

**San Francisco OBAG 2 Application
Project Scope, Schedule, Cost**

v.2 (REV 03.17.17)

Project Name	Better Market Street	
Sponsor Agency	San Francisco Public Works	
Sponsor Agency Contact Name	Project Manager: Simon Bertrang	Grant Manager: Rachel Alonso
Phone Number	415.554.4810	415.558.4034
Email	simon.bertrang@sfdpw.org	rachel.alonso@sfdpw.org
Partner Agencies and Staff Contacts (if applicable)	San Francisco Municipal Transportation Agency: Joel Goldberg (joel.goldberg@sfmta.com)	
Project Location (including boundaries)	Market Street from Octavia Boulevard to Steuart Street	
Supervisory District(s)	3, 5 and 6	
Brief Project Description for MyStreetSF (50 words max)	Better Market Street will completely reconstruct San Francisco's premier boulevard and important regional transit corridor from Octavia Boulevard to the Embarcadero. The project will prioritize transit, provide safe pedestrian access for people of all ages and abilities, and build safe bicycle facilities and quality public spaces and streetscapes.	
Detailed Scope (may attach Word document): Please describe the project scope and benefits, in particular how the project would meet the OBAG 2 program goal of supporting focused growth.	Please see Attachment 1.	
Attachments: Please list all attachments, e.g. letters of support; maps, drawings, photos; and any other materials to support understanding of the project	<ol style="list-style-type: none"> 1. Scope and Community Outreach 2. Diagrams/Photos 3. Maps 4. Letters of Support 5. Complete Streets Checklist 6. SFMTA Market Street Safety Collision Analysis Memorandum 7. Initial VISSIM Testing Results 	

Project Delivery Milestones	Schedule		Cost			Work
	Start (Mo/Yr)	End (Mo/Yr)	Phase Total (\$1,000)	% of Construction	Source of Cost Estimate (e.g. % Design Complete)	In-house, Contracted, or Both
Planning/Conceptual Engineering (typically 30% design)	1/2011	6/2019	\$ 15,287	3%	actuals + cost to complete	Both
Environmental Studies (PA&ED)	1/2015	6/2019	\$ 11,355	2%	actuals + cost to complete	Both
Design Engineering (PS&E)	7/2019	6/2021	\$ 42,039	8%	conceptual design documents	Both
Right-of-way						
Construction	1/2022	12/2024	\$ 535,039	N/A	conceptual design documents	Contracted
Total Cost (\$1,000)			\$ 603,720			

- Is the project located in or near environmentally, historically, or culturally sensitive areas? yes
- Does the project location overlap with other jurisdictions' ROW or require ROW acquisition? yes
- Does the project require utility relocation? yes
- Does the project require any other agreements with other jurisdictions or regulatory agencies? yes

If checked yes to any of the above, please describe possible impact on project delivery, and provide more detail on the status and steps identified/undertaken to address the issues below.

Additional Status/Schedule/Cost Information (see instructions for type of information requested)

Please see Attachment 1 (Section I, Part B).

Requested OBAG 2 Programming Year by Phase						
Fund Source	FY 2017/18*	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	Total
OBAG 2 - PE Phase	\$ -	\$ -	\$ 15,980	\$ -	\$ -	\$ 15,980
OBAG 2 - Construction	\$ -	\$ -	\$ -	\$ -	\$ 21,143	\$ 21,143
					Project Total	\$ 37,123

* If project has requested funding in FY 2017/18, please provide a justification for why the funds are needed in these early years of the program. Due to funding availability, MTC has indicated it will prioritize on-going projects but will also consider non-infrastructure projects (including plans) and preliminary engineering phases for Fiscal Year 2017/18.

**San Francisco OBAG 2 Application
Funding Plan (\$1,000)**

Source	Status ²	Project Phases ¹					Total by Fund Source	TOTAL PROJECT FUNDING
		PLAN	ENV	PS&E	ROW	CON		
OBAG 2	Planned			\$15,980		\$21,143	\$37,123	\$603,720
General Fund	Allocated	\$2,480	\$2,620				\$5,100	
Octavia Land Sales	Allocated		\$3,050				\$3,050	<i>Total Cost Entered:</i>
Market Octavia Impact Fees	Allocated		\$1,000				\$1,000	\$603,720
Prop A GO Bond	Programmed	\$12,807	\$4,685	\$18,841		\$60,413	\$96,746	
PUC (non-participating)	Planned			\$7,218		\$63,151	\$70,369	
Prop K (EP 44)	Programmed					\$1,250	\$1,250	
Prop B GF setaside	Programmed					\$10,055	\$10,055	
FTA 5337 Fixed Guideway	Programmed					\$11,700	\$11,700	
SFMTA 2021 Revenue Bond	Programmed					\$18,870	\$18,870	
SFMTA CIP	Planned					\$7,073	\$7,073	
SB1 (STIP II / "ATP+" / GHG funding)	Planned					\$50,000	\$50,000	
RM3	Planned					\$100,000	\$100,000	
OBAG 3	Planned					\$16,000	\$16,000	
New (VLF, Bonds, sales tax, potential TTF II).	Planned					\$76,000	\$76,000	
FTA 5309	Planned					\$99,384	\$99,384	
Total by Phase		\$15,287	\$11,355	\$42,039		\$535,039	\$603,720	

<i>Cost Entered by Phase (\$1,000)</i>		\$15,287	\$11,355	\$42,039		\$535,039
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Please identify the responsible agency(ies) and funding sources for ongoing maintenance of the project, including but not limited to lighting and landscaping:

San Francisco Public Works is responsible for the overall maintenance of all Right-of-Way (ROW), including Market Street. Operating and capital funds are allocated annually for as-needed and routine repairs to and cleaning of infrastructure (roadways, sidewalks, curb ramps, etc.)

Other agencies are responsible for maintaining their own facilities located in Public Works' ROW. For example, SFMTA is responsible for the maintenance of the track lanes, center boarding islands, overhead contact system, traffic signals, and striping, etc. SFPUC is responsible for the sewers, water mains, hydrants, and street lighting, etc. Funding for the maintenance of the project will come from the annual budgets of both agencies. Note that the SFPUC scope items are non-participating, economies-of-scale investments.

¹ Acronyms for project phases include: PLAN - Pre-environmental Planning, ENV - Environmental Studies, PS&E - Plans, Specifications & Estimates or Final Design, ROW- Right of Way, and CON - Construction.

² Allocated - funds have been approved for expenditure for the subject project by the funding authority; Programmed - funds have been assigned to the subject project but not yet approved for expenditure; Planned - funds have not yet been committed.

**San Francisco OBAG 2 Application
Major Line Item Budget**

General Instructions

Please provide budget detail for all phases through construction. Sponsor may use sample budget templates below or may attach budget details in another format that includes all required information.

Project Name: Better Market Street

	Trade Costs	Design Contingency	Escalation (2014 to 2023 Midpoint Const)	Subtotal Contracts	Project Cost (Rolled-Up)
		30%	52%		140%
Environmental Review*	11,355,013			11,355,013	
Conceptual Engineering**	15,286,798			15,286,798	
Detailed Design***	42,038,696			42,038,696	
Planning, Design and Project Management	68,680,507			68,680,507	
Sewer Replacement	11,562,763	3,468,829	7,845,286	22,876,878	32,027,629
Track Replacement	13,080,000	3,924,000	8,874,725	25,878,725	36,230,214
Water Replacement	1,547,000	464,100	1,049,633	3,060,733	4,285,026
State of Good Repair	26,189,763	7,856,929	17,769,643	51,816,335	72,542,869
Roadways	9,505,748	2,851,724	6,449,610	18,807,083	26,329,916
Center Transit Lanes	3,706,810	1,112,043	2,515,055	7,333,908	10,267,472
New Boarding Islands and Shelters	7,567,870	2,270,361	5,134,768	14,973,000	20,962,200
Traffic Signal Upgrade	14,490,000	4,347,000	9,831,404	28,668,404	40,135,765
Bicycle Facility	9,613,002	2,883,901	6,522,381	19,019,284	26,626,997
Overhead Contact System (accommodate cycle track)	18,297,050	5,489,115	12,414,471	36,200,636	50,680,890
New Traction Power Plant	63,318,000	18,995,400	42,960,995	125,274,395	175,384,153
Path of Gold Lighting (full replacement)	9,689,368	2,906,810	6,574,195	19,170,373	26,838,522
F Line Loop (McAllister-Charles J Brenham)	3,795,100	1,138,530	2,574,959	7,508,589	10,512,025
Core Capacity Improvements	139,982,949	41,994,885	94,977,838	276,955,671	387,737,939
Site Furnishings	2,760,000	828,000	1,872,648	5,460,648	7,644,908
Crosswalk Treatment	2,388,750	716,625	1,620,757	4,726,132	6,616,584
Curb Ramps	918,000	275,400	622,859	1,816,259	2,542,763
Tree Planting & Irrigation	6,786,479	2,035,944	4,604,597	13,427,020	18,797,828
Sub-Sidewalk Basement Allowance	3,500,000	1,050,000	2,374,735	6,924,735	9,694,629
Sidewalk Paving	9,291,010	2,787,303	6,303,911	18,382,224	25,735,113
Wayfinding Signage	344,929	103,479	234,033	682,440	955,416
Public Art	1,000,000	300,000	678,496	1,978,496	2,769,894
Streetscape Enhancements	26,989,168	8,096,750	18,312,036	53,397,955	74,757,136
TOTAL CONSTRUCTION	193,161,880	57,948,564	131,059,517	382,169,961	535,037,945
Construction Management	12%			45,860,395	

**San Francisco OBAG 2 Application
Major Line Item Budget**

Construction Administration (Engineering)	3%	11,465,099
Construction Contingency	10%	38,216,996
Traffic Control	5%	19,108,498
Transit Operations during Construction	7%	26,751,897
Mobilization	3%	11,465,099
CONSTRUCTION PHASE TOTAL		535,037,945
TOTAL PROJECT BUDGET		603,718,452

Notes:

*Environmental Review = 3% of trades and design contingency + 1% for project management

**Conceptual Engineering = 3% of subtotal contracts + 1% for project management

***Detailed Design = 10% of subtotal contracts + 1% for project management

**San Francisco OBAG 2 Application
Screening Criteria**

Project Name:
Better Market Street

Please check all that apply, and fill in the blank as appropriate.

All Projects	
Project is a fully funded, stand-alone project that fits one of the following categories:	
Safe Routes to School (SRTS) project (capital or non-infrastructure)	<input type="checkbox"/>
Capital project	<input checked="" type="checkbox"/>
Plan	<input type="checkbox"/>
Project scope is consistent with the intent of OBAG and its broad eligible uses.	
	<input checked="" type="checkbox"/>
Sponsor has a Master Agreement with Caltrans with an expiration date of:	
	Does Not Expire
The OBAG funding request is at least \$500,000.	
	<input checked="" type="checkbox"/>
If less than \$500,000 please provide justification (grant request must not be lower than \$100,000):	
Project is consistent with 2013 Plan Bay Area and the San Francisco Transportation Plan.	
	<input checked="" type="checkbox"/>
Check one that applies:	
Sponsor has identified the required 11.47% local match in committed or programmed funds.	<input checked="" type="checkbox"/>
(For a capital project) Sponsor has secured local funds to fully fund the pre-construction phases (e.g. project development, environmental or design) and would like to claim toll credits in lieu of a match for the construction phase. Sponsor will still meet all federal requirements for the pre-construction phases.	<input type="checkbox"/>
(For a non-infrastructure project) Sponsor has secured local funds to fund federally ineligible activities (comprising of at least 11.47% of the total project cost) and would like to claim toll credits in lieu of a match for the federally eligible scope.	<input type="checkbox"/>
Sponsor has submitted MTC's Complete Streets Checklist.	
	<input checked="" type="checkbox"/>
Street Resurfacing Only	
Project selected based on the analysis results from San Francisco's certified Pavement Management System.	
	<input type="checkbox"/>
The project location's PCI is:	N/A
(For preventative maintenance) Project will extend the useful life of the facility by the following number of years:	N/A
Safe Routes to School (SRTS) Only	
Project is for non-infrastructure scope (e.g. education and outreach).	
	<input type="checkbox"/>
Coordination with SRTS Coalition (check all that apply):	
Project has been prioritized by the Coalition.	<input type="checkbox"/>
Project has a letter of support signed by all of the Coalition member agencies.	<input type="checkbox"/>

**San Francisco OBAG 2 Application
Prioritization Criteria**

Project Name:
Better Market Street

See the Transportation Authority's OBAG 2 website (www.sfcta.org/obag2) for links to resources that correspond to the criteria below. Please check all that apply, and provide additional detail where requested.

Location-Specific Prioritization

	In or through	Provides a proximate access to*
Priority Development Area (PDA) If checked, list PDA names: 1. Transit Center District 2. Downtown – Van Ness – Geary 3. Market-Octavia/Upper Market	<input checked="" type="checkbox"/>	<input type="checkbox"/>

High Impact Project Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Community of Concern	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Community Air Risk Evaluation (CARE) Community	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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* For all areas checked for a proximate access, please explain how Project provides a proximate access, including geographical and/or policy justifications:

Project near affordable housing development (with 75% or more affordable units) in PDA	<input checked="" type="checkbox"/> adjacent <input type="checkbox"/> within 1/8 mile	<input type="checkbox"/> within 1/4 mile
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Included in the Major Project List in the Transportation Investment Growth Strategy	<input checked="" type="checkbox"/>
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Included in MTC-funded PDA plan(s) If checked, list PDA plan(s): Better Market Street (Downtown - Van Ness - Geary PDA)	<input checked="" type="checkbox"/>
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Included in Muni Equity Strategy	<input checked="" type="checkbox"/>
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Planning for Healthy Places If checked, list applicable strategies:

Project implements Transportation Demand Management (TDM) strategies.	<input checked="" type="checkbox"/>	1. Install ample bike racks 2. Install additional spaces for bike share facilities 3. Implement private vehicle restrictions on significant sections of Market Street.
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Project implements traffic management strategies to reduce vehicle emissions (e.g. traffic circles or signal retiming).	<input checked="" type="checkbox"/>	1. Restrictions on vehicles turning onto Market will reduce emissions and stop-and-go driving.
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Project promotes the use of zero emission vehicles (e.g. installation of electric vehicle charging stations), as well as the uses of alternative fuels.	<input type="checkbox"/>	
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Safety If checked, list applicable locations:

**San Francisco OBAG 2 Application
Prioritization Criteria**

Project is located on the Vision Zero High Injury Network. <input checked="" type="checkbox"/>	Wholly located on network along Market from Octavia to Steuart Streets with 17 network intersections crossings from Octavia to Battery Streets.
If not on the Vision Zero High Injury Network, project is located at high injury locations as supported by data. <input type="checkbox"/> Data used: _____	
Description of specific safety concerns and project features that address those concerns: Better Market Street is wholly located on San Francisco’s Vision Zero High Injury Network (Map 6), and has the highest per mile City average collision rate of all City streets. San Franciscans are more than ten times more likely to be hit by a car while walking on Market Street than the average City street. In 2012 and 2013, there were 271 collisions along Market Street, 89 of which involved pedestrians or bicycles (33%). Of those 89 collisions, 60% involved automobiles and 40% involved transit vehicles. The main collision factors of the 36 incidents involving transit hitting either a bicyclist or pedestrian consisted of “proceeding straight,” “stopped in road,” “turning movements,” and “pulling into/out of a bus stop.” Better Market Street’s proposed safety improvements focus on addressing all of these collision factors. For more information about the Market Street Safety collision analysis, please refer to the SFMTA Market Street Safety Collision Analysis Memorandum (Attachment 6). The Better Market Street project focuses on making it safe for all people to walk, bike and drive along the street. The primary and most visible safety treatment is restricting private vehicles on the street, significantly reducing the exposure rate for collisions for all modes crossing Market Street. Further, the project recommends a separated and dedicated bicycle facility, giving priority to bicycles and significantly reducing bicycle conflicts with vehicles. Additionally, pedestrian major safety improvements include installing bulb-outs, redesigning irregular geometric intersections, opening closed crosswalks, realigning crosswalks, installing new ADA-compliant curb ramps, and wider and larger traffic signal vehicle heads for greater visibility. The recommended countermeasures are focused at locations where collision analysis identifies them to be most effective. The combination of all these improvements will reduce the number of conflicts, injuries, and deaths on Market Street.	
Describe how the proposed elements are consistent with Vision Zero policies: Better Market Street is consistent with Vision Zero policies in that the project elements incorporate turn restrictions, advance stop lines, raised crosswalks, sidewalk extensions, and Leading Pedestrian Intervals. All the aforementioned elements have been reviewed by the WalkFirst project to assess their effectiveness at reducing pedestrian collisions and have been incorporated into Vision Zero policy. In addition, the creation of a Class IV protected cycletrack facility, transit boarding islands, and larger traffic signal infrastructure for greater intersection visibility, are also project elements that are consistent with Vision Zero policies.	

**San Francisco OBAG 2 Application
Prioritization Criteria**

Multi-modal benefits	If checked, list mode-specific scope elements:	
Project will bring benefits to the following mode:		
Pedestrians <input checked="" type="checkbox"/>		<ol style="list-style-type: none"> 1. Bulb-outs to shorten crossings 2. New aligned crosswalks 3. ADA compliant curb ramps 4. Accessible Pedestrian Signals and Pedestrian Countdown Signals
Bicyclists <input checked="" type="checkbox"/>		<ol style="list-style-type: none"> 1. Dedicated, protected bicycle facility for length of corridor.
Transit passengers <input checked="" type="checkbox"/>		<ol style="list-style-type: none"> 1. Rapid transit service in center lane on Market Street 2. Extend bus-only lane into Financial District and Transbay Terminal 3. Longer transit islands to accommodate more buses/passengers with ADA compliance
Motorists <input checked="" type="checkbox"/>		<ol style="list-style-type: none"> 1. Increase of north/south cross-volume throughput due to elimination of turning conflicts blocking cross-street traffic

Multiple Project Coordination

Better Market Street has been coordinating, and will continue to coordinate, with other projects that intersect with the corridor. Such projects include but are not limited to: 2nd Street Improvement Project, 6th Street Improvement Project, Page Street Neighborway, Geary Bus Rapid Transit (BRT), Van Ness BRT, Muni Forward, Central Subway, 8th Street and 7th Street Safety Projects, and the Upper Market Street Safety Project. The project team has regular status and design meetings to ensure project cost and construction impacts are minimized. Also, as those intersecting projects go through project development to detailed design and construction, the Better Market Street project management team continues to coordinate with the other project managers to ensure that potential conflicts are identified and addressed early.

Community Support (may attach Word document or include as part of the Scope section on the first page)

Please see Attachment 1 (Section I, Part A(vi) and Part H).

Core Capacity	If checked, list applicable corridors:	
Project is identified as a 1) Prerequisite Project or 2) Project Common to All Packages in Bay Area Core Capacity Transit Study (CCTS). <input checked="" type="checkbox"/>		Market Street is the core transit street for San Francisco and this project is identified as a Prerequisite Project in the CCTS.
Project is not identified in CCTS but located on Bay Area Core Corridors (i.e. Muni Metro and Rapid Network, Transbay and Peninsula travel corridors). <input type="checkbox"/>		Not applicable.

**San Francisco OBAG 2 Application
Prioritization Criteria**

If checked, please indicate base year for data purposes, provide base year data and anticipated increase in person throughput and/or reliability that will result from the project. Provide supporting data and/or explanations.

Investing in Better Market Street would yield tangible time and cost savings for the passengers of the fourteen transit lines operating along the project corridor. Attachment 7, Initial Results for Better Market Street VISSIM Testing, details findings from an analysis of transit operations on Market Street in 2014. The model is bounded by the Embarcadero/Steuart Street in the east and Octavia Boulevard/Division Street in the west and contains every intersection in between on Market Street. The model simulates the 4:00 to 6:00 PM peak period and includes all bus traffic crossing Market Street.

Option 1 of Near-Term Project Conditions includes updated transit spacing and turn restrictions on Market Street. In addition to an increase in the capacity of each stop, the existing 40 stops on Market Street (20 inbound and 20 outbound) have been reduced to 27 total stops, a decrease of 33 percent. Dwell times for all Market Street transit vehicles were increased to account for greater ridership at each transit stop, though overall corridor dwell times typically decrease due to the improved station spacing.

Compared to the Updated Baseline Conditions, all 26 transit segments on Market Street showed travel time decreases. Travel times for transit vehicles on Market Street decreased an average of 18 percent. Travel times for inbound cars on Market Street decreased an average of 6 percent and for outbound cars increased an average of 9 percent (approximately one minute). This option also decreased bus/bicycle conflicts by 10 percent as compared to Near-Term No Project Conditions.

For additional information, please refer to Attachment 1 (Section 1, Part I) and Attachment 7. The benefits are summarized in Table 1 (Corridor Travel Times by Vehicle Type) on page 6 of Attachment 7.

Project Sponsor Priority

If applicable, please identify the priority of this project relative to other OBAG 2 SF applications submitted by the same sponsor.

Better Market Street is a priority project for San Francisco Public Works. OBAG funding has always played a crucial role in the project funding plan, and is critical to delivering many of the desired scope elements. SF Public Works has also submitted an OBAG application for the John Yehall Chin Safe Routes to School project.

SECTION I: PROJECT SPECIFIC INFORMATION

A. Detailed Scope Summary

Market Street is San Francisco's most important transportation corridor. Both the design of the street network and historic land use patterns have served to funnel movement, chiefly transit, to Market Street. Infrastructure investments in the 1970s and 80s, first in the underground BART and the Muni Metro systems, and then in the surface streetcar and overhead catenary system, cemented Market Street's role as San Francisco's key transit corridor. Nearly one-third of Muni's all-day, weekday surface transit lines travel on Market Street. During the busiest hour of the day, over 100 buses and streetcars pass in each direction (*Figure 1: Buses per Hour on Market Street*). The performance of transit on Market Street impacts the entire Muni system – with delays and inefficiencies rippling out across the City.

Market Street's status as the City's premier transportation artery extends to bicyclists and pedestrians as well. It has recently grown into the busiest bicycling street west of the Mississippi, surpassing one million annual trips in the inbound direction for the first time in 2015. With almost 500,000 pedestrians walking the sidewalks every day, it is also the City's busiest pedestrian thoroughfare. Conflicts between travel modes have created congestion and safety issues. Without new approaches, conflicts will be compounded as demand for transit along Market Street increases due to new residential and mixed-use development and projects along the corridor and in SOMA, as well as future connections to the new Transbay Transit Center, the Central Subway, the Van Ness and Geary Bus Rapid Transit (BRT) lines, and the implementation of service increases planned as part of the Muni Forward program, which will increase Market Street bus volumes by 25%.

San Francisco's vision for a Better Market Street (BMS) is a comprehensive program to reconstruct 2.2 miles of the City's premier boulevard and most important transit corridor from Octavia Boulevard to the Embarcadero (*Figure 2: Better Market Street Project Area*).

San Francisco's vision for a Better Market Street (BMS) is to:

1. Build transit's core capacity along Market Street in order to accommodate growth from new housing developments, transit service, and transit connections (*Figure 3: Current Boarding Islands and Curbside Stops Lack Capacity*);
2. Accommodate growing bicycle traffic, increase safety, and decrease conflicts of bicyclists with transit and pedestrians (*Figure 4: Current Accommodation for Bicycles is Inadequate*); and

3. Revitalize Market Street as the City's premier pedestrian boulevard through streetscape and safety improvements (*Figure 5: Current Streetscape Lacks Amenities*)

The program is a series of interdependent project scopes (BMS Core Capacity Improvements, BMS Streetscape Enhancements, and BMS State of Good Repair) that will advance several key City policies: Transit First, Vision Zero, the SF Bicycle Plan, and the Better Streets Plan. The project will achieve core objectives by prioritizing transit; providing safe access for street users of all types, ages, and abilities; and building safe bicycle routes, quality public spaces, and streetscapes. In addition, because so many surface transit lines converge on the corridor, including busy lines like the 5/5R, 6/7/7R, 9/9R, and 38/38R, the major transit performance improvements on Market Street will provide system-wide benefits and allow SFMTA to add the planned Muni Forward service increases that will serve the neighborhoods across the City, including Inner Mission, Visitacion Valley, the Richmond, the Sunset, and Ocean Beach.

Better Market Street is a joint project of Public Works, SF Municipal Transportation Agency (MTA), SF Public Utilities Commission (PUC), and the Department of Technology (DT), with work on facilities owned by all four agencies. Public Works is leading the implementation and will coordinate the design drawings and bid the construction contracts. The project team also includes the Planning Department and the County Transportation Authority.

The three interdependent project scopes are as follows:

- i. *BMS Core Capacity Improvements* will increase transit's already high capacity along the corridor by increasing the efficiency for the 14 surface transit lines that converge on Market Street via cost-effective investments. The project will accommodate growth from new housing developments, new transit service, and new transit connections as well as make room for growing bicycle traffic, increase safety, and decrease conflicts between transit, bicycles, and pedestrians. Proposed improvements include:
 - Wider and longer transit boarding islands for more customer and bus capacity
 - Consolidated and relocated stops to improve transit efficiency (*Figures 6 and 7: Transit Stop Spacing*)
 - New center boarding islands located only at every BART/Muni Metro Station to allow the Rapid Buses to improve performance along the corridor
 - Relocated curbside boarding islands that provide more regularly-spaced local service along the corridor
 - ADA accessible curb ramps and streetcar access ramps ("mini-highs") at all F-line (historic streetcar) stops

- Upgraded transit shelters
 - Red Muni-only lanes in the two center lanes
 - New F-Line track loop at McAllister and Charles J Brenham to allow additional streetcar service between Powell and Fisherman's Wharf
 - Full repaving of roadway including base repair
 - Replacement and upgrade of traffic signals including provision of larger, more visible signal heads and bicycle signals where needed
 - Transit signal priority
 - Private vehicular restrictions to speed bus service and reduce conflicts with Muni (*Figures 8 and 9: Proposed Vehicle Restrictions*)
 - Protected cycling facility along length of the corridor to attract bicyclists of all ages
 - New striping to clearly define bicycle circulation including jug-handles and intersection markings
 - Clearly marked pedestrian crossings
 - Traction power upgrades including a new substation to provide power for increased transit service on surface routes and in the Muni Metro
 - New Overhead Contact System (OCS) installation to support changed geometries and increased service
- ii. *BMS Streetscape Enhancements* will revitalize Market Street as the City's premier pedestrian boulevard by creating major streetscape and safety improvements that include:
- Simplifying north side intersections to make it easier and safer to cross by
 - Eliminating two-stage crossings
 - Shortening crossing distances
 - Changing cross streets to right angles
 - Extending sidewalks to shorten crossings (e.g. bulb outs)
 - Realigning and reconstructing crosswalks
 - Adding new curb ramps at all intersection crossings and on transit islands
 - Installing Audible Pedestrian Signals and Pedestrian Countdown Signals throughout
 - Ensuring minimum 15' wide pedestrian through-way everywhere and generous sidewalk widths that prioritize human-scale movement
 - Replacing sidewalk bricks to improve accessibility, providing all users with improved traction and narrower joints that meet current ADA standards
 - Modernizing wayfinding systems (bicycle and pedestrian)
 - Planting new and replacement trees with improved subsurface conditions to improve overall health of the urban forest on Market Street

- Installing streetscape improvements and furnishings including benches, understory plantings, et cetera
 - Adding Public Art
- iii. *BMS State of Good Repair* will replace aging transit and utility infrastructure with in-kind facilities.
- Replace streetcar tracks
 - Replace the sewer on approximately 1/3 of the street
 - Replace aging water distribution infrastructure
 - Replace conduit and wiring for streetlight service
 - Add conduit for high-speed internet connectivity

B. Additional Status/Schedule/Cost Information

- i. *Environmental/Historic/Cultural Risk* – We are advancing an Environmental Impact Report (EIR) for California Environmental Quality Act (CEQA) clearance of the proposed project and an Environmental Assessment (EA) for its National Environmental Policy Act (NEPA) clearance. An Initial Study addressing most of the CEQA categories was published in January 2016. The remaining categories, those that have the potential for significant impacts, will be addressed in detail in the EIR and the technical studies that feed into it, including Transportation, Cultural and Historic Resources, Air Quality, Noise, and Wind and Shadow. The full EIR and EA process will ensure that all potential impacts of the proposed project are fully disclosed to the public. We have confidence in the duration for environmental review as it has been determined by the Planning Department and the Public Works in-house Regulatory Affairs staff, many of whom used to perform environmental reviews for Caltrans. The project has not proven to be controversial to date and enjoys a broad range of support among the public.
- ii. *Right-of-Way (ROW) issues* – The project does not require any ROW acquisition. All work will be performed exclusively in the public ROW. Improvements at Van Ness Avenue and Market Street will include some work in Caltrans ROW and the project will seek the necessary Caltrans Encroachment Permit. Bay Area Rapid Transit (BART) tunnels and stations are located immediately under Market Street, so the project will seek the necessary BART approvals to work over their facilities. Public Works has successfully completed multiple projects in Caltrans ROW and over BART facilities and we do not anticipate any issues.

- iii. *Utility Relocation* – The SFPUC and SFMTA have significant utilities in the Market Street ROW including combined sewer, water mains, high- and low-pressure emergency water service, street light power, traffic signal wiring, and traction power substations and ducts. Both agencies have joined the project and all SFMTA and SFPUC utility work will be constructed as part of the Better Market Street contracts. This is consistent with the recent citywide approach to capital project delivery: by combining multiple disparate scopes into a single construction contract, economies of scale can be achieved, tax payer cost savings realized, and public disruption minimized. There are also private utilities with facilities on Market Street; the most extensive belong to PG&E and AT&T. The project team has already started the coordination with these companies. Public Works has successfully completed multiple projects in the ROW that required relocation of private utilities and does not anticipate any issues.

- iv. *Agreements with other jurisdictions* – As previously stated, Public Works will need approvals from regional transit providers Caltrans and BART to complete the proposed work. Public Works has successfully completed multiple projects in Caltrans ROW and over BART facilities and does not anticipate any issues.

C. Project Readiness

- i. *Project Development* - This complex project has developed well through the planning stage and continues to progress through environmental clearance. As of spring 2017, design is at approximately 10%. After several years of working to develop a consensus alternative, the project is on track to deliver a design that effectively meets the project goals for all stakeholders.

- ii. *Schedule* - The following schedule will allow us to meet the federal guidelines and deliver an initial fundable phase that will begin construction in January 2022.

Project Delivery Milestones	Schedule	
	Start (Mo/Yr)	End (Mo/Yr)
Phase		
Planning/Conceptual Engineering (typically 30% design)	1/2011	6/2019
Environmental Studies (PA&ED)	1/2015	6/2019
Design Engineering (PS&E)	7/2019	6/2021
Right-of-way	-	-
Construction	1/2022	12/2024

Now that Public Works and SFMTA have arrived at a consensus conceptual alternative, engineering documents can be developed from 10% to 30% design in two years. The duration for Environmental Studies has been defined by Public Works in-house Regulatory Affairs staff, many of whom used to perform environmental reviews for Caltrans. Developing design documents from 30% to 100% is achievable within the second two-year time frame by relying on a strategic combination of dedicated in-house engineers and external consultants.

- iii. Cost Estimate* - Better Market Street is a complex project with a lengthy development process. As such, the project team has included contingencies and escalation/inflation assumptions more aggressive than those used on simpler projects with shorter timeframes. Specifically, a 30% design contingency has been added to the cost estimate to acknowledge that the quantities and scope are from conceptual documents. As we develop the detailed design, we will scale the design contingency as appropriate to the phase. The project is holding an industry-standard 10% construction contingency. Costs originally developed in 2014 have been escalated to 2023 dollars, the mid-point of construction. Furthermore, while agencies such as the Metropolitan Transportation Commission tend to use a more standard 2.2% annual inflation index, the project funding plan assumes 5% annual inflation instead. This more aggressive number is in alignment with recommendations to the San Francisco Capital Planning Committee for capital project and plan cost assumptions in Fiscal Years 2015-16 and 2016-17. Taking a more conservative approach to the project's escalation assumptions will ensure a realistic cost estimate.
- iv. Funding plan* - The project funding plan is a collaborative effort between Public Works and SFMTA Capital Finance staffs. As with many complex, multimodal projects – given the diversity of scope to be delivered, the design still to be completed, and the current reality of how transportation projects are financed in California – the project relies on more than one dozen funding sources.¹ Identified sources have been internally categorized as having high, medium, and low certainty. The project's timeline allows Finance staffs at both agencies to seek funds at every opportunity and apply for new grants as they arise. Furthermore, the project delivery plan will be phased based on minimizing disruption and in recognition of current construction contractor bonding and delivery capacities. The reality is that phasing is to Better Market Street's advantage. As

¹ "The Basics of Transportation Funding," California State Assembly, 7/6/2015 (<http://assembly.ca.gov/sites/assembly.ca.gov/files/Committees/Transportation-070615-Background-Paper.pdf>)

funds for each phase (linear and/or modal) become accessible, contracts will be issued accordingly.

Eight million dollars in local funds have already been allocated to the project, as well as \$8.5M in bond proceeds issued from the 2014 Proposition A General Obligation Bond, of which an additional \$27.8M will be used for design and \$60.4M for construction.

In addition to the \$37M in OBAG Cycle 2 funds, the funding plan assumes the \$1.25M in Proposition K sales tax funds already programmed as an OBAG local match placeholder (Strategic Plan Expenditure Plan 44).

For construction, \$47.7M has been identified from several sources in SFMTA's control: the Proposition B annual General Fund set-aside, FTA 5337 Fixed Guideway formula funds, SFMTA 2021 Revenue Bond funds, and funds from SFMTA's next Capital Improvement Program covering Fiscal Years 2019-2033.

The remaining \$340M in construction funding is acknowledged as less certain. For many large projects, the levels of funding uncertainty approach zero as full funding plans are memorialized in time for obligation (E-76 package) of construction funds. This is the case with Better Market Street. Potential future sources include new state revenue stemming from the passage of Senate Bill 1, such as State Transportation Improvement Program (STIP), the augmented Active Transportation Program (ATP), and increased Green House Gas reduction funds. Policy level discussion for a potential Regional Measure 3 Bridge Toll have been advancing, and Better Market Street is a candidate project for its additional revenue. Finally, OBAG 3, FTA 5309 funds, and new local measures such as a Vehicle License Fee (VLF), general obligation bonds, and/or a sales tax, as will be identified in the recently relaunched Mayor's Transportation Task Force, can also be folded into the project funding plan. The non-participating water and sewer scopes will be funded by SFPUC.

- v. *Environmental Clearance* - Better Market Street is well under way in its environmental review and has a clear path to both CEQA and NEPA clearance.

On the CEQA front, the SF Planning Department published an Initial Study in March 2016 that determined the potential effects of the project on most CEQA environmental resources would not be significant. This Initial Study is allowing us to focus the EIR only on the five effects determined to be potentially significant: Transportation and Circulation,

Cultural Resources, Noise, Air Quality, and Wind and Shadow. An environmental review consultant team is hard at work on the technical studies that will support the full analysis of the project on these five environmental resource factors. The technical studies will feed into the EIR and its analysis of the direct and indirect environmental effects of three alternatives and two design options, including both construction-related and long-term operational impacts.

On the NEPA front, Caltrans, as assigned by the Federal Highway Administration (FHWA), has agreed to be the lead agency for the federal clearance of the Better Market Street project. Caltrans will lead the production of an EA that will clear the project as a Complete Street and cover both the OBAG 2 funds as well as all other federal funds allocated to the project, including Federal Transit Administration (FTA) funds.

The project team expects to complete the full environmental clearance in the summer of 2019, at the same time detailed design starts. The project has not proven to be controversial to date and enjoys a broad range of support among the public.

- vi. *Public Review* - Better Market Street has been through an extensive public outreach process to date, which will continue as design is developed. The project was first considered in the early 2000's under the San Francisco County Transportation Authority, focusing on a series of near-term, low-cost improvements to Market Street to improve the user experience for transit users, bicyclists, and pedestrians while still accommodating motor vehicle traffic. The proposed project then progressed into a Complete Street project with the goals of decreasing transit travel time, improving pedestrian circulation and safety, creating a safer and more inviting bicycle route, and accommodating necessary motor vehicle trips. Public Works, SFMTA, and the Planning Department also became involved during this planning phase. As the agencies developed the project scope and heard initial public comments, project scope shifted to a complete reconstruction to address long-term needs, in addition to the desired near-term improvements, of the project corridor.

In consideration of the existing operation of the Project corridor and the public outreach process, several key design drivers were identified in December 2011, including improving mobility, enhancing access and the public realm experience, reducing conflict and friction between travel modes, establishing a unique identity, and integrating actions with form, street, and function.

Formal public outreach for the BMS project's conceptual design began in early 2011 and involved a public visioning process. People from both the immediately adjacent neighborhoods and all over the City provided broad input through a series of coordinated workshops, online comments, social media, and other outreach venues. Three rounds of public outreach workshops and webinars were conducted from May 2011 to July 2013. Public notices for the workshops and webinars were distributed throughout the City. The public notices included, but were not limited to, press releases; postcards and flyers (in several languages) published as posters and bus cards; public service announcement videos that aired on SFGovTV; over 1,000 postcards hand-distributed; multi-language bus posters placed in bus shelters on Market Street; Better Market Street email newsletter blasts distributed to over 5,000 people per round; hand-written notices sent to property owners along Market Street; workshop announcements posted via social media; and announcements and updates provided on the Better Market Street website.²

The project team also established a Community Advisory Committee (CAC) to provide an ongoing mechanism for feedback between itself and local residents, business owners, and community representatives. The CAC includes several dozen members organized into three working groups:

- i. Transportation/Corridor
- ii. Streetscape/Urban Design
- iii. District Identity.

The CAC is broadly representative and includes local residents, local businesses, cultural groups, hotels, advocacy groups, community benefit districts, business improvement districts, and other public stakeholders from across the city. The CAC generally met once a month during the visioning and planning phases of the project and will meet on a similar schedule during upcoming key design and engineering phases.

- vii. *Project Delivery Track Record* - San Francisco Public Works has a lengthy history of successfully delivering federally-funded projects. We expect this proven track record will continue. We have a dedicated team of project managers with experience coordinating between civil, traffic, rail, electrical and hydraulic engineers, landscape architects, planners, urban designers, construction managers, and finance staff. We are delivering and have delivered projects of varying complexity with a variety of federal aid sources, including Active Transportation Program (ATP) Cycle 1, Highway Safety Improvement

² Better Market Street (<http://www.bettermarketstreetsf.org/>)

Program (HSIP) Cycle 6, One Bay Area Grant (OBAG) Cycle 1, Emergency Repair, Highway Bridge Program, and others. Public Works has not had any Caltrans administered projects in red flag status in the past five years.

D. Planning for Healthy Places

Better Market Street will reduce vehicle emissions by making alternative modes of transportation more attractive than private automobile travel. Better Market Street will install ample bike racks, add additional spaces for bike share facilities, and implement private vehicle restrictions on significant sections of Market - all of which serve as Transportation Demand Management (TDM) strategies. With the absence of parking on and near Market Street and additional private vehicle restrictions, transit or bicycling will seem like an even better option than an automobile. Furthermore, by proposing traffic management strategies, such as restrictions on vehicles turning onto Market Street, the traffic volume throughput across Market Street is expected to increase, which will reduce vehicle emissions by reducing stop-and-go driving. Finally, street trees and vegetation are a component of the streetscape scope. The Bay Area Air Quality Management District (BAAQMD) notes that these "may trap and filter coarse and fine particulates... [which] are eventually washed to the ground by rainfall. Trees also lower the air temperature by providing shade over streets and parking lots, thereby reducing evaporative emissions from vehicles."³

E. Safety

Better Market Street is wholly located on San Francisco's Vision Zero High Injury Network (*Map 6*), and has the highest per mile City average collision rate of all City streets. San Franciscans are more than ten times more likely to be hit by a car while walking on Market Street than the average City street. In 2012 and 2013, there were 271 collisions along Market Street, 89 of which involved pedestrians or bicycles (33%). Of those 89 collisions, 60% involved automobiles and 40% involved transit vehicles. The main collision factors of the 36 incidents involving transit hitting either a bicyclist or pedestrian consisted of "proceeding straight," "stopped in road," "turning movements," and "pulling into/out of a bus stop." Better Market Street's proposed safety improvements focus on addressing all of these collision factors. For more information about the Market Street Safety collision analysis, please refer to the SFMTA Market Street Safety Collision Analysis Memorandum (*Attachment 6*).

The Better Market Street project focuses on making it safe for all people to walk, bike and drive along the street. The primary and most visible safety treatment is restricting private vehicles on the street, significantly reducing the exposure rate for collisions for all modes crossing Market

³ Bay Area Air Quality Management District, Planning for Healthy Places, "Vegetation," (http://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en), page 40.

Street. Further, the project recommends a separated and dedicated bicycle facility, giving priority to bicycles and significantly reducing bicycle conflicts with vehicles. Additionally, pedestrian major safety improvements include installing bulb-outs, redesigning irregular geometric intersections, opening closed crosswalks, realigning crosswalks, installing new ADA-compliant curb ramps, and wider and larger traffic signal vehicle heads for greater visibility. The recommended countermeasures are focused at locations where collision analysis identifies them to be most effective. The combination of all these improvements will reduce the number of conflicts, injuries, and deaths on Market Street.

Better Market Street is consistent with Vision Zero policies in that the project elements incorporate turn restrictions, advance stop lines, raised crosswalks, sidewalk extensions, and Leading Pedestrian Intervals. All the aforementioned elements have been reviewed by the WalkFirst project to assess their effectiveness at reducing pedestrian collisions and have been incorporated into Vision Zero policy. In addition, the creation of a Class IV protected cycletrack facility, transit boarding islands, and larger traffic signal infrastructure for greater intersection visibility, are also project elements that are consistent with Vision Zero policies.

F. Multi-Modal Benefits

Better Market Street stands to serve as the archetype of Complete Streets Design chiefly because of its multi-modal benefits. It is designed to improve the mobility for all four modes of transportation within the City at-large. The project is proposing to create a rapid transit service in the center lanes of Market Street and to extend the bus-only lane further east into the Financial District and to the Transbay Terminal. Transit riders will also benefit from larger transit islands that can safely accommodate more buses and more passengers, with full ADA compliance. In addition, pedestrian improvements include bulb-outs, new crosswalks, and ADA-compliant curb ramps, while bicyclists will have a dedicated, protected facility along the entire length of the corridor. Motorists throughout eastern San Francisco trying to move north and south across Market Street will benefit from the increased cross-volume throughput with the elimination of turning conflicts blocking cross-street traffic.

G. Multiple Project Coordination

Better Market Street has been coordinating, and will continue to coordinate, with other projects that intersect with the corridor. Such projects include but are not limited to: 2nd Street Improvement Project, 6th Street Improvement Project, Page Street Neighborway, Geary Bus Rapid Transit (BRT), Van Ness BRT, Muni Forward, Central Subway, 8th Street and 7th Street Safety Projects, and the Upper Market Street Safety Project. The project team has regular status and design meetings to ensure project cost and construction impacts are minimized. Also, as those intersecting projects go through project development to detailed design and construction,

the Better Market Street project management team continues to coordinate with the other project managers to ensure that potential conflicts are identified and addressed early.

H. Community Support

The Better Market Street project has clear and diverse support from community members as shown by the enclosed letters. We have the support of merchant groups and key businesses who are looking forward to the improvements that the project will bring. Advocacy organizations representing multiple transportation modes, including walking, bicycling, and public transportation, have participated in our planning process and are on board. We have forged partnerships with contractor associations that support the project and the jobs it will bring to the City. We have worked closely with local Community Benefit Districts and Business Improvement Districts to gather their input, ideas, and support. Environmental and arts organizations recognize their role in improving San Francisco's premier corridor and are backing the project. Workforce development and affordable housing organizations also support the plan and understand how improving Market Street will benefit San Francisco's less fortunate populations.

To date there is no sign of any public opposition to the project. Moreover, in an often divided City, the one thing both techies and community advocates (among others) agree on is the need for a Better Market Street.

I. Core Capacity

Better Market Street is identified in the MTC's Bay Area Core Capacity Transit Study because Market Street is **the** core transit street for the City of San Francisco. Market Street transit service is currently at capacity, with multiple routes operating along the corridor providing less than the FTA minimum of 5.4 square feet of space per passenger. Better Market Street core capacity improvements will result in as much as a 22% increase in service in the PM peak period. This service improvement will also benefit the neighborhoods on the other end of each of the bus lines, such as Inner Mission, Visitacion Valley, the Richmond, the Sunset, and Ocean Beach, as the increased efficiency along the Market Street portion of the routes will allow the SFMTA to add the programmed Muni Forward service increases to each line.

The project proposes to create a Muni Rapid service network on Market Street in the center track lanes that will have the same stop spacing as the Muni Metro and BART systems. In addition, the transit-only lanes will be extended so that Muni routes will have quick, efficient access to the Transbay Terminal. Transit Signal Priority, stop consolidation, and the widening and lengthening of boarding islands will improve transit rider throughput and service reliability. Geary BRT and other Muni routes benefit from the above-mentioned improvements under the Better Market Street project as they access the Transbay Terminal to provide connections across the region.

Attachment 7, Initial Results for Better Market Street VISSIM Testing, details findings from an analysis of transit operations on Market Street in 2014. The model is bounded by the Embarcadero/Steuart Street in the east and Octavia Boulevard/Division Street in the west and contains every intersection in between on Market Street. The model simulates the 4:00 to 6:00 PM peak period and includes all bus traffic crossing Market Street.

Option 1 of Near-Term Project Conditions includes updated transit spacing and turn restrictions on Market Street. Transit stops were modeled such that two vehicles would be able to stop at an outbound transit stop and three vehicles would be able to stop at an inbound transit stop. In addition to an increase in the capacity of each stop, the existing 40 stops on Market Street (20 inbound and 20 outbound) have been reduced to 27 total stops, a decrease of 33 percent. Dwell times for all Market Street transit vehicles were increased to account for greater ridership at each transit stop, though overall corridor dwell times typically decrease due to the improved station spacing. The transit lines were re-aligned such that local buses use the curb-side lanes and limited-service buses use the center lanes, except for the 38L which travels on Market Street for a relatively short distance before turning right onto First Street and for the F Line Streetcar, which will remain in the center lane.

Compared to the Updated Baseline Conditions, all 26 transit segments on Market Street showed travel time decreases. Travel times for transit vehicles on Market Street decreased an average of 18 percent. Travel times for inbound cars on Market Street decreased an average of 6 percent and for outbound cars increased an average of 9 percent (approximately one minute). This option also decreased bus/bicycle conflicts by 10 percent as compared to Near-Term No Project Conditions.

These benefits are summarized in Table 1 (Corridor Travel Times by Vehicle Type) on page 6 of Attachment 7. Investing in Better Market Street would yield tangible time and cost savings for the passengers of the fourteen transit lines operating along the project corridor.

J. Alternate Funding Sources

Both Public Works and the SFMTA are committed to securing all the required project funds and will be updating our funding plan on a quarterly basis, as required by some funding sources, such as FTA Section 5309. We have collectively categorized funds as high, medium, and low risk. In the near term, Public Works and SFMTA staff will focus on securing the low-risk funds that have greater certainty of procurement before Phase I construction commences.

OBAG is an essential funding source for the project because it will get Better Market Street through design and Phase 1 of construction. On the local level, a project of significance such as Better Market Street would have difficulty procuring local funds because of the opportunity costs of funding other competing priorities citywide. Furthermore, San Francisco Public Works does not have access to flexible capital fund sources. The 2011 General Obligation Streets Bond has been fully programmed and funds are nearly exhausted. Public Works is also largely reliant upon the City's over-subscribed General Fund for regular capital fund requests that tend to favor renewal projects rather than enhancements. OBAG represents a crucial and rare funding source for Better Market Street because Surface Transportation Program (STP) and Congestion Mitigation and Air Quality Improvement (CMAQ) funds can be used for bicycle facilities and streetscape enhancements. Similar hard-to-fund scopes were delivered with OBAG Cycle 1 in projects such as Second Street and Broadway Chinatown Phase IV.

SECTION II: LOCATION SPECIFIC CRITERIA

Map 1: Priority Development Areas

Better Market Street is wholly located in three Priority Development Areas (PDAs):

- Transit Center District
- Downtown – Van Ness – Geary
- Market-Octavia/Upper Market

Better Market Street is also a listed project in the 2013 Transportation Investment and Growth Strategy (TIGS) – specifically as one of the major projects serving multiple PDAs. Better Market Street serves four including: the Transit Center District, Downtown – Van Ness – Geary, Market-Octavia/Upper Market, and Eastern Neighborhoods PDAs.⁴

Better Market Street is also in an MTC-funded PDA Plan. The Association of Bay Area Governments (ABAG)'s Plan Bay Area PDA Showcase online GIS map lists the Better Market Street Plan as the primary planning document for the Downtown-Van Ness-Geary PDA.⁵ In spring 2013, SFMTA and the Planning Department received \$2.38M in grant funds from MTC for eight projects, one of which is the Better Market Street EIR.⁶

Map 2: High Impact Project Areas

Better Market Street runs squarely through and along multiple High Impact Project Areas. Not only is there significant housing development projected along Market Street, especially in Central Market and in the Hub, but Downtown and SOMA are projected to continue to be significant and growing job centers (*Figures 10 and 11: Projected Housing and Job Growth by 2035*). Better Market Street will serve this growth, building on the incredible underground transit resources already in place (BART and Muni Metro) by serving all income levels with speedier and more reliable surface transit service on Muni's most important transit corridor. Better Market Street will improve the connectivity of multiple ongoing and planned transportation investments including Central Subway, Van Ness BRT, Geary BRT, E-line service, the Transbay Terminal, High Speed Rail, and Downtown Caltrain Extension (*Figure 12: New Transit Connections*).

⁴ San Francisco County Transportation Authority, "San Francisco Transportation Investment and Growth Strategy" Executive Summary / Figure E-3 (<http://www.sfcta.org/sites/default/files/content/Planning/CongestionManagementPlan/2015/San%20Francisco%20Growth%20Strategy%20Update%205312015.pdf>), page 14

⁵ Association of Bay Area Governments, Priority Development Area Showcase (<http://gis.abag.ca.gov/website/PDAShowcase/>)

⁶ San Francisco Municipal Transportation Agency, Board Item 10.4 (<https://www.sfmta.com/sites/default/files/agendaitems/6-4-13%20Item%2010.4%20Planning%20grant%20app.pdf>)

Map 3: Community Air Risk Evaluation Community

Better Market Street is wholly located within a Community Air Risk Evaluation (CARE) Community and will employ best management practices to mitigate exposure.

As a major project for the improvement of public infrastructure located within the San Francisco Department of Public Health's (DPH) Air Pollutant Exposure Zone, Better Market Street is subject to the terms of Chapter 25 of the San Francisco Public Health Code, which protects public health by reducing diesel exhaust emissions from publicly funded construction sites through enforcing specific Best Management Practices (BMPs).

The project will incorporate the following BMPs for air-quality protection:

- All off-road equipment shall have engines that meet or exceed either United States Environmental Protection Agency (EPA) or California Air Resources Board (CARB) Tier 2 off-road emission standards, and have been retrofitted with a CARB Level 3 verified diesel emission control strategy (VDECS). Equipment with engines meeting Tier 4 Interim or Tier 4 Final off-road emission standards automatically meet this requirement.
- Where access to alternative sources of power is available, use of portable diesel engines to perform work on the project shall be prohibited; any diesel engines that are employed shall not be left idling for more than two minutes at any location, except as allowed for in applicable state regulations regarding idling for off-road and on-road equipment (e.g., traffic conditions, safe operating conditions). The Contractor shall require that workers and operators properly maintain and tune equipment in accordance with manufacturer specifications.
- The project contractor must submit a Construction Emissions Minimization Plan before the start of construction which details how the contractor will meet these requirements, including estimates of the construction timeline by phase, with a description of each piece of off-road equipment required for each Construction Phase. After the start of Construction Activities, the Contractor shall maintain quarterly reports at the construction site documenting compliance with the Construction Emissions Minimization Plan.

Map 4: Communities of Concern

The Better Market Street project runs through and serves scores of blocks identified as within Communities of Concern (CoC). In addition, multiple projects identified in the Muni Equity Strategy include transit service running on or crossing Market Street. These Muni Equity projects will benefit from the improvements planned as part of Better Market Street by increasing speed and reliability on these lines too.

The specific CoC's served by Better Market Street include the Tenderloin, SOMA, Western Addition and the Mission. In addition, the Muni Equity Strategy identifies these same Communities of Concern served by Better Market Street (Tenderloin/SOMA, Western Addition and Mission) as three of the City's seven "Equity Strategy Neighborhoods" based on the concentration of households with low income, high concentration of people of color, high household density, low vehicle ownership rates, and a need for Citywide accessibility. Service improvements and increases enabled by Better Market Street will serve the immediately adjacent Equity Strategy neighborhoods mentioned above (Muni routes 19, 31, and 38R for the Tenderloin; 5 and 7R for Western Addition; 9/9R for Inner Mission) as well as the more far-flung Equity Strategy Neighborhoods at the other end of the bus lines that converge on Market Street (e.g. 9/9R for Visitacion Valley).

Map 5: PDA with Affordable Housing Preservation and Creation Strategy

Better Market Street is wholly located in Priority Development Areas and is immediately adjacent to a proposed affordable housing development with 75% or more affordable units. In addition to the fronting development at 54 McAllister Street, significant portions of the Better Market Street scope fall within both 1/8 mile and 1/4 mile radii of over a dozen other proposed affordable housing developments.

FIGURE 2: BETTER MARKET STREET PROJECT AREA



FIGURE 3: CURRENT BOARDING ISLANDS AND CURBSIDE STOPS LACK CAPACITY

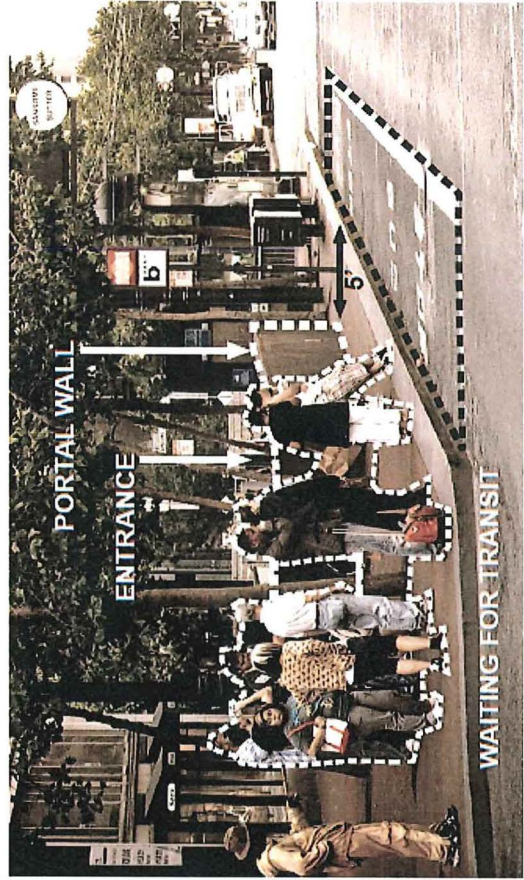


FIGURE 4: CURRENT ACCOMMODATION FOR BICYCLES IS INADEQUATE



FIGURE 5: CURRENT STREETScape LACKS AMENITIES

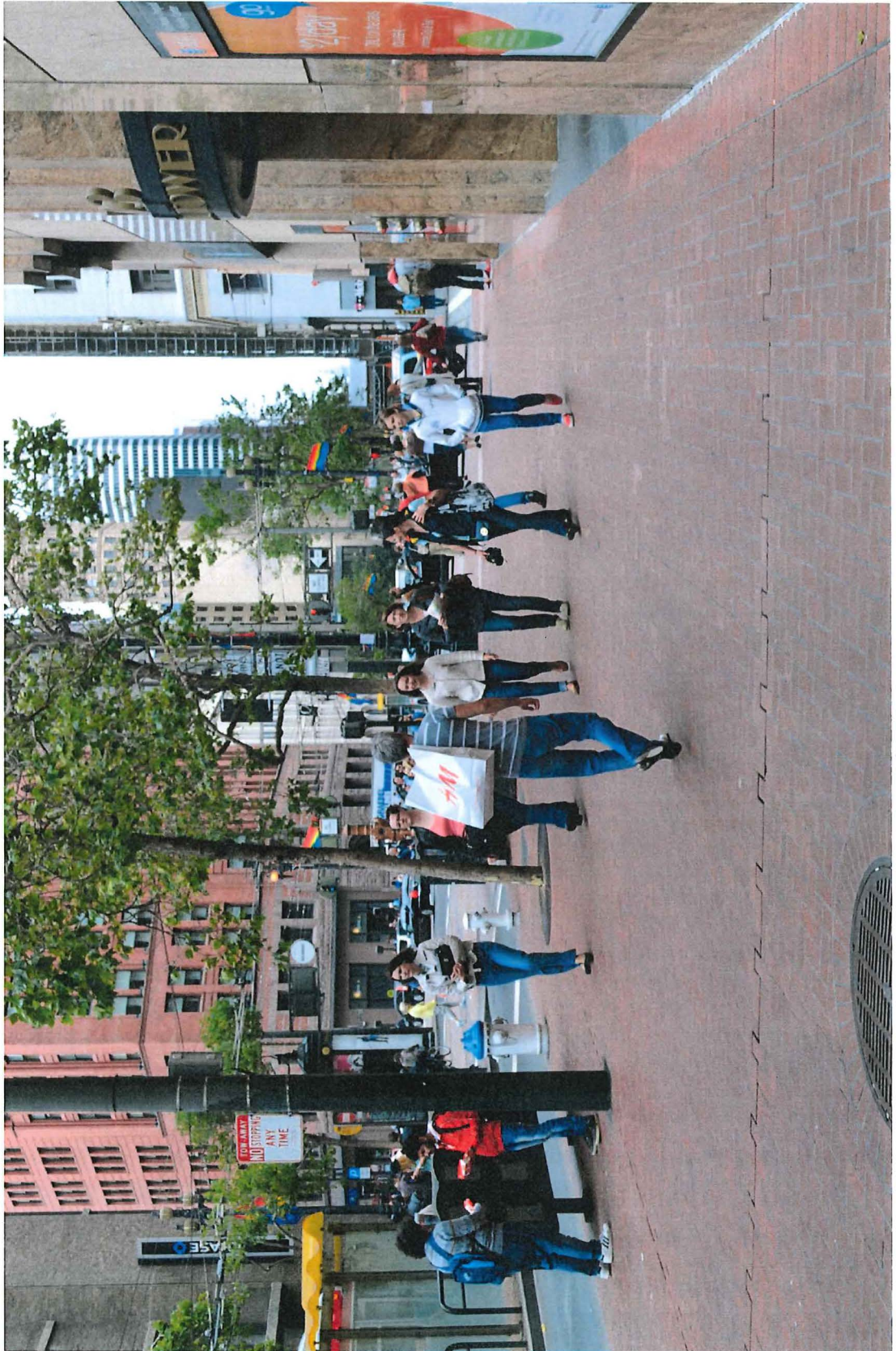
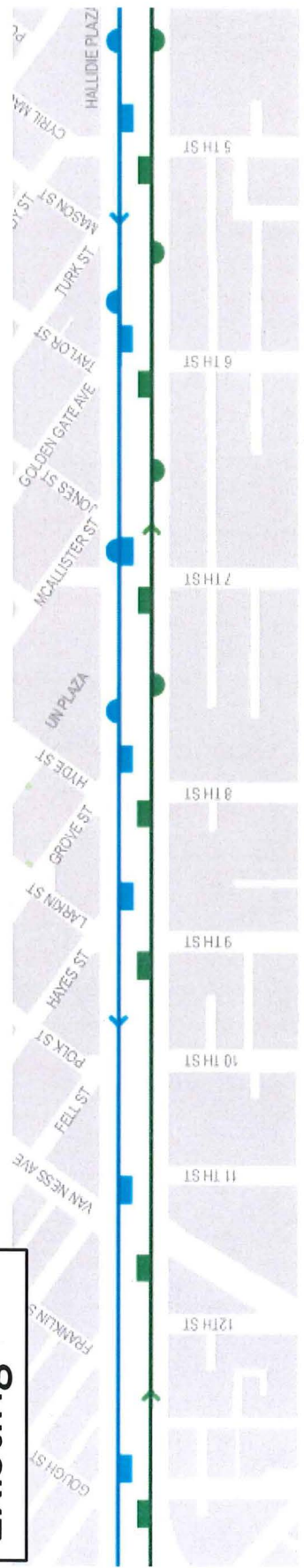


FIGURE 6: TRANSIT STOP SPACING - OCTAVA TO 5TH ST.

Existing



Proposed



-  CURB
-  CURB (SHARED LANE VARIANT)
-  ISLAND (RAPID)
-  ISLAND (LOCAL)

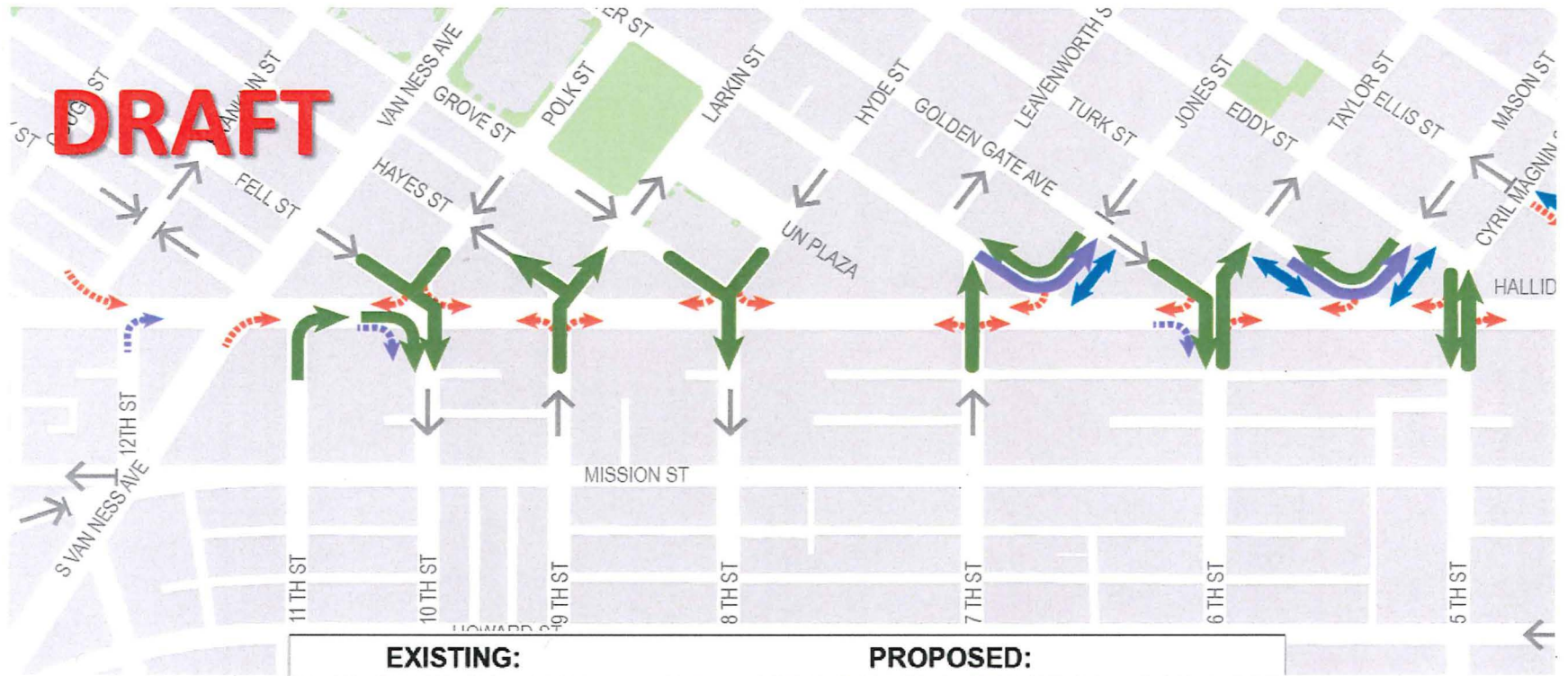
FIGURE 7: TRANSIT STOP SPACING - 5TH ST. TO EMBARCADERO



FIGURE 8: PROPOSED WESTERN VEHICLE RESTRICTIONS



Attachment 2: Diagrams & Photos



EXISTING:	PROPOSED:
One-Way Street	Allowed Traffic Movement
Existing Required Turn	New One-Way
Existing Movement Proposed to Be Restricted	Two-Way Conversion
	New Required Turn

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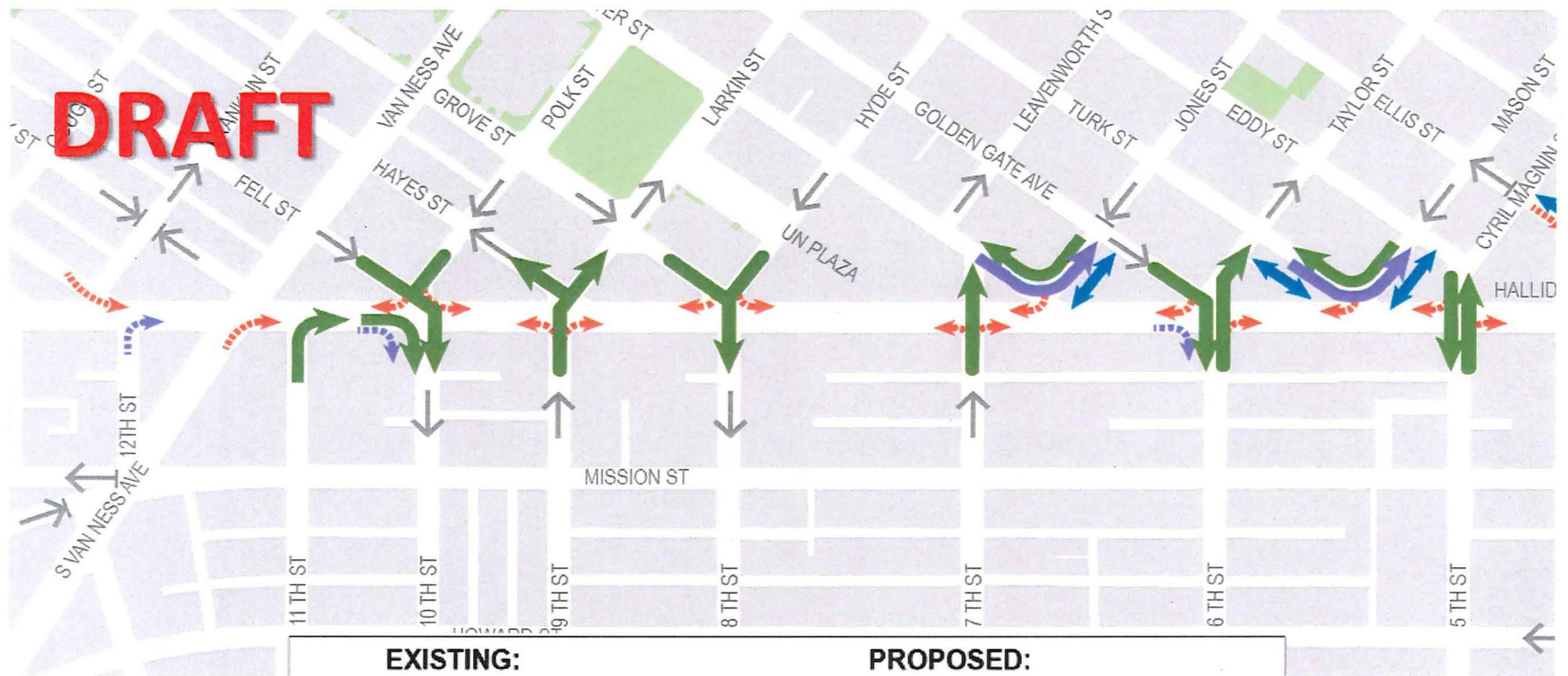
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Restrictions to private vehicles only; buses, taxis, bicycle, trucks, paratransit are exempt

FIGURE 9: PROPOSED EASTERN VEHICLE RESTRICTIONS



Attachment 2: Diagrams & Photos



San Francisco Public Works | Better Market Street | OBAG Cycle 2 Application

EXISTING:	PROPOSED:
One-Way Street	Allowed Traffic Movement
Existing Required Turn	New One-Way
Existing Movement Proposed to Be Restricted	Two-Way Conversion
	New Required Turn

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Restrictions to private vehicles only; buses, taxis, bicycle, trucks, paratransit are exempt

FIGURE 10: PROJECTED HOUSING GROWTH BY 2035



101,000 new households
(approx. 15%)



FIGURE 11: PROJECTED JOBS GROWTH BY 2035



191,000 new workers
(approx. 25%)



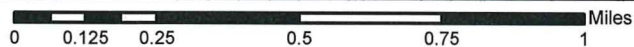
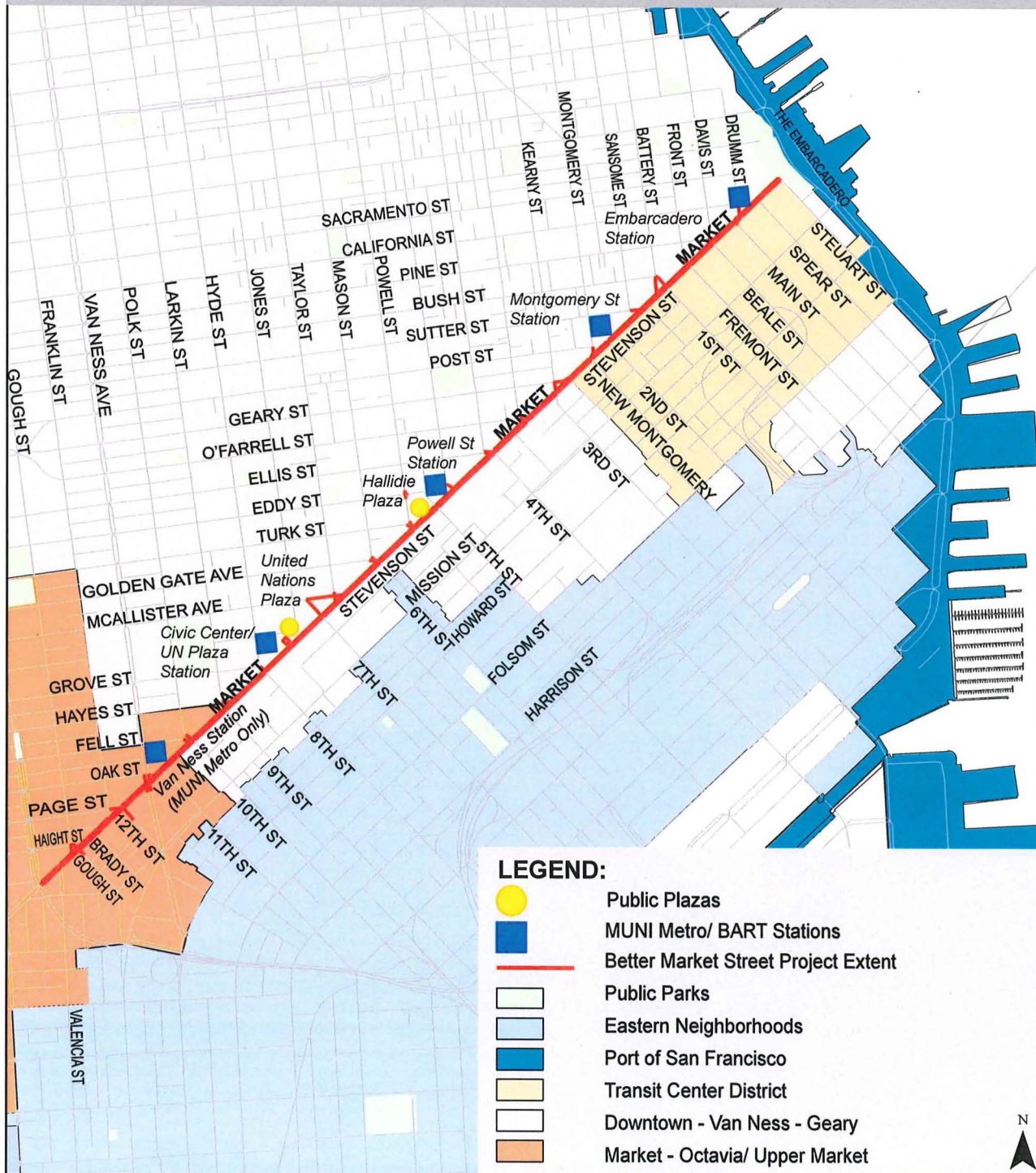
FIGURE 12: NEW TRANSIT CONNECTIONS



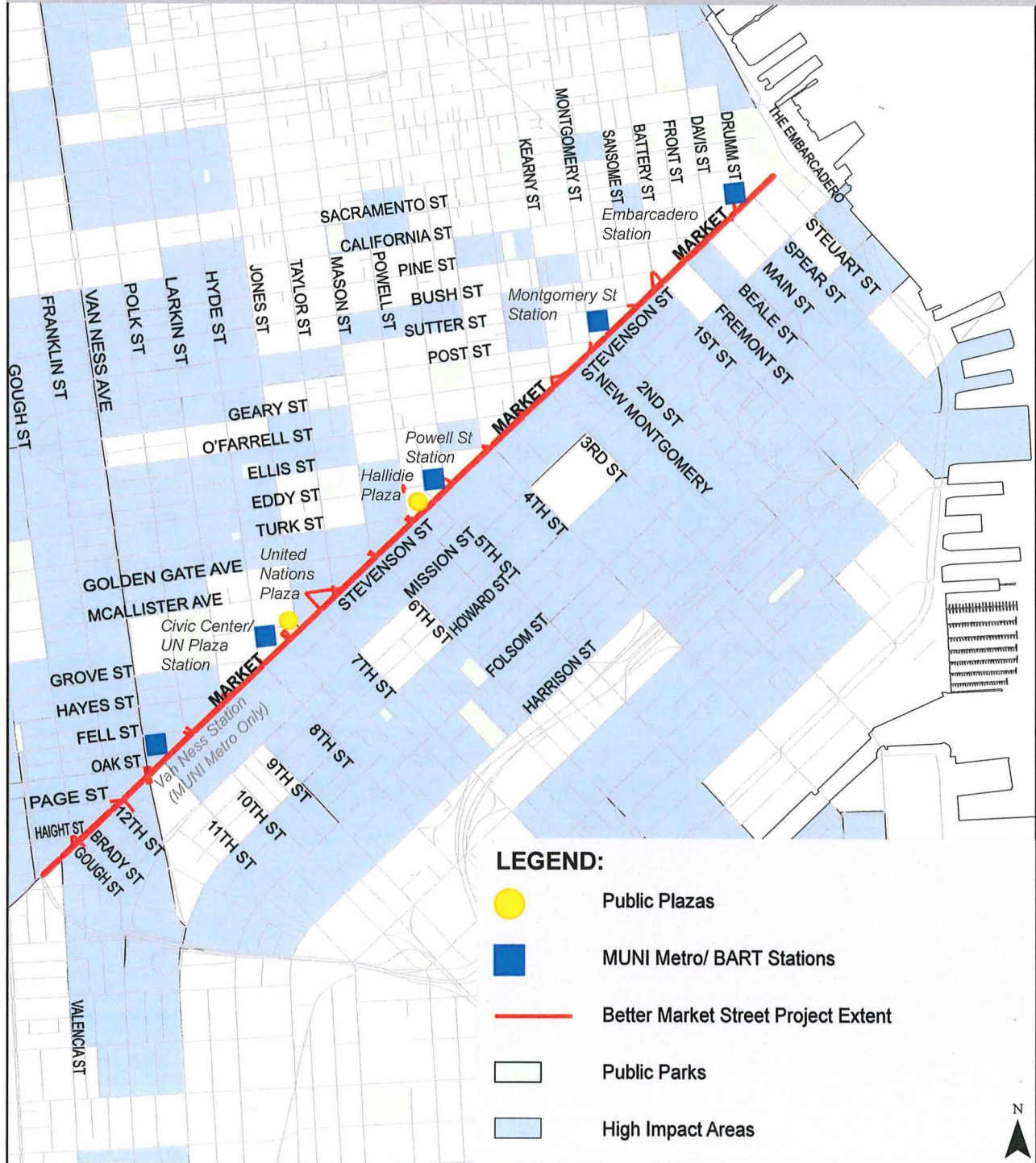
Central role in connecting existing and future transit modes and projected growth in employment and housing.



MAP 1: PRIORITY DEVELOPMENT AREAS



MAP 2: HIGH IMPACT AREAS

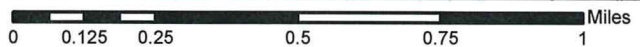


MAP 3: COMMUNITY AIR RISK EVALUATION PROGRAMS (CARE) IMPACTED AREAS

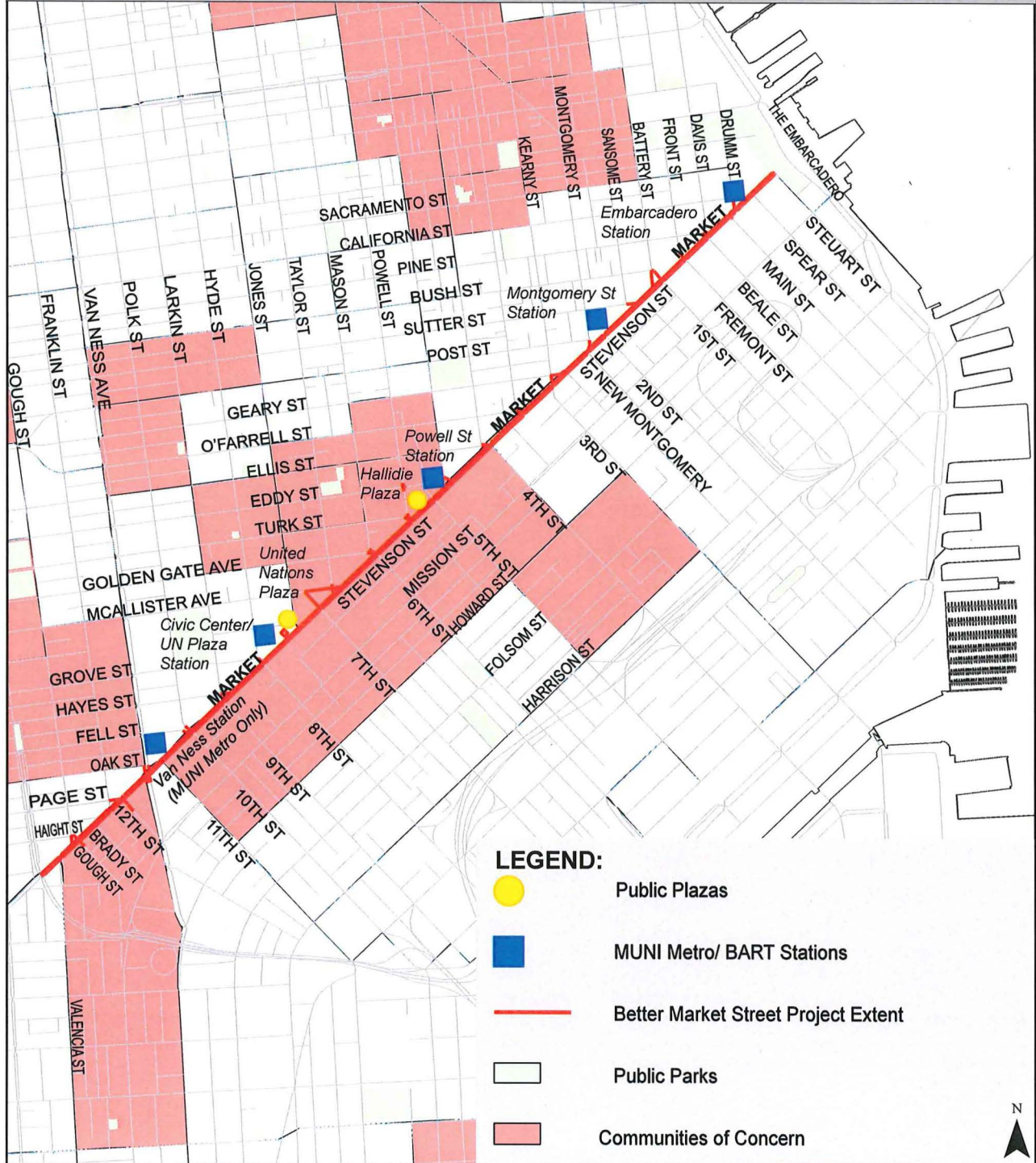


LEGEND:

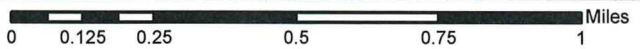
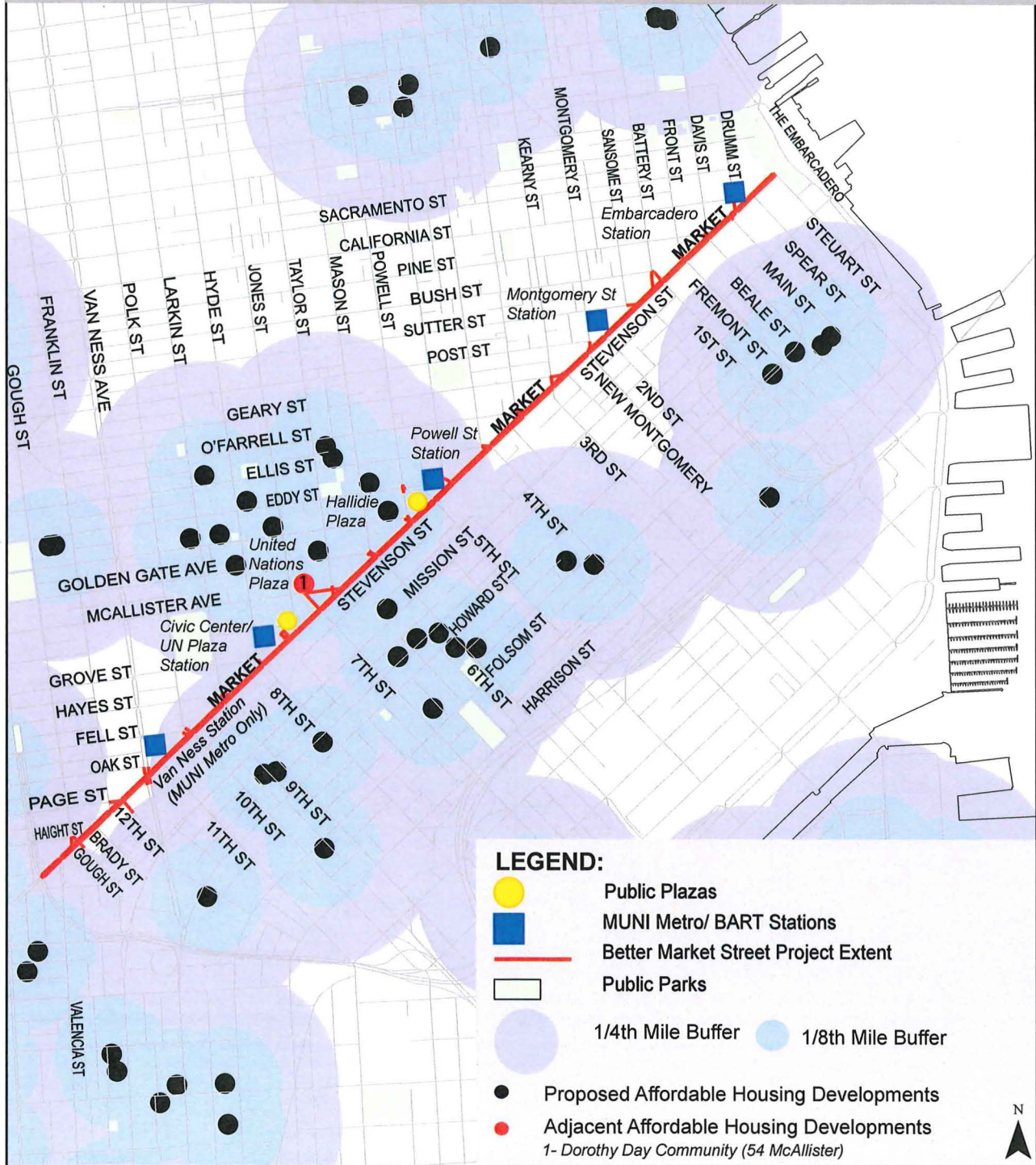
- Public Plazas
- MUNI Metro/ BART Stations
- Better Market Street Project Extent
- Public Parks
- CARE Community



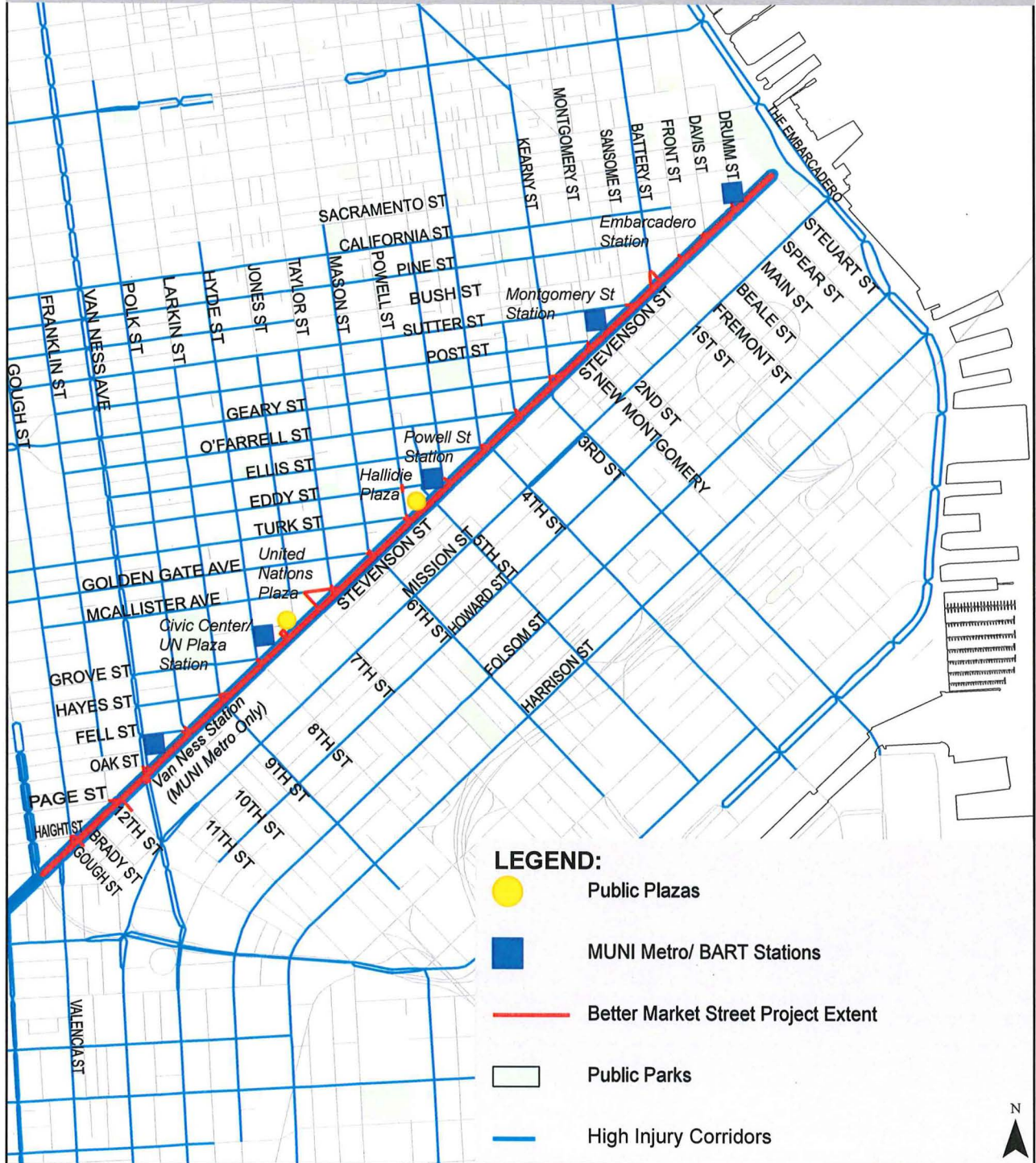
MAP 4: COMMUNITIES OF CONCERN



MAP 5: PROPOSED AFFORDABLE HOUSING DEVELOPMENTS



MAP 6: VISION ZERO HIGH INJURY LOCATIONS



LETTERS OF SUPPORT

1. San Francisco Bicycle Coalition
2. Walk SF
3. San Francisco Department of Homelessness and Supportive Housing
4. Tenderloin Housing Clinic
5. Market Street Association
6. Illuminate the Arts
7. Market Street Railway
8. Tenderloin Community Benefit District
9. Central Market Community Benefit District
10. Yerba Buena Community Benefit District
11. San Francisco Office of Economic and Workforce Development
12. Clean City Coalition
13. Hunters Point Family
14. Twitter
15. Yerba Buena Alliance
16. Hotel Council of San Francisco
17. Building Owners and Managers Association San Francisco
18. Associated General Contractors
19. United Contractors



San Francisco Bicycle Coalition
1720 Market Street
San Francisco CA 94102

T 415.431.BIKE
F 415.431.2468

sfbike.org

PROMOTING THE BICYCLE FOR EVERYDAY TRANSPORTATION

April 21, 2017

Tilly Chang, Executive Director
SF County Transportation Authority
1455 Market Street, 22nd Floor
San Francisco, CA 94103

Dear Executive Director Chang:

On behalf of the San Francisco Bicycle Coalition and our 10,000-plus members, I am writing to express our strong support for the Better Market Street application for funding through the One Bay Area Grant (OBAG) program, which was submitted by SF Public Works and the SF Municipal Transportation Agency.

Market Street serves as the backbone of San Francisco's transportation system, and Better Market Street is the City's chance to finally transform this signature boulevard into a world-class corridor. There is no other street that is more important for biking and transit in San Francisco, and we need to make sure Better Market Street makes a significant impact to improve and advance our transportation networks for years to come. To get there, we need the funding to match the vision we have for Market Street.

The San Francisco Bicycle Coalition has always advocated for fully protected bike lanes for the full length of Better Market Street, from the Embarcadero to Octavia. We are in strong support of Alternative 1, Option B and believe that this design would not only match the growth of biking but would reenvision Market Street into an iconic corridor for biking.

Protected bike lanes on Market Street are long overdue. Biking in SF has grown 184% in the last ten years, and Market Street has felt that growth the most, with counts regularly surpassing 6,000 trips every day. Manual bike counts regularly show that bikes far outnumber motor vehicles; data from 2015 showed that bikes accounted for 76% of all inbound traffic during morning commute times.

Beyond biking, the benefits of Better Market Street are extensive. This project will provide much-needed improvements to our public transit network and also increase pedestrian safety. Activating public space will bring more foot traffic and boost local businesses. The potential for improvements is difficult to overstate, and to ensure Better Market Street is able to continue progressing on the current timeline, funding is critical.

Therefore, we strongly support this application and thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "Brian Wiedenmeier".

Brian Wiedenmeier
Executive Director
San Francisco Bicycle Coalition



April 21, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Subject: Better Market Street Application for One Bay Area Grant

Dear Director Chang,

On behalf of Walk San Francisco, I am writing to share our support for the One Bay Area Grant (OBAG) application being submitted by San Francisco Public Works and the San Francisco Municipal Transportation Agency for the Better Market Street project.

Walk SF makes walking in San Francisco safe for everyone, so our community is healthier and more livable. By reclaiming streets as shared public space for everyone, Walk SF helps ensure walking is safe and enjoyable, and encourages more people to walk more often.

Walk SF is pleased to provide this letter of support for the Better Market Street OBAG Application. The Better Market Street effort is the first of its kind in more than a generation. It will prioritize sustainable transportation — pedestrian, transit, and bicycle travel — and enhance public space along San Francisco's most important transit street and the city's premier cultural, civic, and commercial corridor. We support the City's vision to transform our busiest street from a high-injury corridor into a safe, vibrant, and inclusive destination where people want to travel, work, and live.

By providing significant safety improvements to the street and intersections, the Better Market Street project will improve the safety, comfort, and mobility of people walking and bicycling. This project will also improve accessibility by making transit and sidewalks safer and easier to use. Finally, the project will create thriving public spaces and help revitalize Market Street, with improvements that will ensure that Market Street remains the backbone of the city for generations to come.

Walk San Francisco is pleased to support the complete reconstruction of San Francisco's most important street. An investment of OBAG funds will help make Market Street a better public space for the more than 400,000 people who walk there each day.

Sincerely,

A handwritten signature in blue ink that reads "Cathy DeLuca".

Cathy DeLuca
Interim Executive Director

333 Hayes Street, Suite 202 | San Francisco, CA 94102
415.431.WALK | walksf.org

Mayor Edwin M. Lee
City & County of San Francisco



Department of Homelessness &
Supportive Housing

Jeff Kositsky
Director

April 19, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of the Department of Homelessness and Supportive Housing, I am writing to express our support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

The Department of Homelessness and Supportive Housing strives to make homelessness in San Francisco rare, brief, and one time through the provision of coordinated, compassionate, and high-quality services. We provide assistance and support to homeless and at-risk youth, adults, and families to prevent imminent episodes of homelessness and to end homelessness for people in San Francisco. Services include outreach, homelessness prevention, emergency shelter, drop-in centers, transitional housing, supportive housing, and support services.

San Francisco needs a Better Market Street. Not only is Market Street our most important transit street, it is our premier cultural, civic and commercial corridor. We support San Francisco's vision to remake our busiest pedestrian street, busiest bicycle thoroughfare and busiest transit corridor, making it easier and safer for people to commute and creating a vibrant and inclusive destination where people want to live, work, and visit.

After years of planning and scores of public meetings, we are excited that the project is ready to move forward towards implementation.

Better Market Street will:

- Provide faster and more reliable transit service;
- Improve safety, comfort, and mobility for pedestrians and bicyclists;
- Help achieve San Francisco's Vision Zero goal by providing significant safety improvements to the street and intersections;
- Improve accessibility for all people by making transit and sidewalks easier and safer to use;
- Provide easy access to citywide transportation for the multitudes of people moving into the new housing developments along the Market Street corridor.

We are pleased to support the complete reconstruction of our most important street. An investment in OBAG funds will help make Market Street a much safer and more attractive place for pedestrians, bicyclists, transit riders, motorists and tourists that enjoy it every day.

Thank you for your consideration.

Sincerely,

Sam Dodge, Deputy Director of Policy and Communication

April 20, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of the Tenderloin Housing Clinic, Inc., I am writing to express our support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

The Tenderloin Housing Clinic has long worked to improve Market Street. We just opened an SRO at 1139 Market and run three other SRO's within a block of Market. Our tenants care deeply about creating a better Market Street.

San Francisco needs a Better Market Street. Not only is Market Street our most important transit street, it is our premier cultural, civic and commercial corridor. We support San Francisco's vision to remake our busiest pedestrian street, busiest bicycle thoroughfare and busiest transit corridor, making it easier and safer for people to get around and creating a vibrant and inclusive destination where people want to live, work and visit.

After years of planning and scores of public meetings, we are excited that the project is ready to move forward towards implementation.

Better Market Street will:

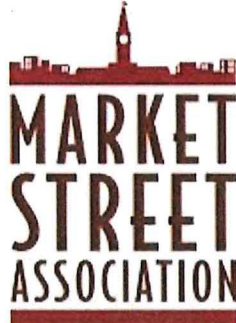
- Provide faster and more reliable transit service;
- Improve safety, comfort and mobility for pedestrians and bicyclists;
- Accommodate growing bicycle traffic in a way that increases safety and decreases conflicts with transit and pedestrians;
- Improve accessibility for all people by making transit and sidewalks easier and safer to use;
- Provide easy access to citywide transportation for the multitudes of people moving into the new housing developments along the Market Street corridor;
- Create thriving public spaces that attract a diversity of people and uses; and
- Revitalize Market Street with streetscape and safety improvements that cement its place as the City's premier pedestrian boulevard for the next 50 years.

We are pleased to support the complete reconstruction of our most important street. An investment in OBAG funds will help make Market Street a safer and more attractive place for the throngs of pedestrians, bicyclists, transit riders, motorists and tourists that enjoy it every day.

Thank you for your consideration.

Sincerely,





870 Market Street Suite 452 San Francisco, CA 94102 415-362-2500
Carolyn@marketstreetassociation.org

April 17, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street 22nd Floor
San Francisco, CA 94103

Dear Ms. Chang,

The Market Street Association (MSA) supports the Better Market Street application for a One Bay Area Grant that San Francisco Public Works and the SF Municipal Transportation Agency are submitting to the SF County Transportation Authority.

MSA was founded in 1963 to oversee the \$24.5 million beautification bond issue for Market Street. The mission of MSA as stated in our original formation documents is "To promote and encourage the rehabilitation, redevelopment and improvement of Market Street"; and "To encourage and promote the significant and material improvement of the general economic, commercial and social environment of the Market Street area." This mission continues today to be our credo.

The re-design of Market Street is one of San Francisco's most important projects. As a member of the Better Market Street committee I have participated in numerous committee meetings to understand the scope and significance of this venture. For Market Street to continue to be our most important and historic street, it is important to implement modern design and structure. Better transportation accessibility, pedestrian safety, and public spaces will be addressed under the Better Market Street plan. Each of these factors will contribute to making Market Street one of the most vital streets in San Francisco.

Our organization fully supports the application of OBAG funds knowing that they will be instrumental in the realization of the new vision for Market Street. Thank you for your consideration.

Sincerely,

Carolyn Diamond

Carolyn Diamond
Executive Director



April 20, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of Illuminate, I am writing to express our support for the Better Market Street application for a One Bay Area Grant (OBAG). We are hopeful the combined effort by San Francisco Public Works and the San Francisco Municipal Transportation Agency is approved by the San Francisco County Transportation Authority.

As you may know, Illuminate completed work on The Bay Lights last year and immediately trained full our attention upon our next project, Lightrail, which complements the Better Market Street vision by bringing energy and vitality to Market Street by installing a two-mile long work of public art. We are committed to seeing Market Street's return to grandeur.

We agree San Francisco needs a Better Market Street. Not only is it our most important transit street, it is our premier cultural, civic and commercial corridor. We support San Francisco's vision to remake our busiest pedestrian street, busiest bicycle thoroughfare and busiest transit corridor, making it easier and safer for people to get around and creating a vibrant and inclusive destination where people want to live, work and visit.

We're delighted the project is ready to proceed and we're hopeful it leads to an improved Market Street. We have built a vast community around Lightrail. We have met with hundreds of residents and local leaders, and dozens of groups, including all CBD's and BID's, BOMA SF, Walk SF, SF Bike and countless Market Street businesses. The thirst for efforts to revitalize Market Street is deep, profound and diverse.

We are pleased to support the construction of our most important street. Along with Lightrail, an investment in OBAG funds will help make Market Street a safer and more attractive place for all to enjoy.

Thank you for your consideration.



Ben Davis
CEO and Chief Visionary Officer
Illuminate

Illuminate c/o PCG 810 Fifth Avenue, Suite 200 San Rafael, CA 94901



April 20, 2017

Ms. Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

870 MARKET STREET
SUITE 803
SAN FRANCISCO
CALIFORNIA 94102
415 956-0472
FAX 415 956-4790

SAN FRANCISCO
RAILWAY MUSEUM
77 STEUART STREET
SAN FRANCISCO
CALIFORNIA 94105
415 974-1948
FAX 415 974-1968

PHARR DIVISION
415 552-3055

WWW.STREETCAR.ORG

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Tam Tran
Jeremy Wallenberg
Paul Wells

Rick Laubscher
President and CEO

Dear Tilly:

We are writing to express Market Street Railway's strong support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

As you know, we are strong advocates for effective, efficient, attractive public transportation in San Francisco, especially Muni's historic streetcars. These wonderful vehicles have proven their popularity, drawing 23,000 riders a day along Market Street and The Embarcadero. We believe they have served to tie Market Street together visually and to activate more parts of the street. They have facilitated hundreds of millions of dollars of new development by providing highly visible, attractive, and accessible transit the length of Market from Castro to the Ferry Building.

The F-line's very popularity makes it critical that it be operated as efficiently as possible. This is especially important for the thousands of new residents along the Market Street corridor, with thousands more on the way. The Better Market Street Project achieves this greater efficiency by reducing the number of F-line stops on the downtown section of Market Street and taking measures to make boarding faster. The project also includes a critically needed short-turn loop via McAllister Street and Charles J. Brenham Place (7th Street North), allowing F-line service to be balanced according to demand. These improvements will allow the F-line to carry more people and move more quickly.

We also support the improved safety, comfort, and mobility for pedestrians and bicyclists that the Better Market Street Project will provide. We believe these improvements can be achieved while preserving the historic fabric of our main street, most especially the Path of Gold streetlamps, whose linear alignment has been a constant for a century. As an organization dedicated to preserving history, whose very name includes "Market Street", this is very important to us.

This grant is critical to move the collective community vision for Market Street from vision toward reality. We thank you for your consideration.

Sincerely,

Bruce Agid
Chair, Board of Directors

Rick Laubscher
President & CEO



April 18, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of the **Tenderloin Community Benefit District**, I am writing to express our support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

Our organization implements a variety of projects and programs with an overarching mission to improve the overall health, safety and usability of the Tenderloin neighborhood for the people who live, work and visit here. Our geographic district includes a stretch of Market Street greatly impacted by the Better Market Street Plan between 5th and 7th Streets. Not only is Market Street our most important transit street, it is our premier cultural, civic and commercial corridor. We support San Francisco's vision to remake our busiest pedestrian street, busiest bicycle thoroughfare and busiest transit corridor, making it easier and safer for people to get around and creating a vibrant and inclusive destination where people want to live, work and visit. The Better Market Street vision aligns with our mission of making the Tenderloin neighborhood a more vibrant community for ALL.

After years of planning and scores of public meetings, we are excited that the project is ready to move forward towards implementation.

Better Market Street will

- Improve safety, comfort and mobility for pedestrians and bicyclists;
- Help achieve San Francisco's Vision Zero goal by providing significant safety improvements to the street and intersections;
- Improve accessibility for all people by making transit and sidewalks easier and safer to use;
- Provide easy access to citywide transportation for the multitudes of people moving into the new housing developments along the Market Street corridor;
- Create thriving public spaces that attract a diversity of people and uses; and



- Revitalize Market Street with streetscape and safety improvements that cement its place as the City's premier pedestrian boulevard for the next 50 years.

We are pleased to support the complete reconstruction of our most important street. An investment in OBAG funds will help make Market Street a safer and more attractive place for the throngs of pedestrians, bicyclists, transit riders, motorists and tourists that enjoy it every day.

Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Steve Gibson".

Steve Gibson

Executive Director
Tenderloin Community Benefit District
512 Ellis Street
San Francisco, CA 94109
415 292-4812



central market community benefit district

April 21, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of the Central Market Community Benefit District, I am writing to express our support for the Better Market Street project's application for a One Bay Area Grant (OBAG).

Market Street is San Francisco's most prominent boulevard and the busiest: pedestrian street, bicycle thoroughfare and transit corridor in the City. It is also the main thoroughfare running through the Central Market Community Benefit District. Making the stretch of Market Street within our District easier and safer for people to use and creating a more vibrant and inclusive destination is in line with our Mission.

After years of planning and public meetings, which our Board and staff have been a part of, it is critical the Better Market Street project move forward toward implementation. Market Street and its sidewalks and adjacent open spaces need reconstruction now.

There is also critical need for a strategic plan to keep these areas safe and welcoming before, during and after reconstruction.

We will remain a key partner for the remainder of the planning process, during the implementation phase, and beyond as the City develops its plans for effective maintenance and management of the improvements. We look forward to our continued involvement to ensure our District stakeholders' concerns are heard and incorporated; but also to strengthen the project with our resources and expertise, and our collaboration with all project partners.

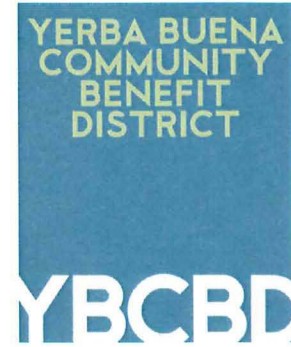
Sincerely,

Tracy Everwine,
Executive Director

901 Market Street, Suite 490
San Francisco, CA 94103
P. 415.957.5985
www.central-market.org
info@central-market.org

April 21, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103



Dear Ms. Chang,

On behalf of the Yerba Buena Community Benefit District (YBCBD), I am writing to express our support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

The mission of the YBCBD is to advance the quality of life for residents and visitors in the Yerba Buena neighborhood and San Francisco on an ongoing basis by fostering a safer and more secure community, enhancing environmental quality and beauty, and reinforcing the viability of our economic base. The YBCBD has a commitment to creating safer streets and sidewalks and improving our neighborhood's public spaces. To this end, we are an active member in the Better Market Street Community Advisory Committee.

San Francisco needs a Better Market Street. Not only is Market Street our most important transit street, it is our premier cultural, civic and commercial corridor. We support San Francisco's vision to remake our busiest pedestrian street, busiest bicycle thoroughfare and busiest transit corridor, making it easier and safer for people to get around and creating a vibrant and inclusive destination where people want to live, work and visit.

After years of planning and scores of public meetings, we are excited that the project is ready to move forward towards implementation.

Better Market Street will:

- Improve safety, comfort and mobility for pedestrians and bicyclists;
- Help achieve San Francisco's Vision Zero goal by providing significant safety improvements to the street and intersections;
- Improve accessibility for all people by making transit and sidewalks easier and safer to use;
- Create thriving public spaces that attract a diversity of people and uses; and
- Revitalize Market Street with streetscape and safety improvements that cement its place as the City's premier pedestrian boulevard for the next 50 years.

The YBCBD is pleased to support the application for funding to further the planning and implementation of improvements to Market Street. An investment in OBAG funds will help make Market Street a safer and more attractive place for the throngs of pedestrians, bicyclists, transit riders, motorists and tourists that enjoy it every day.

Thank you for your consideration.

Sincerely,

Cathy Maupin
Executive Director
Yerba Buena Community Benefit District



April 21, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of the Office of Economic and Workforce Development (OEWD), I am writing to express our support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

OEWD supports San Francisco's ongoing economic vitality by strengthening its neighborhoods, businesses, commercial corridors and workforce. As the lead agency for the Central Market/Tenderloin Strategy, we are committed to seeing through the City's investment in Market Street. As a resource for Community Benefit Districts citywide, we are committed to supporting the Market Street-area CBDs' goals for an improved public realm.

Not only is Market Street our most important transit street, it is our premier cultural, civic and commercial corridor. We support San Francisco's vision to remake our busiest pedestrian street, bicycle thoroughfare and transit corridor. We aim to make it easier and safer for people to get around, reinforcing a vibrant and inclusive destination where people want to live, work and visit. We believe that Better Market Street initiative will support the City of San Francisco's economic growth and revitalize Market Street with beautification and safety improvements that cement its place as the City's premier pedestrian boulevard for the next 50 years.

Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Todd Rufo".

Todd Rufo
Director



1 Dr. Carlton B. Goodlett Place, Room 448

San Francisco, CA 94102 | www.oewd.org

p: 415.554.6969 f: 415.554.6018



San Francisco Clean City Coalition

366 Eddy Street, SF CA 94102 • 415.552.9201 • Fax: 415.552.9202 • www.sfcleancity.com

April 21, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

I am writing on behalf of the San Francisco Clean City Coalition (SF Clean City) to express our support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

SF Clean City's non-profit mission is to support and encourage cleaning, greening and beautification throughout San Francisco neighborhoods. For the last ten years, we have been the service provider of the Tenderloin Community Benefit District which includes daily sweeping, graffiti abatement and sidewalk scrubbing on sections of Market Street and surrounding UN Plaza.

San Francisco needs a Better Market Street. Not only is Market Street our most important transit street, it is our premier cultural, civic and commercial corridor. We support San Francisco's vision to remake our busiest pedestrian street, busiest bicycle thoroughfare and busiest transit corridor, making it easier and safer for people to get around and creating a vibrant and inclusive destination where people want to live, work and visit.

After years of planning and scores of public meetings, we are excited that the project is ready to move forward towards implementation. Better Market Street will help improve safety, comfort and mobility for pedestrians and bicyclists, accommodate growing bicycle traffic in a way that increases safety and decreases conflicts with transit and pedestrians, provide easy access to citywide transportation for the multitudes of people moving into the new housing developments along the Market Street corridor, and create thriving public spaces that attract a diversity of people and uses. These changes and improvements are long overdue.

SF Clean City is pleased to support the complete reconstruction of our most important street.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gia Grant', with a long horizontal stroke extending to the right.

Gia Grant
Executive Director



April 13, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of the Hunters Point Family, I am writing to express our support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

Hunters Point Family (HPF) was founded in 1997 to serve young people and their families living in Bayview Hunters Point's public housing community. HPF's mission is to prepare youth to become independent, strong, and productive adults through comprehensive support services that empower them to develop their full potential. Since 1997 the agency has expanded significantly and includes community empowerment and development through empowering and developing the individuals who comprise the community. HPF provides youth development, workforce development, and community beautification services. Consistent with these services, HPF implements the Civic Center Commons program, the Pit Stop, and TL Clean programs. Each of these programs partner with City agencies to ensure some of San Francisco's most vulnerable neighborhoods are safe and clean. As such, HPF is a stakeholder in the downtown and Market Street areas and is proud to support the Better Market Street plan.

San Francisco needs a Better Market Street. Not only is Market Street our most important transit street, it is our premier cultural, civic and commercial corridor. We support San Francisco's vision to remake our busiest pedestrian street, busiest bicycle thoroughfare and busiest transit corridor, making it easier and safer for people to get around and creating a vibrant and inclusive destination where people want to live, work and visit.

After years of planning and scores of public meetings, we are excited that the project is ready to move forward towards implementation.

Better Market Street will

- ;
- Help achieve San Francisco's Vision Zero goal by providing significant safety improvements to the street and intersections;
- Accommodate growing bicycle traffic in a way that increases safety and decreases conflicts with transit and pedestrians;



- Improve accessibility for all people by making transit and sidewalks easier and safer to use;
- Create thriving public spaces that attract a diversity of people and uses; and
- Revitalize Market Street with streetscape and safety improvements that cement its place as the City's premier pedestrian boulevard for the next 50 years.

We are pleased to support the complete reconstruction of our most important street. An investment in OBAG funds will help make Market Street a safer and more attractive place for the throngs of pedestrians, bicyclists, transit riders, motorists and tourists that enjoy it every day.

Thank you for your consideration.

Sincerely,

Lena Miller

Lena Miller, Executive Director
Hunters Point Family



April 20, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of Twitter, I am writing to express our support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

San Francisco needs a Better Market Street. Not only is Market Street our most important transit street, it is our premier cultural, civic and commercial corridor. We support San Francisco's vision to remake our busiest pedestrian street, busiest bicycle thoroughfare and busiest transit corridor, making it easier and safer for people to get around and creating a vibrant and inclusive destination where people want to live, work and visit.

After years of planning and scores of public meetings, we are excited that the project is ready to move forward towards implementation. With our global headquarters located at 1355 Market Street, Twitter recognizes that these upcoming work will directly impact our employees and our business.

Better Market Street will:

- Support the City of San Francisco's planned growth and economic development;
- Provide faster and more reliable transit service;
- Improve safety, comfort and mobility for pedestrians and bicyclists;
- Improve accessibility for all people by making transit and sidewalks easier and safer to use; and
- Create thriving public spaces that attract a diversity of people and uses.

We are pleased to support the complete reconstruction of our most important street. An investment in OBAG funds will help make Market Street a safer and more attractive place for the throngs of pedestrians, bicyclists, transit riders, motorists and tourists that enjoy it every day.

Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Caroline Barlerin', is located below the 'Sincerely,' text.

Caroline Barlerin
Head of Community Outreach & Philanthropy



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Chi-Hsin Shao

April 21, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of the Yerba Buena Alliance, I am writing to express our support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

The Yerba Buena Alliance celebrates its 26th anniversary in 2017 as a neighborhood building membership organization working to create partnerships and community in the Yerba Buena neighborhood of downtown San Francisco. The Alliance has an active interest in Market Street for the connection to the greater Yerba Buena neighborhood.

San Francisco needs a Better Market Street. Not only is Market Street our most important transit street, it is our premier cultural, civic and commercial corridor. We support San Francisco's vision to remake our busiest pedestrian street, busiest bicycle thoroughfare and busiest transit corridor, making it easier and safer for people to get around and creating a vibrant and inclusive destination where people want to live, work and visit.

After years of planning and scores of public meetings, we are excited that the project is ready to move forward towards implementation.

Better Market Street will;

- Provide faster and more reliable transit service;
- Improve safety, comfort and mobility for pedestrians and bicyclists;
- Help achieve San Francisco's Vision Zero goal by providing significant safety improvements to the street and intersections;
- Accommodate growing bicycle traffic in a way that increases safety and decreases conflicts with transit and pedestrians;
- Improve accessibility for all people by making transit and sidewalks easier and safer to use;
- Provide easy access to citywide transportation for the multitudes of people moving into the new housing developments along the Market Street corridor;
- Create thriving public spaces that attract a diversity of people and uses; and
- Revitalize Market Street with streetscape and safety improvements that cement its place as the City's premier pedestrian boulevard for the next 50 years.

We are pleased to support the complete reconstruction of our most important street. An investment in OBAG funds will help make Market Street a safer and more attractive place for the throngs of pedestrians, bicyclists, transit riders, motorists and tourists that enjoy it every day.

Thank you for your consideration.

Sincerely,

Virginia Grandi
Executive Director

YerbaBuenaAlliance 735 Market Street, 3rd Floor, San Francisco, CA 94103 T (415) 541-0312, info@yerbabuena.org,
www.yerbabuena.org



April 20, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of the Hotel Council of San Francisco, I am writing to express our support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

The Hotel Council was established in 1987 as a non-profit organization to represent all segments of the Hotel Industry. Kevin serves as the key community liaison between the Hotel Council and City, State, and National Government Agencies as well as community and travel industry organizations. The Hotel Council and many of our Hotels have been included in the planning process for Better Market Street.

San Francisco needs a Better Market Street. Not only is Market Street our most important transit street, it is our premier cultural, civic and commercial corridor. We support San Francisco's vision to remake our busiest pedestrian street, busiest bicycle thoroughfare and busiest transit corridor, making it easier and safer for people to get around and creating a vibrant and inclusive destination where people want to live, work and visit. After years of planning and scores of public meetings, we are excited that the project is ready to move forward towards implementation.

Better Market Street will

- Support the City of San Francisco's planned growth and economic development;
- Provide faster and more reliable transit service for our hotel visitors and employees;
- Help achieve San Francisco's Vision Zero goal by providing significant safety improvements;
- Improve accessibility for all people by making transit and sidewalks easier and safer to use;
- Provide easy access to citywide transportation for the millions of visitors to San Francisco along the Market Street corridor; and
- Create thriving public spaces that attract a diversity of people and uses.

We are pleased to support the complete reconstruction of our most important street. An investment in OBAG funds will help make Market Street a safer and more attractive place for the throngs of pedestrians, bicyclists, transit riders, motorists and tourists that enjoy it every day.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "Kevin Carroll".

Kevin Carroll
Executive Director



April 24, 2017

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of the members of the [Building Owners and Managers Association \(BOMA\) San Francisco](#), I am writing to express our organization's support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

BOMA is the most influential and effective advocacy, recruitment and training organization for the U.S. commercial real estate industry. BOMA San Francisco represents more than 72 million square feet of office space in San Francisco, San Mateo, Marin and Sonoma counties, and is federated with BOMA International and BOMA California, the voices of the commercial real estate industry in Washington, D.C. and Sacramento. BOMA offers commercial property owners and managers and the businesses that serve them an invaluable package of services to help them succeed in one of the nation's most challenging and competitive markets.

BOMA San Francisco members have been involved with the Better Market Street project for many years - since 2012 to be exact. The planned update of San Francisco's most important thoroughfare is also the corridor that is immediately adjacent to many of our high-rise commercial office buildings. Our members appreciate the Better Market Street team and their early - and continued - outreach to BOMA for our important input.

Better Market Street will:

- Support the City of San Francisco's planned growth and economic development;
- Provide faster and more reliable transit service;
- Improve accessibility for all people by making transit and sidewalks easier and safer to use;

- Provide easy access to citywide transportation for the multitudes of people moving into the new housing developments along the Market Street corridor;
- Create thriving public spaces that attract a diversity of people and uses; and
- Revitalize Market Street with streetscape and safety improvements that cement its place as the City's premier pedestrian boulevard for the next 50 years.

An investment in OBAG funds will help make Market Street a safer and more attractive place for the throngs of pedestrians, bicyclists, transit riders, motorists and tourists that enjoy it every day.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Bozeman', with a stylized flourish extending to the right.

John M. Bozeman
Director of Government and Public Affairs
BOMA San Francisco



San Francisco Bay Area District

1390 Willow Pass Rd., Suite 250 / Concord, CA 94520 / (925) 827-2422 / Fax (925) 827-4042

April 18, 2017

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Regional Member, Section 14-8 Support Letters

Tilly Chang, Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of the Associated General Contractors of California and its nearly 1,000 members, I confirm our support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

The mission of the Associated General Contractors of California is to be the recognized leader in providing business opportunities, education, training, resources, and advocacy for its members while advancing sound public policy for the construction industry. AGC members build California's highways, roads, tunnels, dams, utility systems, power plants, bridges, refineries, hospitals, schools, sewage and waste treatment plants, rail transit systems, and office buildings.

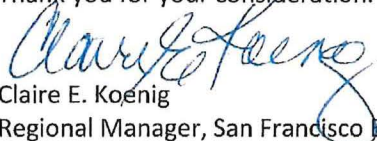
San Francisco needs a Better Market Street. Not only is Market Street our most important transit street, it is our premier cultural, civic and commercial corridor. We support San Francisco's vision, making it easier and safer for people to get around and creating a vibrant and inclusive destination where people want to live, work and visit. We are excited that the project is ready to move towards implementation.

Better Market Street will support the City of San Francisco's planned growth and economic development:

- Accommodate growing bicycle traffic in a way that increases safety and decreases conflicts with transit and pedestrians;
- Improve accessibility for all people by making transit and sidewalks easier and safer to use;
- Create thriving public spaces that attract a diversity of people and uses; and
- Revitalize Market Street with streetscape and safety improvements that cement its place as the City's premier pedestrian boulevard for the next 50 years.

We are pleased to support the complete reconstruction of our most important street. An investment in OBAG funds will help make Market Street a safer and more attractive place for all.

Thank you for your consideration. Sincerely,


Claire E. Koenig
Regional Manager, San Francisco Bay Area District



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www.unitedcontractors.org

April 20, 2017

Tilly Chang,
Executive Director
San Francisco County Transportation Authority
1455 Market Street, 22nd floor
San Francisco, CA 94103

Dear Ms. Chang,

On behalf of United Contractors, I am writing to express our support for the Better Market Street application for a One Bay Area Grant (OBAG) that San Francisco Public Works and the San Francisco Municipal Transportation Agency are submitting to the San Francisco County Transportation Authority.

United Contractors represents more than 500 union affiliated heavy civil engineering construction and vendor companies throughout the state, many of whom are based in and/or perform vital infrastructure work for the City and County of San Francisco. Our members collectively employ over 25,000 individuals and represent over 25 million man hours building CA.

United Contractors supports San Francisco's vision to remake the city's busiest pedestrian street, busiest bicycle thoroughfare and busiest transit corridor, making it easier and safer for people to get around and creating a vibrant and inclusive destination where people want to live, work and visit.

After years of planning and scores of public meetings, we are pleased that the project is ready to move forward towards implementation.

Better Market Street will:

- Support the City of San Francisco's planned growth and economic development;
- Provide faster and more reliable transit service;
- Improve safety, comfort and mobility for pedestrians and bicyclists;
- Help achieve San Francisco's Vision Zero goal by providing significant safety improvements to the street and intersections;
- Accommodate growing bicycle traffic in a way that increases safety and decreases conflicts with transit and pedestrians;
- Improve accessibility for all people by making transit and sidewalks easier and safer to use;
- Provide easy access to citywide transportation for the multitudes of people moving into the new housing developments along the Market Street corridor;
- Create thriving public spaces that attract a diversity of people and uses; and

- Revitalize Market Street with streetscape and safety improvements that cement its place as the City's premier pedestrian boulevard for the next 50 years.

We are pleased to support the complete reconstruction of one of San Francisco's most important streets. An investment in OBAG funds will help make Market Street a safer and more attractive place for the throngs of pedestrians, bicyclists, transit riders, motorists and tourists that enjoy it every day.

Thank you for your consideration.

Sincerely,



Emily Cohen
Executive Vice President



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Successfully submitted checklist.

Project:

[Better Market Street \(/projects/983\)](#)

Checklist:

Better Market Street

Name:

Better Market Street

Description:

Improve Market Street Between Steuart St and Octavia Blvd. Includes resurfacing, sidewalk improvements, way-finding, lighting, landscaping, transit boarding islands, transit connections, traffic signals, transportation circulation changes and utility relocation and upgrade. One of three options being studied would also include improvements on Mission St and moving Mission St bus lines to Market St.

Status:

Submitted

Project:

[Better Market Street \(/projects/983\)](#)

Location:

San Francisco

Contact Name:

Rachel Alonso

Contact Email:

rachel.alonso@sfdpw.org

Contact Phone:

4155544139

Contact Address:

1155 Market Street, 4th floor
San Francisco, CA 94102

1a: What bicycle and pedestrian accommodations are currently included on the facility or on facilities it intersects or crosses? Please check all that apply.

- Class I bicycle paths
- Class II bicycle lanes
- Class III bicycle routes
- Class IV bikeways
- Bicycle boxes
- Raised separated bikeways
- Bicycle Boulevards
- Bicycle parking
- Sidewalks on one side or both sides of street
- Marked crosswalks
- Protected intersection
- Painted conflict zones
- Narrow unpaved path
- Pedestrian-actuated traffic signals or routine pedestrian cycle
- Bulb-outs
- Bicycle actuated traffic signals or routine bicyclist cycle
- High visibility crosswalks
- Pedestrian-level lighting
- ADA-compliant ramps
- Traffic signal push buttons
- Refuge islands on roadways
- Transit shelter
- Wide curb lanes
- Right turn only lanes
- Transit vehicle stops

- Transit vehicle stops
- Pedestrian countdown signals
- Way-finding or directional signage
- None

: Other

ADA-compliant ramps in only some locations

: Please provide specifics of any items checked above.

All the items above exist at only some locations along the corridor except the presence of sidewalks, marked crosswalks, and a routine pedestrian cycle.

1b: If there are no existing pedestrian or bicycle facilities, how far from the proposed project are the closest parallel bikeways and walkways?

- 0-1/4 mile
- 1/4 mile to 1/2 mile
- 1/2 mile to 1 mile
- 1+ mile

1c: Please indicate needed pedestrian, bicycle, or transit improvements in the project area that staff or the public have identified

- Improved lighting
- sidewalks
- Improve intersections
- Mid-block crossings
- Accommodations for the elderly or disabled or school age children
- School age children
- Transit shelters
- ADA facilities
- Widened curb lanes
- Bicycle parking
- Traffic signals responsive to bicycles
- Shorter vehicular traffic signal cycles
- Addressing choke points or gaps in pedestrian or bicycle
- RR crossings
- Bike racks on busses
- Widened or better-lit under crossings
- Removed slip lanes
- Right turn only lanes
- None

: Other

1d: Please describe the overall context of the project area:

The project area is in one of the most well-known urban settings in the San Francisco Bay Area - downtown San Francisco. Today there are over 1000 pedestrians per hour on Market Street during the peak period, as well as over 600 people on bikes – a number that has been steadily growing over several years. The daily count has been over 4500 at times. There are also roughly 40,000 daily transit riders that use the above-ground transit along Market Street, in addition to the over 200,000 riders a day that use BART or Muni Metro underground within the project corridor. Market Street is considered a ceremonial street, and hosts many parades, protests, and other planned/unplanned events throughout the year.

1e: What existing challenges could the proposed project improve for bicycle, pedestrian, or transit travel in the vicinity of the proposed project?

- Unresponsive signals to bicycles
- Lack of bicycle parking
- Freeway on-off ramps
- Narrow curb lanes
- Choke points
- RR crossings
- No bike racks on buses
- Wide roadway crossings

- Long signal cycles which require pedestrians to wait long periods of time
- Short signal crossing times
- Narrow undercrossings, overcrossings
- Slip lanes
- Sidewalk obstruction or missing sidewalk
- Pedestrian-level lighting
- Lack of ADA compliant facilities
- Lack of Transit vehicle stops

: Other

2a: What trip generators (existing and future) are in the vicinity of the proposed project that might attract walking or bicycling customers, employees, students, visitors or others?

- Educational institutions
- Transit stations
- Senior centers
- High-density land uses
- Downtowns
- Shopping areas
- Medical centers
- Major public venues
- Government buildings
- Parks

: Other

3a: Have you considered collisions involving bicyclists and pedestrians along the route of the facility?

Yes

: If so, please provide the number of collisions and describe the outcomes of each:

In 2012 and 2013, there were 271 collisions along Market Street; 89 of which involved pedestrians or bicycles (33%). Of those 89 collisions, 60% involved automobiles while 40% involved transit vehicles. The main collision factors of the 36 bicyclist and pedestrian – transit collisions consisted of "proceeding straight", "pulling into/out of a bus stop", "turning movements", or "stopped in road" (67, 3, 6, and 24 percent respectively).

: If so, what resources have you consulted?

SFPD and SWITRS data. In addition, Muni collision data has been collected and analyzed as well.

4a: Do any adopted plans call for the development of bicycle or pedestrian facilities on, crossing or adjacent to the proposed facility/project?

- City or town bicycle plan
- Countywide bicycle plan
- City or town pedestrian plan
- Countywide pedestrian plan
- Combined bicycle and pedestrian plan
- ADA transition plan
- General plan
- Specific plan
- Regional transportation Plan
- Sales tax expenditure plan
- Station area access plan
- No plans

: Other

: Is the proposed project consistent with these plans?

Yes

5a: Do any local, statewide or federal policies call for incorporating bicycle and/or pedestrian facilities into this project?

Caltrans Deputy Directive 64
 Caltrans Highway Design Manual (Chapter 1000)
 ACR 211
 MUTCD 2003
 MUTCD California supplement
 Americans with Disabilities Act Accessibility Guidelines (ADAAG)
 MTC Pedestrian Districts Study
 None
 more

: Other

: If so, have the policies been followed?

Yes

5b: N/A

No

5c: If this project includes a bicycle and/or pedestrian facility, which applicable design standards or guidelines have been followed?

AASHTO bicycle and pedestrian design guides
 Americans with Disabilities Act Accessibility Guidelines
 Caltrans Design Information Bulletin 89
 Caltrans Highway Design Manual
 Caltrans California MUTCD
 Caltrans Pedestrian and Bicycle Facilities in California
 FHWA MUTCD
 ITE Designing Urban Walkable Thoroughfares
 NACTO Urban Bikeway Design Guide
 N/A - no bicycle or pedestrian facilities included
 None

6a: What comments have been made regarding bicycle and pedestrian accommodations at BPAC, stakeholder, or public meetings at which the proposed project has been discussed?

Make Market Street a great, safe place to walk, bike, shop, and spend time! Create a protected bike facility along the entire length of Market Street! Make Market Street safer for all sidewalk users - including wheelchair/mobility device users, visually impaired, and all other disabled and able-bodied pedestrians! Do something to bring the sunken plazas up to grade-level and make them more appealing and accessible for all users!

: How have you responded to comments received?

We are working to incorporate elements into the project that address the major concerns described above -- in a way that works for all stakeholders and that responds to the considerable physical constraints within the right-of-way. These include Muni Metro/BART portals and subway infrastructure, myriad sub-sidewalk basements, gas, water, power, sewer, storm, auxiliary fire suppression water, and various other City-owned and private communications and other underground utilities.

7a: What accommodations, if any, are included for bicyclists and pedestrians in the proposed project design?

Class I bicycle paths
 Class II bicycle lanes
 Class III bicycle routes
 Class IV bikeways
 Bicycle boxes
 Raised separated bikeways
 Bicycle Boulevards
 Bicycle parking
 Sidewalks on one side or both sides of street
 Widened sidewalks
 Marked crosswalks
 Protected intersection
 Painted conflict zones
 Narrow unpaved path
 Pedestrian-actuated traffic signals or routine pedestrian cycle
 Bulb-out
 Bicycle actuated traffic signals or routine bicyclist cycle
 High visibility crosswalks
 Pedestrian-level lighting
 ADA-compliant ramps
 Traffic signal push buttons
 Refuge islands on roadways
 Transit shelters
 Wide curb lanes
 Right turn only lanes

- right turn only lanes
- Transit vehicle stops
- Pedestrian countdown signals
- Way-finding or directional signage
- None

: Other

8a: Will the proposed project remove an existing bicycle or pedestrian facility or block or hinder bicycle or pedestrian movement?

Yes

: If yes, please describe situation in detail.

"REMOVE?": Yes. "HINDER?": No. In the interest of improving safety and reducing potential conflicts between motor vehicles, pedestrians and bikes, the project proposes to close one pedestrian crosswalk at the east side of the Page/Franklin/Market/12th St intersection. This will shorten the signal delay by approximately 30 seconds and reduce motorist/pedestrian/bicyclist confusion due to the irregular geometry of the intersection. The project also proposes to add several new crosswalks, which is in response to observed pedestrian demand and "desire lines". Additionally, the project will construct a continuous protected cycle-track, which currently only exists along less than half of the project length. These significant project elements result in a net benefit to overall bicycle and pedestrian movement within the corridor.

8b: If the proposed project incorporates neither bicycle nor pedestrian facilities, or if the proposed project would hinder bicycle or pedestrian travel, list reasons why the project cannot be re-designed to accommodate these facilities.

As mentioned in 8a, in the interest of improving safety and reducing potential conflicts between motor vehicles, pedestrians and bikes, the project proposes to close one pedestrian crosswalk at the east side of the Page/Franklin/Market/12th St intersection. This will shorten the signal delay by approximately 30 seconds and reduce motorist/pedestrian/bicyclist confusion due to the irregular geometry of the intersection.

: Was a road diet or car parking removal considered?

There is no parking along project corridor except for along one block, where the project intends to remove it. A road diet was considered and rejected due to projected traffic and transit volumes, although the project does intend to prohibit all private automobiles from traveling on Market Street.

: What would be the cost of the added bicycle and/or pedestrian facility?

: If the proposed project incorporates bicycle or pedestrian improvements, what proportion is the bicycle and/or pedestrian facility of the total project cost?

17

: If right-of-way challenges are the reason for the hindrance, please explain the analysis that led to this conclusion.

9a: How will access for bicyclists and pedestrians be maintained during project construction?

- Alternative signed bicycle route
- Alternative signed pedestrian route
- Separated pedestrian pathway
- Other

: Other

10a: What agency will be responsible for ongoing maintenance of the facility?

San Francisco Public Works

10b: How will ongoing maintenance be budgeted?

Annual capital and operating budgets



MEMORANDUM

Date: May 14, 2015
To: Mari Hunter, Safer Market Street Project Manager
From: Ian Trout, E.I.T, Junior Engineer
Subject: Market Street Safety Collision Analysis

EXECUTIVE SUMMARY

Market Street is an important multi-modal corridor in San Francisco where safety has been a central concern. The purpose of the memorandum is to analyze collisions on Market Street to develop a better understanding of the types of collisions that occur on the corridor. This will allow for the formulation of appropriate policy and design recommendations to improve safety within the Market Street corridor.

Two accident databases (Statewide Integrated Traffic Records Systems (SWITRS) and TransitSafe) are used to aggregate collision data from January 1, 2012 through December 31, 2013 on Market Street between Van Ness Avenue and the Embarcadero. Additionally, accident data is analyzed on the adjacent Mission St to serve as a comparison to Market.

Overall, the data indicates a high rate of collisions on Market Street (32.0 collisions per million vehicle miles traveled) compared to Mission Street (6.9 collisions per million vehicle miles traveled). There is a high concentration of collisions on Market between 8th Street and New Montgomery Street, with the highest levels being on the block between 3rd and New Montgomery streets. On Market Street, 44% of collisions involved Muni and 33% involved a bicyclist or pedestrian. In comparison, on Mission Street, 34% of collisions involved Muni while 23% involved a bicyclist or pedestrian. This indicates that there are a higher percentage of collision incidents with Muni, bicyclists, and pedestrians on Market Street. In terms of non-Muni related collisions, on Market Street, 57% of collisions were a result of through movements. On Mission, only 46% of collisions were related to through movements. This suggests that the collisions are not intersection related but a result of the unique characteristics of Market St.

The data shows that collisions on Market Street are of significant concern because the collisions involve a high number of vulnerable roadway users. The collision characteristics suggest that at least part of the cause of the high collision rate is the mixing of automobiles on a street that carries a large volume of bicyclists and pedestrians and is a main transit corridor.

ABOUT THIS MEMORANDUM

This memorandum documents collision trends on Market Street between Van Ness Avenue and The Embarcadero. An understanding of the types of collisions on Market Street is needed to formulate the most appropriate recommendations to improve safety within the Market Street corridor. Collision trends are also analyzed for the same segment of Mission Street to serve as a comparison.

The two main sources of the collision data are the Statewide Integrated Traffic Records Systems (SWITRS) maintained by the California Highway Patrol, and the TransitSafe database maintained by the San Francisco Municipal Transportation Agency. The TransitSafe database covers all collisions involving a transit vehicle (bus or rail) while the SWITRS database contains collision records as reported by the San Francisco Police Department and the California Highway Patrol. Not all transit collisions are captured under SWITRS, and there is overlap of nine transit related collisions between SWITRS and TransitSafe on Market Street, and one transit related collision on Mission Street. The datasets covered in this memorandum are from January 1, 2012 through December 31, 2013.

Due to limited police resources, not all collisions are recorded in the SWITRS database. Collisions involving property damage only frequently go unrecorded. If none of the involved parties reports the collision, and if no one is injured or killed, the police are not notified and the collision is unrecorded. When collisions are recorded in the database, some information such as the primary collision factor or direction of travel of one or more parties may not be recorded. These collisions are noted in the data analysis contained within this memorandum.

MARKET STREET OVERVIEW

Market Street is the most important multi-modal corridor in San Francisco. It integrates three levels of rail transit with a dozen local bus routes converging to the corridor and integrating with BART, AC Transit, SamTrans and Golden Gate Transit among other regional transit services and shuttles. On a typical weekday, over 200,000 people walk along its length, getting to work, going shopping, visiting museums and enjoying the sites of the city. In addition, cycling makes up a large share of the users of Market Street, outnumbering motor vehicles at various times during the day. However, safety has and continues to be a significant concern for this multi-modal corridor.

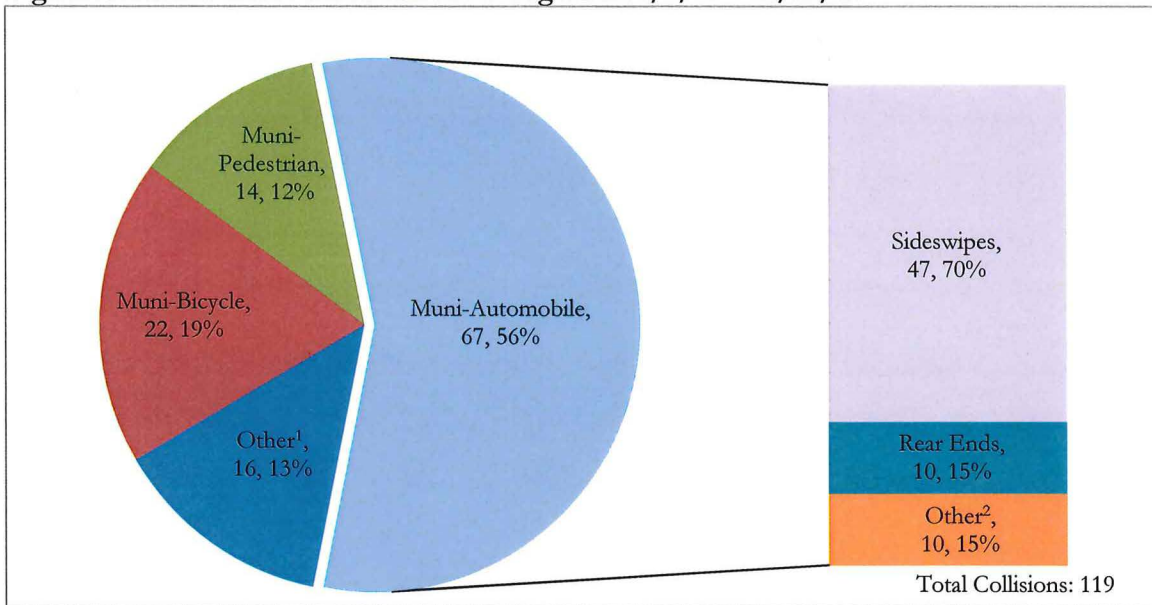
In the past 2 years, there have been 271 collisions on Market Street east of Van Ness Avenue, 119 of which involve a Muni vehicle, or 44 percent, and 89 that involved a bicyclist or pedestrian, or 33 percent. In comparison, there have been 183 collisions on Mission Street east of Van Ness Avenue, 63 of which involve a Muni vehicle, or 34 percent, and 43 that involved a bicyclist or pedestrian, or 23 percent. The overall collision rate on Market Street is 32.0 collisions per million vehicle miles traveled compared to 6.9 collisions per million vehicle miles traveled on Mission Street¹. To curb this trend and support the newly adopted Vision Zero Policy, staff aims to focus resources on treatments that will be most effective. The following presents Market Street and Mission Street collision trends.

¹ Crash Rate Calculation is based on the total number of crashes in the study period divided by the roadway length, Average Annual Daily Traffic (AADT) volumes, and number of years of data. The formula and a more detailed description may be found here: http://safety.fhwa.dot.gov/local_rural/training/fhwasa1109/app_c.cfm

MUNI COLLISIONS

Collisions involving a Muni transit vehicle make up 119 collisions on Market Street east of Van Ness Avenue. Of the 119 Muni related collisions, 67 involved an automobile*, 22 involved a bicycle, and 14 involved a pedestrian (Figure 1). A majority (85 percent) of the 67 Muni-automobile collisions were categorized as either sideswipes or rear end collisions. This indicates a potential problem with automobiles switching between the curb lane and center lane, and colliding with buses and trains as they do so.

Figure 1: Market Street Collisions Involving Muni 1/1/12 – 12/31/13



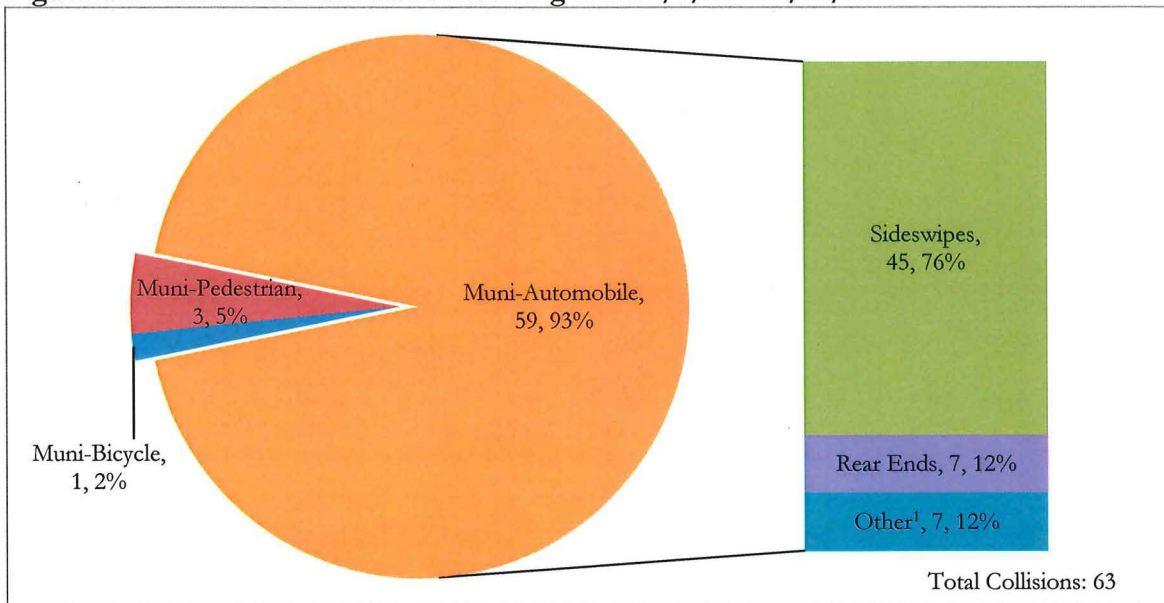
Notes:

- 1) Other includes collisions with another Muni vehicle, a fixed object, or "other/not listed".
- 2) Other includes collisions at an angle or from the front of a Muni vehicle.

On Mission Street, there were 63 collisions involving a Muni transit vehicle. Only 4 of these collisions involved pedestrian or bicycle while the rest involved an automobile (Figure 2). The share of pedestrian bicycle collisions on Mission Street is much lower with only 7 percent of these collisions involved either a bicyclist or pedestrian, compared to 31% of the collisions on Market Street. Of the 59 Muni-automobile collisions, most (88 percent) were categorized as a sideswipe or rear end, similar to Market Street (Figure 2).

*Automobile is defined as a private or commercial motorized vehicle such as a car, truck, or motorcycle. Muni buses and trains are excluded from this definition.

Figure 2: Mission Street Collisions Involving Muni 1/1/12 – 12/31/13



Notes:

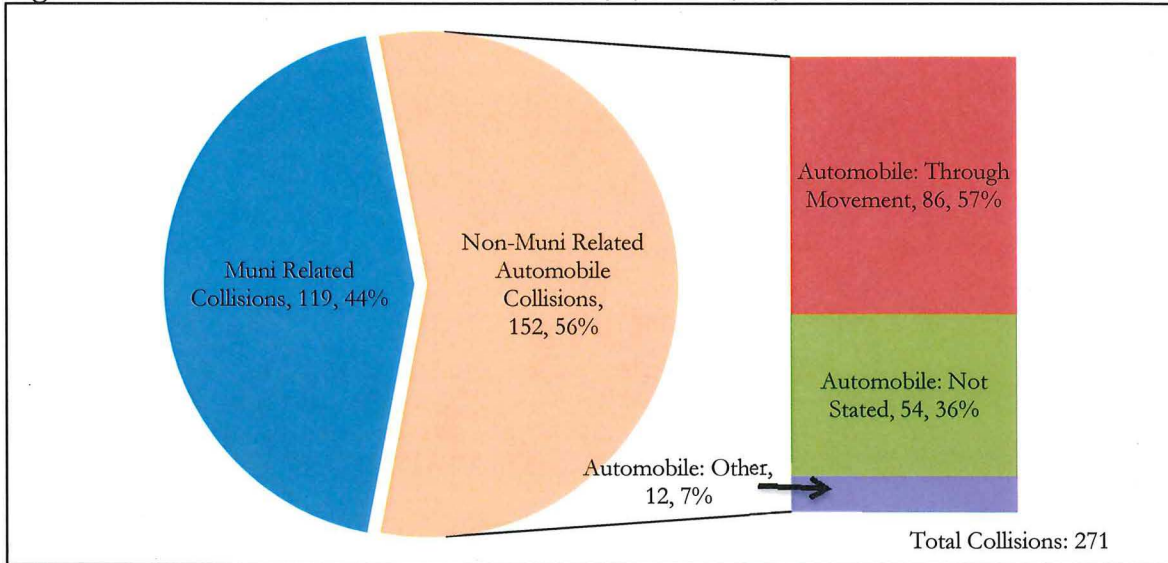
1) Other includes collisions at an angle to a Muni vehicle, or “other/not listed”.

NON-MUNI AUTOMOBILE COLLISIONS

Exclusive of Muni-related collisions, collisions involving automobiles accounted for 152 of the 271 (56 percent) total collisions on Market Street. As shown in Figure 3, 86 of these collisions (57 percent) involved automobiles traveling through on Market Street, with the primary collision factor categorized as “proceeding straight”, “passing other vehicle”, “changing lanes”, “backing”, “parking maneuver”, “ran off road”, or “stopped in road”. These types of collisions would not be affected by traditional intersection countermeasures such as traffic signal changes, and are considered reflective of the multi-modal character of a limited right-of-way (ROW) Market Street.

Fifty-four of the 152 collisions (36 percent) had their primary collision factor categorized as “not stated”.

Figure 3: Market Street Automobile Collisions 1/1/12 – 12/31/13

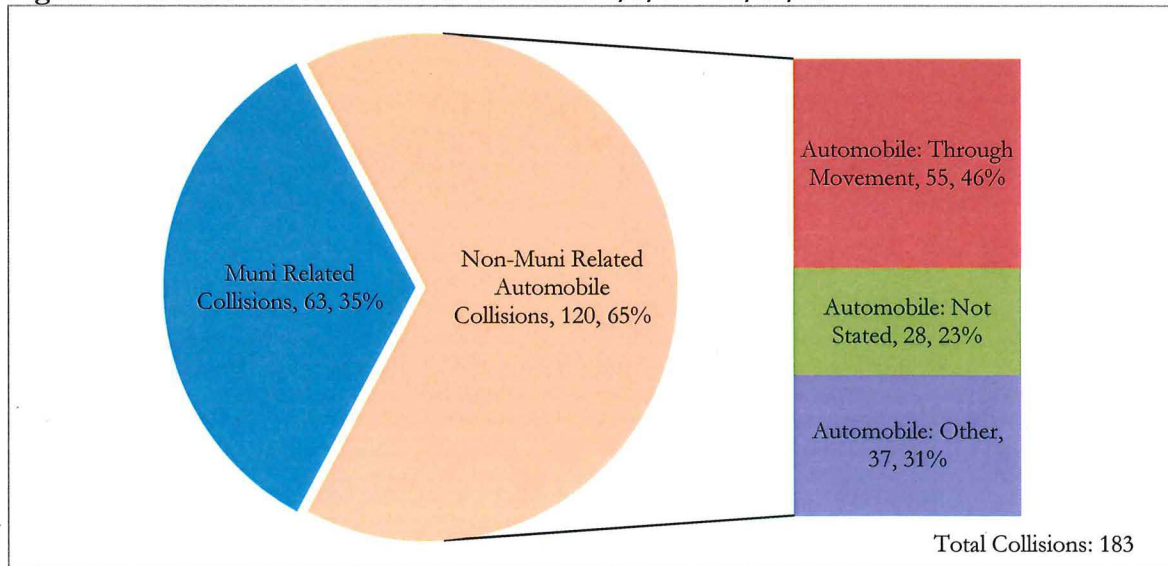


Notes:

1) Other collisions include entering traffic, or making right or left turns.

On Mission Street, 120 of the 183 total collisions (65 percent) were non-Muni related automobile collisions. As shown in Figure 4, 55 of these (46 percent) involved automobiles traveling through on Mission Street, with the primary collision factor categorized as “changing lanes”, “crossed into opposing lane”, “merging”, “passing other vehicle”, “proceeding straight”, “ran off road”, “slowing/stopping”, or “stopped in road”.

Figure 4: Mission Street Automobile Collisions 1/1/12 – 12/31/13



Notes:

1) Other collisions include entering traffic, making right or left turns, or making a U-turn.

Compared to Market Street, there were 32 (21 percent) fewer non-Muni related automobile collisions and 31 (36 percent) fewer collisions involving automobile through movements despite Mission Street carrying an average of 18,200 vehicles per day compared to 6,100 on Market Street.

NON-MUNI AUTOMOBILE COLLISIONS BY LOCATION

A disproportionate number of collisions involving non-Muni automobiles occurred between 8th Street and New Montgomery Street. Despite being only half of the overall length of Market Street east of Van Ness Avenue, this stretch of Market Street was the site of 104 of the 152 collisions (68 percent). This is illustrated in Figure 5. Figure 6 shows the number of collisions by block.

Figure 5: Market Street non-Muni Automobile Collision Frequency versus Location, by street segment 1/1/12 – 12/31/13

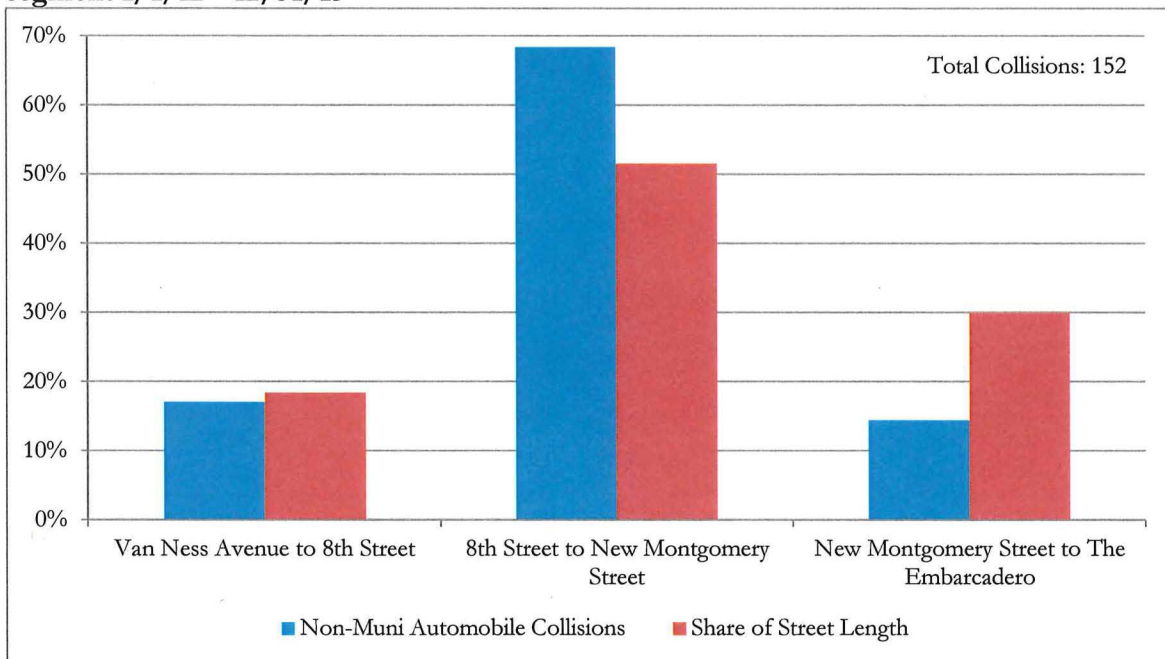


Figure 6: Market Street non-Muni Automobile Collision Frequency versus Location, by block group 1/1/12 – 12/31/13



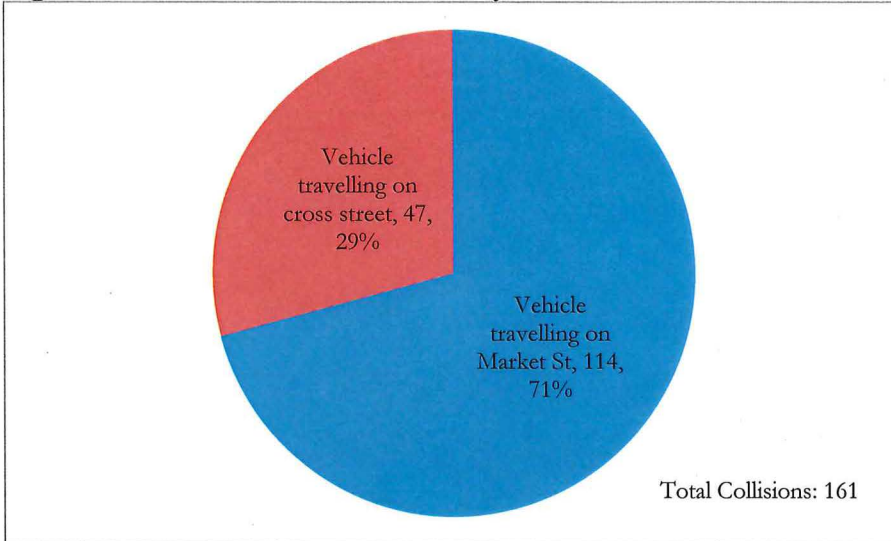
Notes:

- 1) There were no reported non-Muni automobile collisions between 11th and 10th.
- 2) Collisions that occurred at intersections were split evenly between block groups.

COLLISIONS BY LOCATION OF VEHICLE AT FAULT

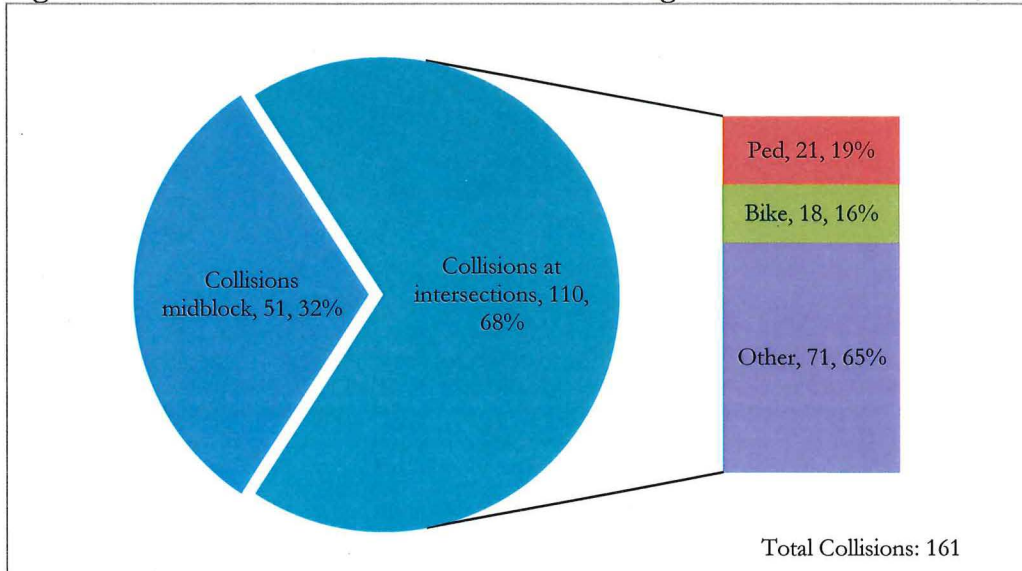
The following data involved a total of 161 collisions due to the lack of information in the Transit Safe data. The collisions reported in the SWITRS database did not involve Muni vehicles except for 9 collisions that were Muni vehicle related. Of the 161 collisions, 114 of them were when the vehicle at fault was on Market Street (Figure 7). This indicates that 71 percent of all collisions on Market Street east of Van Ness Avenue were due to traffic on Market Street. Mission Street has a similar collision trend albeit a lower number of total collisions.

Figure 7: Market Street collisions by location of the vehicle at fault 1/1/12 – 12/31/13



On Market Street, 110 collisions occurred at intersections. Any collision within 30 feet from an intersection was noted as intersection related. Out of those 110 intersection-related collisions, 39 of them involved a bicyclist or a pedestrian (35 percent). This is illustrated in Figure 8. Intersections typically have higher collision rates due to crossing vehicle paths, and the need to handle different transportation modes safely (pedestrians, bikes, motor vehicles, Muni). Intersection geometry, traffic volumes, intersection lane approaches, and vehicle speed also factor into the likelihood of intersection-related collisions. The breakdown of the collisions by user for midblock collisions had a similar trend as Figure 8 and is not shown in this report.

Figure 8: Intersection-related collisions along Market Street 1/1/12 – 12/31/13

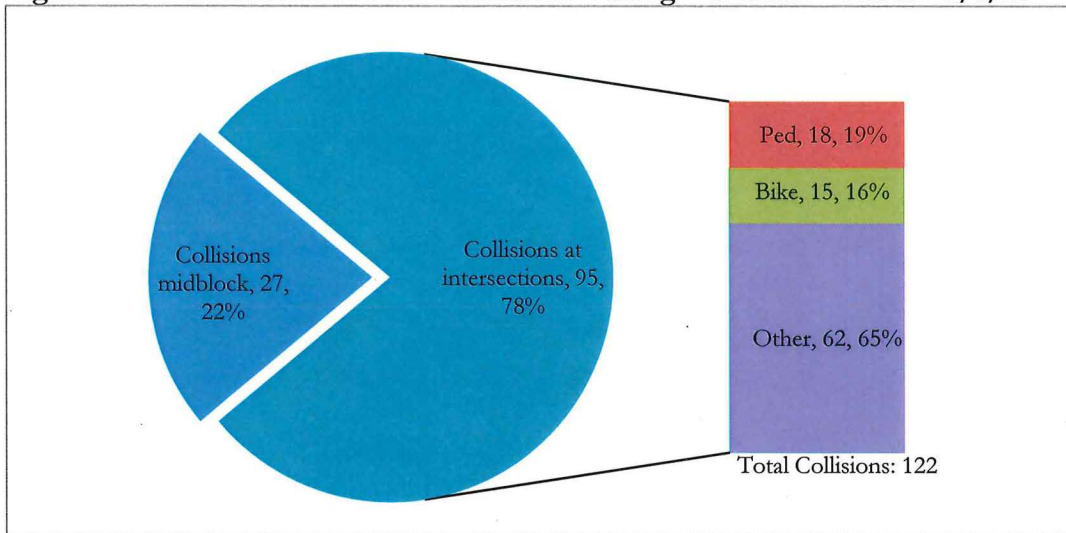


Notes:

1) Other includes collisions that do not involve any bicyclists or pedestrians such as Muni-automobile collisions, automobile-automobile collisions, or fixed-object collisions.

On Mission Street, 95 collisions occurred at intersections. Out of these 95 collisions, 33 of them involved a bicyclist or a pedestrian (35 percent). This is illustrated in Figure 9. There was a higher percentage of intersection related collisions at intersections along Mission Street compared to Market Street (78% on Mission Street to 68% on Market Street). The higher percentage of Market Street midblock collisions is due to the numerous characteristics of Market Street (large amounts of bicyclists, Muni buses, center transit only lane, commercial and passenger loading/unloading) that share the same roadway.

Figure 9: Intersection-related collisions along Mission Street 1/1/12 – 12/31/1



Notes:

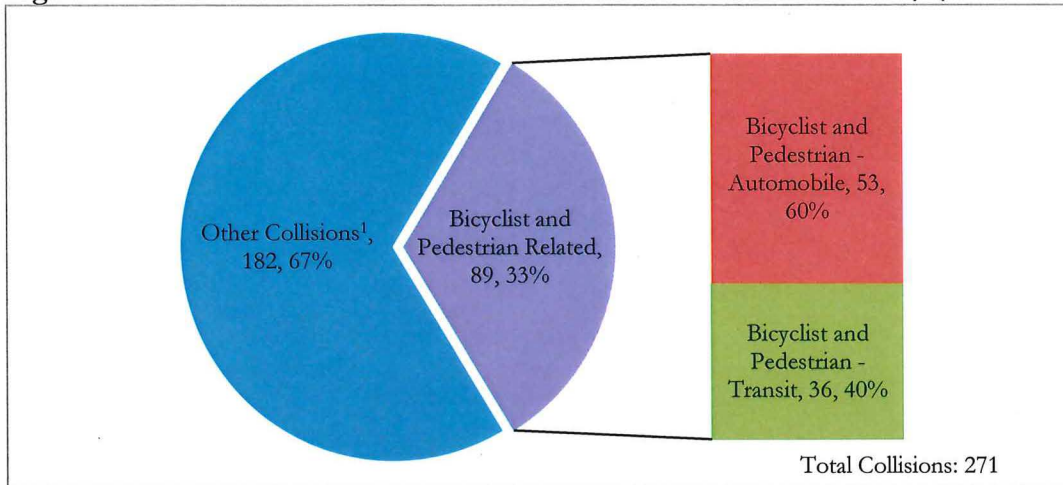
1) Other includes collisions that do not involve any bicyclists or pedestrians such as Muni-automobile collisions, automobile-automobile collisions, or fixed-object collisions.

The breakdown of the collisions by user for midblock collisions had 2 pedestrian collisions and 5 bicycle collisions (26 percent). The graph is not shown in this report.

COLLISIONS WITH BICYCLISTS AND PEDESTRIANS

Bicyclists and pedestrians, the most vulnerable roadway users, were involved in 89 of the 271 total collisions on Market Streets (33 percent). As shown in Figure 10, transit vehicles accounted for 36 of these collisions (40 percent) while automobiles accounted for 53 (60 percent). In comparison, Muni represents, at most, 30% of all traffic volume on Market St.

Figure 10: Market Street Non-Motorized Collisions 1/1/12 – 12/31/13

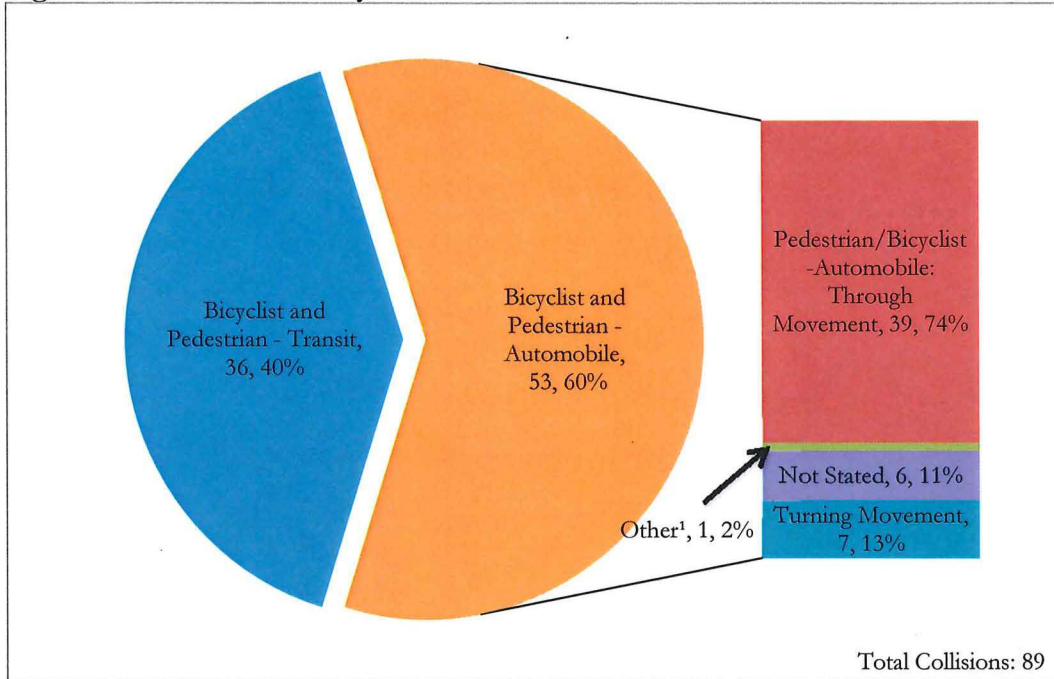


Notes:

1) Other includes collisions that do not involve any bicyclists or pedestrians such as Muni-automobile collisions, automobile-automobile collisions, or fixed-object collisions.

The primary collision factors for most of the collisions that involved an automobile and a bicyclist or pedestrian on Market Street were “proceeding straight”, “passing other vehicle”, “changing lanes”, or “stopped in road” (39 of 53 or 74 percent). This indicates an automobile through movement at the time of the collision. Six of the 53 collisions had their primary collision factor categorized as “not stated”. This is illustrated in Figure 11. The main collision factors of the 36 bicyclist and pedestrian – transit collisions consisted of “proceeding straight”, “pulling into/out of a bus stop”, “turning movements”, or “stopped in road” (67, 3, 6, and 24 percent respectively).

Figure 11: Market Street Bicycle and Pedestrian Collisions with Automobiles 1/1/12 – 12/31/13

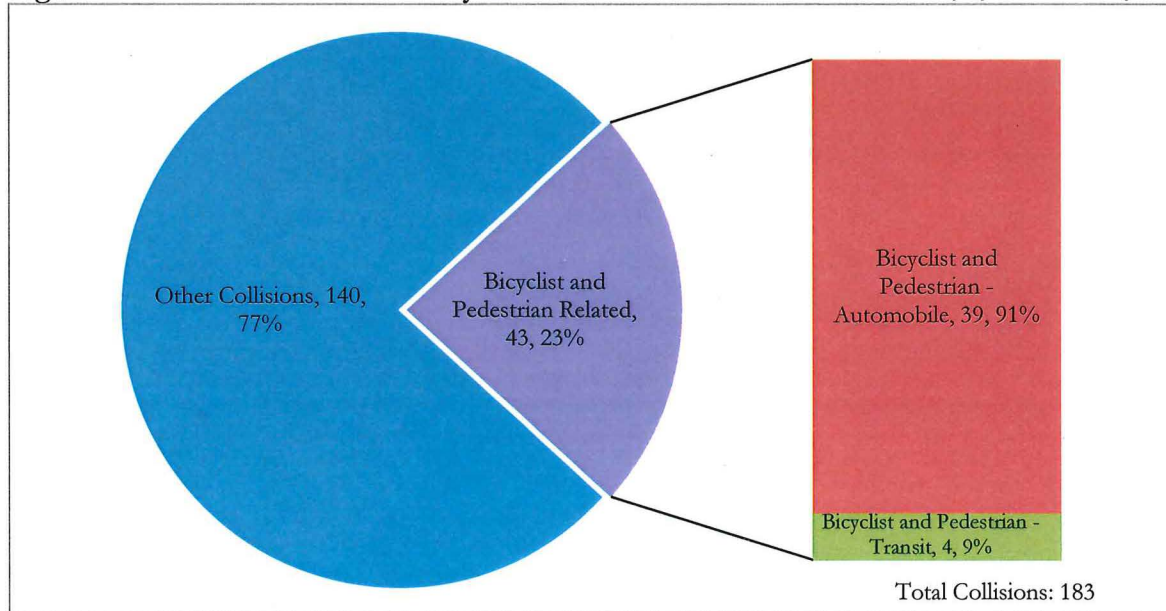


Notes:

1) Other primary collision factor includes entering traffic.

On Mission Street, bicyclists and pedestrians were involved in 43 of the 183 total collisions on Mission Street (23 percent). As shown in Figure 12, transit vehicles accounted for 4 of these collisions (9 percent) while automobiles accounted for 39 (91 percent).

Figure 12: Mission Street Bicycle and Pedestrian Collisions 1/1/12 – 12/31/13

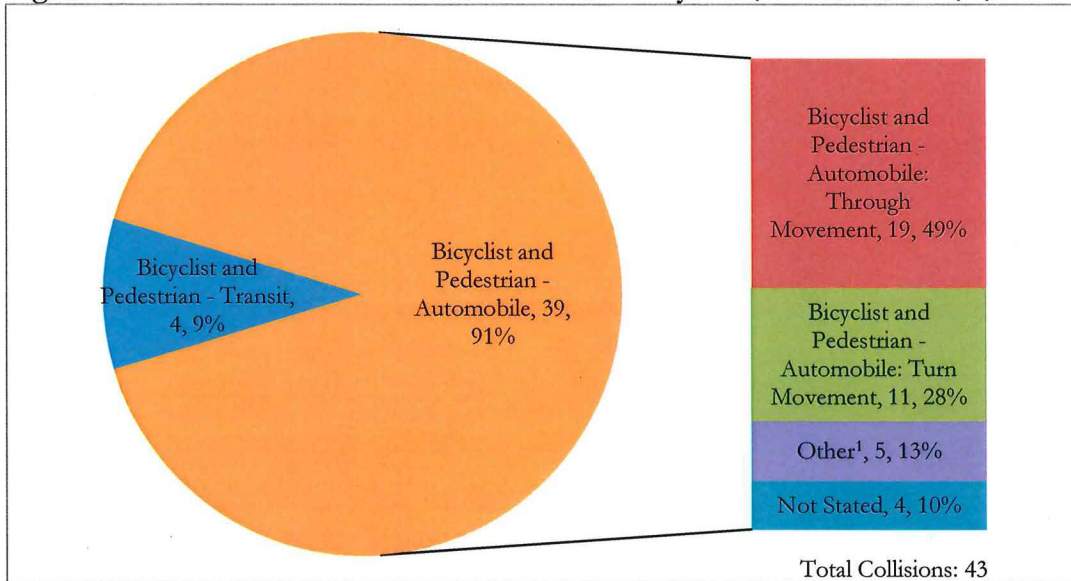


Notes:

1) Other includes collisions that do not involve any bicyclists or pedestrians such as Muni-automobile collisions, automobile-automobile collisions, or fixed-object collisions.

The primary collision factors for less than half of the collisions that involved an automobile and a bicyclist or pedestrian on Mission Street were “proceeding straight”, “ran off road”, or “stopped in road” (19 of 39, or 49 percent), indicating an automobile through movement. The second biggest primary collision factor was an automobile turning left or right (11 of 39, or 26 percent). Four of the 39 collisions had their primary collision factor categorized as “not stated”. This is illustrated in Figure 13.

Figure 13: Mission Street Collisions with Bicyclists/Pedestrians 1/1/12 – 12/31/13



Notes:

1) Other primary collision factors include entering traffic or parked.

Compared to Market Street, there were fewer collisions involving pedestrians or bicyclists on Mission Street (89 on Market Street versus 43 on Mission Street). Collisions involving automobiles and pedestrians or bicyclists were also lower (53 on Market Street versus 39 on Mission Street) while collisions involving transit and pedestrians or bicyclists were significantly lower (36 on Market Street versus 4 on Mission Street). Turning movements were the cause for 28% of bicycle - pedestrian collisions on Mission Street compared with only 13% on Market.

CONCLUSIONS

The data presented indicates a high rate of collisions on Market Street compared to Mission Street. Despite carrying about a third of the traffic that Mission Street carries, Market Street experiences 14 percent more collisions involving Muni and automobiles (Figure 1 and Figure 2), and 36 percent more collisions involving automobiles and bicyclists or pedestrians (Figure 11 and Figure 13). The overall collision rate on Market Street is 32.0 collisions per million vehicle miles traveled compared to 6.9 collisions per million vehicle miles traveled on Mission Street.

The data indicates that 71 percent of all collisions along Market St occurred due to a vehicle travelling on Market Street (Figure 7) and that 68 percent of collisions occurred at or near an intersection (Figure 8) and that a quarter of those intersection-related collisions involved a bicyclist or a pedestrian.

On Market Street, the data shows that there is a high concentration of collisions on Market Street between 8th Street and New Montgomery Street (Figure 6 and Figure 14). These collisions involve a high number of vulnerable roadway users, and the nature of the collisions suggests that the mixing of automobiles on a street that carries a large volume of bicyclists, pedestrians, and transit buses is at least part of the cause.



MEMORANDUM

Date: June 13, 2014
To: Simon Bertrang, City of San Francisco Department of Public Works
From: Dan Hennessey and Chris Mitchell, Fehr & Peers
Cc: David Parisi, Parisi Transportation Consulting
Bill Lieberman, CHS Consulting
Subject: Initial Results for Better Market Street VISSIM Testing

SF13-0715

As part of the Better Market Street alternative development and project screening, Fehr & Peers conducted an analysis of traffic, transit, bicycle, and pedestrian operations along Market and Mission Streets in San Francisco under various operating assumptions. The purpose of this analysis was to determine whether Option 3, which would relocate all Mission Street transit operations onto Market Street, would operate smoothly, would be fatally flawed, or whether additional measures such as auto restrictions, reconfiguring transit stop locations, or relocating some of the Mission Street transit to other roadways could be implemented to make the option feasible.

As you recall, the San Francisco Planning Department originally built, calibrated, and validated a VISSIM model to existing conditions in 2012. As part of our work summarized in this memo, based on direction from SFMTA, we made updates to the model to reflect changes expected to be in place by 2015, including growth in bicycle usage and implementation of the Transit Effectiveness Project (TEP). Since these models are used for screening the proposed project alternatives, they will need to be updated in greater detail in support of the environmental document. This memorandum summarizes the analysis and describes the changes and improvements made for each model run.

EXISTING/BASELINE CONDITIONS

Fehr & Peers received the model files and a memo dated January 30, 2012 titled "Methodology and Validation for Market/Mission Street VISSIM Model." The model is bounded by the

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Embarcadero/Steuart Street in the east and Octavia Boulevard/Division Street in the west and contains every intersection in between on Market and Mission Streets. The model simulates the 4:00 PM to 6:00 PM peak period and includes all bus traffic crossing Mission Street and Market Street. The Planning Department's VISSIM model included an "Existing Conditions" scenario, which represented conditions as they were at the time the data was collected, as well as a "Baseline Conditions" model, which reflects the same travel demand conditions, but includes implementation of several near-term roadway projects that may affect travel behavior, including:

- Two-way McAllister Street, including rerouting of the inbound 5 Fulton bus route via McAllister Street, and modifications to signal timing and lane configuration at the intersections of Market/McAllister/Jones and Market/Seventh;
- Two-way Haight Street, including rerouting of the inbound 6 Parnassus and 71/71L Haight-Noriega bus routes via Haight Street, and modifications to signal timing and lane configuration at Market/Haight/Gough;
- Construction of the Transbay Transit Center bus plaza between Beale and Fremont Streets, including rerouting of the 5 Fulton, 38 and 38L Geary, 71/71L Haight-Noriega, and Golden Gate Transit bus routes to approach the plaza via Market – First – Mission – Beale and depart the plaza via Fremont – Market. (At the intersection of Market/First Streets, the inbound travel time segment for the 71 bus was relocated to account for its shifted inbound route via First Street instead of Beale Street.)

Fehr & Peers re-ran both the Existing Conditions and Baseline Conditions models developed by the Planning Department without making any changes and obtained similar results to the Planning Department's results¹, confirming the Planning Department's results and indicating that the correct models were being used in this analysis. The rerouting of the 5 Fulton, 38 and 38L Geary, 71/71L Haight-Noriega, and Golden Gate Transit bus routes to use First Street instead of Beale Street to access the Transbay Transit Center adds some delay to the curb lane on Market Street, though the queue is contained between First Street and New Montgomery Street.

At the request of SFMTA, several additional minor changes were made to the Baseline Conditions files. These updates were made to reflect new data for model file inputs and changes in service for the transit agencies. These updates included:

¹ Because VISSIM uses a stochastic, or random, modeling approach to replicate day-to-day variations in travel demand, it would be unreasonable to expect to obtain exactly the same results when re-running the model.

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- Updated Golden Gate Transit and SamTrans dwell times based on data provided by the respective agencies. Golden Gate Transit and SamTrans services and frequencies have been updated as of January 27, 2014.
- Increased area of influence and decreased speed for trolley buses crossing at a switch
- Addition of the 5L Fulton Limited and 14X Mission Express (outbound) lines
- Updated service frequencies for Market Street and Mission Street Muni routes

The above minor changes did not substantially affect the model results compared to the Baseline Conditions results. The analysis showed that while overall travel times increased slightly (as would be expected with most of the revised assumptions), they did not fundamentally alter the operations of the corridor, which is also intuitive. More detailed inputs, such as signal timing information, were not changed for any scenario during this initial testing.

The results of these runs are shown in **Table 1**, which compares travel times by street, mode, and lane for both Mission Street and Market Street (all tables appear at the end of this report). These results will serve as the basis of comparison for the Near-Term Conditions analysis. **Table 2** compares the travel times for cars, transit vehicles, and bicyclists for the different segments of Market Street for Updated Baseline Conditions, as well as conveys other important characteristics of the roadway segments. Auto volumes were not determined in this initial set of runs, but will be completed for future analysis.

NEAR-TERM NO PROJECT CONDITIONS

At the request of SFMTA, one additional change was made to approximate Near-Term No Project Conditions that would occur without any of the Better Market Street project elements. Bike volumes were increased 40 percent from the 2011 bicycle counts to represent 2015 bike volumes.

Fehr & Peers ran the Near-Term No Project Conditions model files to determine the impact of the additional bicycles on the travel times of the transit vehicles and cars on the Market Street corridor. The initial results suggest that additional bicycles on the transportation network do not significantly change the operations of the corridor.

Table 3 compares the travel times for cars, transit vehicles, and bicyclists for the different segments of Market Street for Near-Term No Project Conditions, as well as conveys other important characteristics of the roadway segments. Auto volumes were not determined in this initial set of runs, but will be completed for future analysis.

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NEAR-TERM PROJECT CONDITIONS – OPTION 1

From the Near-Term No Project Conditions model files, Fehr & Peers built a Near-Term Project Conditions model to reflect Option 1. Option 1 includes the updated transit spacing plan provided by the SFMTA and no changes to the bicycle circulation. It also includes turn restrictions on Market Street that are currently under consideration. Transit stops were modeled such that two vehicles would be able to stop at an outbound transit stop and three vehicles would be able to stop at an inbound transit stop. In addition to an increase in the capacity of each stop, the existing 40 stops on Market Street (20 inbound and 20 outbound) have been reduced to 27 total stops, a decrease of 33 percent. Dwell times for all Market Street transit vehicles were increased to account for greater ridership at each transit stop, though overall corridor dwell times typically decrease due to the improved station spacing.

The transit lines were re-aligned such that local buses use the curb-side lanes and limited-service buses use the center lanes, except for the 38L which travels on Market Street for a relatively short distance before turning right onto First Street and for the F Line Streetcar, which will remain in the center lane. The center lane will be a transit only lane for the entire length of Market Street; currently it is transit only from Van Ness Avenue to 5th Street inbound and 8th Street to 12th Street outbound. In summary, transit lines on Market Street were aligned in the following manner:

- Curb lanes and transit stops: 2, 5, 6, 9, 16X, 19, 21, 31, 38, 38L
- Center lanes and island transit stops: 5L, 9L, 71L, F

The results of the model runs were compared to the Updated Baseline Conditions results. Of the 26 transit segments on Market Street, all 26 showed travel time decreases. Travel times for transit vehicles on Market Street decreased an average of 18 percent. Travel times for inbound cars on Market Street decreased an average of 6 percent and for outbound cars increased an average of 9 percent (approximately one minute). Travel times for buses on Mission Street remained largely unchanged. This option also decreased bus/bicycle conflicts by 10 percent as compared to Near-Term No Project Conditions.

Table 4 compares the travel times for cars, transit vehicles, and bicyclists for the different segments of Market Street for Near-Term Project Conditions – Option 1, as well as conveys other important characteristics of the roadway segments. Auto volumes were not determined in this initial set of runs, but will be completed for future analysis.

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NEAR-TERM PROJECT CONDITIONS – OPTION 3

Fehr & Peers also built a Near-Term Project Conditions model to reflect Option 3, which includes all of the Option 1 changes and relocates all transit lines on Mission Street to Market Street to accommodate a separated bicycle facility on Mission Street. The relocation adds approximately 30 buses per hour to Market Street (approximately 25 percent of existing bus traffic), most of which are the 14 and 14L lines. As a result of the separated bicycle facility on Mission Street, 50 percent of the bikes on Market Street were assumed to take alternative routes. The 14 and 14L lines were assumed to use 11th Street to maneuver between Market Street and Mission Street. With the project, the following lines would be affected and were aligned in the following manner:

- Curb lanes and transit stops: 2, 5, 6, 9, 16X, 19, 21, 31, 38, 38L, **14, SamTrans 292/KX, Golden Gate Transit Basic Service²**
- Center lanes and island transit stops: 5L, 9L, 71L, F, **14L, 14X,**

The results of the model runs were compared to the Updated Baseline Conditions results. Of the 26 transit segments on Market Street, all but one showed travel time decreases (the increase was less than 15 seconds per segment). Travel times for transit vehicles on Market Street decreased an average of 14 percent. Travel times for inbound cars on Market Street increased an average of 2 percent and for outbound cars increased an average of 17 percent (approximately two minutes). This option also decreased bus/bicycle conflicts on Market Street by 40 percent as compared to Near-Term No Project Conditions.

Table 5 compares the travel times for cars, transit vehicles, and bicyclists for the different segments of Market Street, as well as conveys other important characteristics of the roadway segments. Auto volumes were not determined in this initial set of runs, but will be completed for future analysis.

This concludes our initial traffic analysis for the alternative development and project screening for the Better Market Street project. Please call Chris Mitchell or Dan Hennessey at (415) 348 0300 with any questions or comments.

Attachments: Attachment A – Travel Time Results

² **Bolded** transit lines indicate lines that have been shifted from Mission Street to Market Street.

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**TABLE 1: CORRIDOR TRAVEL TIMES BY VEHICLE TYPE**

Vehicle Type / Direction ²	Length of Evaluation Section (miles)	Average Travel Time (MM:SS) ¹			
		Updated Baseline Conditions	Near-Term No Project Conditions ³	Near-Term With Project – Option 1 ³	Near-Term With Project – Option 3 ³
Market Street Streetcar IB	2.19	25:25	25:55 (+2%)	18:50 (-26%)	19:35 (-23%)
Market Street Streetcar OB	2.20	23:30	24:05 (+2%)	19:55 (-15%)	20:50 (-11%)
Market Street Buses Center Lane IB	1.68	17:25	17:35 (+1%)	13:50 (-21%)	14:40 (-16%)
Market Street Buses Center Lane OB	1.63	14:35	14:35 (+0%)	12:45 (-13%)	13:40 (-6%)
Market Street Buses Curb Lane IB	1.67	20:55	21:50 (+4%)	15:50 (-24%)	17:00 (-19%)
Market Street Buses Curb Lane OB	1.64	17:45	18:15 (+3%)	16:10 (-9%)	16:30 (-7%)
Mission Street Buses IB	1.82	18:10	17:50 (-2%)	17:55 (-1%)	18:25 (+1%) ⁴
Mission Street Buses OB	1.97	20:40	21:05 (+2%)	20:40 (0%)	22:50 (+10%) ⁵
Market Street Cars IB	2.07	15:45	16:25 (+4%)	14:50 (-6%)	16:00 (+2%)
Market Street Cars OB	2.07	14:30	15:10 (+5%)	15:45 (+9%)	16:55 (+17%)

Notes:

- Travel times are the averages of 10 runs of the VISSIM model.
 - IB = Inbound; OB = Outbound
 - Percentage change is relative to Updated Baseline Conditions. When comparing vehicle type/direction travel times for different scenarios, small percentage changes ($\leq 5\%$) are potentially random variations of the same mean and within a margin of error of the previous scenario.
 - Travel times are for the inbound 14 line that has been relocated to Market Street. Total distance traveled is 6 percent longer due to left turn at 11th.
 - Travel times are for the outbound 14 line that has been relocated to Market Street. Total distance traveled is 6 percent longer due to left turn at 11th.
- Source: Fehr & Peers, May 2014.

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TABLE 2: MARKET STREET TRAVEL TIMES BY ROADWAY SEGMENT FOR UPDATED BASELINE CONDITIONS

Roadway Segment	Segment Length (miles)	Auto				Transit		Bicycles	
		Volume (Demand)	Volume (Served)	Average Delay ¹	Average Speed ²	Travel Time ³	Average Speed ²	Bus Interactions ⁴	Average Speed ²
Inbound									
Octavia Boulevard to 10 th Street	0.45			1:55	8.4	5:35 ⁶	4.9 ⁶	Combined Market Street inbound and outbound: 10,600 during the peak hour	7.8
10 th Street to 7 th Street	0.39			1:35	10.3	3:50	7.1		9.6
7 th Street to 4 th Street	0.51	For Future Analysis ⁵		1:30	8.0	4:55	7.3		7.4
4 th Street to 1 st Street	0.52			3:30	6.1	7:30	5.3		6.0
1 st Street to Steuart Street	0.32			1:00	7.6	3:10	6.4		7.2
Outbound									
Steuart Street to 1 st Street	0.33			1:00	7.7	3:55	5.7	7.2	
1 st Street to 4 th Street	0.53			2:00	8.9	5:00	7.5	7.7	
4 th Street to 7 th Street	0.50	For Future Analysis ⁵		1:45	9.3	4:40	7.4	10,600	8.7
7 th Street to 10 th Street	0.40			1:15	9.7	3:20	7.5	8.9	
10 th Street to Octavia Boulevard	0.44			2:20	7.2	5:20 ⁶	4.9 ⁶	6.6	

Notes:

1. Reported average delay is the total segment travel time minus the expected travel time at a free flow speed of 20 mph (seconds per vehicle).
2. Average speed is travel time divided by segment length (miles per hour).
3. Travel time for each segment is an average of all transit vehicles on Market Street (minutes : seconds).
4. Bus interactions determined by Surrogate Safety Assessment Model (SSAM) software provided by FHWA and defined as each time a bicycle trajectory and a bus trajectory would collide if they continued on their present paths at their present speeds for an additional 1.5 seconds.
5. Volumes evaluation files were not prepared for this initial evaluation.
6. Values for streetcar only.

Source: Fehr & Peers, May 2014.

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TABLE 3: MARKET STREET TRAVEL TIMES BY ROADWAY SEGMENT FOR NEAR-TERM NO PROJECT CONDITIONS

Roadway Segment	Segment Length (miles)	Auto				Transit		Bicycles	
		Volume (Demand)	Volume (Served)	Average Delay ¹	Average Speed ²	Travel Time ³	Average Speed ²	Bus Interactions ⁴	Average Speed ²
Inbound									
Octavia Boulevard to 10 th Street	0.45			1:55	8.4	5:30 ⁶	4.9 ⁶	Combined Market Street inbound and outbound: 14,600 during the peak hour	7.6
10 th Street to 7 th Street	0.39			1:45	9.9	3:50	7.1		9.3
7 th Street to 4 th Street	0.51	For Future Analysis ⁵		1:35	7.7	5:00	7.1		7.1
4 th Street to 1 st Street	0.52			3:55	5.7	7:50	5.2		5.9
1 st Street to Steuart Street	0.32			1:05	7.2	3:15	6.2		7.0
Outbound									
Steuart Street to 1 st Street	0.33			1:00	7.4	4:10	5.5	14,600	7.1
1 st Street to 4 th Street	0.53			2:10	8.4	5:00	7.4		7.3
4 th Street to 7 th Street	0.50	For Future Analysis ⁵		1:55	8.7	4:40	7.4		8.4
7 th Street to 10 th Street	0.40			1:20	9.6	3:20	7.5		8.6
10 th Street to Octavia Boulevard	0.44			2:25	7.0	5:30 ⁶	4.8 ⁶		6.4

Notes:

1. Reported average delay is the total segment travel time minus the expected travel time at a free flow speed of 20 mph (seconds per vehicle).
2. Average speed is travel time divided by segment length (miles per hour).
3. Travel time for each segment is an average of all transit vehicles on Market Street (minutes : seconds).
4. Bus interactions determined by Surrogate Safety Assessment Model (SSAM) software provided by FHWA and defined as each time a bicycle trajectory and a bus trajectory would collide if they continued on their present paths at their present speeds for an additional 1.5 seconds.
5. Volumes evaluation files were not prepared for this initial evaluation.
6. Values for streetcar only.

Source: Fehr & Peers, May 2014.

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TABLE 4: MARKET STREET TRAVEL TIMES BY ROADWAY SEGMENT FOR OPTION 1 CONDITIONS

Roadway Segment	Segment Length (miles)	Auto				Transit		Bicycles	
		Volume (Demand)	Volume (Served)	Average Delay ¹	Average Speed ²	Travel Time ³	Average Speed ²	Bus Interactions ⁴	Average Speed ²
Inbound									
Octavia Boulevard to 10 th Street	0.45			1:50	8.5	4:55 ⁶	5.5 ⁶	Combined Market Street inbound and outbound: 13,100 during the peak hour	8.0
10 th Street to 7 th Street	0.39			2:00	9.0	3:00	8.7		8.4
7 th Street to 4 th Street	0.51	For Future Analysis ⁵		1:40	7.5	4:05	8.5		8.4
4 th Street to 1 st Street	0.52			2:05	8.6	4:45	7.8		8.8
1 st Street to Steuart Street	0.32			1:00	7.7	2:40	7.4		7.9
Outbound									
Steuart Street to 1 st Street	0.33			1:45	5.1	3:35	6.2	5.7	
1 st Street to 4 th Street	0.53			3:20	6.4	4:35	8.1	7.0	
4 th Street to 7 th Street	0.50	For Future Analysis ⁵		1:50	9.0	3:55	8.6	13,100	9.4
7 th Street to 10 th Street	0.40			0:55	11.3	2:40	9.0	9.8	
10 th Street to Octavia Boulevard	0.44			1:40	8.8	4:40 ⁶	5.7 ⁶	9.1	

Notes:

1. Reported average delay is the total segment travel time minus the expected travel time at a free flow speed of 20 mph (seconds per vehicle).
2. Average speed is travel time divided by segment length (miles per hour).
3. Travel time for each segment is an average of all transit vehicles on Market Street (minutes : seconds).
4. Bus interactions determined by Surrogate Safety Assessment Model (SSAM) software provided by FHWA and defined as each time a bicycle trajectory and a bus trajectory would collide if they continued on their present paths at their present speeds for an additional 1.5 seconds.
5. Volumes evaluation files were not prepared for this initial evaluation.
6. Values for streetcar only.

Source: Fehr & Peers, May 2014.

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TABLE 5: MARKET STREET TRAVEL TIMES BY ROADWAY SEGMENT FOR OPTION 3 CONDITIONS

Roadway Segment	Segment Length (miles)	Auto				Transit		Bicycles	
		Volume (Demand)	Volume (Served)	Average Delay ¹	Average Speed ²	Travel Time ³	Average Speed ²	Bus Interactions ⁴	Average Speed ²
Inbound									
Octavia Blvd. to 10 th Street	0.45			1:50	8.6	4:55 ⁶	5.5 ⁶		8.2
10 th Street to 7 th Street	0.39			2:10	8.7	3:10	8.4	Combined Market Street inbound and outbound: 8,800 during the peak hour	8.9
7 th Street to 4 th Street	0.51	For Future Analysis ⁵		1:45	7.3	4:10	8.4		8.5
4 th Street to 1 st Street	0.52			3:00	6.8	5:20	7.1		9.0
1 st Street to Steuart Street	0.32			1:00	7.6	2:50	7.0		8.0
Outbound									
Steuart Street to 1 st Street	0.33			1:55	4.9	3:40	6.0		6.5
1 st Street to 4 th Street	0.53			4:15	5.5	5:00	7.4		7.0
4 th Street to 7 th Street	0.50	For Future Analysis ⁵		2:05	8.4	4:05	8.4	8,800	9.8
7 th Street to 10 th Street	0.40			1:00	10.8	2:40	9.0		10.1
10 th Street to Octavia Boulevard	0.44			1:30	9.4	4:40 ⁶	5.7 ⁶		9.3

Notes:

1. Reported average delay is the total segment travel time minus the expected travel time at a free flow speed of 20 mph (seconds per vehicle).
2. Average speed is travel time divided by segment length (miles per hour).
3. Travel time for each segment is an average of all transit vehicles on Market Street (minutes : seconds).
4. Bus interactions determined by Surrogate Safety Assessment Model (SSAM) software provided by FHWA and defined as each time a bicycle trajectory and a bus trajectory would collide if they continued on their present paths at their present speeds for an additional 1.5 seconds.
5. Volumes evaluation files were not prepared for this initial evaluation.
6. Values for streetcar only.

Source: Fehr & Peers, May 2014.

Mode	Description	Distance (feet)	Time (seconds)							% Change in Time					
			G-Ex.	D-Ex.	Baseline	BL_Updated	2015 NP	Option1	Option3	D-Ex.	Baseline	BL_Updated	2015 NP	Option1	Option3
Streetcar: F Inbound	Octavia-10th	2,394	283	282	296	333	332	295	296	0%	5%	13%	0%	-11%	-11%
	10th-7th	2,041	252	251	251	264	264	180	183	0%	0%	5%	0%	-32%	-31%
	7th-4th	2,690	321	317	319	328	332	235	240	-1%	1%	3%	1%	-28%	-27%
	4th-1st	2,733	314	318	339	382	396	237	265	1%	7%	13%	4%	-38%	-31%
	1st-Steuart	1,691	206	208	193	220	229	184	190	1%	-7%	14%	4%	-16%	-14%
Streetcar: F Outbound	Steuart-1st	1,758	274	275	274	293	315	249	263	0%	0%	7%	8%	-15%	-10%
	1st-4th	2,810	275	278	275	290	292	247	282	1%	-1%	5%	1%	-15%	-3%
	4th-7th	2,630	266	266	267	273	272	233	241	0%	0%	2%	0%	-15%	-12%
	7th-10th	2,101	223	224	220	232	233	186	183	0%	-2%	5%	0%	-20%	-21%
	10th-Octavia	2,317	296	290	290	322	331	279	279	-2%	0%	11%	3%	-13%	-13%
Bus Center Lane Market: Inbound 9	10th-7th	2,041	216	214	218	214	213	179	197	-1%	2%	-2%	0%	-16%	-8%
	7th-4th	2,688	286	288	287	289	292	255	266	1%	0%	1%	1%	-12%	-8%
	4th-1st	2,732	309	314	330	381	385	251	263	2%	5%	15%	1%	-34%	-31%
	1st-Spear	1,396	171	173	156	162	166	143	152	1%	-10%	4%	2%	-12%	-6%
Bus Center Lane Market: Outbound 9	Main-1st	1,065	123	125	123	121	124	110	120	1%	-2%	-2%	2%	-9%	-1%
	1st-4th	2,809	256	254	261	269	273	247	286	-1%	3%	3%	1%	-8%	6%
	4th-7th	2,629	265	267	259	278	274	235	238	1%	-3%	7%	-1%	-15%	-14%
	7th-10th	2,101	206	197	201	206	206	171	177	-4%	2%	2%	0%	-17%	-14%
Bus Curb Lane Market: Inbound 71/21	10th-7th	2,041	210	208	206	213	213	183	186	-1%	-1%	3%	0%	-14%	-13%
	7th-4th	2,688	259	259	255	267	282	243	240	0%	-2%	5%	6%	-9%	-10%
	4th-1st	2,713	359	381	541	587	625	370	427	6%	42%	9%	6%	-37%	-27%
	1st-Spear	1,396	179	177	164	186	192	155	166	-1%	-7%	13%	3%	-17%	-11%
Bus Curb Lane Market: Outbound 21	Steuart-1st	1,759	269	255	247	290	307	279	282	-5%	-3%	17%	6%	-4%	-3%
	1st-4th	2,810	318	313	317	336	341	327	332	-1%	1%	6%	1%	-3%	-1%
	4th-7th	2,629	269	277	272	284	289	237	249	3%	-2%	4%	2%	-17%	-12%
	7th-9th	1,460	142	146	141	157	158	127	125	3%	-3%	11%	1%	-19%	-20%
Bus Mission: Inbound 14	S Van Ness-7th	3,141	320	315	318	336	335	339	374	-2%	1%	6%	0%	1%	11%
	7th-4th	2,715	259	253	256	260	253	261	282	-2%	1%	2%	-3%	0%	8%
	4th-1st	2,722	347	344	364	356	356	368	314	-1%	6%	-2%	0%	3%	-12%
	1st-Main	1,058	122	115	120	138	127	109	135	-6%	4%	15%	-8%	-21%	-2%
Bus Mission: Outbound 14	Steuart-1st	1,788	231	229	229	244	245	241	314	-1%	0%	7%	0%	-1%	29%
	1st-4th	2,724	317	312	327	332	347	317	435	-2%	5%	2%	5%	-5%	31%
	4th-7th	2,717	259	258	258	262	262	268	249	0%	0%	2%	0%	2%	-5%
	7th-S Van Ness	3,160	392	392	396	400	413	415	371	0%	1%	1%	3%	4%	-7%
Cars Market: Inbound	Octavia-10th	2,392	175	169	181	195	195	191	190	-3%	7%	8%	0%	-2%	-3%
	10th-6th	2,950	196	193	194	195	204	223	232	-2%	1%	1%	5%	14%	19%
	6th-4th	1,781	145	143	141	152	158	161	167	-1%	-1%	8%	4%	6%	10%
	4th-1st	2,733	237	244	264	305	327	216	273	3%	8%	16%	7%	-29%	-10%
	1st-Main	1,091	107	109	92	98	103	97	98	2%	-16%	7%	5%	-1%	0%
Cars Market: Outbound	Main-1st	1,063	93	93	91	94	98	141	149	1%	-2%	3%	4%	50%	59%
	1st-4th	2,810	213	204	211	215	228	298	350	-4%	3%	2%	6%	39%	63%
	4th-7th	2,628	191	188	193	193	207	199	214	-1%	3%	0%	7%	3%	11%
	7th-10th	2,101	140	139	138	147	150	127	133	-1%	-1%	7%	2%	-14%	-10%
	10th-Octavia	2,318	207	204	210	221	226	179	168	-1%	3%	5%	2%	-19%	-24%

Legend:
 G-Ex. Existing Conditions runs by SF Planning Department (2012)
 D-Ex. Existing Conditions runs by Fehr & Peers (unchanged SFPD models)
 Baseline Baseline Conditions runs by Fehr & Peers (unchanged SFPD models)
 BL_Updated Baseline Conditions runs by Fehr & Peers (updated to reflect current conditions)
 2015 NP Near-Term No Project Conditions runs
 Option1 Near-Term With Project Conditions - Option 1 runs
 Option3 Near-Term With Project Conditions - Option 3 runs