight and encourage revitalization of the area surrounding the Transbay Terminal by replacing the existing terminal with a safe, modern, attractive, well-used, and efficient new terminal as well as reducing the area of aerial bus ramps serving the new terminal.
- 7.12 The new terminal will include shopping, restaurants, and services in the new terminal which are designed to appeal to public transit users, neighborhood residents, downtown workers, and others. Inclusion of these retail uses will help provide revenues for building operations.
- 7.13 The Project includes plans for redeveloping and dramatically improving the area around the Transbay Terminal and creating a vibrant mixed- use neighborhood which includes both market-rate and affordable housing. Residents, workers, and visitors to the area will have unequalled access to public transit thus encouraging them to use public transit for many trips.
- 7.14 The Project minimizes, to the extent feasible, impacts to historic resources. Where such impacts will occur, the Project includes historic documentation and exhibits designed to commemorate the historic buildings and structures.
- 7.15 The Project provides the public with a safe and functional building that complies with all building, accessibility, seismic, and life-safety code requirements. It includes code-compliant and energy efficient systems, provides access for the disabled to public spaces and work areas, and incorporates modern efficient internal circulation systems.
- 7.16 The Project will provide an all-night (24 hour transit) transbay passenger facility thereby serving the transportation needs of a larger segment of the workforce and expanding the range of potential users of the new facility.
- 7.17 The Project will build the first new major multi-modal rail and bus station in the United States in the last 70 years. Given the Project's location and powerful integrating characteristics, it is destined to become the most important transit center in the western part of North America.

- 7.18 The Project allows the City and TJPA to receive 20 acres of land from the State of California at no cost. Sale proceeds from these properties will be used to build a world class transit center for the City, region and State.
- 7.19 The Redevelopment Plan component of the Project, if adopted by the City, will provide a brand new San Francisco neighborhood with 3,400 new residential units (35% affordable—1,200 units) and modern urban design features where people can live, work, and play. The centerpiece to the neighborhood will be the new Transbay Terminal, a landmark signature building that will serve generations to come and serve to reinvigorate San Francisco's stature as a world-renowned destination.
- 7.20 The Project will provide thousands of person-years of construction work and in the process enhance the economic vitality of San Francisco.
- 7.21 The Project will be a model for resource efficient and environmentally responsive building techniques.

Having considered these Project benefits, including the benefits discussed in Article IV.A above, the Agency finds that the Project's benefits outweigh the unavoidable adverse environmental effects, and that the adverse environmental effects are therefore acceptable.

Exhibit 1

MITIGATION MEASURES PRESENTED AND ANALYZED IN FINAL EIS/EIR FOR THE TRANSBAY TERMINAL/CALTRAIN DOWNTOWN EXTENSION/REDEVELOPMENT PROJECT

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**MITIGATION MEASURES PRESENTED & ANALYZED IN FINAL EIS/EIR
FOR THE TRANSBAY TERMINAL/CALTRAIN DOWNTOWN
EXTENSION/REDEVELOPMENT PROJECT**

1. WIND

See discussion of wind impacts in Section 5.1.2 of the Final EIS/EIR. Mitigation measures include:

W 1 – The San Francisco Redevelopment Agency (Agency) shall consider potential wind effects of an individual project for the Redevelopment area. If necessary, perform wind tunnel testing in accordance with City Planning Code Section 148. If exceedences of the wind hazard criterion should occur for any individual project, require design modifications or other mitigation measures to mitigate or eliminate these exceedences. Tailor mitigation measures to the individual needs of each project. Examples of mitigation measures include articulation of building sides and softening of sharp building edges.

2. PROPERTY ACQUISITION/RELOCATION

See discussion of property acquisition impacts, Section 5.2 of the Final EIS/EIR. Mitigation measures include:

Prop 1 – TJPA shall apply federal Uniform Relocation Act (Public Law 91-646) and California Relocation Act (Chapter 16, Section 7260 et seq. of the Government Code) and related laws and regulations governing 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.) Provide information, assistance, and payments to all displaced businesses in accordance with these laws and regulations.

3. SAFETY AND EMERGENCY SERVICES

See discussion of safety and emergency services, Section 5.4 of the Final EIS/EIR. Mitigation measures include:

Saf 1 – TJPA shall provide Project plans to the San Francisco Fire Department for its review to ensure that adequate life safety measures and emergency access are incorporated into the design and construction of Project facilities.

Saf 2 – TJPA shall prepare a life safety plan including the 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.

Saf 3 – TJPA shall prepare a risk analysis to accurately determine the number of personnel necessary to maintain an acceptable level of service at Project facilities.

4. NOISE – OPERATIONS

See discussion of noise impacts, Section 5.8 of the Final EIS/EIR. Mitigation measures include:

NoiO 1 – TJPA shall apply noise mitigation at the following locations adjacent to the bus storage facility:

- Provide sound insulation to mitigate noise impacts at the residences north of the AC Transit Facility at the corner of Perry and Third Street. At a minimum, apply sound insulation to the facade facing the bus storage facility (the south facade).
- Construct two noise barriers to mitigate noise impacts to Residences south of the AC Transit Facility along Stillman Street. The first noise barrier would be approximately 10-12 feet high and run along the southern edge of the AC Transit storage facility. The second noise barrier would be approximately 5-6 feet high and would be located on the portion of the ramp at the southwestern corner of the AC Transit facility. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway.
- Construct a noise barrier to mitigate noise impacts to residences south of the Golden Gate Transit Facility along Stillman Street. The barrier would 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. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway.

NoiO 2 – TJPA shall landscape the noise walls. Develop the actual design of the walls in cooperation with area residents.

NoiO 3 – TJPA shall construct noise walls prior to the development of the permanent bus facilities.

5. NOISE – CONSTRUCTION

See discussion of construction noise impacts, Section 5.21.10 of the Final EIS/EIR. Mitigation measures include:

NoiC 1 – TJPA shall comply with 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.

NoiC 2 – TJPA shall conduct noise monitoring. The purpose of monitoring is to ensure that contractors take all reasonable steps to minimize noise.

NoiC 3 – TJPA shall conduct inspections and noise testing of equipment. This measure will ensure that all equipment on the site is in good condition and effectively muffled.

NoiC 4 – TJPA shall 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.

NoiC 5 – TJPA shall minimize use of vehicle backup alarms. 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.

NoiC 6 – TJPA shall 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.

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.

6. VIBRATION – OPERATIONS

See discussion of vibration impacts, Section 5.8.8 of the Final EIS/EIR. Mitigation measures include:

VibO 1 – TJPA shall use high-resilience track fasteners or a resiliently supported tie system for the Caltrain Downtown Extension for areas projected to exceed vibration criteria, including the following locations: (1) Live/Work Condos, 388 Townsend Street (Hubbell and Seventh), (2) San Francisco Residences on Bryant (Harrison Parking Lot Site), (3) Clock Tower Building, and Second Street High Rise and (4) new Marriott Courtyard (Marine Firefighter's Union).¹

¹ After mitigation, groundborne noise impact at 388 Townsend Street and vibration impact at the Clocktower Building would still exceed the FTA 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 vibration buffering 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 costs would not be a prudent and reasonable expenditure to eliminate the last one decibel of impact at these two sites. 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.”

7. VIBRATION – CONSTRUCTION

See discussion of construction vibration impacts, Section 5.21.10 of the Final EIS/EIR. Mitigation measures include:

VibC 1 – TJPA shall 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.

VibC 2 – TJPA shall 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.)

VibC 3 – TJPA shall require vibration monitoring during vibration intensive activities.

VibC 4 – TJPA shall restrict the hours of vibration intensive activities such as pile driving to weekdays during daytime hours.

VibC 5 – TJPA shall investigate alternative construction methods and practices to reduce the impacts in coordination with the construction contractor if resident annoyance from vibration becomes a problem.

VibC 6 – TJPA shall include specific limits, practices and monitoring and reporting procedures for the use of controlled detonation. Control and monitor use of controlled detonation to avoid damage to existing structures. Include specific limits, practices, and monitoring and reporting procedures within contract documents to ensure that such construction methods, if used, would not exceed safety criteria.

8. SOILS/GEOLOGY

See discussion of geologic impacts in Section 5.9 and construction impacts and approaches in Sections 5.20 and 5.21.17 of the Final EIS/EIR. Mitigation measures include:

SG 1 – TJPA shall monitor adjacent buildings for movement and, if movement is detected, take immediate action to control the movement.

SG 2 – TJPA shall apply 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. Apply design measures and utilize pile supported foundations to mitigate potential settlement of the surface and underground stations.

SG 3 – TJPA shall design and construct structural components of the Project to resist strong ground motions approximating the maximum anticipated earthquake (0.5g). The cut-and-cover portions will require pile supports to minimize non-seismic settlement in soft compressible sediments (Bay Mud). The underground Caltrain station at Fourth and Townsend will require pile-supported foundations due to the presence of underlying soft sediments.

SG 4 – TJPA shall underpin existing building, where deemed necessary, to protect existing structures from potential damage that could result from excessive ground

movements during construction. Design the tunneling and excavation procedures (and construction sequence), and design of the temporary support system 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 will be implemented such as: (1) underpinning, (2) ground improvement, and/or (3) strengthening of existing structures to mitigate the risks.

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 existing foundations with deep foundations embedded outside the tunnel zone of influence. Alternatives, in lieu of underpinning, involve strengthening 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 make the rock mass over the tunnel act as a rigid beam, allowing construction of tunnels with no adverse effects on the buildings 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 selectively strengthen structures that may be too weak to resist even small deformations, was successfully used for the Muni Metro Turnback project, and are deemed to be effective for the Caltrain Downtown Extension Project as well.

SG 5 – TJPA shall assure proper design and construction of pile supported foundations for structures to control potential settlement of the surface. Stability of excavations and resultant impacts on adjacent structures can be controlled within tolerable limits by proper design and implementation of the excavation shoring systems.

9. UTILITIES

See discussion of utility impacts, Sections 5.12 and 5.21.12 of the Final EIS/EIR. Mitigation measures include:

Util 1 – TJPA shall coordinate with utility providers during preliminary engineering, continuing through final design and construction. Utilities would 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.

10. CULTURAL AND HISTORIC RESOURCES

See discussion of cultural and historic resources impacts, Section 5.14 of the Final EIS/EIR. Mitigation measures include:

CH 1 – TJPA shall comply with the provision of the signed Memorandum of Agreement (MOA) between the Federal Transit Administration (FTA), the State Historic Preservation Officer (SHPO), and the TJPA.² Provisions of the memorandum of agreement include the measures below.

CH 2 – Assure supervision of all activities regarding historic preservation, historical archaeology and prehistoric archaeology is carried out by professionals meeting Secretary of the Interior’s professional qualifications standards (48 FR 44738-9).

CH 3 – Permanent Interpretive Exhibit at the Terminal – TJPA will direct the design and engineering team for the Project 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.

CH 4 – TJPA will consult with the California Department of Transportation (Department) regarding the availability of historical documentary materials and the potential use of salvaged items from the existing Transbay Terminal for the creation of the permanent interpretive display of the history of the original Transbay Terminal building and its association with the San Francisco-Oakland Bay Bridge and the potential salvaged items from the existing Terminal.

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 in this consultation. 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.

CH 5 – 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 Transbay Terminal, TJPA will provide and deliver exhibit materials to a venue designated by the City of Oakland.

CH 6 – Salvage – TJPA, in consultation with Department, will identify elements of the existing Transbay Terminal that are suitable for salvage and interpretive use in the exhibit in the new Terminal or by museums. Within two years of signing of the MOA, 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 the agreement.

CH 7 – 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 Terminal and the Key System. Components to such an exhibit may include photographs, drawings, videotape, models, oral histories, and salvaged components from the terminal.

² A copy of the Memorandum of Agreement is included as Appendix G of the Final EIS/EIR.

CH 8 – 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.

CH 9 – 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 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 copies to the 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, the Western Railway Museum, and Department District 4 Office.. TJPA will ensure that these records are accepted by SHPO prior to demolition of the Transbay Transit Terminal.

CH 10 – TJPA will develop and implement measures, in consultation with the owners of historic properties immediately adjoining the construction sites, 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 Project. Such measures will include, but are not necessarily limited to those identified in this Mitigation Monitoring Plan.

CH 11 – 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 to 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).

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.

CH 12 – 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 Project 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 Project 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.

CH 13 – TJPA shall Prepare 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.

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 Project 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

CH 14 – 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. 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.

CH15 –In consultation with FTA and SHPO, re-evaluate 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.

CH16 –In consultation with FTA and SHPO, re-evaluate 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.

11. HAZARDOUS MATERIALS/WASTE - OPERATIONS

See discussion of hazardous material and waste impacts, Section 5.15 of the Final EIS/EIR. Mitigation measures include:

HWO 1 – The Peninsula Corridor Joint Powers Board (JPB) – the agency responsible for operating Caltrain – shall construct and operate any fueling facility in compliance with local, state and Federal regulations regarding handling and storage of hazardous materials.

HWO 2 – JPB shall equip diesel fuel pumps with emergency shut-off valves and, in compliance with U.S. EPA requirements, fuel Underground Storage Tanks (USTs) would be equipped with leak detection and monitoring systems.

HWO 3 – JPB shall employ the use of secondary containment systems for any aboveground storage tanks.

HWO 4 – JPB shall store cleaning solvents in 55-gallon drums, or other appropriate containers, within a bermed area to provide secondary containment.

HWO 5 – JPB shall slope paved surfaces within the fueling facility and the solvent storage area to a sump where any spilled liquids could be recovered for proper disposal.

HWO 6 – JPB shall follow California OSHA and local standards for fire protection and prevention for the handling and storage of fuels and solvents.

HWO 7 – JPB shall prepare a Hazardous Materials Management/ Business Plan and file with the San Francisco Department of Public Health.

12. HAZARDOUS MATERIALS/WASTE – CONSTRUCTION

See discussion of hazardous material and waste impacts during construction, Section 5.21.15 of the Final EIS/EIR. Mitigation measures include:

HMC 1 – TJPA shall follow California OSHA and local standards for fire protection and prevention. Handling and storage of fuels and other flammable materials during construction will conform to these requirements, which include appropriate storage of flammable liquids and prohibition of open flames within 50 feet of flammable storage areas.

HMC 2 – TJPA shall perform detailed investigations of the potential presence of contaminants in soil and groundwater prior to construction, using conventional drilling, sampling, and chemical testing methods. Based on the chemical test results, a mitigation plan will 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 will follow the requirements of the City and County of San Francisco’s 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.

HMC 3 – TJPA shall cover with plastic sheeting soils removed during excavation and grading activities that remain at a centralized location for an extended period of time to prevent the generation of fugitive dust emissions that migrate offsite.

HMC 4 – TJPA shall use a licensed waste hauler, applying appropriate manifests or bill of lading procedures, as required to haul soil for disposal at a landfill or recycling facility.

HMC 5 – TJPA shall use chemical test results for groundwater samples along the alignment 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 will 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.

HMC 6 – TJPA shall develop a detailed mitigation plan for the handling of potentially contaminated soil and groundwater prior to starting Project construction.

HMC 7 – TJPA shall design dewatering systems 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.

HMC 8 – TJPA shall require that workers performing activities on site that may involve contact with contaminated soil or groundwater have appropriate health and safety training in accordance with 29 CFR 1910.120.

A Worker Health and Safety Plan (HSP) will 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 will 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 will specify mitigation of potential worker and public exposure to airborne contaminant migration by incorporating dust suppression techniques in construction procedures. The plan will 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.

HMC 9 – TJPA shall review existing asbestos surveys, abatement reports, and supplemental asbestos surveys, as warranted. Perform an asbestos survey for buildings to be demolished, as required. Asbestos-containing building materials (ACM) will require abatement prior to building demolition. Removal and disposal of ACM will be performed in accordance with applicable local, state, and federal regulations.

HMC 10 – TJPA shall perform a lead-based paint survey for buildings to be demolished to determine areas where lead-based paint is present and the possible need for abatement prior to demolition.

13. PEDESTRIANS

See discussion of pedestrian impacts, Section 5.19.6.1 of the Final EIS/EIR. Mitigation measures include:

Ped 1 – Agency and City shall use future construction or redevelopment as opportunities to increase building set-backs thereby increasing sidewalk widths. Particular areas where such widening is most needed include:

- Southeast corner Fremont/Mission Street;
- Northeast corner First/Mission Street;
- 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.

Ped 2 – Agency and City shall eliminate or reduce sidewalk street furniture such as newspaper boxes and magazine racks in the immediate Transbay Terminal area on corners.

Ped 3 – City shall retime traffic light signalization. This could improve pedestrian levels of service at each of the intersections studies that fall into LOS F.

Ped 4 – City shall provide crosswalk signalization at intersections where they do not exist already, such as Folsom and Beale Streets.

Ped 5 – City shall provide cross-walk count-down signals at intersections and cross-walks immediately surrounding the new Transbay Terminal.

Ped 6 –TJPA shall ensure that Transbay Terminal design increases corner and sidewalk widths at the four intersections immediately surrounding the Transbay Terminal.

Ped 7 – TJPA shall provide 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.

14. PRE-CONSTRUCTION ACTIVITIES

See discussion of construction impacts, Section 5.20.1 of the Final EIS/EIR. Mitigation measures include:

PC 1 – TJPA shall complete a pre-construction building structural survey to determine the integrity of existing buildings adjacent to and over the proposed Caltrain Downtown Extension. Use this survey to finalize detailed construction techniques along the alignment and as the baseline for monitoring construction impacts during and following construction.

PC 2 – TJPA shall contact and interview individual businesses along the Caltrain Extension alignment to gather information and develop an understanding of how these businesses carry out their work. This survey will identify business usage, delivery/shipping patterns, and critical times of the day or year for business activities. Use this information to assist in: (a) the identification of possible techniques during construction to maintain critical business activities, (b) analyze alternative access routes

for customers and deliveries to businesses, (c) develop traffic control and detour plans, and (d) finalize construction practices.

PC 3 – TJPA shall complete detailed geotechnical investigation, including additional sampling (drilling and core samples) and analyses of subsurface soil/rock conditions. Use this information to design the excavation and its support system to be used in the retained cut, cut-and-cover, and tunnel portions of the Caltrain Downtown Extension.

PC 4 – TJPA shall establish community construction information/outreach program to provide on-going dialogue among the TJPA and the affected community regarding construction impacts and possible mitigation/solutions. Include dedicated personnel for an outreach office in the construction area to deal with construction coordination.

PC 5 – TJPA shall establish site and field offices located along the Caltrain Downtown Extension alignment. Field office staff, in conjunction with other staff, will:

- 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.

PC 6 – TJPA shall implement an information phone line to provide community members and businesses the opportunity to express their views regarding construction. Review calls received and, as appropriate, forward the message 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 will include current Project schedule, dates for upcoming community meetings, notice of construction impacts, individual problem solving, construction complaints and general information. Phone service would be provided in English, Cantonese, and Spanish and would be operated on a 24-hour basis.

PC 7 – TJPA shall develop traffic management plans. Traffic management plans to maintain access to all businesses will 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.

15. GENERAL CONSTRUCTION MEASURES

See discussion of construction staging and methods and construction impacts, Sections 5.20 and 5.21 of the Final EIS/EIR. Mitigation measures include:

GC 1 – TJPA shall disseminate information to community in a timely manner regarding anticipated construction activities.

GC 2 – TJPA shall provide signage. Work with establishments affected by construction activities to develop appropriate signage for display that directs both pedestrian and vehicular traffic to businesses via alternate routes.

GC 3 – TJPA shall install level deck. Install decking at the cut-and-cover sections to be flush with the existing street or sidewalk levels.

GC 4 – TJPA shall provide for efficient sidewalk design and maintenance. Wherever feasible, maintain sidewalks at the existing width during construction. Where a sidewalk must be temporarily narrowed during construction (e.g., deck installation), restore it to its original width during the majority of construction period. (In some places this may require placing the temporary sidewalk on the deck.) Each sidewalk design should be of good quality and approved by the Resident Engineer prior to construction. Handicapped access will be maintained during construction where feasible.

GC 5 – TJPA shall provide construction site fencing of good quality, capable of supporting the accidental application of the weight of an adult without collapse or major deformation. Where covered walkways or other solid surface fencing is installed, establish a program to allow for art work (e.g., by local students) on the surface(s).

16. AIR EMISSIONS – CONSTRUCTION

See discussion of air emission impacts from construction, Section 5.21.9 of the Final EIS/EIR. The following mitigation measures are derived from the "basic control measures" and the "enhanced control measures" recommended by the Bay Area Air Quality Management District (BAAQMD). Mitigation measures include:

AC 1 – TJPA shall assure that, as part of the contract provisions, the Project contractor is required to implement the measures below at all Project construction sites.

AC 2 – TJPA shall 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.

AC 3 – TJPA shall cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.

AC 4 – TJPA shall 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.

AC 5 – TJPA shall sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.

AC 6 – TJPA shall sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

AC 7 – TJPA shall install sandbags or other erosion control measures to prevent silt runoff to public roadways.

AC 8 – TJPA shall replant vegetation in disturbed areas as quickly as possible.

AC 9 – TJPA shall minimize use of on-site diesel construction equipment, particularly unnecessary idling.

AC 10 – TJPA shall shut off construction equipment to reduce idling when not in direct use.

AC 11 – TJPA shall, where feasible, replace diesel equipment with electrically powered machinery.

AC 12 – TJPA shall locate diesel engines, motors, or equipment as far away as possible from existing residential areas.

AC 13 – TJPA shall properly tune and maintain all diesel power equipment.

AC 14 – TJPA shall suspend grading operations during first and second stage smog alerts, and during high winds, i.e., greater than 25 miles per hour.

AC 15 – TJPA, shall, 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).

17. VISUAL/AESTHETICS – CONSTRUCTION

See discussion of visual/aesthetic impacts from construction, Section 5.21.16 of the Final EIS/EIR. 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, mitigation measures include:

VA 1 – TJPA shall assure 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.

VA 2 – TJPA shall assure that contractors make all efforts possible to minimize specific aesthetic and visual effects of construction identified by neighborhood businesses and residents.

Exhibit 2

TRANSBAY TERMINAL/CALTRAIN DOWNTOWN EXTENSION/ REDEVELOPMENT PROJECT

MITIGATION MONITORING AND REPORTING PROGRAM

INTRODUCTION

Assembly Bill (AB) 3180 was enacted by the State Legislature to provide a mechanism to ensure that mitigation measures adopted through the California Environmental Quality Act ("CEQA") process are implemented in a timely manner and in accordance with the terms of project approval. Under AB 3180, local agencies are required to adopt a monitoring or reporting program designed to ensure compliance during project implementation.

The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Mitigation Monitoring and Reporting Program ("Mitigation Monitoring Program"), pursuant to AB 3180, CEQA Section 21081.6 and CEQA Guidelines Section 15091, provides the basic framework through which adopted mitigation measures will be monitored to ensure implementation.

ORGANIZATION

The Mitigation Monitoring Program is organized in a table format, keyed to each adopted Final EIS/EIR mitigation measure. For each measure, the table: (1) lists the mitigation measure; (2) specifies the party responsible for implementing the measure; (3) establishes a schedule for mitigation implementation; (4) assigns mitigation monitoring responsibility; and (5) establishes monitoring actions and a schedule for mitigation monitoring.

IMPLEMENTATION

While the Mitigation Monitoring Program generally outlines the actions, responsibilities and schedule for mitigation monitoring, it does not attempt to specify the detailed procedures to be used to verify implementation (e.g., interactions between the Project Sponsor – the Transbay Joint Powers Authority, the San Francisco Redevelopment Agency and City of San Francisco departments, use of private consultants, signed-off on plans, site inspections, etc.). Specific monitoring procedures are either contained in approval documents or will be developed at a later date, closer to the time the mitigation measures will actually be implemented.

The majority of the measures will be monitored primarily by the Transbay Joint Powers Authority (TJPA), in consultation with other City and non-City agencies, as part of the site permit, building permit processes or other development actions.

EXHIBIT 2

**TRANSBAY TERMINAL/CALTRAIN DOWNTOWN EXTENSION/REDEVELOPMENT PROJECT
FEIS/FEIR MITIGATION MONITORING AND REPORTING PROGRAM**

MITIGATION MEASURE	Responsibility for Implementation	Mitigation Schedule	Monitoring Responsibility	Monitoring Actions/Schedule
Wind				
W 1 – Consider potential wind effects of an individual project for the Redevelopment area. If necessary, perform wind tunnel testing in accordance with City Planning Code Section 148. If exceedences of the wind hazard criterion should occur for any individual project, require design modifications or other mitigation measures to mitigate or eliminate these exceedences. Tailor mitigation measures to the individual needs of each project. Examples of mitigation measures include articulation of building sides and softening of sharp building edges.	San Francisco Redevelopment Agency (Agency)	During environmental review process preceding approval of each individual project in Transbay Redevelopment Project Area	Agency	Apply project review procedures for wind when projects are developed by or proposed to Agency
Property Acquisition/Relocation				
Prop 1 – Apply federal Uniform Relocation Act (Public Law 91-646) and California Relocation Act (Chapter 16, Section 7260 et seq. of the Government Code) and related laws and regulations governing 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.) Provide information, assistance, and payments to all displaced businesses in accordance with these laws and regulations.	City and County of San Francisco (CCSF), Agency, and TJPA	Prior to & during property acquisition & relocation activities	TJPA	TJPA to report to Board on compliance during acquisition & relocation activities
Safety and Emergency Services				
Saf 1 – Provide project plans to the San Francisco Fire Department for its review to ensure that adequate life safety measures and emergency access are incorporated into the design and construction of Project facilities.	Transbay Joint Powers Authority (TJPA)	Prior to project facility permitting & during construction	TJPA	Project facility plans to be forwarded to CCSF Fire Department prior to permit issuance Inspect installation during construction

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MITIGATION MEASURE	Responsibility for Implementation	Mitigation Schedule	Monitoring Responsibility	Monitoring Actions/Schedule
Saf 2 – Prepare a life safety plan including the 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.	TJPA	Prior to project facility permitting	TJPA	TJPA to develop life safety plan during facility design phases & implement during testing & startup up phase
Saf 3 – Prepare a risk analysis to accurately determine the number of personnel necessary to maintain an acceptable level of service at Project facilities.	TJPA	Prior to project facility permitting	TJPA	TJPA to develop risk analysis during facility design phases
Noise - Operations				
NoiO 1 – Apply noise mitigation at the following locations adjacent to the bus storage facility:	TJPA	During construction	TJPA	TJPA to design detailed noise mitigation during preliminary & final design phases. TJPA engineering staff to inspect installation and/or construction of mitigation measures
<ul style="list-style-type: none"> ○ Provide sound insulation to mitigate noise impacts at the residences north of the AC Transit Facility at the corner of Perry and Third Street. At a minimum, apply sound insulation to the façade facing the bus storage facility (the south façade). ○ Construct two noise barriers to mitigate noise impacts to Residences south of the AC Transit Facility along Stillman Street. The first noise barrier would be approximately 10-12 feet high and run along the southern edge of the AC Transit storage facility. The second noise barrier would be approximately 5-6 feet high and would be located on the portion of the ramp at the southwestern corner of the AC Transit facility. Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway. ○ Construct a noise barrier to mitigate noise impacts to residences south of the Golden Gate Transit Facility along Stillman Street. The barrier would 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. 				

EXHIBIT 2

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MITIGATION MEASURE	Responsibility for Implementation	Mitigation Schedule	Monitoring Responsibility	Monitoring Actions/Schedule
<p>Treat the noise barriers with an absorptive material on the side facing the facility to minimize the potential for reflections off the underside of the freeway.</p>				
<p>NoiO 2 – Landscape the noise walls. Develop the actual design of the walls in cooperation with area residents.</p>	TJPA	During preliminary and final design	TJPA	TJPA to work with area residents during design of noise walls
<p>NoiO 3 – Construct noise walls prior to the development of the permanent bus facilities.</p>	TJPA	During schedule development, construction document preparation & construction	TJPA	TJPA to develop program schedule and contract documents to implement this construction sequencing requirement
Noise – Construction				
<p>NoiC 1 – Comply with San Francisco noise ordinance. The noise ordinance includes specific limits on noise from construction. The basic requirements are:</p>	TJPA	During preparation of construction contract documents & construction	TJPA	TJPA to work with CCSF Department of Public Works (DPW) regarding construction noise mitigation program
<ul style="list-style-type: none"> o 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. o 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. o Construction activity is prohibited between 8 p.m. and 7 a.m. if it causes noise that exceeds the ambient noise plus 5 dBA. 				
<p>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,</p>				

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MITIGATION MEASURE	Responsibility for Implementation	Mitigation Schedule	Monitoring Responsibility	Monitoring Actions/Schedule
<p>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.</p>				
NoiC 2 – Conduct noise monitoring. The purpose of monitoring is to ensure that contractors take all reasonable steps to minimize noise.	TJPA	During construction	TJPA	Monitoring data to be provided to CCSF DPW
NoiC 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	TJPA	During construction	TJPA	Perform monitoring during construction
NoiC 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.	TJPA	During construction	TJPA	TJPA to develop & initiate community liaison program during final design prior to construction. Program will continue during construction

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MITIGATION MEASURE	Responsibility for Implementation	Mitigation Schedule	Monitoring Responsibility	Monitoring Actions/Schedule
<p>NoiC 5 – Minimize use of vehicle backup alarms. 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.</p>	TJPA	During construction document preparation & construction	TJPA	Review contract specifications during final design & inspect construction
<p>NoiC 6 – Include noise control requirements in construction specifications. These should require the contractor to:</p> <ul style="list-style-type: none"> ○ 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. 	TJPA	Final Design & construction	TJPA	TJPA to develop detailed noise control requirements during preliminary engineering & final design. Insure contractor obtains permits if necessary. Inspect construction activities for compliance & monitor noise levels. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as CCSF Department of Parking & Traffic (DPT) and DPW

EXHIBIT 2

TRANSBAY TERMINAL/CALTRAIN DOWNTOWN EXTENSION/REDEVELOPMENT PROJECT

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MITIGATION MEASURE	Responsibility for Implementation	Mitigation Schedule	Monitoring Responsibility	Monitoring Actions/Schedule
<ul style="list-style-type: none">○ 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. <p>Controlling noise in contractor work areas during nighttime hours is likely to require some mixture of the following approaches:</p> <ul style="list-style-type: none">○ 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.				

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○ 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.				
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Vibration – Operations				
VibO 1 – Use high-resilience track fasteners or a resiliently supported tie system for the Caltrain Downtown Extension for areas projected to exceed vibration criteria, including the following locations: (1) Live/Work Condos, 388 Townsend Street (Hubbell and Seventh), (2) San Francisco Residences on Bryant (Harrison Parking Lot Site), (3) Clock Tower Building, and Second Street High Rise and (4) new Marriott Courtyard (Marine Firefighter's Union).	TJPA	During preliminary engineering, final design & construction	TJPA	TJPA to develop locations/use of resilience track fasteners or resiliently supported tie system during preliminary engineering & final design. Review construction documents & inspect installation. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as CCSF Department of Building Inspection (DBI) and DPW.
<hr/>				
Vibration – Construction				
VibC 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.	TJPA	During preliminary engineering, final design & construction	TJPA	TJPA to ensure preliminary design, final design & contract documents preclude use of pile driving equipment within 250 feet of residences. Construction management & inspection will monitor contractors' activities to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW

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VibC 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.)	TJPA	During preliminary engineering, final design & construction	TJPA	TJPA to establish construction vibration design standards during final design. Include provisions in contract documents & monitor contractors' activities to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW
VibC 3 – Require vibration monitoring during vibration intensive activities.	TJPA	During construction	TJPA	TJPA to include provisions for vibration monitoring in construction contract documents or perform monitoring under a separate contract. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW
VibC 4 – Restrict the hours of vibration intensive activities such as pile driving to weekdays during daytime hours.	TJPA	During design & construction	TJPA	TJPA to include provisions in contract documents & monitor contractors' activities to insure compliance
VibC 5 – Investigate alternative construction methods and practices to reduce the impacts in coordination with the construction contractor if resident annoyance from vibration becomes a problem.	TJPA	During final design & during construction	TJPA	TJPA to include provisions in contract documents & monitor contractors' activities to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW
VibC 6 – Include specific limits, practices and monitoring and reporting procedures for the use of controlled detonation. Control and monitor use of controlled detonation to avoid damage to existing structures. Include specific limits, practices, and monitoring and reporting procedures within contract documents to ensure that such construction methods, if used, would not exceed safety criteria.	TJPA	During final design & during construction	TJPA	TJPA to establish detailed limits, practices, and monitoring program for controlled detonation during final design. Include provisions in contract documents & monitor contractors' activities to insure compliance. Where applicable, coordinate with CCSF

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				departments with jurisdiction over activities, such as DBI and DPW
Soils/Geology				
SG 1 – Monitor adjacent buildings for movement and, if movement is detected, take immediate action to control the movement.	TJPA	During construction	TJPA	TJPA to include provisions in contract documents requiring such monitoring and corrective measures and inspect contractors' activities to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW
SG 2 – Apply 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. Apply design measures and utilize pile supported foundations to mitigate potential settlement of the surface and underground stations.	TJPA	During preliminary engineering and final design	TJPA	TJPA to review design and contract documents to insure implementation. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW
SG 3 – Design and construct structural components of the project to resist strong ground motions approximating the maximum anticipated earthquake (0.5g). The cut-and-cover portions will require pile supports to minimize non-seismic settlement in soft compressible sediments (Bay Mud). The underground Caltrain station at Fourth and Townsend will require pile-supported foundations due to the presence of underlying soft sediments.	TJPA	During preliminary engineering, final design & construction	TJPA	TJPA to design structural components to meet seismic standards during preliminary engineering & final design. Review design, contract documents & construction activities to insure implementation. Where applicable, coordinate with JPB and CCSF departments with jurisdiction over activities, such as DBI and DPW
SG 4 – Underpin existing building, where deemed necessary, to protect existing structures from potential damage that could result from excessive ground movements during construction. Design the tunneling and excavation procedures (and construction sequence), and design of the temporary support system with the	TJPA	During preliminary engineering, final design & construction	TJPA	TJPA to design tunneling, excavation procedures, underpinning, strengthening existing structures or ground improvement to protect existing structures from damage

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<p>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 will be implemented such as: (1) underpinning, (2) ground improvement, and/or (3) strengthening of existing structures to mitigate the risks.</p> <p>Underpinning may include internal strengthening of the superstructure, bracing, reinforcing existing foundations, or replacing existing foundations with deep foundations embedded outside the tunnel zone of influence. Alternatives, in lieu of underpinning, involve strengthening the rock between the building & crown of tunnel. Grouting in combination with inclined pin piles can be used not only to strengthen the rock but make the rock mass over the tunnel act as a rigid beam, allowing construction of tunnels with no adverse effects on the buildings supported on shallow foundations over the tunnel.</p>				<p>Include provisions in contract documents requiring contractors to implement measures during construction. Monitor construction activities to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW</p>
<p>SG 5 – TJPA shall assure proper design and construction of pile supported foundations for structures to control potential settlement of the surface. Stability of excavations and resultant impacts on adjacent structures can be controlled within tolerable limits by proper design and implementation of the excavation shoring systems.</p>	TJPA	During preliminary engineering, final design & construction	TJPA	TJPA to insure foundations & excavation shoring systems are designed & constructed to minimize & control settlement & impacts on adjacent structures. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DBI and DPW

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Utilities				
Util 1 – Coordinate with utility providers during preliminary engineering, continuing through final design and construction. Utilities would 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.	TJPA	During preliminary engineering, final design & construction	TJPA	TJPA to identify utilities; design relocations or protection measures where required; & include requirements in contract documents. Monitor construction activities to insure implementation of all required measures
Cultural and Historic Resources				
CH 1 – Comply with the provision of the signed Memorandum of Agreement (MOA) between the Federal Transit Administration, the State Historic Preservation Officer, and the TJPA.	TJPA	During preliminary engineering, final design & construction	TJPA	TJPA will assure compliance with MOA provisions during preliminary engineering, final design & construction, as described below
CH 2 – Assure supervision of all activities regarding historic preservation, historical archaeology and prehistoric archaeology is carried out by professionals meeting Secretary of the Interior’s professional qualifications standards (48 FR 44738-9).	TJPA	During preliminary engineering, final design & construction	TJPA	Prior to initiation of design & construction activities, TJPA will require submission of & review qualifications of professionals performing the MOA activities to assure that Secretary of Interior standards are met
CH 3 – 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	During preliminary engineering & final design	TJPA	TJPA will include space for interpretive exhibit in terminal during design. Review contract documents & construction submittals & activities to insure implementation
CH 4 – Consult with the State Department of Transportation (Department) regarding the availability of historical documentary materials and the potential use of salvaged items from the existing Transbay Terminal for the creation of the permanent	TJPA	During preliminary engineering & final design	TJPA	TJPA will consult with Department regarding availability of documentary materials & potential use of salvaged items. TJPA will invite participation

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<p>interpretive display of the history of the original Transbay Terminal building and its association with the San Francisco-Oakland Bay Bridge and the potential salvaged items from the existing Terminal. Invitation to the Oakland Heritage Alliance, the San Francisco Architectural Heritage, the California State Railroad Museum, and the Western Railway Museum to participate in this consultation. While retaining responsibility for the development of the exhibit, TJPA will jointly consider the Department's and participating invitees' recommendations when finalizing the exhibit design. TJPA will produce, install, and maintain the exhibit.</p>				<p>in this review from the other designated parties. TJPA will produce, install, & maintain the exhibit in the new Transbay Terminal</p>
<p>CH 5 – 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 Transbay Terminal, TJPA will provide and deliver exhibit materials to a venue designated by the City of Oakland.</p>	TJPA	During preliminary engineering & final design	TJPA	<p>During preliminary engineering & final design, TJPA will consult with City of Oakland regarding its interest in establishing an exhibit. TJPA will provide & deliver exhibit materials to a venue in the City of Oakland should such an exhibit be developed</p>
<p>CH 6 – Identify, in consultation with Department, elements of the existing Transbay Terminal that are suitable for salvage and interpretive use in the exhibit in the new Terminal or by 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. 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.</p>	TJPA	During preliminary engineering & final design	TJPA	<p>Acceptance of items by interested parties must be completed at least 90 days prior to demolition of the Transbay Terminal</p>
<p>CH 7 – 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</p>	TJPA	During preliminary engineering &	TJPA	<p>TJPA will produce & deliver to the Oakland Museum agreed-upon materials for such an exhibit</p>

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bridges of the San Francisco Bay Area. TJPA will propose contributions to such an exhibit, which may include an interpretive video that would include the history of the Transbay Terminal and the Key System. Components to such an exhibit may include photographs, drawings, videotape, models, oral histories, and salvaged components from the terminal.		final design		
CH 8 – Assist the Oakland Museum by contributing to the cost of preparing and presenting the exhibit, 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. TJPA has established a maximum budget of \$50,000.00 for the Oakland Museum of California exhibit and the interpretive video.	TJPA	During preliminary engineering & final design	TJPA	TJPA will work with Oakland Museum & assist in the preparation of an exhibit & an interpretive video if consultation results in agreement between TJPA & Oakland Museum prior to demolition of the existing Transbay Terminal
CH 9 – Consult, prior to the start of any work that would have an adverse effect on historic properties, with the California SHPO to ensure that the Transbay 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.	TJPA	During preliminary engineering & final design	TJPA	TJPA will consult with the SHPO regarding adequacy of prior recordation efforts. TJPA will work with Department to seek original drawings of the Transbay Transit Terminal. If drawings cannot be copied & included in documentation, TJPA will consult with SHPO regarding recordation level & specifications for completing additional documentation

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<p>Submit all documentation to SHPO, and Department Headquarters Library, with xerographic copies to the 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, the Western Railway Museum, and Department District 4 Office.</p>				<p>TJPA will ensure that these records are accepted by SHPO prior to demolition of the Transbay Transit Terminal</p>
<p>CH 10 – Develop and implement measures, in consultation with the owners of historic properties immediately adjoining the construction sites, 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 this Mitigation Monitoring Plan.</p>	TJPA	<p>During preliminary engineering final design, & construction</p>	TJPA	<p>As part of its overall outreach efforts, TJPA will contact owners of record of historic properties that will be affected (but that will not be acquired & demolished) by the Project. TJPA will provide & review this mitigation monitoring program with the owners via correspondence and/or public and face-to-face meetings. TJPA will coordinate these efforts with the CCSF Planning Department</p>
<p>CH 11 – Assure, prior to the start of any work that would have an adverse effect on historic properties, that the three historic properties to be demolished are recorded in accordance with HABS/HAER standards, as appropriate. These buildings are:</p> <ul style="list-style-type: none"> o 191 2nd Street, (APN: 3721-022), o 580-586 Howard Street, (APN: 3721-092 through 3721-106), and o 165-173 2nd Street, (APN: 3721-025) <p>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</p>	TJPA	<p>During preliminary engineering & final design</p>	TJPA	<p>TJPA shall prepare recordation documents in accordance with HABS/HAER standards. TJPA will coordinate these efforts with the CCSF Planning Department. TJPA shall contract the HABS/HAER branch of the National Park Service to obtain guidance regarding level of recordation & specifications for completing the documentation</p>

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carrying out any other treatment.				
CH 12 – Repair, in accordance with the Secretary of the Interior’s Standards for Rehabilitation, of 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. 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.	TJPA	Prior to, during, and following construction	TJPA	Condition of contributing properties will be photographed prior to the start of the Project to establish the baseline condition for assessing damage. TJPA will coordinate these efforts with the CCSF Planning Department. To record 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), & will be retained on file by TJPA
CH 13 – Prepare 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. The Research Design/Treatment Plan will include, at a minimum:	TJPA	During preliminary engineering	TJPA	TJPA will assure completion of comprehensive research design/treatment plan consistent with the content required in the MOA. TJPA shall transmit this plan to the signatories of the MOA. TJPA will also coordinate these efforts with the CCSF Planning Department
<ul style="list-style-type: none"> ○ An historical context for the Area of Potential Effects for Archaeological Resources (APEAR). ○ A research context for the APEAR, identifying expected archeological property types and developing research themes, questions, and data needs. ○ A testing/data recovery plan that will specify, at minimum: 	TJPA	During design &	TJPA	TJPA will assure compliance with the testing/data recovery plan once

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<ul style="list-style-type: none"> ➤ 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	construction	TJPA	finalized. TJPA will coordinate these efforts with the CCSF Planning Department
CH 14 – Submit the Research Design/Treatment Plan to all parties to the MOA for a thirty (30) calendar day review	TJPA	During preliminary	TJPA	TJPA will submit the Research Design/Treatment Plan to the

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following receipt of the Plan.		engineering phase		signatories of the MOA. TJPA will coordinate these efforts with the CCSF Planning Department. 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, & will notify any party whose comments were not incorporated into the Plan
CH15 – In consultation with FTA and SHPO, re-evaluate 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.	TJPA	Within 180 days after FTA determines that the Project has been completed	FTA/SHPO	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)
CH16 – In consultation with FTA and SHPO, re-evaluate 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.	TJPA	Within 180 days after FTA determines that the Project has been completed	FTA/SHPO	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). TJPA will coordinate these efforts with the CCSF Planning Department

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Hazardous Materials/Waste – Operations				
HWO 1 – Construct and operate any Caltrain fueling facility in compliance with local, state and Federal regulations regarding handling and storage of hazardous materials.	Caltrain Joint Powers Board (JPB)	During construction and operation	TJPA	Review design and contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Inspect operations, & comply with all permitting & reporting requirements
HWO 2 – Equip diesel fuel pumps with emergency shut-off valves and, in compliance with U.S. EPA requirements, fuel Underground Storage Tanks (USTs) would be equipped with leak detection and monitoring systems.	JPB	During operation	TJPA	Review design & contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents and regulations. Inspect operations, & comply with all permitting & reporting requirements
HWO 3 – Employ the use of secondary containment systems for any aboveground storage tanks.	JPB	During operations	TJPA	Secondary containment to be included in facility design & construction & maintained during operations
HWO 4 – Store cleaning solvents in 55-gallon drums, or other appropriate containers, within a bermed area to provide secondary containment.	JPB	During operations	TJPA	Inspect operations, & comply with all permitting & reporting requirements
HWO 5 – Slope paved surfaces within the fueling facility and the solvent storage area to a sump where any spilled liquids could be recovered for proper disposal.	JPB	During construction & operations	TJPA	Sloped paved surfaces and sump to be included in facility design
HWO 6 – Follow California OSHA and local standards for fire protection and prevention for the handling and storage of fuels and solvents.	JPB	During operation	TJPA	Review design & contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect

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HWO 7 – Prepare a Hazardous Materials Management/ Business Plan and file with the CCSF Department of Public Health.	JPB	During final design	TJPA	construction to insure compliance with contract documents & regulations. Inspect operations, & comply with all permitting & reporting requirements JPB to prepare and TJPA to file Hazardous Materials Management/ Business Plan with CCSF Department of Public Health (DPH)
Hazardous Materials/Waste – Construction				
HMC 1 – Follow California OSHA and local standards for fire protection and prevention. Handling and storage of fuels and other flammable materials during construction will conform to these requirements, which include appropriate storage of flammable liquids and prohibition of open flames within 50 feet of flammable storage areas.	TJPA	During construction	TJPA	Review design & contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents & regulations
HMC 2 – Perform detailed investigations of the potential presence of contaminants in soil and groundwater prior to construction, using conventional drilling, sampling, and chemical testing methods. Based on the chemical test results, a mitigation plan will 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 will follow the requirements of the City and County of San Francisco’s Article 22A in the appropriate areas along the alignment.	TJPA	During construction	TJPA	Review design & contract documents to insure compliance with all applicable regulations. Obtain all applicable permits. Inspect construction to insure compliance with contract documents & regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW

With construction projects of this nature and magnitude, there are

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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.				
HMC 3 – Cover with plastic sheeting soils removed during excavation and grading activities that remain at a centralized location for an extended period of time to prevent the generation of fugitive dust emissions that migrate offsite.	TJPA	During construction	TJPA	Review design & contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents & regulations
HMC 4 – Use a licensed waste hauler, applying appropriate manifests or bill of lading procedures, as required to haul soil for disposal at a landfill or recycling facility.	TJPA	During construction	TJPA	Review design & contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents & regulations
HMC 5 – Use chemical test results for groundwater samples along the alignment 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 will 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.	TJPA	During construction	TJPA	Review design & contract documents to insure compliance. Obtain all applicable permits. Inspect construction to insure compliance with contract documents & regulations. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW

If required, treatment may include:

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<ul style="list-style-type: none"> ○ 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. 	TJPA	During final design	TJPA	Review detailed mitigation plan, include provisions in contract documents & inspect construction to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW. Obtain all applicable permits
<p>HMC 6 – Develop a detailed mitigation plan for the handling of potentially contaminated soil and groundwater prior to starting project construction.</p> <p>HMC 7 – Design dewatering systems 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.</p>	TJPA	During final design & construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH and DPW

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<p>HMC 8 – Require that workers performing activities on site that may involve contact with contaminated soil or groundwater have appropriate health and safety training in accordance with 29 CFR 1910.120.</p> <p>A Worker Health and Safety Plan (HSP) will 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 will include provisions for:</p> <ul style="list-style-type: none"> o Conducting preliminary site investigations and analysis of potential job hazards; o Personnel protective equipment; o Safe work practices; o Site control; o Exposure monitoring; o Decontamination procedures; and o Emergency response actions. <p>The HSP will specify mitigation of potential worker and public exposure to airborne contaminant migration by incorporating dust suppression techniques in construction procedures. The plan will 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.</p>	TJPA	During construction	TJPA	Provide health and safety training prior to start of & at timely intervals during construction. Include requirements in contract documents & monitor construction activities to insure compliance
<p>HMC 9 – Review existing asbestos surveys, abatement reports, and supplemental asbestos surveys, as warranted. Perform an asbestos survey for building to be demolished, as required. Asbestos-containing building materials (ACM) will require abatement prior to building demolition. Removal and disposal of</p>	TJPA	During preliminary engineering, final design & construction	TJPA	Determine extent of ACM throughout project site. Perform abatement work prior to demolition. Include all regulatory requirements in contract documents & inspect construction to

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ACM will be performed in accordance with applicable local, state, and federal regulations.		phases		insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH. Obtain all applicable permits
HMC 10 – Perform a lead-based paint survey for buildings to be demolished to determine areas where lead-based paint is present and the possible need for abatement prior to demolition.	TJPA	During preliminary engineering prior to building demolitions	TJPA	Determine extent of lead contamination throughout project site. Perform abatement work prior to demolition if necessary. Include all regulatory requirements in contract documents & inspect construction to insure compliance. Where applicable, coordinate with CCSF departments with jurisdiction over activities, such as DPH. Obtain all applicable permits
Pedestrians				
Ped 1 – Use future construction or redevelopment as opportunities to increase building set-backs thereby increasing sidewalk widths. Particular areas where such widening is most needed include:	Agency and CCSF	During future project reviews in Transbay Terminal area	Agency & CCSF	TJPA will forward guidance to Agency, CCSF Planning Department and DPW
<ul style="list-style-type: none"> ○ The southeast corner of Fremont and Mission Streets, ○ The northeast corner of First and Mission 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. 				
Ped 2 – Eliminate or reduce sidewalk street furniture such as newspaper boxes and magazine racks in the immediate Transbay Terminal area on corners.	Agency & CCSF	Prior to opening of new Transbay Terminal	Agency & CCSF	TJPA will forward guidance to Agency, CCSF Planning Department and DPW
Ped 3 – Retime traffic light signalization. This could improve	CCSF	Prior to opening	CCSF	TJPA will forward guidance to CCSF

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pedestrian levels of service at each of the intersections studies that fall into LOS F.		of new Transbay Terminal		DPT
Ped 4 – Provide crosswalk signalization at intersections where they do not exist already, such as Folsom and Beale Streets.	CCSF	Prior to opening of new Transbay Terminal	CCSF	TJPA will forward guidance to CCSF DPT
Ped 5 – Provide cross-walk count-down signals at intersections and cross-walks immediately surrounding the new Transbay Terminal.	CCSF	Prior to opening of new Transbay Terminal	CCSF	TJPA will forward guidance to CCSF DPT
Ped 6 – Ensure that Transbay Terminal design increases corner and sidewalk widths at the four intersections immediately surrounding the Transbay Terminal.	TJPA & CCSF DPW	During Transbay Terminal design phase	TJPA	TJPA and CCSF DPW, where applicable, to include sidewalk width expansion during preliminary & final design of new Transbay Terminal
Ped 7 – Provide 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.	TJPA	Prior to opening of new Transbay Terminal	TJPA	TJPA to work with CCSF DPT to install cross-walk warnings
Pre-Construction Activities				
PC 1 – Complete a pre-construction building structural survey to determine the integrity of existing buildings adjacent to and over the proposed Caltrain Downtown Extension. Use this survey to finalize detailed construction techniques along the alignment and as the baseline for monitoring construction impacts during and following construction.	TJPA	Prior to preliminary engineering, final design and construction	TJPA	TJPA to perform building surveys during preliminary engineering. TJPA to include measures to protect existing buildings in final design & construction documents TJPA to review design submittals, contract documents and construction activities to insure implementation
PC 2 – Contact and interview individual businesses along the Caltrain Extension alignment to gather information and develop an understanding of how these businesses carry out their work. This survey will identify business usage, delivery/shipping patterns, and critical times of the day or year for business activities. Use this information to assist in: (a) the identification	TJPA	During preliminary engineering, final design & construction		TJPA to perform business activity survey during preliminary engineering. TJPA to include measures to maintain business activities & access in final design and construction documents

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<p>of possible techniques during construction to maintain critical business activities, (b) analyze alternative access routes for customers and deliveries to businesses, (c) develop traffic control and detour plans, and (d) finalize construction practices.</p>				<p>TJPA to review design submittals, contract documents and construction activities to insure implementation</p>
<p>PC 3 – Complete detailed geotechnical investigation, including additional sampling (drilling and core samples) and analyses of subsurface soil/rock conditions. Use this information to design the excavation and its support system to be used in the retained cut, cut-and-cover, and tunnel portions of the Caltrain Downtown Extension.</p>	TJPA	<p>During preliminary engineering & final design</p>	TJPA	<p>TJPA to obtain necessary permits from CCSF prior to performing drilling. TJPA to perform detailed geotechnical investigation during preliminary engineering</p> <p>TJPA to review design submittals, contract documents & construction activities to insure proper utilization of information obtained during investigation</p>
<p>PC 4 – Establish community construction information/ outreach program to provide on-going dialogue among the TJPA and the affected community regarding construction impacts and possible mitigation/solutions. Include dedicated personnel for an outreach office in the construction area to deal with construction coordination.</p>	TJPA	<p>During construction</p>	TJPA	<p>TJPA to establish program during final design prior to construction</p>
<p>PC 5 – Establish site and field offices located along the Caltrain Downtown Extension alignment. Field office staff, in conjunction with other staff, will:</p> <ul style="list-style-type: none"> ○ 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, 	TJPA & JPB	<p>During construction</p>	TJPA	<p>TJPA to establish program during final design & continue during construction</p>

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<ul style="list-style-type: none"> ○ 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. 				
<p>PC 6 – Implement an information phone line to provide community members and businesses the opportunity to express their views regarding construction. Review calls received and, as appropriate, forward the message 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 will include current project schedule, dates for upcoming community meetings, notice of construction impacts, individual problem solving, construction complaints and general information. Phone service would be provided in English, Cantonese, and Spanish and would be operated on a 24-hour basis.</p>	TJPA	During construction	TJPA	TJPA to establish informational “Hot Line” during final design & continue during construction
<p>PC 7 – Develop traffic management plans. Traffic management plans to maintain access to all businesses will 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</p>	TJPA	During preliminary engineering, final design & construction	TJPA	TJPA to forward traffic management plans to CCSF DPT for review & approval. Include all requirements in construction documents & inspect implementation during construction

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require the maintenance of driveway access to businesses to the extent feasible.				
General Construction Measures				
GC 1 – Disseminate information to community in a timely manner regarding anticipated construction activities.	TJPA	During construction	TJPA	TJPA to initiate program during final design & continue during construction
GC 2 – Provide signage. Work with establishments affected by construction activities to develop appropriate signage for display that directs both pedestrian and vehicular traffic to businesses via alternate routes.	TJPA	Prior to & during construction	TJPA	TJPA to initiate signage program during final design and monitor contractors' installation during construction
GC 3 – Install level deck. Install decking at the cut-and-cover sections to be flush with the existing street or sidewalk levels.	TJPA	During construction	TJPA	TJPA to design flush decking during preliminary & final design, include in construction documents & insure installation during construction
GC 4 – Provide for efficient sidewalk design and maintenance. Wherever feasible, maintain sidewalks at the existing width during construction. Where a sidewalk must be temporarily narrowed during construction (e.g., deck installation), restore it to its original width during the majority of construction period. (In some places this may require placing the temporary sidewalk on the deck.) Each sidewalk design should be of good quality and approved by the Resident Engineer prior to construction. Handicapped access will be maintained during construction where feasible.	TJPA	During preliminary engineering & construction	TJPA	TJPA to work with CCSF DPW on design of sidewalk plans during preliminary & final design & insure installation during construction
GC 5 – Provide construction site fencing of good quality, capable of supporting the accidental application of the weight of an adult without collapse or major deformation. Where covered walkways or other solid surface fencing is installed, establish a program to allow for art work (e.g., by local students) on the surface(s).	TJPA	During design & construction	TJPA	TJPA to work with CCSF DPW, incorporate requirements in construction documents and inspect installation during construction

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Air Emissions – Construction				
AC 1 – Assure that, as part of the contract provisions, the project contractor is required to implement the measures below at all project construction sites.				
AC 2 – 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.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
AC 3 – Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
AC 4 – 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.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
AC 5 – Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
AC 6 – Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
AC 7 – Install sandbags or other erosion control measures to prevent silt runoff to public roadways.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
AC 8 – Replant vegetation in disturbed areas as quickly as possible.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
AC 9 – Minimize use of on-site diesel construction equipment,	TJPA	During	TJPA	Include requirements in contract

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particularly unnecessary idling.		construction		documents & monitor construction activities to insure compliance
AC 10 – Shut off construction equipment to reduce idling when not in direct use.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
AC 11 – Where feasible, replace diesel equipment with electrically powered machinery.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
AC 12 – Locate diesel engines, motors, or equipment as far away as possible from existing residential areas.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
AC 13 – Properly tune and maintain all diesel power equipment.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
AC 14 – Suspend grading operations during first and second stage smog alerts, and during high winds, i.e., greater than 25 miles per hour.	TJPA	During & following construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
AC 15 – 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).	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
Visual/Aesthetics – Construction				
VA 1 – Assure 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.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance
VA 2 – Assure that contractors make all efforts possible to minimize specific aesthetic and visual effects of construction identified by neighborhood businesses and residents.	TJPA	During construction	TJPA	Include requirements in contract documents & monitor construction activities to insure compliance

