SAN FRANCISCO
PLANNING DEPARTMENT

1650 Mission St.
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San Francisco,
CA 94103-2479

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PMND Date:	September 17, 2010
Case No.:	**2007.1238 E**
Project Title:	**Better Streets Plan Project**
BPA Nos.:	NA
Zoning:	Various
Block/Lot:	Various
Lot Size:	Various
Project Sponsor	Adam Varat – San Francisco Planning Department (415) 558-6405
Lead Agency:	San Francisco Planning Department
Staff Contact:	Devyani Jain – (415) 575-9051, devyani.jain@sfgov.org Monica Pereira – (415) 575-9107, monica.pereira@sfgov.org

To Interested Parties Regarding the Attached Final Amended Programmatic Mitigated Negative Declaration (PMND):

A Final Mitigated Negative Declaration is being sent to you because you either submitted comments or have expressed an interest in the Better Streets Plan Draft PMND. Where applicable, edits have been incorporated to the PMND. New and revised text is presented as underlined text in the PMND. Deleted texts have been ~~strickedthrough~~. Please note that comments related to the merits of the project and/or to the City's processes are not part of the environmental review under CEQA and therefore not addressed in the PMND.

The preparation or finalization of a Mitigated Negative Declaration does not indicate a decision by the City to approve or to disapprove the proposed project. However, prior to making any such decision, the decision makers must review and consider the information contained in the Mitigated Negative Declaration.

If you have any questions concerning the attached materials or this process, please contact the planner identified as the "Agency Contact Person" on the Preliminary Mitigated Negative Declaration cover page.

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Mitigated Negative Declaration

PMND Date:	July 28, 2010
Case No.:	**2007.1238 E**
Project Title:	**Better Streets Plan Project**
BPA Nos.:	NA
Zoning:	Various
Block/Lot:	Various
Lot Size:	Various
Project Sponsor	Adam Varat – San Francisco Planning Department (415) 558-6405
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PROJECT DESCRIPTION:

The Better Streets Plan ("Proposed Project") describes a vision for the future of San Francisco's pedestrian environment and would involve adoption of a set of citywide streetscape and pedestrian policies and guidelines to help accomplish this vision. The Planning Department, San Francisco Metropolitan Transportation Agency (SFMTA), Department of Public Works (DPW), and San Francisco Public Utilities Commission (SFPUC) are joint project sponsors of the proposed project, on behalf of the City and County of San Francisco. The proposed project seeks to balance the needs of all City street users. The proposed project identifies goals, objectives, policies and design guidelines, as well as future strategies to improve the pedestrian realm in San Francisco. For the proposed project, pedestrian areas mainly include sidewalks and crosswalks, but in some instances also include portions of the roadway. The proposed project does not focus on roadway or vehicle travel characteristics. The project would involve implementation of the proposed standard and optional streetscape improvements. Major project concepts related to streetscape and pedestrian improvements include: (1) pedestrian safety and accessibility features, such as enhanced pedestrian crossings, corner or mid-block curb extensions, pedestrian countdown and priority signals, and traffic calming features; (2) universal pedestrian-oriented streetscape design incorporating street trees, sidewalk planting, furnishing, lighting, efficient utility location for unobstructed sidewalks, shared single-surface for small streets/alleys, sidewalk and median pocket parks, and temporary and permanent street closures to vehicles; (3) integrated pedestrian/transit functions using bus bulb-outs and boarding islands; (4) enhanced usability of streetscapes for social purposes with reuse of excess street area, creative use of parking lanes, and outdoor restaurant seating; and (5) improved ecological performance of streets and streetscape greening with incorporation of stormwater management techniques and urban forest maintenance. It is anticipated that the Plan-proposed pedestrian realm improvements would be included in future site-specific street improvement projects in San Francisco, as part of the City's ongoing streetscape/pedestrian realm improvement efforts. However, the Better Streets Plan itself is a program-level policy document and does not identify site-specific projects in the City.

FINDING:

This project could not have a significant effect on the environment. This finding is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15064 (Determining Significant Effect), 15065 (Mandatory Findings of Significance), and 15070 (Decision to prepare a Negative Declaration), and the following reasons as documented in the Initial Evaluation (Initial Study) for the project, which is attached. Mitigation measures are included in this project to avoid potentially significant effects. See pages **171 through 180**.

In the independent judgment of the Planning Department, there is no substantial evidence that the project could have a significant effect on the environment.

BILL WYCKO
Environmental Review Officer

January 15, 2010
Date of Adoption of Final Mitigated Negative Declaration

cc: Adam Varat, Neighborhood Planner

SAN FRANCISCO
PLANNING DEPARTMENT

Notice of Availability of and Intent to Adopt a Mitigated Negative Declaration

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Date:	July 28, 2010
Case No.:	2007.1238E
Project Address:	San Francisco Better Streets Plan
Zoning:	Various
Block/Lot:	Not Applicable
Lot Size:	Not Applicable
Staff Contact:	Devyani Jain – (415) 575-9051, devyani.jain@sfgov.org Monica Pereira – (415) 575-9107, monica.pereira@sfgov.org

To Whom It May Concern:

This notice is to inform you of the availability of the environmental review document concerning the proposed project as described below. The document is a Preliminary Mitigated Negative Declaration, containing information about the possible environmental effects of the proposed project. The Preliminary Mitigated Negative Declaration documents the determination of the Planning Department that the proposed project could not have a significant adverse effect on the environment. Preparation of a Mitigated Negative Declaration does not indicate a decision by the City to carry out or not to carry out the proposed project.

Project Description: The Better Streets Plan ("Proposed Project") describes a vision for the future of San Francisco's pedestrian environment and would involve adoption of a set of citywide streetscape and pedestrian policies and guidelines to help accomplish this vision. The Planning Department, San Francisco Metropolitan Transportation Agency (SFMTA), Department of Public Works (DPW), and San Francisco Public Utilities Commission (SFPUC) are joint project sponsors of the proposed project, on behalf of the City and County of San Francisco. The proposed project seeks to balance the needs of all City street users. The proposed project identifies goals, objectives, policies and design guidelines, as well as future strategies to improve the pedestrian realm in San Francisco. For the proposed project, pedestrian areas mainly include sidewalks and crosswalks, but in some instances also include portions of the roadway. The proposed project does not focus on roadway or vehicle travel characteristics. The project would involve implementation of the proposed standard and optional streetscape improvements. Major project concepts related to streetscape and pedestrian improvements include: (1) pedestrian safety and accessibility features, such as enhanced pedestrian crossings, corner or mid-block curb extensions, pedestrian countdown and priority signals, and traffic calming features; (2) universal pedestrian-oriented streetscape design incorporating street trees, sidewalk planting, furnishing, lighting, efficient utility location for unobstructed sidewalks, shared single-surface for small streets/alleys, sidewalk and median pocket parks, and temporary and permanent street closures to vehicles; (3) integrated pedestrian/transit functions using bus bulb-outs and boarding islands; (4) enhanced usability of streetscapes for social purposes with reuse of excess street area, creative use of parking lanes, and outdoor restaurant seating; and (5) improved ecological performance of streets and streetscape greening with incorporation of stormwater management techniques and urban forest maintenance. It is anticipated that the Plan-proposed pedestrian realm improvements would be included in future site-specific street improvement projects in San Francisco, as part of the City's ongoing streetscape/pedestrian realm improvement efforts. However, the Better Streets Plan itself is a program-level policy document and does not identify site-specific projects in the City.

If you would like a copy of the Preliminary Mitigated Negative Declaration or have question concerning environmental review of the proposed project, contact the Planning Department staff contact listed above.
Within 20 calendar days following publication of the Preliminary Mitigated Negative Declaration (i.e., by close of business on **August 17, 2010** any person may:

1) Review the Preliminary Mitigated Negative Declaration as an informational item and take no action.
2) Make recommendations for amending the text of the document. The text of the Preliminary Mitigated Negative Declaration may be amended to clarify or correct statements and/or expanded to include additional relevant issues or cover issues in greater depth. One may recommend amending the text without the appeal described below. -OR-
3) Appeal the determination of no significant effect on the environment to the Planning Commission in a letter which specifies the grounds for such appeal, accompanied by a check for $500 payable to the San Francisco Planning Department.[1] An appeal requires the Planning Commission to determine whether or not an Environmental Impact Report must be prepared based upon whether or not the proposed project could cause a substantial adverse change in the environment. Send the appeal letter to the Planning Department, Attention: Bill Wycko, 1650 Mission Street, Suite 400, San Francisco, CA 94103. **The letter must be accompanied by a check in the amount of $500.00 payable to the San Francisco Planning Department, and must be received by 5:00 p.m. on August 17, 2010** The appeal letter and check may also be presented in person at the Planning Information Counter on the first floor at 1660 Mission Street, San Francisco.

In the absence of an appeal, the Mitigated Negative Declaration shall be made final, subject to necessary modifications, after 20 days from the date of publication of the Preliminary Mitigated Negative Declaration.

[1] Upon review by the Planning Department, the appeal fee may be reimbursed for neighborhood organizations that have been in existence for a minimum of 24 months.

SAN FRANCISCO
PLANNING DEPARTMENT

Preliminary Mitigated Negative Declaration

1650 Mission St.
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FINDING:

This project could not have a significant effect on the environment. This finding is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15064 (Determining Significant Effect), 15065 (Mandatory Findings of Significance), and 15070 (Decision to prepare a Negative Declaration), and the following reasons as documented in the Initial Evaluation (Initial Study) for the project, which is attached.

Mitigation measures are included in this project to avoid potentially significant effects. See pp. 169-174.

cc: Distribution List
Master Decision File
Sue Hestor

INITIAL STUDY
SAN FRANCISCO BETTER STREETS PLAN
PLANNING DEPARTMENT CASE NO. 2007.1238E

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GLOSSARY

Bioretention: A soil and plan-based retention practice that captures and biologically degrades pollutants as water infiltrates through subsurface layers containg microbes that treat pollutants. Treated runoof is then slowly infiltrated and recharges the groundwater.

Bollard: Short post or vertical element designed to separate or buffer pedestrians from vehicle areas.

Infiltration Boardwalk; Area of infiltration in the sidewalk that is covered with durable surface material to serve as clear pedestrian throughways.

Bulb-out: See **curb extension**.

Bus bulb: Curb extension housing a transit stop to allow transit vehicles to board without pulling in and out of traffic.

Channels and runnels: Concrete or stone lined pathway used to convey rainwater runoff along the surface to other stormwater control measures or the city collection system.

Civic boulevard: A street with significant design treatment that relates to the overall city pattern.

Chicane: A traffic calming measure that slows traffic by visually narrowing the roadway and causing vehicles to laterally shift from side to side.

Corner bulb, corner bulb-out: Curb extension at an intersection.

Crosswalk: Designated location for pedestrians to legally cross from one side of a roadway to the other; may be marked or unmarked.

Curb extension: Location where the sidewalk edge is extended from the prevailing curb line into the roadway at sidewalk grade, effectively increasing pedestrian space. Also called a bulb-out.

Curb radius: Sharpness of the curb edge as the sidewalk turns a corner.

Extended bulb-out: Curb extension that continues significantly beyond the typical corner area, to allow space for landscaping or public use.

Flexible parking zone: Parking lane that is used temporarily for other uses such as café or public sitting.

Green alley: An alley with substantial sidewalk landscaping.

Green connector: A street designed to significantly calm and/or divert traffic, prioritize pedestrian and bicycle travel, and connect to larger open spaces.

Green gutter: A narrow landscape system in the roadway adjacent to the curb to capture and slow stormwater flow.

Infiltration: The process by which water penetrates into soil from the ground surface.

Infiltration trench: Shallow subsurface linear stormwater facilities that provide on-site stormwater retention by collecting and recharging stormwater runoof into the ground.

Living alley: An alleyway designed to prioritize the entire right-of-way for pedestrian and public space use while retaining limited local vehicular circulation. Living alleys are limited to alleys (generally <40' wide).

Living street: Are treatments applied to streets' excess right-of-way (e.g. triangular plaza spaces) for public space use.

Median: The portion of the roadway separating opposing directions of the traveled way, or local lanes from through travel lanes. Medians are generally linear and continuous through a block, and may be depressed, raised, or flush with the road surface.

Median extension: An extension of an existing median towards an intersection along the axis of the existing median (the median is lengthened, rather than widened into the adjacent travel lanes.)

Median island: An area between traffic lanes used for control of traffic movements; differentiated from medians by being generally not linear or continuous throughout the block.

Mid-block crosswalk: Marked crosswalk at a mid-block (non-intersection) location.

Mixed-use street: A street that accommodates all modes of travel with particular emphasis on supporting pedestrian, bicycle and transit movements.

Multi-use path: Pathway that may be used for a variety of non-motorized, recreational uses, including walking, jogging, biking, and the like.

Paseo: A right-of-way closed to motorized vehicles, either permanently or at specific times of the day.

Permeable paving: Paving material that provides pervious surface for stormwater to drain to sub-surface materials. May infiltrate to soil and groundwater or provide an underdrain where infiltration is not possible.

Pedestrian signals: Traffic signals specifically aimed at directing pedestrian movement, such as 'walk/don't walk' or the international pedestrian symbol signal (red hand, walking man).

Pork chops: Excess paved areas where roadways come together at odd angles.

Rain garden: Landscaped detention or bio-retention features in a street designed to provide initial treatment of stormwater runoff.

Raised crosswalk or intersection: Area where the level of the crosswalk or intersection is raised to the sidewalk grade.

Road diet: Reduction of travel lanes.

Runoff: Water from rainfall that flows over the land surface that is not absorbed into the ground.

Right turn/bus queue jump lanes: Right-turn-only with physical configuration and signage that allow transit vehicles to use the lane for travelling forward. A transit vehicle using the lane to go forward can thus "jump" ahead of non-transit vehicles that may be queuing at the intersection in a non-turning lane.

Shared street[1]: Public right-of-way that is designed as a single surface with no grade differentiation between street and sidewalk areas, and where roadway space is shared between pedestrians and slow-moving vehicles.

Stormwater treatment planters: See **rain garden**

Swales: Long narrow landscaped depressions primarily used to collect and convey stormwater and improve water quality.

Thumbnail: See **median extension**

Traffic calming: Practice of designing streets to encourage vehicles to proceed slowly through neighborhoods, by the use of visual or actual roadway narrowing, horizontal or vertical shifts in the roadway, or other features.

Traffic calming elements: Physical improvements to the roadway designed to encourage vehicles to proceed slowly through neighborhoods.

Traffic circle: Generally circular raised areas in the center of a standard intersection that provide space for landscaping, and slow traffic by visually shortening the roadway and forcing vehicles to slow to go around them.

Vegetated buffer strip: Sloping planted areas designed to treat and infiltrate sheet flow from adjacent impervious surfaces.

Vegetated gutter: Narrow landscape systems along street frontages that capture and slow stormwater flow.

[1] The BSP includes guidelines for shared public ways to address concerns for differentiation of a 'pedestrian-only zone' from a 'shared roadway zone' such that there is a pedestrian-only space; guidelines also address concerns for people with visual impairments, such as paving differentiation between the shared and pedestrian-only zones. Per the BSP, shared public ways would be implemented on low-traffic streets without transit, except at 'transit malls' where transit right-of-way would be clearly delineated.

INITIAL STUDY
Case No. 2007.1238E - Better Streets Plan

A. PROJECT DESCRIPTION

A-1. Introduction

The Better Streets Plan ("Proposed Project") presents a vision for improving San Francisco's pedestrian environment in the future. The Plan would involve the adoption of a set of citywide streetscape and pedestrian policies and guidelines[2] to help accomplish this vision. The Proposed Project seeks to balance the needs of all City street users. Accordingly, the Proposed Project identifies goals, objectives, policies and design guidelines, as well as future strategies to improve the pedestrian environment in San Francisco. For purposes of the project, the pedestrian environment is generally defined as areas of the street where people walk, shop, sit, play, or interact. The pedestrian areas mainly include sidewalks and crosswalks, but in some instances also include portions of the roadway.[3] The Proposed Project however does not focus on any particular roadway or section of roadway in the City. Nor does it focus on the reconfiguration of vehicular travel lanes of City roadways.

The Planning Department, San Francisco Municipal Transportation Agency (SFMTA), Department of Public Works (DPW), and San Francisco Public Utilities Commission (SFPUC) are joint project sponsors of the Proposed Project, on behalf of the City and County of San Francisco.[4] According to the project sponsors, if fully realized, the Proposed Project is anticipated to confer multiple benefits to San Francisco, including promotion of public safety; promotion of the City's transit-first objectives (in particular supporting Muni and walking); reduction of sewer/stormwater overflows into the Bay; enhancement of day-to-day quality of life for San Francisco residents; and retention of families in the City due to increased livability for all street users. If the San Francisco Better Streets Plan were to be adopted, the standard and optional streetscape improvements outlined in the Plan are anticipated to be implemented as part of the City's ongoing and future site-specific streetscape improvement efforts, as well as part of proposed private developments that include streetscape changes. Major project concepts related to envisioned streetscape and pedestrian improvements can be grouped under

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[2] The BSP is a policy document that directs City departments in their plans, programs, and projects. BSP Policies will be implemented over time by various City agencies. The City goes through a public process to determine appropriate streetscape improvements on a case-by-case basis. Additionally, the City implements test pilots of proposed new ideas.

[3] The public right-of-way includes sidewalk, curb, gutter, on-street parking area, roadway or vehicular travel lanes, and medians.

[4] The Plan also involved collaboration with other City agencies, such as the Department of Public Health (DPH), Mayor's Office on Disability (MOD), Mayor's Office on City Greening, and the San Francisco County Transportation Authority (SFCTA). These agencies however are not considered sponsors for this project.

the following categories: (i) pedestrian safety and accessibility features, such as enhanced pedestrian crossings, corner or mid-block curb extensions, pedestrian countdown and accessible pedestrian signals, and traffic calming features; (ii) universal pedestrian-oriented streetscape design with incorporation of street trees, sidewalk planting, streetscape furnishing, street lighting, efficient utility location for unobstructed sidewalks, curb ramps suitable for all users, shared single-surface for small streets/alleys, temporary or permanent street closures to vehicles, and sidewalk/median pocket parks; (iii) improved access to transit using bus bulb-outs and boarding islands; (iv) enhanced usability of streetscapes for social purposes/neighborhood gatherings with the reuse of excess street area, generous curb extensions for seating and landscaping, creative use of parking lanes, and outdoor restaurant seating; and (v) improved ecological performance of streets and streetscape greening with incorporation of stormwater management techniques and urban forest maintenance. Implementation of the above-noted streetscape and pedestrian improvements is dependent upon street characteristics. It is anticipated that the above-mentioned Plan-proposed pedestrian realm improvements would be included in future site-specific street improvement projects in San Francisco, as part of the City's ongoing and future streetscape/pedestrian realm improvement efforts. However, the Better Streets Plan itself is a program-level policy document and does not identify site-specific projects for the City.

A-2 Project History

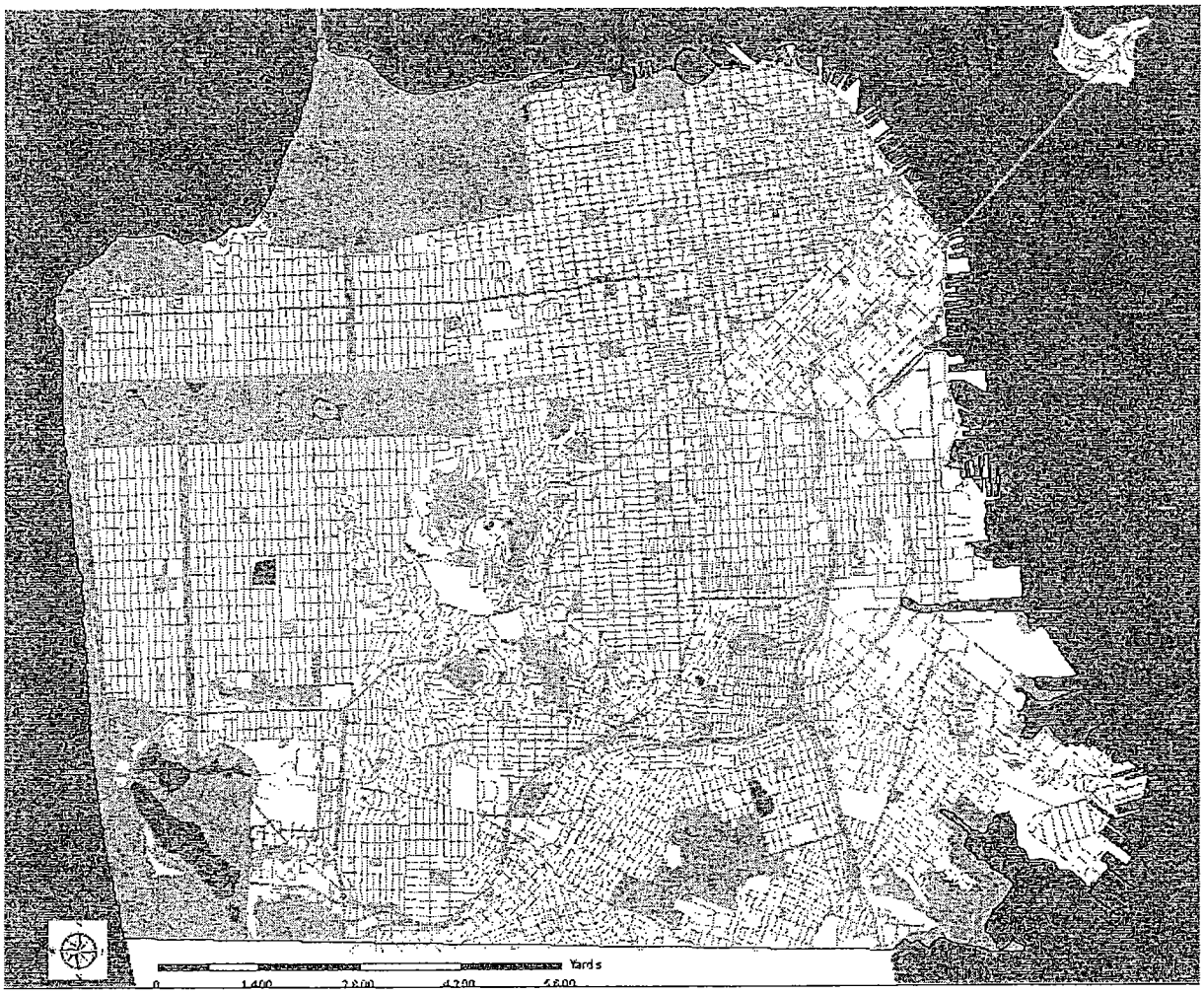
The San Francisco Better Streets Plan is an outgrowth of the Better Streets Policy, which was adopted on February 6, 2006 by the Board of Supervisors and Mayor.[5] According to the Better Streets Policy, City streets are corridors for all types of transportation, walking and transit operations in particular. (See Figure 1: Street Map of San Francisco.) In addition, the Better Streets Policy establishes that City streets are meant to serve more than just transportation needs. The Better Streets Policy requires that City agencies coordinate their activities to promote more coherent street design throughout San Francisco, such that City streets serve a variety of roles, including safe and accessible movement of all travel modes (with an emphasis on pedestrians and transit operations), social and recreational purposes, as well as ecological functions.

The San Francisco Better Streets Plan (Proposed Project) was initiated in Fall 2006. The Proposed Project brought together two separate planning efforts that were simultaneously underway at that time: (1) the Pedestrian Master Plan led by SFMTA; and (2) the Streetscape Master Plan led by the Mayor's Office of Greening.[6] These related efforts were combined to develop the Proposed Project, which has a broader focus of improving various aspects of the pedestrian environment. Development of the

[5] See San Francisco Administrative Code Chapter 98.

[6] The Streetscape Master Plan also involved input of the Planning Department, DPW, and SFPUC.

Figure 1: Street Map of San Francisco



Proposed Project also involved input from other pertinent City agencies, monthly meetings over a two-year period with a 15-member Community Advisory Committee (CAC), as well as a substantial public outreach process. Four rounds of public outreach and notification were conducted and over 75 community meetings were held between April 2007 and June 2008, in order to solicit initial ideas and receive feedback on draft Plan concepts and proposals. The Draft San Francisco Better Streets Plan document was published and distributed for public review in June 2008.

A-3. Objectives of the Project Sponsors

i) Project Vision

The Planning Department, SFMTA, DPW, and SFPUC, on behalf of the City and County of San Francisco, are the joint sponsors for the Proposed Project. The overall objective of the project sponsors is to realize the vision of the Better Streets Plan, which states:

> *The Better Streets Plan will result in a street system designed to promote human needs. It will prioritize the needs of walking, bicycling, transit use, and the use of streets as public spaces for social interaction and community life following San Francisco's General Plan, Transit First Policy, and Better Streets Policy. The Better Streets Plan will result in streets where people walk and spend time out of choice—not just necessity—because streets are memorable, engaging, safe, accessible, healthy, attractive, fun, and convenient. The Better Streets Plan will result in streets that improve pedestrian connections and linkages among the City's nodes, hubs, destinations, transit system, and major land use centers. The Better Streets Plan will result in a green network that enhances the City's long-term ecological functioning and peoples' connection to the natural environment. Finally, the Better Streets Plan will result in improved street-based social opportunities, community life, access, and mobility for all San Franciscans, regardless of cultural identity, income group, neighborhood identity, or mobility level.*

The Better Streets Plan contains a comprehensive set of goals that link to objectives, policies, specific guidelines, and potential future steps in the planning process to accomplish those goals. The policies provide a guiding framework for making decisions about streetscape design and maintenance in the near-term, as well as long-term planning. With respect to the near-term, the Plan establishes priorities for City agencies to help them make immediate decisions about streetscape design, improvements, usage, and maintenance on current proposals. The Plan defines potential steps and recommendations for City agencies for realizing the vision of the Plan;[7] for instance, initiating site-specific streetscape projects in the future, identifying potential funding sources, creating criteria for prioritization of capital projects, supporting the continuation of successful pedestrian programs, streamlining the

[7] Most of these steps are part of the Controller's Office functions.

management/maintenance of streetscape facilities, and identifying appropriate enforcement and education strategies related to the pedestrian environment.

Through the Better Streets Plan process, the project sponsors intend to develop a set of implementation recommendations for delivering streetscape improvements related to realizing the vision of the Plan. Strategies for improving street delivery would include identifying potential funding sources, creating criteria for prioritization of capital projects, streamlining the City's institutional delivery of streetscape improvement projects, maintenance of these streetscape improvements, and identifying appropriate enforcement and education strategies related to the pedestrian environment.

ii) Project Objectives

The central focus of the Plan is to create a pedestrian environment in San Francisco that:

- Gives City neighborhoods a recognizable image, and provides orientation and better spatial understanding of the City;
- Provides opportunities for diverse experiences and encourages users to engage in social and recreational activities;
- Encourages residents, workers, and visitors to walk to and patronize local shopping areas, rather than drive to regional shopping centers;
- Prioritizes the everyday needs of people, and supports human comfort and enjoyment;
- Promotes healthy lifestyles by encouraging pedestrian activity (that is, walking daily to frequent and occasional destinations), thereby minimizing pedestrian injuries and helping decrease major chronic diseases related to vehicular traffic;
- Supports a high level of pedestrian safety and security;
- Facilitates safe, accessible, and convenient connections among major nodes, hubs, destinations, transit centers, and major land use and activity centers;
- Enhances the City's long-term ecological functioning;
- Facilitates street use and access to destinations for all populations, particularly those with visual or mobility impairments; and
- Creates an engaging visual impression, appeals to all human senses (sight, smell and sound), and encourages a sense of ownership and civic pride that is reflected in the City streets' physical appearance and level of activity.

A-4 Project Components

i) Major Concepts

The Proposed Project includes program-level concepts for improvement of San Francisco's pedestrian environment that are intended to be considered as part of the

City's ongoing and future streetscape improvement efforts. (See Figure 2: Typical Pedestrian Environment Diagram.) The Proposed Project does not however identify any site-specific projects.

Major concepts[6] include:

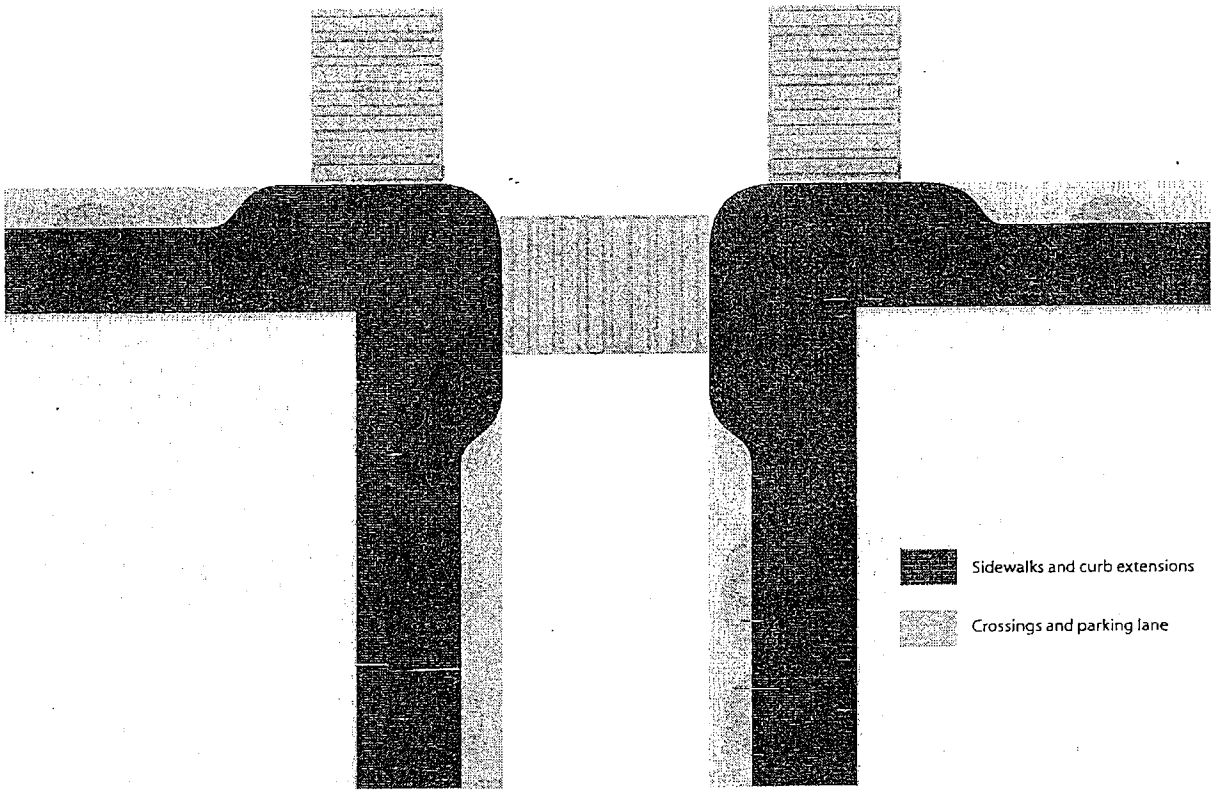
- **Distinctive, unified streetscape design:** Street trees that help define the streetscape rhythm; integrated site furnishings; regular pedestrian-oriented lighting; and minimizing cluttering elements.
- **Space for public life:** Safe, useable public seating for neighborhood gatherings; generous curb extensions for seating and landscaping; reclaiming of excess street space for public use; and space for outdoor café and restaurant seating.
- **Enhanced pedestrian safety:** Safe, convenient pedestrian crossings; curb radii and curb extensions that slow traffic, shorten crossing distance, and enhance visibility; and pedestrian countdown signals and priority signals, such as pedestrian head-start[7] and pedestrian scramble.[8]
- **Improved street ecology:** On-site stormwater management to reduce combined sewer overflows; the use of resource-efficient elements and materials; and design of streets as green corridors and habitat connectors.
- **Universal design:** Generous, unobstructed sidewalks; curb ramps suitable for all users; and accessible pedestrian signals.
- **Integrating pedestrians with transit:** Transit rider amenities at key stops; safe, convenient pedestrian routes to transit; and pedestrian safety/comfort and transit operations features, such as bus bulb-outs and boarding islands.

[6] Descriptions of various street elements begin on page 18.

[7] Pedestrian head-start (leading pedestrian interval): signal timing that gives pedestrians a green light before giving vehicles a green light, allowing pedestrians to be more visible to turning vehicles.

[8] Pedestrian scramble: An exclusive pedestrian signal phase that allows pedestrians to cross any leg of an intersection (including the diagonal) at once, while restricting traffic movements.

Figure 2: Typical Pedestrian Environment Diagram



- **Creative use of parking lanes:** Permanent curb extensions with seating and landscaping; landscape planters in the parking lane; and flexible, temporary use of the parking lane for restaurant seating and other uses.
- **Traffic calming to reduce speeding and enhance pedestrian safety**: Raised crossings and speed tables; landscaped traffic circles; and chicanes.
- **Pedestrian-priority designs:** Small streets and alleys designed as shared, single-surface streets; temporary or permanent street closures to vehicles; and sidewalk and median pocket parks.
- **Extensive greening:** Healthy, well-maintained urban forests; expanded sidewalk planting; and efficient utility location to provide more space for tree planting and other amenities.

ii) Project Policies

The Proposed Project policies are grouped as follows:

1. Create Memorable Streets

Policy 1.1 Create a distinctive, unified streetscape environment for San Francisco that contains commonalities, but can be customized to individual neighborhoods.

Policy 1.2 Provide distinctive design treatment for streets with important citywide functions.

Policy 1.3 Design streets to reflect and strengthen a sense of neighborhood identity.

Policy 1.4 Ensure that streetscape improvements complement and are consistent with significant features that provide a link to the city's past.

2. Support Diverse Public Life

Policy 2.1 Design streets with comfortable spaces for interaction and gathering.

Policy 2.2 Use excess portions of rights-of-way (such as overly wide lanes, unused street space, or spaces created by streets coming together at odd angles) to create landscaped and/or usable areas.

Policy 2.3 Design sidewalks to maximize the amount of pedestrian space and usable open space.

Policy 2.4 Facilitate and encourage residents and businesses to make streetscape improvements (using landscaping or other aesthetic elements) adjacent to their sites that promote street use and activity.

Policy 2.5 Facilitate and encourage temporary community use of street space for public activities, such as street fairs, performances, and farmer's markets.

3. *Create Vibrant Places for Commerce*

Policy 3.1 In commercial districts, facilitate and encourage adjacent businesses to use street space for outdoor seating and merchandise displays, while maintaining adequate pedestrian access.

Policy 3.2 In commercial districts, balance the need for short-term parking for shoppers and loading for businesses with the need for pedestrian-oriented design.

4. *Promote Human Use and Comfort*

Policy 4.1 Create streetscapes that have a variety of seating opportunities to accommodate a range of users.

Policy 4.2 Design streets with comfortable buffer spaces or sense of separation from passing traffic.

Policy 4.3 Design streets with a comfortable micro-climate for walking, sitting, or interacting.

Policy 4.4 Make residential and small streets more tranquil and relatively free of noise and visual over-stimulation.

Policy 4.5 Enable opportunities to create shared spaces on small streets that prioritize pedestrians, but accommodate limited vehicles at slow speeds.

Policy 4.6 Minimize the impact of driveway curb-cuts on pedestrian through-travel and the ability to provide streetscape amenities.

5. *Promote Healthy Lifestyles*

Policy 5.1 Enable opportunities to create active recreational spaces on streets, such as paths or pocket parks.

Policy 5.2 Emphasize improvements to streets that link to schools, parks, recreation centers, and other community uses

Policy 5.3 Develop and continue programs and policies that encourage the use of pedestrian facilities for physical activity

Policy 5.4 Use quantitative methods to measure pedestrian health, safety, and walking quality

Policy 5.5 Design streets to have generous pedestrian facilities and amenities that encourage safe walking as a travel choice, and encourage alternatives to driving alone, in order to improve ambient air quality

Policy 5.6 Design streets that encourage activity, social interaction and eyes on the street, in order to promote social cohesion and to reduce social isolation and street-based violence

6. Promote Safe Streets

Policy 6.1 Design pedestrian crossings to maximize pedestrian safety and comfort.

Policy 6.2 Employ traffic control devices to maximize pedestrian safety and comfort.

Policy 6.3 Design intersections so that their layout (geometry) and traffic operations maximize pedestrian safety and comfort.

Policy 6.4 Enforce traffic and parking violations to promote pedestrian safety, comfort and accessibility.

Policy 6.5 Conduct education and awareness activities to promote pedestrian safety.

Policy 6.6 Prioritize pedestrian safety in school zones.

Policy 6.7 Design streets to maximize personal safety/security.[11]

Policy 6.8 Design streets to calm traffic and reduce speeding.

7. Provide Convenient Connections

Policy 7.1 Provide generous unobstructed sidewalks for all streets.[12]

Policy 7.2 Increase connectivity and access to reduce barriers to pedestrian travel.

Policy 7.3 Design transit walking areas for comfort, accessibility and ease of use.

Policy 7.4 Improve streets that link to major transit nodes and transfer points.

Policy 7.5 Design streetscape and pedestrian facilities to support transit operations.

Policy 7.6 Create convenient, safe pedestrian conditions at transit waiting areas and transfer points.

8. Promote Ecologically Sustainable Streets

Policy 8.1 Maximize opportunities for on-site stormwater retention and infiltration within streetscapes.

Policy 8.2 Use sustainable materials in streetscape designs, taking into account the life-cycle energy costs of such materials

Policy 8.3 Minimize energy use in street lighting and other energy-requiring streetscape elements

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[11] The BSP includes guidelines for shared public ways to address concerns for differentiation of a 'pedestrian-only zone' from a 'shared roadway zone' such that there is a pedestrian-only space; guidelines also address concerns for people with visual impairments, such as paving differentiation between the shared and pedestrian-only zones. Per the BSP, shared public ways would be implemented on low-traffic streets without transit, except at 'transit malls' where transit right-of-way would be clearly delineated.

[12] The guidelines for shared public ways are intended to create generous, safe pedestrian space that expands the pedestrian realm beyond a standard sidewalk, particularly on alleys and small streets where there is not sufficient right-of-way to have a sufficient sidewalk.

Policy 8.4 Use streetscape landscaping to increase the ecological value of public streets for people and wildlife

Policy 8.5 Plantings in the public right-of-way should emphasize water conservation.

9. Promote Accessible Streets

Policy 9.1 Where appropriate, encourage streetscape and pedestrian projects to follow universal design principles.

Policy 9.2 Ensure that streetscape and pedestrian projects meet legally-mandated accessibility requirements for public rights-of-way

Policy 9.3 Maintain accessibility around construction zones per city standards

10. Encourage Attractive, Inviting, and Well-Cared For Streets

Policy 10.1 Maximize opportunities for street trees and other plantings.

Policy 10.2 Use urban forest elements to impart design definition and neighborhood identity.

Policy 10.3 Provide an orderly and efficient streetscape environment that minimizes visual clutter.

Policy 10.4 Ensure consistency and continuity in the design of streetscape elements.

Policy 10.5 Ensure adequate light levels and quality for pedestrians and other sidewalk users; minimize light trespass and glare to adjacent buildings.

Policy 10.6 Use high quality, durable materials in the design of streetscapes.

Policy 10.7 Include and integrate public art into street improvement projects.

Policy 10.8 Balance desired design treatments with the ability to provide adequate maintenance.

iii) Project Framework: Categorization of Street and Sidewalk Areas

The Proposed Project categorizes streets into different typologies for the purposes of streetscape design and improvements. (See Table 1: List of Proposed Street Types.) The proposed street types are based on the land use characteristics of its location; that is, whether a given street is in a residential, commercial, industrial or mixed-use area of the City, based on the City's existing Zoning Maps. They are also based on the kind of transportation role a given street would play; for instance, either as a downtown throughway, or neighborhood street, based on existing maps in the Transportation Element of the *San Francisco General Plan*. The Proposed Project also includes special street types, including parkways, park edge streets, boulevards and ceremonial (civic) streets, as well as small street types such as alleys, shared public ways and pedestrian-only streets.

Table 1: List of Proposed Street Types

Category	Street Type13	Examples
Commercial	Downtown Commercial	Grant, Kearny, Geary Boulevard
	Commercial Throughway	Van Ness, Divisadero
	Neighborhood Commercial	Clement, Taraval
Residential	Downtown Residential	Beale (in Rincon Hill), Brannan (in South Beach)
	Residential Throughway	Guerrero, California
	Neighborhood Residential	Noe, 21st Ave.
Other	Industrial	Evans, Loomis
	Mixed-Use	Folsom, Harrison (in SoMa)
Special	Parkway	Dolores, Park Presidio
	Park Edge	Lincoln, Fulton
	Boulevard	Octavia
	Ceremonial (Civic)	Market
Small	Alley	Jessie, Linden
	Shared Public Way	Hotaling, Trinity
	Paseo	Ecker, Annie

The street types proposed under the project are not intended to replace functional transportation street classifications, but rather they are meant to help direct decisions about the pedestrian environment and streetscape design. For each proposed street type, the Proposed Project lists standard improvements and optional or case-by-case improvements that could be applicable to that particular street type. This is described in more detail below under the Proposed Streetscape Improvements discussion. The Proposed Project also provides a framework for locating the proposed streetscape improvements within a right-of-way, which would be applicable to all street types.

As shown in Figure 3: Sidewalk Zones, City sidewalks are divided into five zones for purposes of this project:

- **Frontage Zone:** The transitional area adjacent to the property line, located between the building/property and the sidewalk/public space.
- **Throughway Zone:** The portion of the sidewalk used for unobstructed pedestrian movement along the street.
- **Furnishings Zone:** The portion of the sidewalk used for street trees, landscaping, transit stops, street lights, and streetscape furnishings.
- **Edge Zone:** The sidewalk area adjacent to the curb used by people getting in and out of vehicles.

[13] Street type is determined by zoning district and general plan designation. Street types vary throughout a neighborhood.

- **Extension Zone:** The area where pedestrian space may be extended into the parking lane; for example, with the use of landscaped bulb outs and other such features.

The Proposed Project provides direction regarding appropriate placement of typical streetscape elements along the length of a block. For example, street trees should be used to define the rhythm of the streetscape and be placed at regular intervals, interspersed with street lighting and site furnishings. The Proposed Project also indicates special areas of the pedestrian realm where streetscape elements need to be limited or sited differently; for instance, on street corners, transit stops, disabled parking/passenger loading zones, and driveways. (See Figure 4: Special Sidewalk Zones.) It also discusses appropriate design treatments for non right-angle intersections.

In addition, the Proposed Project provides direction regarding appropriate sidewalk widths by proposed street type; that is, 'minimum' and 'recommended' sidewalk widths are indicated for each street type. Existing sidewalks below minimum width would be considered deficient, and should be prioritized for widening as opportunity, funding, and conditions allow. (See Table 2A: Sidewalk Widths by Street Type.) Recommended widths would be wide enough to allow for all desired streetscape amenities. According to project guidelines, sidewalks on new streets must be built to recommended widths. (See Table 2A: Sidewalk Widths by Street Type.) Sidewalk width on new streets could be decreased by the appropriate width of the frontage zone (generally two feet) where consistent setbacks are provided; this would be considered on a case-by-case basis. The Better Street Plan also specifies guidelines for sidewalk zones. (See Table 2B: Guidelines for Sidewalk Zones.)

Figure 3: Sidewalk Zones

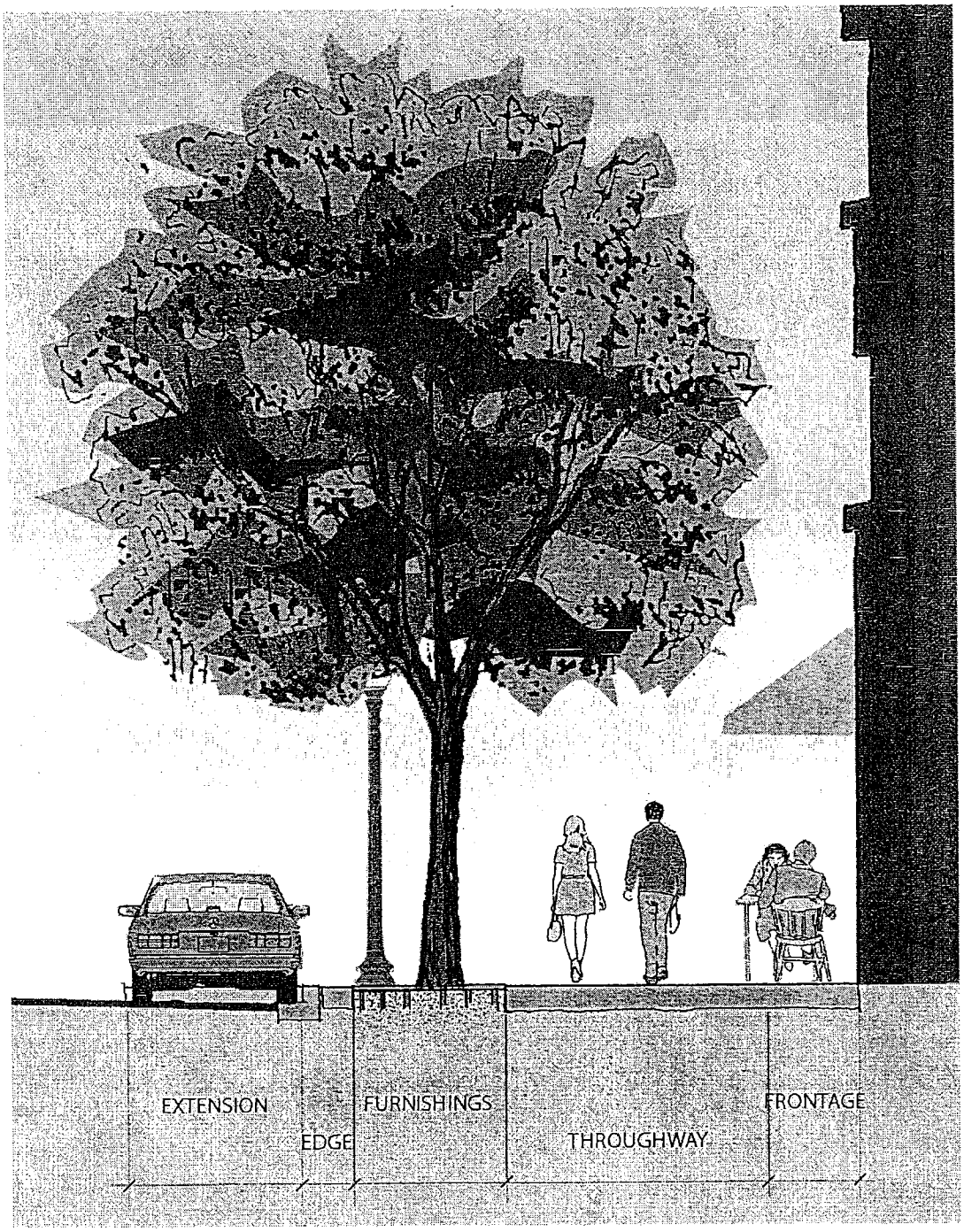


Figure 4: Special Sidewalk Zones

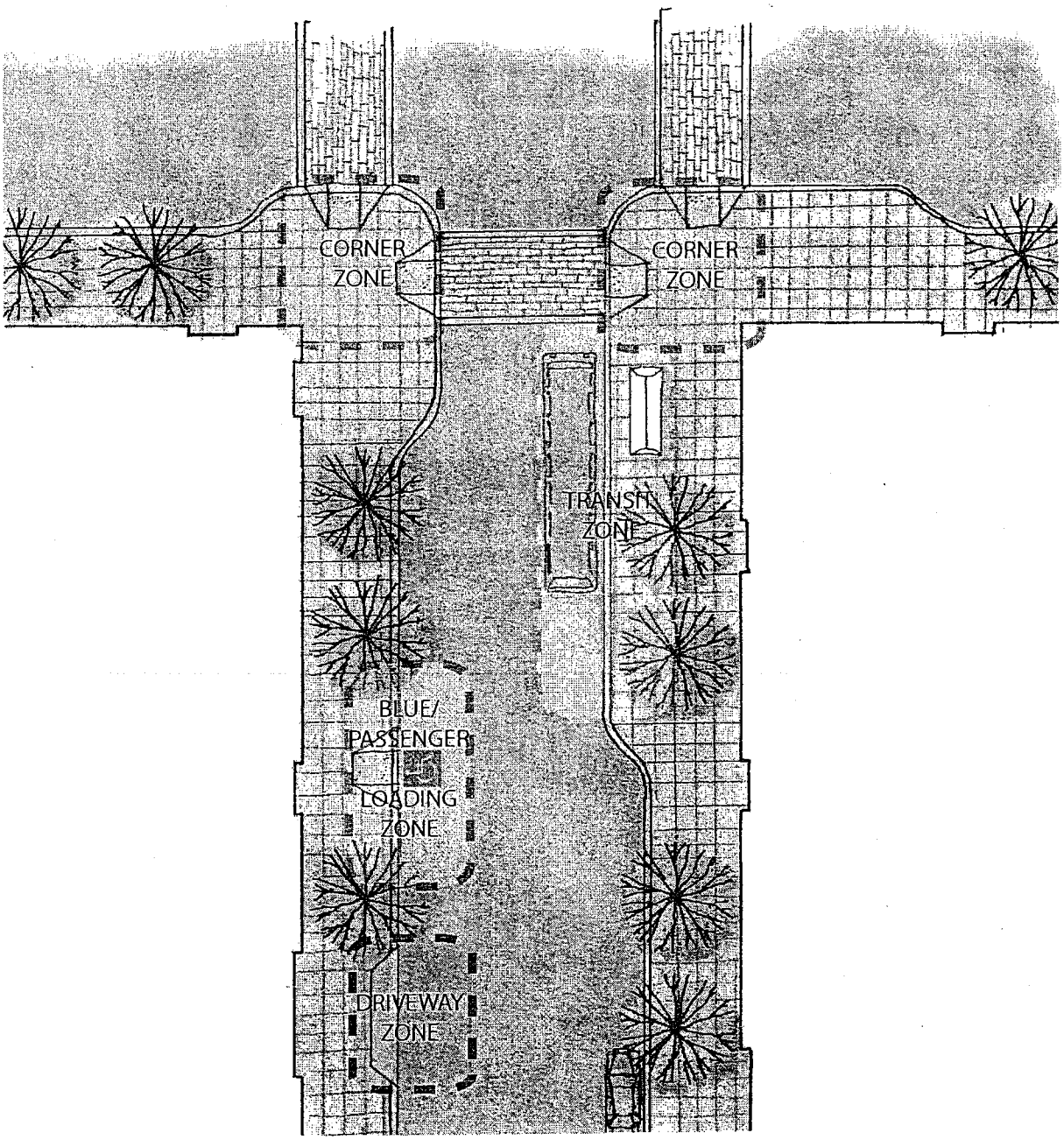


Table 2A: Sidewalk Widths by Street Type

	Street Type	Minimum Width	Recommended Width**
Commercial	Downtown commercial	see BSP	see BSP
	Commercial throughway	12'	15'
	Neighborhood commercial	12'	15'
Residential	Downtown residential	12'	15'
	Residential throughway	12'	15'
	Neighborhood residential	10'	12'
Industrial/Mixed-Use	Industrial	8'	10'
	Mixed-use	12'	15'
Special	Parkway	12'	17'
	Park edge (if multi-use path)	12'	25'
	Multi-way boulevard	12'	15'
	Ceremonial	varies	varies
Small	Alley	6'	9'
	Shared Public Way	n/a	n/a
	Paseo	varies	varies

* Dimensions do not include the width of the curb (generally 6").

** May be greater.

Table 2B: Guidelines for Sidewalk Zones

ZONE	EXTENSION	EDGE	FURNISHINGS	THROUGHWAY	FRONTAGE
Width*	• Width of parking lane	• 0' (where no parking lane, or no continuous planting) • 1' (where parking lane and continuous planting)	• 3' (where trees or landscaping are provided) • 4' (+ 1' for every 5 mph increment over 25 mph) • Wider (as needed for site furnishings/public space)	• **4' minimum per ADA** • 6' (except for alleys, neighborhood residential, and industrial streets) • Wider (to accommodate expected pedestrian volumes)	• 18" • 2' (commercial and mixed-use streets) • Less (where continuous setback is provided)
Use	• All site furnishings, trees and landscaping, street lighting, and utilities • Flexible use of parking lane	• Walkable surface • Non-continuous vertical elements such as light poles, parking meters, etc. • Street trees and basins, with non-continuous planting	•All site furnishings, trees and landscaping, street lighting, and utilities	• Clear of obstacles; accessible surface • Overhanging elements (>80") • Tree grates (not preferred)	• Displays, cafe seating • Furnishings aligned with frontage • Planters (surface or above-ground) • Overhanging elements

* Dimensions do not include the width of the curb (generally 6").

iv) Proposed Streetscape Improvements

The project includes a number of proposed streetscape improvements that are intended to enhance the pedestrian environment. Implementation of these streetscape improvements would vary by street type (street types summarized in Table 2A on pp. **16** above, and Table 5A: Standard Improvements by Street Type and Table 5b: Case-By-Case Improvements by Street Type on pp. 32-34 below). In addition, improvements are grouped into 'Standard Improvements' and 'Optional or Case-by-Case Improvements.' If the Better Streets Plan were to be adopted, standard improvements for a particular street type would typically be required to be included in any future site-specific streetscape project or proposed development (that includes streetscape improvements) on any street within that particular street typology. Optional or case-by-case streetscape improvements recommended for particular street types would not be mandatory for future site-specific streetscape projects or proposed developments in that street type, but should be considered for implementation as budgets, physical conditions, and/or neighborhood preferences permit.

The proposed streetscape improvements are expected to occur in the near-term to long-term future, as site-specific streetscape projects or proposed developments (that include streetscape improvements) occur on City streets.

The City already implements several of the Plan-proposed streetscape improvements as part of its on-going streetscape improvement efforts; therefore, they are not entirely new to the City. However, the Better Streets Plan tries to establish clear guidelines for their applicability and design with respect to street type. The proposed streetscape improvements include the following:

Standard Improvements:

Standard Improvement SI-1 (Better Streets Plan [BSP] page 121): Accessible curb ramps are expected to facilitate access to sidewalks at crossings by lowering the level of the curb to that of the roadway. This improvement would be appropriate on all street types. (See Figure 5: Examples of Proposed Standard Improvements.)

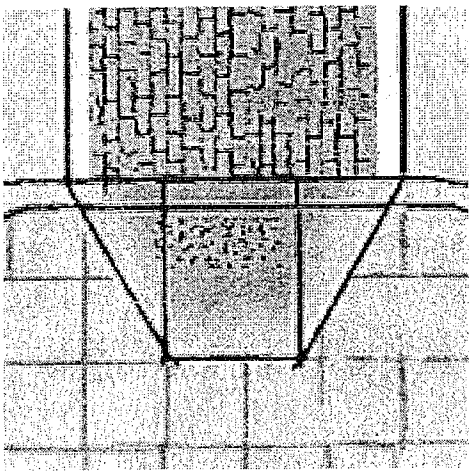
Standard Improvement SI-2 (BSP page 113): Marked crosswalks[9] may be considered at most crossings, according to project guidelines. High-visibility crosswalks would be appropriate in certain circumstances, such as mid-block crossing locations or uncontrolled intersections (See Case-by-Case Improvement CBC-1: High-visibility Crosswalks, page 23).

Standard Improvement SI-3 (BSP page 115): Pedestrian Signals Timing would include pedestrian countdowns signals, accessible pedestrian signals, and signal timing strategies that benefit or prioritize pedestrian movement. Such timing strategies could include leading pedestrian intervals, which give pedestrians a WALK signal several seconds before giving vehicles a green light, or pedestrian scrambles, where vehicles on all approaches must stop and pedestrians may cross any leg of an intersection (including the diagonal). These strategies would be appropriate on all street types where traffic signals exist.

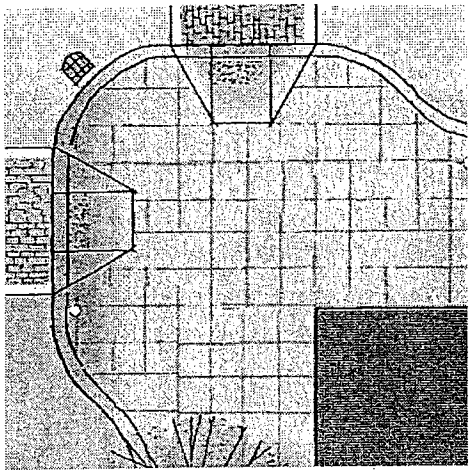
Standard Improvement SI-4 (BSP page 118): Curb radius guidelines are expected to confer a substantial benefit related to pedestrian safety and quality. Under the Proposed Project, curb radii on all streets would be designed to maximize pedestrian space and shorten crossing distance, while allowing for necessary vehicle turn

[9] Whether marked or unmarked, crosswalks exist by law at all intersections that meet at approximately right angles, unless specifically prohibited.

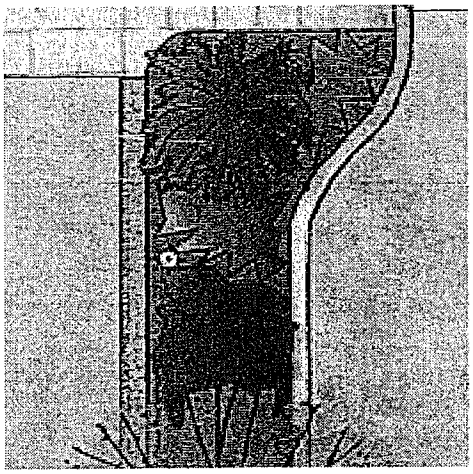
Figure 5: Examples of Proposed Standard Improvements



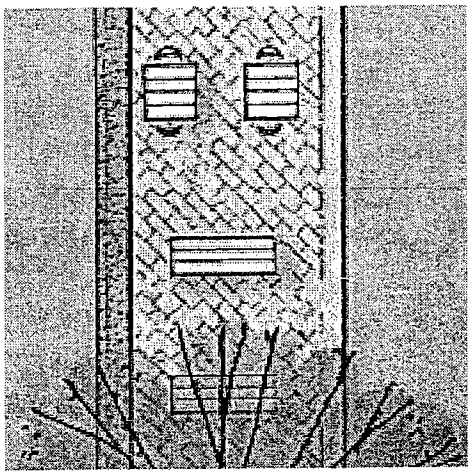
Curb Ramp



Corner Curb Extension



Sidewalk Planter



Site Furnishings

movements, including appropriate turn movements by emergency vehicles, transit vehicles, and freight vehicles. This improvement would be appropriate at all intersections, according to project guidelines.

Standard Improvement SI-5 (BSP page 127): Corner curb extensions or bulb-outs would extend the sidewalk space into the parking lane at intersections. These would narrow the vehicular roadway and provide additional pedestrian space by eliminating parking spaces, while allowing for necessary vehicle turn movements. Corner curb extensions would not reduce roadway capacity. Corner curb extensions would be appropriate as a standard improvement for most street types. (See Figure 5, page 51)

Standard Improvement SI-6 (BSP page 176): Street trees would help define the character and rhythm of the streetscape and are anticipated to provide economic and ecological benefits. Street trees would be appropriate as a standard improvement for all street types.

Standard Improvement SI-7 (BSP page 179): Tree basin furnishings, such as tree grates,[15] tree guards, and railings are considered to be a functional as well as an aesthetic element of streetscape design; however, they would be costly to install and maintain. These would be appropriate on more heavily-traveled street types which have a defined streetscape plan, such as for certain segments of Downtown Commercial or Ceremonial streets.

Standard Improvement SI-8 (BSP page 181): Sidewalk planters are expected to add landscaped, permeable areas to sidewalks, such that these areas extend beyond the typical tree basin. They could be combined with stormwater facilities so as to contribute to ecological benefits. Sidewalk planters would be appropriate as a standard improvement on most street types. (See Figure 5, page 51)

Standard Improvement SI-9 (BSP page 187): Stormwater management tools would encompass a range of strategies to detain, retain, infiltrate and/or convey stormwater, reduce flooding, and improve water quality. Specific stormwater management tools include permeable paving, bioretention facilities swales, channels and runnels, infiltration and soakage trenches, infiltration boardwalks, vegetated buffer strips, and vegetated gutters. (See Table 3: Best Fit for Stormwater Facilities by Street Type on page 21, and Table 4: Stormwater Facilities by Location in the Right-of-Way on page 22)

[15] Per the BSP, tree grates are generally discouraged for tree health and maintenance reasons. In some locations, they are necessary due to high levels of pedestrian traffic.

Table 3: Best Fit for Stormwater Facilities by Street Type

	Street Type	Permeable Paving	Bioretention Facilities	Swales	Infiltration Boardwalks	Infiltration and Soakage Trench	Channels and Runnels	Vegetated Buffer Strip	Vegetated Gutter
Commercial	Downtown Commercial	x				x	x		
	Commercial Throughway	x	x		x	x	x		
	Neighborhood Commercial	x	x		x	x	x		
Residential	Downtown Residential	x	x	x		x	x		x
	Residential Throughway	x	x	x		x	x		x
	Neighborhood Residential	x	x	x		x	x		x
Industrial and Mixed-Use	Industrial	x	x	x		x	x		
	Urban Mixed-Use	x	x		x	x	x		
Special	Parkway	x	x	x		x	x	x	x
	Park Edge	x	x	x		x	x	x	x
	Multi-Way Boulevard	x	x	x		x	x	x	x
	Ceremonial (Civic)	x				x	x		
Small	Alley	x	x			x	x		
	Shared Public Way	x	x			x	x		
	Paseo	x	x		x	x	x		

X = treatment is appropriate

- = treatment is not appropriate

Table 4: Stormwater Facilities by Location in the Right-of-Way

Placement	Permeable Paving	Bioretention Facilities	Swales	Infiltration Boardwalks	Infiltration and Soakage Trench	Channels and Runnels	Vegetated Buffer Strip	Vegetated Gutter
Private Driveways or Yards	x	x			x			
Sidewalk	x	x		x	x	x		
Curb Extension	x	x		x	x	x		
Parking Lane/Gutter	x		x		x	x - covered		x
Bike Lane								
Through Lane								
Median	x	x*	x*		x*	x	x	
Traffic Circles	x	x*			x*			

* Site conditions such as street grading may require special engineering

X = treatment is appropriate

- = treatment is not appropriate

Standard Improvement SI-10 (BSP page 205): Street lighting would include pedestrian and roadway lighting to enhance safety, security, pedestrian comfort, and environmental performance, and would be appropriate on most street types. Historic street light standards such as the Path of Gold (Market Street) lights and Golden Triangle (Mason/Powell) lights, would be preserved, and restored according to the Secretary of the Interior's Standards as funding allows.

Standard Improvement SI-11 (BSP page 211): Special paving would include a range of sidewalk/roadway paving treatments and is intended to give character to the area it is applied in. Special paving could include permeable paving, and this would have associated stormwater management and hydrology/water quality benefits. Special paving would be appropriate as a standard treatment in certain areas of the sidewalk and roadway on many street types, particularly those with a special commercial and civic character, or in the entire right-of-way on small streets such as alleys.

Standard Improvement SI-12 (BSP page 217): Site furnishings would include functional and aesthetic streetscape elements such as benches and seating, bicycle racks, bollards, flower stands, kiosks, newsracks, parking meters, public art, sidewalk restrooms, traffic and parking signs, trash receptacles, wayfinding signage and gateways, utilities, subway entrances, and other miscellaneous furnishings. Site furnishings would also include temporary public use of the pedestrian realm, such as outdoor café and restaurant seating, merchandise displays, and food vendors. In the event that streetscape improvements are proposed on historically significant streets, interpretative signage, plaques, or markers should be installed to convey their significance. Site furnishings are recommended to be designed and located to minimize visual clutter. They would be appropriate on most street types. (See Figure 5, page 51.)

Optional or Case-by-Case Improvements

Case-by-Case Improvement CBC-1 (BSP page 114): High-visibility crosswalks would employ additional striping to make pedestrian crossings more visible, primarily at locations where crosswalks may be unexpected such as at mid-block crossings or uncontrolled intersections. High-visibility crosswalks should be considered on a case-by-case basis, under certain conditions. These would be appropriate on most street types under certain conditions.

Case-by-Case Improvement CBC-2 (BSP page 115): Special crosswalk treatments would enhance visibility and safety at crosswalks, similar to High-visibility crosswalks. Special crosswalk treatments include a range of facilities such as pedestrian warning signs, advance stop and yield signs, parking restrictions at crosswalks, special intersection paving, in-roadway flashing lights, and flashing beacons. These would be appropriate on most street types under certain conditions.

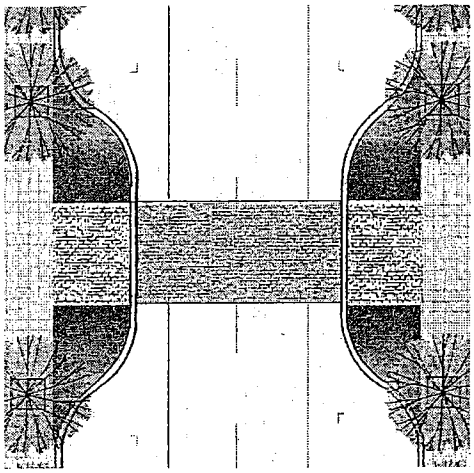
Case-by-Case Improvement CBC-3 (BSP page 119): Vehicle turning movements at crosswalks: The Plan provides guidance on right turn on red and multiple-turn lane restrictions. The proposed improvements to vehicle turning movements at crosswalks would be appropriate on most street types under certain conditions. For intersections where right-turning volume currently exceeds 300 vehicles per hour, additional site-specific environmental review would be required prior to implementation of a prohibition of right turn on red. In addition, a proposed reduction in the number of turn lanes would require further site-specific environmental analysis.

Case-by-Case Improvement CBC-4 (BSP page 120): Removal or reduction of permanent crosswalk closures: Crosswalk closures force pedestrians to travel out of their way to cross the street. According to the Plan, no new crosswalk closures should be instituted, and existing closed crosswalks should be evaluated for re-opening. This improvement should be considered on a case-by-case basis, under certain conditions. Prior to the reopening of a closed crosswalk, site-specific environmental analysis would be required.

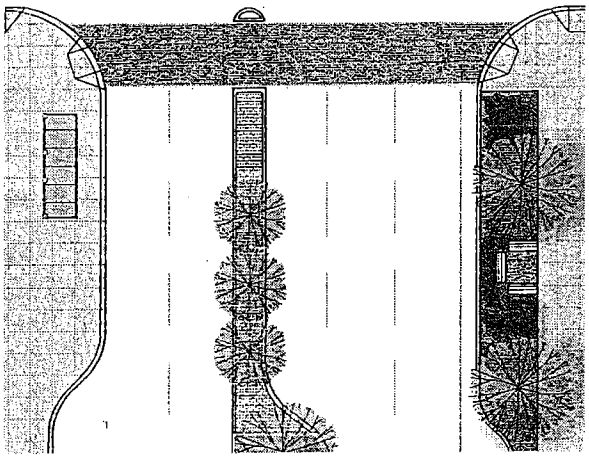
Case-by-Case Improvement CBC-5 (BSP page 114): Mid-block crosswalks would allow pedestrians to legally cross the street in the middle of the block. Under the Plan, they are recommended to be marked with supplementary treatments to enhance visibility. (See Figure 6: Examples of Proposed Case-by-Case Additions.) This improvement should be considered on a case-by-case basis, under certain conditions. On a one-way street with coordinated traffic signals, a signalized mid-block crossing would be appropriate. On lower volume streets (fewer than 500 vehicles per hour in either direction), a signalized or unsignalized crosswalk would be appropriate. For locations with greater than 500 vehicles per hour on an approach, subsequent site-specific environmental analysis would be required.

Case-by-Case Improvement CBC-6 (BSP page 117): Raised crosswalks would continue the level of sidewalks across intersections, prioritizing pedestrians and forcing vehicles to slow. Raised crosswalks would be appropriate on some street types, on a case-by-case basis, particularly where major and minor streets intersect.

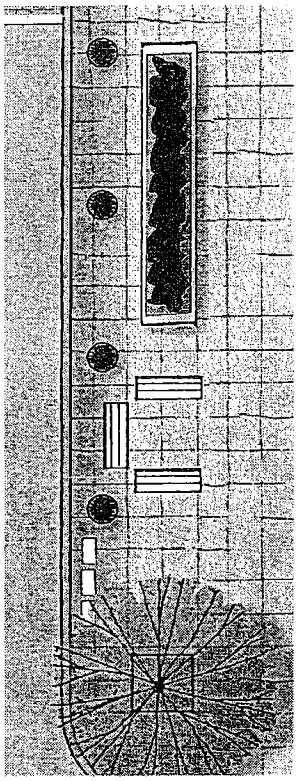
Figure 6: Examples of Proposed Case-by-Case Additions



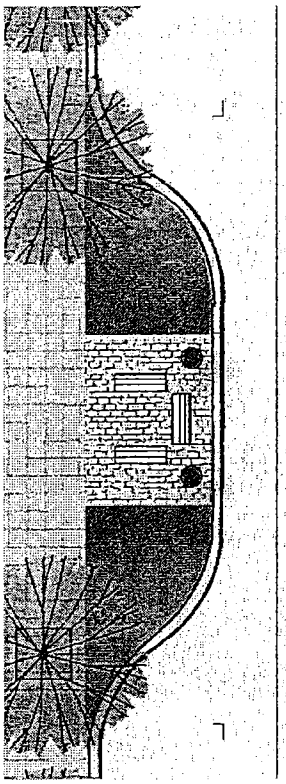
Mid-Block Crosswalk



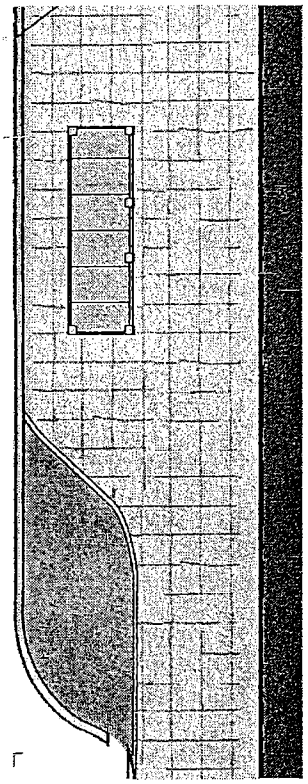
Center Median and Pedestrian Refuge Island



Extended Bulb-Out

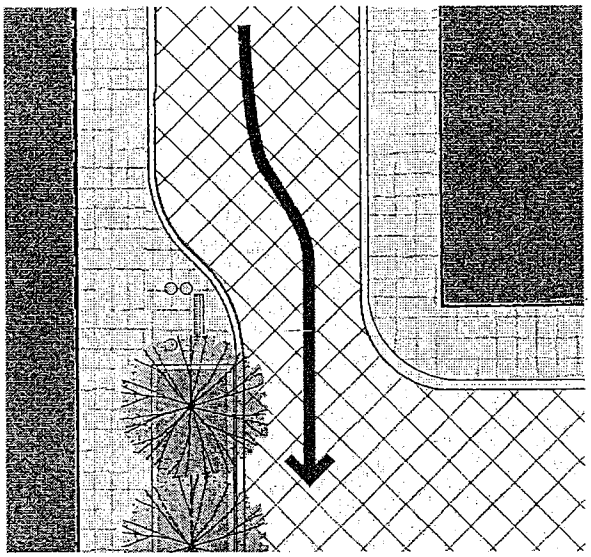


Mid-Block Bulb-Out

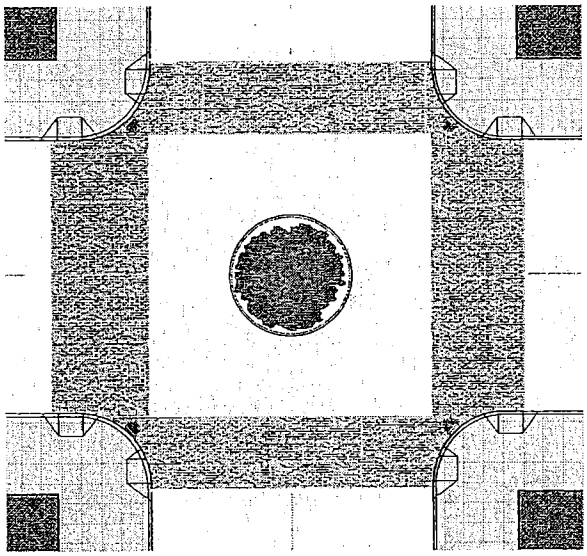


Transit Bulb-Out

Figure 6: Examples of Proposed Case-by-Case Additions (continued)



Chicane



Traffic Calming Circle

Case-by-Case Improvement CBC-7 (BSP page 131): Extended bulb-outs would continue curb extensions further along the sidewalk, usually by removing one or more parking spaces, and provide space for seating, landscaping, or stormwater facilities, while allowing for necessary vehicle turn movements. (See Figure 6, page 25) This improvement should be considered on a case-by-case basis, under certain conditions.

Case-by-Case Improvement CBC-8 (BSP page 131): Mid-block bulb-outs would provide curb extensions in a mid-block location (often in combination with a mid-block crossing), by removing one or more parking spaces. They could also provide space for seating, landscaping, stormwater facilities and/or other amenities. (See Figure 6, page 25) This improvement should be considered on a case-by-case basis, under certain conditions.

Case-by-Case Improvement CBC-9 (BSP page 133): Center or side medians would help separate portions of the roadway, control vehicle access, and create space for landscaping, pedestrian refuges, and other amenities. This improvement would be appropriate on major streets on a case-by-case basis, under certain conditions. (See Figure 6, page 25) They would be designed to ensure adequate access by emergency vehicles.

Case-by-Case Improvement CBC-10 (BSP page 135): Pedestrian refuge islands would provide waiting areas for pedestrians in the center of the roadway, buffered from passing traffic by raised concrete or landscaped areas; they are often combined with a median. This improvement would be appropriate on major streets on a case-by-case basis under certain conditions. On streets with a concrete or planted median, pedestrian refuge islands can be installed as a continuation of the median into the crosswalk. (See Figure 6, page 25) They would be designed to ensure adequate access by emergency vehicles.

Case-by-Case Improvement CBC-11 (BSP page 144): Transit bulb-outs would provide curb extensions at transit stops and are intended to improve transit operations and provide transit rider amenities. This improvement would be appropriate on most street types where transit is present, on a case-by-case basis under certain conditions. (See Figure 6, page 25)

Case-by-Case Improvement CBC-12 (BSP page 144): Transit boarding islands would facilitate transit operations (similar to transit bulb-outs) by allowing transit vehicles to avoid pulling in and out of traffic at stops, and provide transit rider amenities. Transit boarding islands would be expected to be located in the middle of the roadway, and be typically used with transit that runs in center lanes. Transit boarding islands would be appropriate on most street types where transit is present, on a case-by-case basis under certain conditions. (See Figure 6, page 25) They would be designed to ensure adequate access by emergency vehicles.

Case-by-Case Improvement CBC-13 (BSP page 148): Perpendicular or angled parking lanes would provide additional parking spaces while narrowing the vehicular travel-way. It is anticipated that this would have a substantial traffic calming effect on the roadway. This improvement would also help provide opportunities for creating public open space with the addition of curb extensions at either end of perpendicular or angled parking lanes. This improvement is appropriate on most street types where roadway space allows, on a case-by-case basis under certain conditions.

Case-by-Case Improvement CBC-14 (BSP page 149): Flexible use of the parking lane would allow for the parking lane to be used for other uses such as café seating on a temporary basis. Parking spaces could be used as parking for certain portions of the day or year, and public space areas at other times; this would also necessitate special design treatments for the parking lane. This improvement would be appropriate on streets such as Commercial and Mixed-Use streets and alleys, on a case-by-case basis under certain conditions, where accommodations could be made to slow traffic and buffer seating areas.

Case-by-Case Improvement CBC-15 (BSP page 148): Parking lane planters would be placed in landscaped areas in the parking lane between parking spaces for aesthetic and traffic calming effect. This improvement could be combined with provision of stormwater facilities to provide associated stormwater management and hydrology/water quality benefits. Provision of parking lane planters could increase street maintenance costs. This improvement would be appropriate on most street types, on a case-by-case basis.

Case-by-Case Improvement CBC-16 (BSP page 154): Chicanes are traffic calming devices; they slow traffic by forcing vehicles to travel a convoluted path (i.e., shift from side to side) along a street. (See Figure 6: Examples of Proposed Case-by-Case Additions (Continued).) Chicanes could be combined with provision of pedestrian amenities such as landscaping and seating. This improvement could also be combined with provision of stormwater facilities to provide associated stormwater management and hydrology/water quality benefits. This improvement would be appropriate on streets such as Neighborhood Residential streets and Alleys, on a case-by-case basis under certain conditions. Chicanes would not be implemented on streets with transit, and would be designed to ensure adequate access by emergency vehicles.

Case-by-Case Improvement CBC-17 (BSP page 155): Traffic calming circles are traffic calming devices that slow traffic by adding a raised island within an intersection that vehicles must go around. Traffic calming circles could be combined with provision of amenities such as landscaping. This improvement could also be combined with provision of stormwater facilities to provide associated stormwater management and hydrology/water quality benefits. This improvement would be appropriate on streets such as Neighborhood Residential

on a case-by-case basis, per project guidelines. They would be designed to ensure adequate access by emergency vehicles.

Case-by-Case Improvement CBC-18 (BSP page 157): Roundabouts are traffic control devices, occasionally used at complicated, high-volume intersections. Roundabouts could be difficult for pedestrians and cyclists to navigate, particularly pedestrians with visual impairments. Due to this reason as well as space constraints, this improvement would have limited applicability in San Francisco.

Case-by-Case Improvement CBC-19 (BSP page 159): Pocket parks are recreational areas that may be placed in sidewalk or median areas, as space constraints allow. This improvement could involve the widening of sidewalks or construction of new medians in the roadway. Pocket parks would be appropriate on most street types, on a case-by-case basis under certain conditions.

Case-by-Case Improvement CBC-20 (BSP page 160): Reuse of 'pork chops' and excess right-of-way: This treatment involves the creation of new parks, plazas, landscaped areas, or stormwater facilities in roadway areas that are unnecessary for traffic or parking movements, such as triangles left over where two streets come together at an odd angle. These left-over spaces may currently be striped areas in the roadway or built up with a concrete median. This improvement would be appropriate on all street types where such left-over spaces exist, on a case-by-case basis.

Case-by-Case Improvement CBC-21 (BSP page 162): Boulevard treatments would include construction of side medians on major streets and the separation of through traffic from local access, thereby creating a pedestrian-friendly zone from the side median all the way to the property line. A range of public space, landscaping, stormwater, and urban design amenities would be appropriate with boulevard treatments. This improvement would be appropriate on a case-by-case basis on street types such as major commercial, residential, and special street types, where street width would allow implementation. They would be designed to ensure adequate access by emergency vehicles.

Case-by-Case Improvement CBC-22 (BSP page 164): Shared public ways are streets designed as a single surface where the entire right-of-way is shared among pedestrians, cyclists, and motor vehicles. Shared public ways should be designed to force vehicles to proceed very slowly to access adjacent properties. Shared space may be used for public space areas, landscaping, stormwater facilities, parking, and other uses. This improvement would be appropriate on small-scale street types such as Alleys (or other local access lanes), on a case-by-case basis under certain conditions. They would be designed to ensure adequate access by emergency vehicles. Prior to implementation of a shared public way, site-specific environmental analysis would be required.

Case-by-Case Improvement CBC-23 (BSP page 168): Pedestrian-only streets close the street to vehicular traffic. Pedestrian-only streets would include temporary closures, pedestrian malls, or transit malls (which allow transit vehicles). Pedestrian-only streets could be created in new development or redevelopment areas, and would also be appropriate for certain designated street types such as Ceremonial streets and Alleys (see page 12 for description of street types), on a case-by-case basis under certain conditions. They would be designed to ensure adequate access by emergency vehicles. Prior to implementation of a pedestrian-only street, site-specific environmental analysis would be required.

Case-by-Case Improvement CBC-24 (BSP page 169): Public stairs exist in many locations throughout the city. They are considered a special type of pedestrian-only street, where topography does not allow for an at-grade path.

Case-by-Case Improvement CBC-25 (BSP page 85): Multi-use paths could be used by a variety of non-motorized users, such as walkers, joggers and cyclists. This improvement would be appropriate on street types, such as Parkway and Park Edge streets. The Plan, however, does not provide specific guidelines for development of multi-use paths, and subsequent site-specific environmental analysis would be required prior to implementation.

Case-by-Case Improvement CBC-26 (BSP page 184): Above-ground landscaping would include container plantings and hanging baskets. These types of planting are considered to be resource-intensive, and their use should be limited.

A-5 Project Approvals

After completion and approval of the environmental review by the San Francisco Planning Commission (CPC), approvals required for the Proposed Project would be considered in the future by various City decision-makers. These potential approvals are listed here, as follows:

- Approval of the San Francisco Better Streets Plan by the CPC, SFMTA Board of Directors, SFPUC Commissioners, and the Board of Supervisors (BOS).
- Amendments to the Administrative Code and Regulations of various City Departments. (For instance, the Proposed Project would likely require amendments to the San Francisco General Plan; Planning Code; Public Works Code, and Transportation Code; specific amendments have not yet been drafted. The Proposed Project would however not require any variances, special authorizations, or changes to the City zoning maps.)
- Interdepartmental Memorandum of Understanding (MOU) among various City Departments, regarding Plan implementation and jurisdiction.

- Potential future encroachments for work within public rights-of-way from Department of Public Works (DPW) and/or approval from San Francisco Municipal Transportation Agency (SFMTA).

Table 5A: Standard Improvements by Street Type

Improve-ment (Applicable Policy)	Downtown Commercial	Commercial Throughway	Neighborhood Commercial	Downtown Residential	Residential Throughway	Neighborhood Residential	Industrial	Urban Mixed-Use	Parkway	Park Edge	Boulevard	Cerem onial	Alley	Shared Public Way
Curb Ramps (5.1)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y - prefer shared public way or raised xing	n/a
Marked Crosswalks (5.1)	Y	Y	Y	Y	Y	M	M	Y	Y	Y	Y	Y	M	n/a
Ped signals –countdown and APS (5.1)	Y	Y	Y	Y	Y	M	M	Y	Y	Y	Y	Y	n/a	n/a
Corner curb extensions (5.2)	Y	Y	Y	Y	Y	M	N	Y	Y	Y	Y	Y	N	n/a
Street Trees (6.1)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Tree Grates (6.1)	Y	M	M	M	N	N	N	M	N	N	M	Y	M	M
Sidewalk Planters (6.1)	Y - planter box	Y - planter box	Y - planter box	Y	Y	Y - planter strip	N	Y	Y - planter strip	Y - planter strip	Y	N	Y	Y
Stormwater Control (6.2)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pedestrian Lighting (6.3)	Y	Y	Y	Y	Y - at corners	Y - at corners	N	M	Y	Y	Y	Y	Y	Y
Special Paving (6.4)	Y	Y - furnishings zone	Y - furnishings zone	Y - furnishings zone	N	N	N	Y - furnishings zone	N	N	Y - furnishings zone	Y	Y - entire r.o.w.	Y – entire r.o.w.
Site Furnishings (6.5)	Y	Y	Y	Y	M	N	N	Y	Y	Y	Y	Y	M	Y

Table 5B: Case-By-Case Improvements by Street Type

	Downtown Commercial	Commercial Throughway	Neighborhood Commercial	Downtown Residential	Residential Throughway	Neighborhood Residential	Industrial	Urban Mixed-Use	Parkway	Park Edge	Boulevard	Ceremonial	Alley	Shared Public Way	Pa
High-visibility crosswalk (5.1)	Y	Y	Y	Y	Y	M	M	Y	Y	Y	Y	Y	N	n/a	n/a
Special crosswalk treatment (5.1)	Y	Y	Y	Y	Y	M	M	Y	Y	Y	Y	Y	N	n/a	n/a
Mid-block crossing (5.1)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	N	n/a	n/a
Raised crossing (5.1)	N	N	Y	N	N	Y	N	N	N	N	Y - local lanes	N	Y	n/a	n/a
Extended bulb-out (5.2)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	n/a	n/a
Mid-block bulb-out (5.2)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	n/a	n/a
Center median (5.4)	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	n/a	n/a
Pedestrian refuge island (5.4)	Y	Y	Y	Y	Y	M	M	Y	Y	Y	Y	Y	N	n/a	n/a
Transit bulb-out/boarding island (5.5)	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y - side median	Y	N	n/a	n/a
Perp/angled parking (5.6)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	n/a
Flex use of parking lane (5.6)	Y	Y	Y	N	N	N	N	Y	N	N	Y	N	N	N	n/a
Parking lane planters (5.6; 6.1)	N	Y	Y	Y	Y	Y	N	Y	N	N	Y	N	Y	Y	n/a

Table 5B: Case-By-Case Improvements by Street Type (continued)

	Downtown Commercial	Commercial Throughway	Neighborhood Commercial	Downtown Residential	Residential Throughway	Neighborhood Residential	Industrial	Industrial Mixed-Use	Parkway	Park Edge	Boulevard	Ceremonial	Alley	Shared Public Way	Pa
Chicane (5.7)	N	N	N	N	N	Y	N	N	N	N	N	N	Y	Y	n/a
Traffic circle (5.7)	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	n/a
Pocket park (5.8)	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y
Boulevard treatments (5.8)	Y	Y	N	Y	Y	N	N	Y	Y	Y	n/a	Y	N	n/a	n/a
Shared street (5.8)	N	N	N	N	N	Y	N	N	N	N	Y - local lanes	N	Y	Y	n/a
Ped-only street (5.8)	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	Y
Multi-use path	N	N	N	N	N	N	N	N	Y	Y	N	N	N	N	Y

Y = Yes

M = Maybe

N = No

As noted above, long-term standard and optional/case-by-case streetscape improvements are evaluated in this initial study at a program-level. Site-specific impacts of these improvements are evaluated with regard to the footprint of future proposed projects, and may require further project-level analysis in a separate environmental review process in the future, upon development of site-specific projects.

A-6 Future Steps

Through the Better Streets Plan process, the project sponsors intend to develop a set of implementation recommendations related to realizing the vision of the Plan. Strategies for delivering street improvements would include identifying potential funding sources, creating criteria for prioritization of capital projects, streamlining the City's institutional delivery of street improvement projects, maintenance of these improvements, and identifying appropriate enforcement and education strategies related to the pedestrian environment.

B. PROJECT SETTING

Should the San Francisco Better Streets Plan be adopted, Plan policies and guidelines could be used to guide future site-specific streetscape projects in the public right-of-ways in the City and County of San Francisco. (See Figure 1: Street Map of San Francisco, page 3) Plan-proposed standard improvements would apply where feasible, while optional or case-by-case improvements could be considered for implementation as budgets, physical conditions, and/or neighborhood preferences permit. Areas for project implementation would include right-of-ways under the jurisdiction of DPW, SFMTA, SFPUC, the San Francisco Redevelopment Agency, the San Francisco Recreation and Parks Department, the Port of San Francisco, and other City agencies. It would also apply to State Routes on surface arterial roadways that are in the City but under the jurisdiction of the California Department of Transportation (Caltrans) jurisdiction; for instance, portions of Hwy 1 (Junipero Serra Boulevard/19th Avenue/Park Presidio Avenue), US-101 (Van Ness Avenue/Lombard Street/Richardson Avenue), Route 35 (Skyline Boulevard) and Route 82 (San Jose Avenue).[16] The Plan policies and guidelines would apply to improvements proposed by the City, private property owners and developers, community groups, third-party utilities, and others. The policies and guidelines would also be applicable to new streets created as part of major new public or private development or redevelopment projects in the City.

The Plan area encompasses the public right-of-ways in San Francisco; that is, the City's pedestrian areas including sidewalks and crosswalks, but in some instances also portions of the City's roadways. As discussed above, the Proposed Project however does not focus on roadway or vehicle travel characteristics; nor does it focus on any particular roadway or section of roadway in the City.

[16] Email communication with Heath Maddox, San Francisco Municipal Transportation Agency, Livable Streets Section, November 2008. Any proposed improvements to these State Route roadways would require Caltrans approval, per the Caltrans-San Francisco Highway Maintenance Agreement, dated 1955. See the Caltrans Maintenance Contract, June 2006. This document is available for review at the Planning Department, 1650 Mission Street, San Francisco, as part of the project file.

B-1 Existing Conditions

San Francisco's neighborhoods are generally conducive to pedestrian activity. Opportunities for pedestrian access to various City neighborhoods, major recreational resources, employment, schools and public services throughout the City are generally provided by a combination of transit and walking. Unique City resources, such as Golden Gate Park, Crissy Field, the Presidio, Ocean Beach, Lake Merced, Candlestick Point Recreation Area, John McLaren Park, and the Golden Gate Bridge, provide "walkable" recreational opportunities for City residents, workers, and visitors. Commercial activities and employment districts are scattered across the City, and these create many work-related "walkable" opportunities for City workers. Major public buildings, such as the City Hall and the Main Library, are located near the City center where traffic and parking are difficult; consequently, a well-planned pedestrian environment in combination with available transit services would increase viable options for accessing these public services.

B-2 Pedestrian Context

Current Pedestrian Research. According to the 1995 National Personal Transportation Survey (NPTS), in the U.S. approximately 40 percent of all trips are less than two miles in length, which represents a 30-minute walk.[17] In addition, more than a quarter of all trips or about 28 percent of all trips in U.S. metropolitan areas are about one mile in distance or less, a distance considered easily covered by foot. However, about 65 percent of trips of this length (one mile or less) are generally made by automobile.[18] According to a national survey of pedestrian attitudes and behaviors, one in five (21.3 percent) persons age 16 and older reported that they never walk; this represents roughly 44 million individuals in the U.S. The reasons most cited for not walking were:[19]

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[17] See: http://www.walkinginfo.org/why/benefits_transportation.cfm

[18] See http://www.completestreets.org/documents/CSfactsheet-gasprices.doc. According to research done by this group, automobile is the preferred mode of transportation for short trips, because incomplete or improperly planned streets make it dangerous or unpleasant to walk, bicycle, or take transit.

[19] Bureau of Transportation Statistic's 2002 *National Survey of Pedestrian & Bicyclist Attitudes and Behaviors -Highlights Report*. According to this, one in five (21.3%) persons age 16 and older reported they never walk or had not done so during a 30-day period over the summer of 2002. Persons age 65 and older who did not walk cited disabilities and health impairments as the primary reason (49.2 percent). See website: http://www.bts.gov/programs/omnibus_surveys/targeted_survey/2002_national_survey_of_pedestrian_and_bicyclist attitudes_and_behaviors/survey_highlights/entire.pdf
See also San Francisco Department of Public Health (SFDPH), *Draft The Pedestrian Environmental Quality Index (PEQI): An assessment of the physical condition of streets and intersections*, Fall 2008. According to this report, recent research shows that whether or not people walk is determined by a number of factors including the physical environment, perceptions of and actual safety, proximate destinations and climate. Barriers that discourage walking include the physical separation of work, home, and shops; high traffic speeds; narrow or nonexistent sidewalks; unsafe intersections or poor lighting. The SFDPH began developing the Pedestrian Environmental Quality Index (PEQI) to evaluate existing barriers to walking and assess the quality of the physical pedestrian environment in San Francisco. http://www.sfphes.org/HIA_Tools/PEQI_Methods_2008.pdf

- Disabilities and health impairments (24.5 percent);
- Climatic or weather conditions (22.0 percent);
- Lack of opportunity (18.8 percent);
- Preference for faster transportation modes (6.5 percent);
- Lifestyle/choice issues (7.4 percent);
- Safety issues (3.0 percent); and
- Miscellaneous other reasons (17.8 percent).

Trip purpose is another element of a person's decision whether or not to walk.[20] Trips for social/recreational purposes are often made on foot, especially shorter trips (one mile or less); for instance, between 39-43 percent of these trips are pedestrian trips. However, according to the 2001 National Household Travel Survey (NHTS) results, people are much less likely to walk short distances (one mile or less) for medical visits (7 percent) or to shop (13 percent). The average length of nearly half of all travel trips related to shopping and other utilitarian purposes is 4.8 km (3 miles) or less.[21] The share of walking trips decreases below its overall mode share (9 percent), when the trip length is three or more miles.

Local Pedestrian Context. San Francisco is the central city (and most urban place) in the Bay Area. The City has approximately 780,000 residents within approximately 47 square miles and an average population density of 16,500 persons per square mile. It is a pedestrian-oriented city as a result of its high density of development, relatively low level of automobile ownership, widespread availability of transit, open space/recreational opportunities, and provision of pedestrian facilities. In addition, the City's temperate climate makes year-round walking possible. The average San Francisco resident travels 10 miles to work in 29 minutes and three out of four residents live and work in the City. According to a recent survey, about 9.6 percent of all San Francisco residents walk to work, two times the national average for major U.S. cities (4.5 percent).[22] Of all major U.S. cities (that is cities with at least 250,000 people), San Francisco

has the third highest percentage (9.6 percent) of commuters that walk to work; it ranks third after Boston and Washington D.C.[23]

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[20] See http://www.bts.gov/publications/transportation_statistics_annual_report/2004/html/chapter_02/daily_travel_by_walking_and_bicycling.html

[21] See Federal Highway Administration University Course on Bicycle and Pedestrian Transportation Publication No. FHWA-HRT-05-133 July 2006. Available online at: http://www.tfhrc.gov/safety/pedbike/pubs/05085/pdf/combinedlo.pdf

[22] Thunderhead Alliance 2007 Benchmarking Report's "Current Status of Walking/Percentage of Trips to Work by Foot in Largest U.S. Cities" graph ranked 50 major U.S. cities, using the American Community Survey. According to this, 4.5% of trips to work in major cities are pedestrian trips. Workers in the 50 most populous U.S. states are 1.3 times more likely to walk to work than their counterparts nationwide. The Census reports on the main mode to work; therefore, work trips to and from transit or a parked car are not counted if the transit or car trip is the longest leg of the trip. This document is on file and available for public review at the Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2007.1238E.

[23] United States Census. 2005. 2005 American Community Survey. Walk to Work, 50 Cities with The Most Workers Age 16 and Over, by Percentage. Online at http://www.census.gov/Press Release/www/2007/Pub_Trans_Tables.xls [Accessed August 25, 2008.].

There are few locations throughout the City where sidewalks are not provided. Sidewalks and walkways vary, but generally range from 7 to 15 feet in width. Some boulevards such as The Embarcadero have widths up to 25 feet. Market Street also has wider than average sidewalk for much of its length. A number of roadways include street trees and planting strips between the sidewalk and curb to separate pedestrians from vehicular traffic and provide aesthetic benefit. Crosswalks and pedestrian signals exist at most of the City's major intersections. Over 50 intersections have Accessible Pedestrian Signal (APS)[24] installed.[25] In addition, 740 of 1155 signalized intersections (65%) have pedestrian countdown signals for all crosswalks.[26] There are approximately 5,300 square blocks of sidewalks citywide. Maintenance for a majority of these (97%) is the responsibility of the fronting private property owners. In 2007, the Department of Public Works (DPW) implemented the Sidewalk Inspection and Repair Program (SIRP) with a goal of inspecting and repairing approximately 200 square blocks each year. This ongoing facility maintenance and management process will systematically evaluate the City's sidewalks for hazardous conditions such as vertical displacement, cracks or voids among other conditions.[27] Work areas will be prioritized and needed work will be scheduled under SIRP.[28]

The City's topography and high traffic volumes are among the existing obstacles to further improving pedestrian activity. San Francisco's densely-built urban environment sometimes constrains the ability to provide exclusive right-of-way to many competing transportation modes, including pedestrians, motor vehicles, transit operations, and bicyclists. When transportation-related improvements are proposed, the effects on other modes must be taken into consideration and balanced with the overall transportation system of the City.

C. COMPATIBILITY WITH EXISTING ZONING AND PLANS

	Applicable	*Not Applicable*
Discuss any variances, special authorizations, or changes proposed to the Planning Code or Zoning Map, if applicable.	☒	☐
Discuss any conflicts with any adopted plans and goals of the City or Region, if applicable.	☒	☐
Discuss any approvals and/or permits from City departments other than the Planning Department or the Department of Building Inspection, or from Regional, State, or Federal Agencies.	☒	☐

[24] An Accessible Pedestrian Signal (APS) is a pedestrian pushbutton that communicates when to cross the street in a non-visual manner, such as audible tones, speech messages, and vibrating surfaces.

[25] San Francisco Municipal Transportaiton Agency. 2008. Accessible Pedestrian Signals. Online at http://www.sfmta.com/cms/wproj/aps.htm[Accessed August 25, 2008].

[26] San Francisco. Draft Better Streets Plan. 2008. Online at http://www.sfgov.org/site/uploadedfiles/planning/Citywide/Better_Streets/index.htm [Accessed August 25, 2008].

[27] San Francisco Department of Public Works. 2008. *Good Neighbor Guidelines for the Repair of Sidewalk Defects* (DPW Order 177, 526) and *Guidelines for Inspection of Sidewalk Defects* (DPW Order 177,525). These documents are available for review at the Planning Department, 1650 Mission Street, Suite 400, San Francisco as part of Case File 2007.0347E.

[28] San Francisco Mayor's Office on Disability and Department of Public Works. 2008. *Americans with Disabilities Act Transition Plan for Curb Ramps and Sidewalks, Updates and Revisions, 2007-2008.* Online at http://www.sfgov.org/site/uploadedfiles/mod/RampSidewalk08.pdf. [Accessed August 25, 2008].

Planning Code and Zoning

The San Francisco *Planning Code*, which incorporates by reference the City's Zoning Maps, governs permitted uses, densities, and the configuration of buildings within San Francisco. The Proposed Project would not require variances, special authorizations, or changes to the Zoning Maps. However, incorporation of the San Francisco Better Streets Plan policy framework and design guidelines would include changes to the *Planning Code*, primarily related to requirements for pedestrian realm and streetscape facilities,[29] such as pedestrian safety features including corner or mid-block curb extensions, street trees and sidewalk planting, streetscape furnishings, street lighting, sidewalk and median pocket parks, and stormwater management facilities.

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the City's *Planning Code* to establish eight *Priority Policies.* These policies, and the sections of this Environmental Evaluation addressing the environmental issues associated with the policies, are: (1) preservation and enhancement of neighborhood-serving retail uses; (2) protection of neighborhood character (Question 1c, Land Use); (3) preservation and enhancement of affordable housing (Question 3b, Population and Housing, with regard to housing supply and displacement issues); (4) discouragement of commuter automobiles (Questions 5a, b, f, and g, Transportation and Circulation); (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership (Question 1c, Land Use); (6) maximization of earthquake preparedness (Questions 13a-d, Geology and Soils); (7) landmark and historic building preservation (Question 4a, Cultural Resources); and (8) protection of open space (Questions 8a and b, Wind and Shadow, and Questions 9a and c, Recreation). Prior to issuing a permit for any project which requires an Initial Study under CEQA, and prior to issuing a permit for any demolition, conversion, or change of use, and prior to taking any action which requires a finding of consistency with the *General Plan*, the City is required to find that the Proposed Project or legislation is consistent with the Priority Policies.

The consistency of the Proposed Project with the environmental topics associated with the Priority Policies is discussed in Section E, Evaluation of Environmental Effects, which provides information for use in the case report for the Proposed Project. The case report and approval

motions for the Proposed Project will contain the Planning Department's comprehensive project analysis and findings regarding consistency of the Proposed Project with the Priority Policies.

Local Plans and Policies

General Plan. The City's *General Plan* provides general policies and objectives to guide land use

[29] Streetscape improvements do not typically count towards residential open space requirements. Where property owners or others make such improvements, they are required to receive a City permit, and the area of the public right-of-way remains publicly-owned and publicly-accessible.

decisions. Any conflict between the Proposed Project and policies that relate to physical environmental issues are discussed in Section E, Evaluation of Environmental Effects. The compatibility of the Proposed Project with *General Plan* policies that do not relate to physical environmental issues will be considered by decision-makers as part of their decision regarding whether to approve the Proposed Project. Any potential conflicts identified as part of this process would not alter the physical environmental effects of the Proposed Project.
As described in Checklist Item 1, Land Use and Land Use Planning, page 43, the Proposed Project would amend the *General Plan* to reflect the goals and objectives of the San Francisco Better Streets Plan.30

San Francisco Bicycle Plan and Other Future SFMTA Transportation Planning Efforts.
The proposed San Francisco Bicycle Plan project is a separate ongoing effort undertaken by the San Francisco Municipal Transportation Agency (SFMTA), also one of the joint project sponsors for the Better Streets Plan. The San Francisco Bicycle Plan project consists of the adoption of a citywide bicycle transportation plan and the implementation of near-term, long-term and other minor improvements to the City's bicycle route network, as well as amendments to the *San Francisco General Plan* and the *San Francisco Planning Code.* The overall goal of the San Francisco Bicycle Plan is to make bicycling an integral part of daily life in the City. The 2009 San Francisco Bicycle Plan was adopted by the San Francisco Municipal Transportation Agency Board on June 26, 2009 and affirmed by the San Francisco Board of Supervisors on August 11, 2009. The 2009 Bicycle Plan is a refinement of the Bicycle Plan resulting from the 2002-2005 planning process. The 2002-2005 Bicycle Plan was, in turn, an update of the existing 1997 San Francisco Bicycle Plan. The proposed San Francisco Bicycle Plan is consistent with the Metropolitan Transportation Commission's (MTC) Regional Bicycle Plan and would continue to be so following its approval and implementation. Adoption and implementation of the San Francisco Bicycle Plan qualifies the City for funding from the State Bicycle Transportation Account for bicycle facilities and programs.[31]

The Planning Commission certified the Final EIR for the Bicycle Plan project on June 25, 2009. Two appeals of the FEIR certification were filed July 15, 2009.[32] The Board of Supervisors upheld the Planning Commission's decision to certify the FEIR and denied the appeals on August 4, 2009. ~~However,~~ Implementation of the specific physical improvements proposed by the Bicycle Plan ~~continues~~ continued to be enjoined by an injunction imposed as part of litigation initiated in 2006. On August 6, 2010, San Francisco Superior Court Judge Peter J. Busch issued an order finding the City in compliance with CEQA in seeking to implement its Bicycle Plan citywide; thus, lifting the injunction. ~~The City is currently seeking relief from the injunction.~~

Although separate projects, the Better Streets Plan and the San Francisco Bicycle Plan project do have some goals in common, such as balancing the needs of all City street users. Both plans

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[30] Proposed General Plan amendments will be available to the public and discussed at multiple public hearings prior to any adoptions, per City requirements.

[31] For more information about the Bicycle Plan, please visit the Municipal Transportation Agency's Bicycle Program website at: www.sfmta.com/bikeplan.

[32] See *Case No. 2007.0347E: San Francisco Bicycle Plan Project Final EIR* available at http://www.sfgov.org/site/planning_index.asp?id=80504

emphasize that City streets should serve a variety of roles, including safe and accessible movement of all transportation modes (particularly alternative modes such as walking and bicycling), social and recreational purposes, as well as ecological functions. Both plans call for facilitating and improving alternative modes of transportation in the City. The Better Streets Plan focuses on standard and optional/case-by-case streetscape improvements related to pedestrian use, while the San Francisco Bicycle Plan project focuses on near-term, long-term and other minor streetscape improvements related to bicycle use. The San Francisco Bicycle Plan project was designed to safely accommodate multi-modal transportation in the City. The near-term improvements proposed to be carried out under the San Francisco Bicycle Plan project take into account ongoing transportation planning efforts by SFMTA (such as the Transit Effectiveness Project, Traffic Calming Program, and the Better Streets Plan (Proposed Project)). Accordingly under the San Francisco Bicycle Plan project, particular attention was paid to designing streetscape improvements related to bicycle use that would support safe and smooth interaction between pedestrians, automobiles, and bicycles, at intersections where all three modes may collect.

The long-term improvements proposed under the San Francisco Bicycle Plan project identify areas where there are gaps or deficiencies in the bicycle route network. No specific project designs have yet been developed for these proposed long-term improvements, and therefore, these projects were analyzed in the Bicycle Plan project EIR at a program level. Each of the long-term improvements will go through a community planning process and take into account ongoing transportation planning efforts by SFMTA, such as the Transit Effectiveness Project, Traffic Calming Program, and the Better Streets Plan. Once specific project designs are known, subsequent project-level environmental review would be conducted. The policies, design guidelines, and streetscape improvements proposed under the Better Streets Plan would therefore be compatible with the San Francisco Bicycle Plan project and other ongoing SFMTA transportation planning efforts (Transit Effectiveness Project and Traffic Calming Program). In addition, the Better Streets Plan-proposed future streetscape improvements would be coordinated with the long-term improvements proposed to be carried out under the San Francisco Bicycle Plan project, as well as other ongoing SFMTA transportation planning efforts.

The Climate Action Plan for San Francisco. In February 2002, the San Francisco Board of Supervisors passed the Greenhouse Gas Emissions Reduction Resolution (Number 158-02) committing the City and County of San Francisco to a GHG emissions reduction goal of 20 percent below 1990 levels by the year 2012. In September 2004, the San Francisco Department of the Environment and the Public Utilities Commission published the Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Gas Emissions.[33] The Climate Action Plan provides the context of climate change in San Francisco and examines strategies to meet the 20 percent greenhouse gas reduction target. Although the Board of Supervisors has not formally committed the City to perform the actions addressed in the Plan, and many of the actions require further development and commitment of resources, the Plan serves as a blueprint for GHG emission reductions, and several actions have been implemented or are now in progress.

[33] San Francisco Department of the Environment and San Francisco Public Utilities Commission, *Climate Action Plan for San Francisco*, Local Actions to Reduce Greenhouse Emissions, September 2004.

The Better Streets Plan, in promoting walking as an alternative to driving, would be consistent with the goals of the Climate Action Plan for San Francisco.

Approvals and Permits. Approvals required for the Proposed Project are discussed under Project Approvals, page 30.

D. SUMMARY OF ENVIRONMENTAL EFFECTS

The Proposed Project could potentially affect ("Potentially Significant Impact" or "Less than Significant Impact with Mitigation Incorporated") the environmental factors checked below. The following pages present a more detailed checklist and discussion of each environmental factor.

☐ Land Use	☒ Air Quality	☐ Geology and Soils
☒ Aesthetics	☐ Wind and Shadow	☐ Hydrology and Water Quality
☐ Population and Housing	☐ Recreation	☐ Hazards/Hazardous Materials
☒ Cultural & Paleontological Resources	☐ Utilities and Service Systems	☐ Mineral/Energy Resources
☒ Transportation & Circulation	☐ Public Services	☐ Agricultural Resources
☒ Noise	☒ Biological Resources	☒ Mandatory Findings of Signif.

E. EVALUATION OF ENVIRONMENTAL EFFECTS

This Initial Study examines the project to identify potential effects on the environment. All items on the Initial Study Checklist that have been checked "Less than Significant Impact", "No Impact" or "Not Applicable" indicates that, upon evaluation, staff has determined that the Proposed Project could not have a significant adverse environmental effect relating to that topic. A discussion is included for those issues checked "Less than Significant Impact" and for most items checked with "No Impact" or "Not Applicable". For all items checked "Not Applicable" or "No Impact" without discussion, the conclusions regarding potential significant adverse environmental effects are based upon field observation, staff experience and expertise on similar projects, and/or standard reference material available within the Department, such as the Department's Transportation Impact Analysis Guidelines for Environmental Review, or the California Natural Diversity Database and maps, published by the California Department of Fish and Game. For each checklist item, the evaluation has considered the impacts of the Proposed Project both individually and cumulatively.

On the basis of this study, project-specific effects that have been determined to be potentially significant include: aesthetics, cultural and paleontological resources, transportation and circulation, biological resources and hazards/hazards materials. These issues are discussed in Section E below. For issues requiring mitigation to reduce the impact to a less-than-significant level, this Initial Study identifies mitigation measures which would reduce impacts to less-than-significant level. These mitigation measures are referred to in the environmental analysis, presented at the end of each individual Check List topic of discussion, and in Section F of this document, pp. **168-175.**

For each checklist topic analyzed, the evaluation has considered the impacts of the Proposed Project both individually and cumulatively. Cumulative impacts are analyzed in each

individual Check List topic and summarized in Topic E-19 **Mandatory Findings of Significance, pp. 165-168.**

E.1 Land Use and Land Use Planning

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
1. **LAND USE AND LAND USE PLANNING— Would the project:**					
a) Physically divide an established community?	☐	☐	☒	☐	☐
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐	☐
c) Have a substantial impact upon the existing character of the vicinity?	☐	☐	☒	☐	☐

The land use impacts of a Proposed Project are considered to be significant if the Proposed Project would disrupt or divide the physical arrangement of an established community, conflict with local land use plans or policies as they relate to environmental effects, or have a substantial impact upon the existing character of the vicinity.

a, c) Community and Character. The Better Streets Plan would involve the adoption of a set of citywide pedestrian policies and guidelines to help improve San Francisco's pedestrian environment in the future. It would provide guidance for the implementation of standard and optional case-by-case streetscape improvements citywide. The Proposed Project presents a range of possible pedestrian/streetscape improvements to existing sidewalks, crosswalks, and roadways located within the public right-of-way in San Francisco.

The Proposed Project could potentially lead to physical changes within the public right-of-way in the future. However, no substantial above-ground structures are expected to be constructed within the public right-of-way, other than possibly changes in sidewalks, crosswalks, roadways and one-story transit shelters and other similar small-scale structures in certain City locations on a case-by-case basis if conditions permit. Construction activities related to the Proposed Project would be temporary and intermittent and would not divide or disrupt established neighborhoods. The Proposed Project would not disrupt or divide the physical arrangements of existing uses and surrounding activities. The Proposed Project would be built within the City's existing street network and would not be expected to create an impediment to the passage of persons or vehicles. Surrounding uses and activities would continue on their own sites and would interrelate with each other as they do presently, without significant disruption related to project implementation. The Proposed Project would therefore not physically divide or disrupt an established community and this impact would be less than significant.

New landscaping improvements are proposed in the BSP that could result in potentially beneficial changes to the neighborhood character.[34] The City is experiencing a trend towards adding landscaped surface to the public right-of-way to improve residents and visitors' experience. New landscape would be installed in the Project Area following City regulations and guidelines and would not be expected to be bulky or substantial. Because no substantial physical changes to the public right-of-way or surrounding land uses are anticipated under the BSP, and no substantial above-ground structures are expected to be constructed as a result of project implementation, the Proposed Project would have a less-than-significant impact on the existing character of the Project Area.

b) Land Use Plans, Policies, and Regulations. As discussed above in Project Description, page 5, the overarching vision of the Proposed Project is to prioritize the use of streets for walking and transit use, as well as facilitate the function of streets as public spaces for social interaction and community life, in accordance with the City's *Better Streets Policy*. The land use-related objectives of the project sponsors include (i) providing opportunities for diverse experiences and encouraging users to engage in social and recreational activities; and (2) facilitating safe, accessible, and convenient connections among major nodes, hubs, destinations, transit centers, and major land use and activity centers." The proposed policies, design guidelines, and future streetscape improvements called for under the Better Streets Plan are intended to confer these land use-related benefits to all City street users engaged in pedestrian activity.

The following Plan-proposed policies are relevant to the topic of Land Use and Planning (see page 43): Policy 2, which is related to supporting diverse public life through provision of comfortable spaces for interaction and gathering; conversion of excess portions of rights-of-way to landscaped usable areas; maximizing pedestrian and usable open space; facilitating privately sponsored streetscape improvements to promote street use and activity; and encouraging temporary community use of street space for public activities, such as street fairs, performances, and farmer's markets; and Policy 3, which is related to creating vibrant places for commerce through the facilitation of adjacent street space use for City businesses for outdoor seating and merchandise displays, while maintaining adequate pedestrian access.

Some Plan-proposed optional or case-by-case streetscape improvements are also relevant to the topic of Land Use and Planning (see page 43). These optional streetscape improvements include (i) the flexible use of parking lane, which would allow it to be used for other uses such as café seating on a temporary basis;[35] (ii) placement of pocket parks or recreational areas in sidewalk or median areas, as space constraints allow; and (iii) reuse of 'pork chops'[36] and excess public right-of-way to create new parks, plazas, landscaped areas, or stormwater facilities in the right-of-way areas that are determined to be unnecessary for traffic and/or parking movements.

As discussed in Section C: Compatibility with Existing Zoning and Plans, page 38, the Proposed Project would be consistent with local plans, policies and code requirements as they relate to

[34] The Plan does not call for tearing up and replacing mature trees. New plantings would be generally consistent with the overall character of a district. Trees planted would be appropriate to their context. In some areas, this could mean planting of smaller varieties of trees.

[36] Excess paved areas where roadways come together at odd angles.

environmental effects. Environmental plans and policies are those, like the *Bay Area Air Quality Plan*, that directly address environmental issues and/or contain targets or standards, which must be met in order to preserve or improve characteristics of the City's physical environment. The Proposed Project would not obviously or substantially conflict with any such adopted environmental plan or policy. The Proposed Project would not be expected to conflict with any zoning regulations, particularly because all future work related to Plan-proposed streetscape improvements would occur within the public right-of-way and substantial structures are not anticipated to be constructed. The Proposed Project would not conflict with any Elements of the *General Plan* and would be consistent with the principles found in the City's Transit-first Policy. The Proposed Project would serve to supplement, amend and implement policies from the *General Plan* that would reflect the San Francisco Better Streets Plan and promote alternative transportation modes (pedestrian and transit use). Thus, the Proposed Project would have less-than-significant adverse impacts related to land use plans, policies, and regulations.

Cumulative Effects. The Proposed Project would be consistent with zoning regulations and the *General Plan* and would not be expected to contribute to any cumulative land use impacts with any known past, present, or future projects in the City, such as the San Francisco Bicycle Plan. Therefore, the Proposed Project would not contribute to cumulatively considerable impacts related to conflict with applicable land use plan, policies, and regulations. The BSP does not propose the construction of substantial above-ground structures within the public right-of-way that would adversely affect surrounding land uses in the Project Area. Construction activities related to the Proposed Project would be temporary and intermittent; therefore, the Proposed Project would not contribute to cumulatively considerable impacts related to the division or disruption of an established community. The Project would result in incremental physical changes to the public right-of-way. For instance, new landscaping improvements are proposed in the BSP that could result in potentially beneficial changes to the neighborhood character. The Proposed Project, in combination with past, present and reasonably foreseeable projects in the Project Area, would not contribute to cumulatively considerable impacts related to a permanent change in the existing character of the Project Area.

Overall, effects related to land use would be less than significant. In the context of the overall citywide development, the Proposed Project, as discussed above and under Section C. Compatibility with Existing Zoning and Plans, would not result in or contribute to cumulatively considerable land use impacts.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for land use and planning.

E.2 Aesthetics

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
2.	**AESTHETICS—Would the project:**					
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment which contribute to a scenic public setting?	☐	☒	☐	☐	☐
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or which would substantially impact other people or properties?	☐	☐	☒	☐	☐

A visual quality/aesthetics analysis is somewhat subjective and considers the project design in relation to the surrounding visual character, heights and building types of surrounding uses, its potential to obstruct public scenic views or vistas, and its potential for light and glare. The Plan-proposed streetscape improvements' specific design and aesthetic would be considered in the future during the City's planning and design review process. A Proposed Project would, therefore, be considered to have a significant adverse environmental effect on visual quality if it would cause a substantial and demonstrable negative change. The Proposed Project as a citywide policy framework and plan would not be expected to cause such a change.

a) Views and Scenic Vistas. Project implementation is not expected to block or degrade scenic views or vistas; in addition, scenic resources in the City would not be adversely affected by project implementation. The majority of areas surrounding City streets are already densely developed with a mix of residential, commercial civic/institutional, and industrial structures interspersed with some open spaces, as well as vacant lots and parking lots. Views of particular sections of streets are generally limited to occupants and workers in nearby buildings, and occupants of vehicles, transit users, pedestrians, and bicyclists on adjacent roadways. Existing view corridors along City streets are primarily defined by often continuous streetwalls of buildings interspersed with some open landscaped spaces and/or vacant and surface parking lots. Any potential long-range views from corridors along City streets are therefore largely dominated by surrounding dense urban development, particularly high and mid-rise development. The Proposed Project could potentially lead to physical changes within the public right-of-way in the future. However, no substantial above-ground structures are expected to be constructed within the public right-of-way, other than possibly one-story transit shelters and other similar small-scale structures in certain City locations on a case-by-case basis if conditions permit. Therefore, no substantial physical changes to the public right-of-way or surrounding environment are anticipated as a result of project implementation.

Some portions of potential streetscape improvements could be along streets that have been identified in the General Plan as important to urban design and views or those that have

excellent or good views.[37] Implementation of Plan-proposed future streetscape improvements may include the addition of street signage, pedestrian signals, street trees, tree basin furnishings, sidewalk planters, street lighting, site furnishings, and parking lane planters along some of these streets, but such streetscape improvements would not be expected to be excessively large or dominating (tall and bulky), and would not substantially obstruct views or cast perceptible shadows.

Future streetscape improvements would be apparent to viewers, but would not constitute a substantial adverse physical change to existing street conditions, when seen in short- and mid-range views of such streets. The proposed future streetscape improvements would generally be indistinguishable in long-range views and would tend to blend into the dense urban character of the surrounding area. It is possible that public open spaces would be in the vicinity of streets (or section of streets) that have undergone Plan-proposed streetscape improvements. Views of these streetscape improvements from these public open spaces would likely be blocked by intervening buildings and billboards. Such improvements that would be visible would not be expected to be excessively large or dominating; nor to substantially obstruct views from surrounding public areas. Therefore, the Proposed Project would not degrade or obstruct public scenic views.

Instead, the Proposed Project may result in improved public scenic views. As shown in Table 1: List of Proposed Street Types, page 12, the Proposed Project categorizes streets into different typologies for the purposes of streetscape design. The proposed street types under the project are intended to direct decisions about the pedestrian environment, particularly streetscape design. For each proposed street type, the Proposed Project lists standard improvements and optional or case-by-case improvements that could be applicable to that particular street type. The Proposed Project provides a framework for the appropriate placement of typical streetscape elements along the length of a block, which would be applicable to all proposed street types. In addition, the project also indicates any special areas of the pedestrian realm where streetscape elements need to be limited or sited differently. The Plan-proposed streetscape improvements would likely result in increased street trees, greenery, and appropriate lighting on City streets in the future, and these improvements could visually enhance urban corridors as discussed in the Urban Design Element of the General Plan. Future implementation of Plan-proposed streetscape improvements within the recommended streetscape layout framework for the proposed street types could also potentially result in improved public scenic views. Therefore, the Proposed Project could result in overall improvement of public scenic views along City streets.

Figure 7: Existing and Proposed Streetscapes For Typical Downtown Commercial or Commercial Throughway Streets (page 49) illustrates how the Better Street Plan guidelines and streetscape improvements could be applied to large-scale streets with a mixed-use character to improve those streets' pedestrian environment. The proposed streetscape view in Figure 7 depicts streetscape elements that would be used to improve a typical Downtown Commercial or

[37] Urban Design Element of the *General Plan*. Maps titled: *Street Areas Important to Urban Design and Views* and *Quality of Street Views*. Accessed online November 8, 2007 at http://www.sfgov.org/site/planning_index.asp?id=41416.

Commercial Throughway Street. The elements depicted in the proposed streetscape view include improved transit stops, crosswalks, corner curb extensions, street trees, pedestrian lighting, sidewalk planters, and public seating. The recommended placement of these elements within the right-of-way for a typical Downtown Commercial or Commercial Throughway Street is also depicted in the proposed streetscape view.

Similarly, Figure 8: Existing and Proposed Streetscapes for Typical Neighborhood Residential Streets (page 50) illustrates how the Plan guidelines and streetscape improvements could be applied to smaller-scale residential streets to improve those streets' pedestrian environment. The proposed streetscape view in Figure 8 depicts streetscape elements that would be used to improve a typical Neighborhood Residential Street. The elements depicted in the proposed streetscape view include a median island, chicanes, street trees, sidewalk plantings, and permeable paving (also a stormwater management strategy). The recommended placement of these elements within the right-of-way for a typical Neighborhood Residential Street is also depicted in the proposed streetscape view.

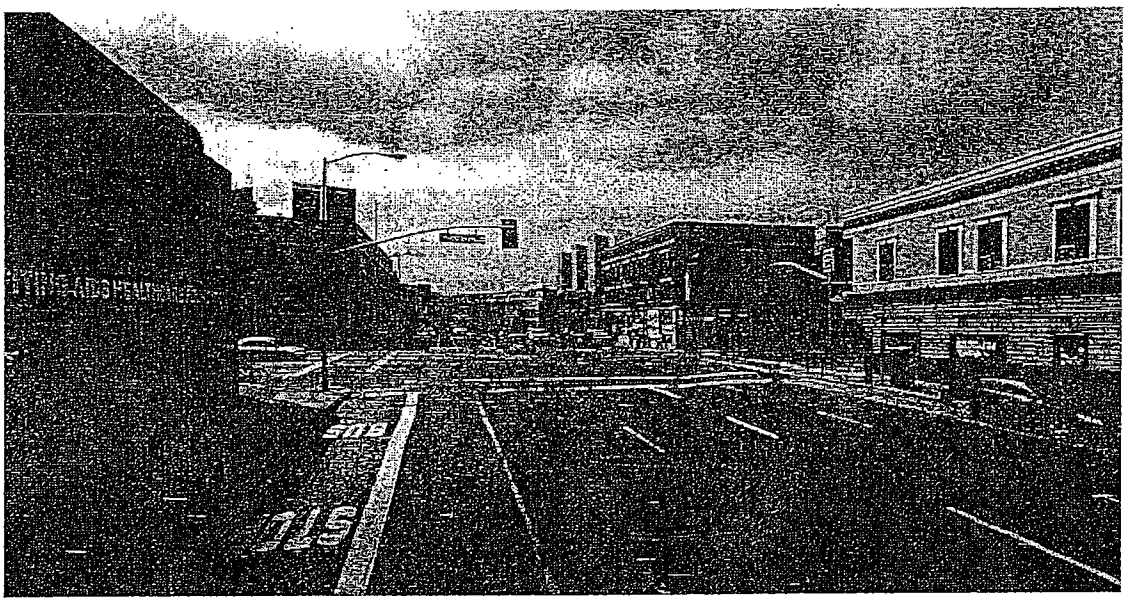
The proposed streetscapes shown in the above-mentioned figures (Figures 7 and 8) are for visualization purposes only, and are not intended to show specific details or dimensions for particular sections of City streets. Furthermore as discussed on page 32 and 33, Plan-proposed streetscape improvements are not necessarily appropriate in all circumstances; for instance, zebra-striped crosswalks are only applied in limited circumstances.

If implemented in the future, Plan-proposed streetscape improvements would be visible from public and private lots in the vicinity. From nearby residences and businesses, the improved streetscapes could change views of surrounding streets. However, because no major large-scale (tall and bulky) above-grade structures or elements are proposed, substantial obstruction of views from nearby public and/or private lots is not anticipated. Although some reduced private views may be an unavoidable consequence of the Proposed Project and would be an undesirable change for those individuals affected, the change in views would not exceed that commonly expected in an urban setting. As discussed above, the Proposed Project would not substantially degrade or obstruct scenic views from public areas and project-related impacts on private views would be limited.

Overall, the Proposed Project would not adversely affect public views and scenic vistas, and would result in less-than-significant impacts with respect to public views and scenic vistas.

Figure 7: Existing and Proposed Streetscapes For Typical Downtown Commercial or Commercial Throughway Streets

Existing



Proposed

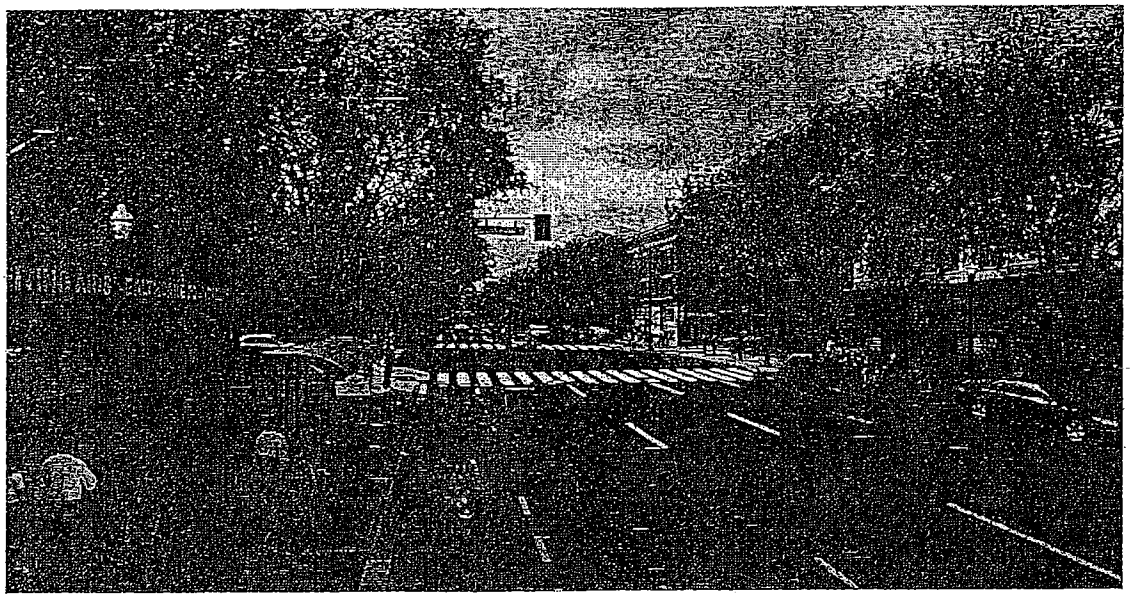
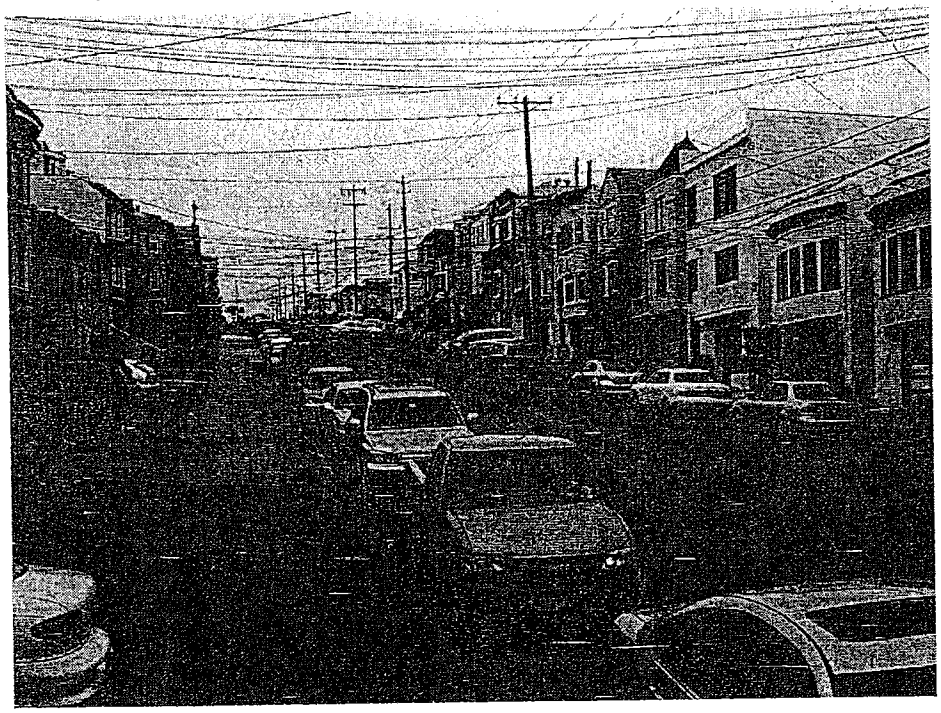
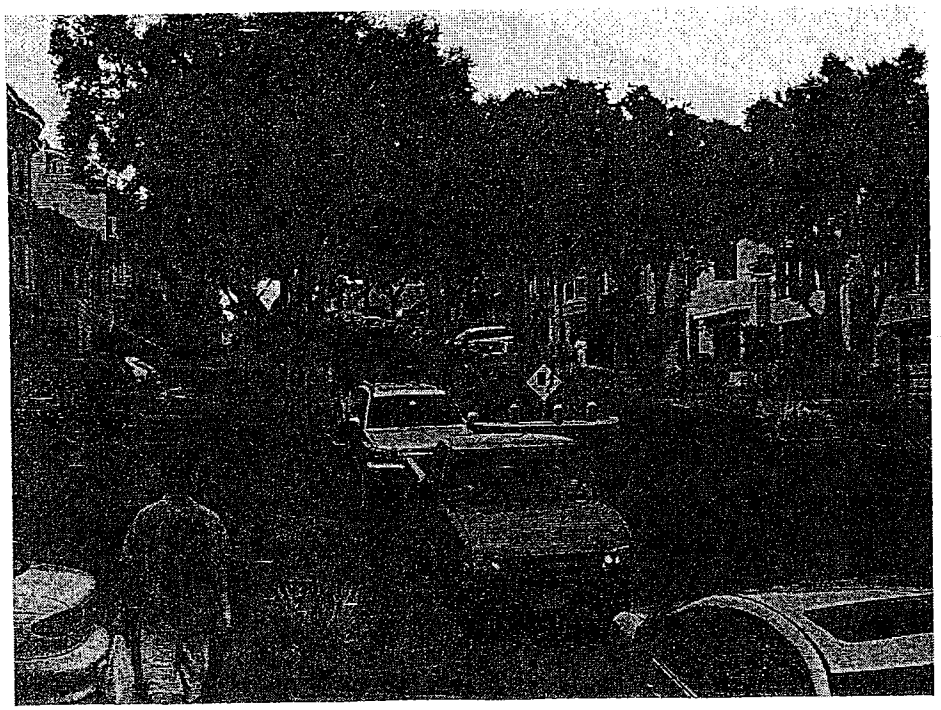


Figure 8: Existing and Proposed Streetscapes For Typical Neighborhood Residential Streets

Existing



Proposed



b) Scenic Resources. Implementation of Plan-proposed future streetscape improvements would occur entirely within the public right-of-way. Portions of State Highway 1, which includes 19th Avenue within San Francisco, are eligible for Scenic Highway Status.[28] However, 19th Avenue is not an Officially Designated Scenic Highway; nor are any specific streetscape facilities proposed within the 19th Avenue traffic right-of-way. The Proposed Project is not expected to involve removal or development of major above-grade structures along a scenic highway.

Article 6 of the *Planning Code* governs signs in the City. Section 603 exempts governmental traffic control signs from the provisions of Article 6. Some Plan-proposed future streetscape improvements may occur along designated scenic streets, which are identified in *Planning Code* Section 608.6. *Planning Code* Section 608.6 regulates the placement of signs along these designated scenic streets, and states that no general advertising sign and no other sign exceeding 200 square feet in area can be placed along such streets. Plan-proposed future streetscape improvements may include the addition of street signage. However, any new signs installed as a result of the Proposed Project would be smaller than those regulated under *Planning Code* Section 608.6. Therefore, the Proposed Project would have less-than-significant impacts with respect to scenic street resources.

No other scenic resources would be affected, with the possible exception of removal, relocation or replacement of street trees and sidewalk plantings, within the public right-of-way. As discussed in Project Description, page 5, the Plan encourages universal pedestrian-oriented streetscape design where appropriate and includes streetscape and pedestrian improvements related to this topic; for instance, calling for more street trees and sidewalk landscaping/planting. The following Plan-proposed policy is relevant to the topic of street trees: Policy 10.1, which is related to maximizing opportunities for street trees and other plantings.

As discussed on page 5, the Proposed Project also provides a framework for locating proposed streetscape improvements such as street trees, and landscaping within a public right-of-way, which would be applicable to all proposed street types. As shown in Figure 3: Sidewalk Zones, City sidewalks are divided into five zones for purposes of this project, and it is recommended that street trees and landscaping be located in the "Furnishings Zone." The Proposed Project also provides direction regarding appropriate placement of typical streetscape elements including street trees along the length of a block. For instance, it is recommended that street trees be placed at regular intervals to define the rhythm of the streetscape, and that street trees should be interspersed with street lighting and streetscape furnishings. Some Plan-proposed standard streetscape improvements are also relevant to this topic (see page 51 above). These standard streetscape improvements include (i) encouraging street trees on all proposed street

[28] The status of a state scenic highway changes from "eligible" to "officially designated" when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (Caltrans) for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a Scenic Highway.

types to help define the character and rhythm of the streetscape; and (ii) providing tree

basin furnishings (tree grates, tree guards, and railings) on more heavily-traveled street types. These tree basin furnishings are intended to serve functional as well as aesthetic purposes.

Implementation of certain streetscape improvement projects under the Better Streets Plan could result in the future removal, relocation, or replacement of select street trees and sidewalk plantings. However as described below, the Urban Forestry Ordinance in the *Public Works Code* would require that appropriate permits be acquired to remove and replace any trees.

Public Works Code Sections 801 et seq. requires a permit from DPW to remove any protected trees.[39] Protected trees include landmark trees, significant trees, or street trees located on private
or public property anywhere within the territorial limits of the City and County of San Francisco.

A landmark tree has the highest level of protection and must meet certain criteria for age, size, shape, species, location, historical association, visual quality, or other contribution to the City's character. A landmark tree must have been found worthy of landmark status after public hearings at both the Urban Forestry Council and the BOS. A significant tree is a tree: a) either on private property or DPW property, b) within 10 feet of a public right-of-way, and c) that has a diameter at breast height (DBH)[40] greater than 12 inches, a height greater than 20 feet, or a canopy greater than 15 feet. A street tree is a tree within the public right-of-way or on DPW's property. Removal of any landmark, significant, or street tree requires a permit from DPW. Also, all such trees are subject to certain maintenance and protection standards.

The Planning Department, Department of Building Inspection (DBI) and DPW have established guidelines to ensure that the provisions concerning protected trees are implemented. As part of these guidelines, the Planning Department requires that a "Tree Disclosure Statement" accompany all permit applications that could potentially impact a protected tree whether the tree is on the site of Plan-proposed improvements or on adjacent sites.

In the future, streetscape improvements associated with the Proposed Project may include the removal, relocation, or replacement of significant street trees. Accordingly, the project sponsors or entities implementing the Plan-proposed streetscape improvements would be required to obtain a permit from DPW.[41] In addition, the *Public Works Code* requires that another significant or street tree be planted in place of a removed tree, or that an in-lieu planting fee be paid. The

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[39] Board of Supervisors, Ordinance No. 17-06, amending *Public Works Code* Sections 801 et seq.

[40] Diameter at Breast Height is 4.5 feet above the ground surface surrounding the tree.

[41] As part of the review process for an application for street or significant tree removal, a DPW inspector would evaluate the trees proposed for removal. If DPW approves the tree to be removed, a notice regarding the tree removal will be posted for a period of up to 30 days. If objections to the removal are received, the removal will be scheduled for public hearing. If DPW denies the removal, the applicant can request the case be scheduled for a public hearing. After the hearing, a hearing officer will make a recommendation to the DPW Director, who in turn will issue a final decision. The DPW Director's decision may be appealed to the Board of Appeals.

project sponsors or entities implementing Plan-proposed streetscape improvements within the City's jurisdiction would be subject to the City's review and approval procedures; therefore, the Proposed Project would have less-than-significant impacts on scenic and biological street tree resources under DPW jurisdiction.

Trees on *Recreation and Park Department* (RPD) land outside of a DPW right-of-way may also be potentially affected by Plan-proposed streetscape improvements. Any tree removal on *Recreation and Park Department* (RPD) land would be carried out by RPD staff pursuant to *Recreation and Park Department Tree Removal Procedures*, which describe the circumstances for tree removal that would require public notification and a public comment period.[42] RPD staff responsible for care and maintenance of the landscape are trained in maintaining the scenic quality of San Francisco public areas. Removal of trees on property maintained by the Port or the PUC would be subject to approval by those City agencies. Any tree removal on public areas (including sidewalks and crosswalks) under the jurisdiction of the National Park Service or the State of California would be subject to the regulations and procedures of the responsible agency. All non-DPW agencies would be expected to be sensitive to the removal of any tree that would otherwise be classified as a significant tree, but for lack of DPW jurisdiction. Thus, the Proposed Project would have less-than-significant impacts on scenic tree resources in areas outside of DPW's jurisdiction.

It is possible that implementation of the BSP would require minor excavation in the Project Area that could result in trimming of street tree roots. Implementation of Mitigation Measure M-AE-1: Tree Root Protection, below would reduce the impacts of the BSP to street trees to less-than-significant levels. Mitigation Measure M-AE-1 would require that if trimming of roots greater than two inches in diameter is necessary during construction of the project, a qualified arborist would be on site to ensure that trimming does not cause an adverse impact to the trees.

Mitigation Measure M-AE-1: Tree Root Protection
If trimming of roots greater than two inches in diameter is necessary during construction of the project, a qualified arborist would be on site during construction to ensure that trimming does not cause an adverse impact to the trees. Pruning would be done using a Vermeer root pruning machine[43] (or equivalent) to sever the uppermost 12 inches of the soil profile. Roots would be pruned approximately 12 to 20 linear inches back (toward tree trunks) from the face of the proposed excavation.

No other scenic resources besides those discussed above exist within the project area. Therefore, the Proposed Project would result in less-than-significant impacts with respect to scenic resources.

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[42] San Francisco Recreation and Park Department, *Tree Removal Procedures*. Adopted July 31, 1997. A copy of these procedures is available for review at the Planning Department, 1650 Mission Street, Suite 400, San Francisco as part of Case File No. 2007.0347E.

[43] Motorized digging equipment produced by Vermeer or other brand name.

c) Visual Character. Similar to land uses within the City, the existing visual characteristics of the City are varied and reflect the changes that have occurred over the years in development patterns, land uses and architectural styles in the surrounding area. The Plan-proposed future streetscape improvements are intended to be based on or to complement their adjacent street and land use character. The prevalent City character (the majority of areas surrounding City streets) is defined by dense urban development typified by a mix of low-, mid-, and high-rise residential, commercial civic/institutional, and industrial structures, interspersed with some open spaces and vacant/parking lots.

As discussed in Project Description on page 5, the stated objectives of the project sponsors include giving City neighborhoods a recognizable image; providing orientation and better spatial understanding of the City; creating an engaging visual impression to appeal to all human senses (sight, smell and sound); and encouraging a sense of ownership and civic pride that is reflected in the City streets' physical appearance and level of activity. The policies and design guidelines, and streetscape improvements proposed under the Better Streets Plan are intended to visually enhance the City's pedestrian realm and confer multiple benefits for all City street users, in particular a visually pleasing civic environment.

As discussed on page **11,** the following Plan-proposed policies are intended to help improve the visual quality of City streetscapes: Policy 1, which is related to creating memorable streets that help provide a unified yet distinct streetscape environment appropriate for individual City neighborhoods; and Policy 10, which is related to providing attractive, inviting, and well-maintained streets through the planting of street trees and landscaping, minimizing of on-street visual clutter, appropriate street lighting, use of high-quality, durable landscaping materials, integration of public art into street improvement projects, and adequate maintenance of such streetscape elements.

As discussed on page 17 above, several Plan-proposed standard and optional streetscape improvements are also intended to help improve the visual quality of City streetscapes. These standard streetscape improvements call for planting of more street trees; tree basin furnishings such as tree grates,[44] tree guards, and railings on certain street types; sidewalk planters; pedestrian and roadway lighting; special sidewalk/roadway paving treatments; and site furnishings incorporating elements such as benches and seating, bicycle racks, bollards, flower-stands, kiosks and gateway monuments, newsracks, parking meters, public art, sidewalk restrooms, traffic and parking signs, trash receptacles, wayfinding signage, and utilities.[45] The optional streetscape improvements include the provision of parking lane planters; pocket parks;[46] boulevard treatments such as side medians on certain street types; and above-ground landscaping in the form of container plantings and hanging baskets.

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[44] Per the BSP, tree grates are generally discouraged for tree health and maintenance reasons. In some locations, they are necessary due to high levels of pedestrian traffic.

[45] Site furnishings are recommended to be designed and located to minimize visual clutter.

[46] Pocket parks can be useful open space for a neighborhood, or can help connect people to larger parks. They do not replace the need for larger parks and open space.

The Proposed Project could result in visual changes in the City's pedestrian environment with the future implementation of Plan-proposed streetscape improvements.[47] Implementation of the streetscape improvements would be expected to occur entirely within the public right-of-way. The Proposed Project would generally not involve construction of substantial above-ground structures other than possibly one-story transit shelters and other similar small-scale structures in the public right-of-ways in certain City locations on a case-by-case basis if conditions permit. It is possible that the project may result in increasing the scale of streetscape elements on affected sidewalks, crosswalks, and roadways. The placement of new larger streetscape elements in the public right-of-way would constitute a less-than-significant impact, because the size, scale and density of future streetscape elements in public right-of-ways would be designed to be consistent with the existing scale of surrounding development. Signs installed for identification of routes and traffic control measures would not be expected to be excessively large and would likely be similar in scale to those found currently on many urban streets. Provision of improved facilities may lead to additional pedestrians in the public right-of-way (sidewalks/crosswalks) and this may affect the visual character of the urban environment and how it is perceived. However as with all modes of traffic, such effects are transitory in nature and do not permanently alter the visual character of the environment. Overall, the visual character and quality of streets citywide would not substantially change or be adversely affected with implementation of the Proposed Project. Overall, there would be less-than-significant adverse impacts related to visual character resulting from the Proposed Project.

Considering all of the above the Proposed Project would not substantially degrade the existing visual character or quality of the project site or its surroundings. Since there would be no significant public view blocked or neighborhood character effects, the Proposed Project would not have a substantial, demonstrable negative aesthetic effect.

d) Light & Glare. Development surrounding City streets area generally include brightly lit buildings, storefronts, signs, bulletin boards, and street lighting. All of these contribute to existing nighttime lighting conditions in the project vicinity.

One of the main concepts of the Proposed Project includes implementation of universal pedestrian-oriented streetscape design, including provision of appropriate street lighting, where appropriate. The Plan calls for streetscape improvements related to implementation of universal pedestrian-oriented streetscape design; for instance, future project sponsors of site-specific streetscape improvement projects would be expected to incorporate street lighting and efficient location of other on-street utilities, as called for under the Better Streets Plan. Per Plan Policy 10.5, adequate light levels and quality should be ensured for pedestrians, and light trespass and glare to adjacent uses should be minimized.

The Proposed Project includes standard streetscape improvements related to street lighting, which would likely result in the future addition, removal or relocation of street lighting in the public right-of-way. Street lighting would be expected to be consistent with light produced by

[47] Sidewalk and street tree maintenance are generally the responsibility of the fronting property owner. On some streets, DPW maintains street trees. Street trees and sidewalk landscaping can be voluntarily installed by property owners who receive a City permit.

existing land uses and the existing street lighting in the neighborhood. The Plan- proposed streetscape street lighting improvements would be required to comply with Planning Commission Resolution No. 9212, which prohibits the use of mirrored or reflective glass. Therefore, the Proposed Project would not have a substantial effect, nor would it create new sources of substantial light or glare. Overall, the Proposed Project would have less-than-significant impacts with respect to light or glare.

Cumulative Effects. The Proposed Project would not involve any substantial changes to above-ground structures and would not contribute to any substantial degradation of the existing visual character along the Project Area. The Project Area is already a densely developed urban area. No scenic vistas, public views or scenic resources would be affected by construction and operation of the Proposed Project; The Proposed Project would thus not contribute to a cumulative impact with any known past, present, or future projects in the City, such as the Bicycle Plan, related to the obstruction of scenic vistas/views .

Any potential removal of Landmark trees, significant trees, or street trees under the Proposed Project would be subject to compliance with the *Public Works Code* and DPW regulation. The project thus would not contribute to a cumulative impact with other projects. Any new signage required by the Proposed Project would comply with the *Planning Code* and thus would not contribute to any cumulative visual impacts beyond those already anticipated by the *Planning Code*. For the reasons discussed above, the Proposed Project's impacts, individually or in combination with other projects, related to trees and other scenic resources would not be cumulatively considerable.

Implementation of the BSP, the San Francisco Bicycle Plan and other cumulative projects combined could represent a change in the visual character of the Project Area. The Proposed Project would increase and add new public open spaces, which could result in potentially beneficial aesthetic changes to the Plan Area. The change in aesthetics and neighborhood character, although noticeable, would be consistent with the diverse nature of the Project Area. Thus, when taken together, the combined effects of these reasonably foreseeable projects on visual aesthetics in the Plan Area would not be cumulatively and considerable.

While implementation of the BSP, the San Francisco Bicycle Plan and other cumulative projects combined could generate additional night light in the Project Area, these projects would comply with City regulations regarding light and glare and cumulatively would not result in obtrusive light and glare in amounts unusual for a developed urban area.[48] Thus, when taken together, the combined effects from light and glare from these reasonably foreseeable projects would not be cumulatively and considerable.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for aesthetics.

[48] The BSP calls for downward-facing street lighting that reduces light loss to the night sky. This type of lighting could potentially be less impactful to birds.

E.3 Population and Housing

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
3. POPULATION AND HOUSING— **Would the project:**					
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐	☐
b) Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing?	☐	☐	☐	☒	☐
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐

a) Population. In general, a project would be considered growth-inducing if its implementation would result in substantial population increases and/or new development. The Proposed Project consists of the adoption and implementation of citywide streetscape/pedestrian policies, design guidelines and standard and optional improvements applicable to pedestrian areas. These pedestrian areas mainly include sidewalks and crosswalks, but in some instances also include portions of the roadway. These improvements would not substantially alter existing development patterns in San Francisco, or necessitate or induce the extension of municipal infrastructure (see Checklist Item 10, Utilities and Service Systems, p. 68). Therefore, the Proposed Project would have less-than-significant impacts related to population.

b-c) Displacement. The Proposed Project consists of the adoption and implementation of citywide policies, design guidelines, and Plan-proposed streetscape improvements to pedestrian areas within the public right-of-way. Thus, it would not result in displacing housing or persons. Therefore, there would be no significant adverse impacts related to the displacement of housing or people.

Cumulative Effects. The Proposed Project would not induce growth, and therefore, would not contribute to the City's overall population growth. The Proposed Project could induce new development in the Project Area. This effect would not be substantial, because it would occur incrementally over a long period of time. Since the BSP does not propose construction of new buildings in the Project Area, and for the reasons discussed above, implementation of the BSP would not contribute to cumulative impacts related to population and housing with any known past, present, or future projects in the City, such as the San Francisco Bicycle Plan.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for population and housing.

E.4 Cultural and Paleontological Resources

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
4. CULTURAL & PALEONTOLOGICAL RESOURCES— Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code?	☐	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐	☐
c) Directly or indirectly destroy a paleontological resource or site or unique geologic feature?	☐	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐	☐

a) Historic Resources. While the Plan-proposed streetscape improvements would not result in the construction of large-scale new structures, they could potentially have an effect on individual historic resources as well as historic districts. The physical character of San Francisco's streets helps define the City's sense of place and contributes to the setting for historic structures. In addition, City streets could include existing historic street furniture, lighting standards, and curbs that help tell the history of the City's development. Therefore, when planning improvements to the City streets, it is important to consider what effect these improvements could have on the historic aspects of City streets in order to ensure that these improvements do not undermine the characteristics that make San Francisco unique and help tell the story of the City's past.

Historic Districts. City streets play an integral part in defining designated and potential historic districts and they help provide context and setting for historic structures within those districts. Any potential changes to public right-of-ways in designated and potential historic districts should be evaluated to determine how these changes may impact the historic district's setting. For example, a historic district that is significant because of its industrial feeling and association might be negatively impacted by the introduction of regularized tree plantings, ornate light standards and street furniture. Conversely, residential historic districts could benefit from the introduction of such features, so long as they are consistent with the Secretary of the Interiors Standards. The Better Streets Plan does not identify site-specific streetscape improvement projects for the City. However, it is anticipated that standard and optional streetscape improvements outlined in the Plan would be implemented as part of the City's ongoing and future site-specific streetscape projects, as well as part of proposed private developments that include streetscape changes. Accordingly, future project sponsors of site-specific development projects in the City that involve streetscape improvements for particular sections of a street or streets within or adjacent to a historic district should consider what potential effects the Plan-proposed streetscape improvements could have on these historic districts.

The BSP includes Policy 1.4, which would help minimize significant impacts to designated historic districts. Under Policy 1.4, streetscape improvements in designated historic districts or planned in areas adjacent to designated historic landmarks would be required to be consistent with Secretary of the Interior's Standards. Streetscape improvements in such areas would be reviewed on a case-by-case basis by a preservation technical specialist at the Planning Department to determine whether they are suitable to be implemented in these historic areas. In addition the BSP includes Standard Improvement SI-11: Site Furnishing, which calls for installation of interpretative signage, plaques, or markers. This would be done as part of the streetscape improvements that are proposed to be carried out on historically significant streets, in order to convey the significance of these historic streets.

Individual Historic Resources. City streets could also be an important component of the context and setting of individual historic resources. Therefore, potentially changing street grades, widening sidewalks, planting trees, and/or introducing new street lighting and other street furniture could result in potential impacts on the context and setting of a historic resource. It is anticipated that the Plan-proposed streetscape improvements would be implemented as part of the City's ongoing and future site-specific streetscape projects, as well as part of proposed private developments that include streetscape changes. Accordingly, future project sponsors of site-specific projects in the City that involve streetscape improvements for particular stretches of a street or streets should consider what potential effects Plan-proposed streetscape improvements could have on adjacent historic resources.

Historic Paving and Street Curbing Materials. Historic materials used to create San Francisco's urban form help tell the story of the City's development, contribute to the character of historic districts, and help give otherwise ordinary City streets a sense of place. These small-scale features are often very durable, rare and have a high amount of embodied energy. Materials historically used in building San Francisco's streets and sidewalks include, but are not limited to, granite curbs, and brick and stone pavers. It is anticipated that the Plan-proposed streetscape improvements, including removal and replacement of paving materials, would be implemented as part of the City's ongoing and future site-specific streetscape projects, as well as part of proposed private developments that include streetscape changes. Prior to potential removal of these historic paving materials, their significance to the immediate context and the City's history should be evaluated. If these paving materials were found to be historically significant to their context, they would be retained in their original setting. This would reduce any adverse effects to less -than-significant levels.

Street Trees. Similar to historic materials, existing street trees also help tell the story of the City's development, contribute to the character of historic districts or landscapes, and help give otherwise ordinary City streets a sense of place. Street trees also help tell the story of the types of people who lived in the neighborhood and help define periods of change, such as the City Beautiful Movement or periods of gentrification. There are some neighborhoods in the City that are defined by their standardized tree plantings, but there are also neighborhoods that are defined by a diverse tree canopy planted by individual home owners over a longer span of

time. When implementing the Plan-proposed streetscape improvements, project sponsors of future site-specific streetscape projects should make every effort to preserve existing trees that are healthy, well formed, and well suited to their particular environment. When trees are proposed for removal, consideration should be given as to what potential effects the removal would have on any adjacent historic resources and whether or not the trees themselves are significant. (See also discussion regarding preservation of trees under Checklist Item 2, Aesthetics on page 46, and Item 12, Biological Resources on page 149 below.)

Events in the Public Realm. Streets are where many of the City's important historical events occur; for instance, festivals, parades, protest and rallies, riots, and speeches all happen in the streets. These significant events can shape history, define an era or embody tradition. While it might not be necessary or desirable to preserve the exact setting in order to convey the significance of an event, these events and the relationship to their setting should be evaluated by the project sponsors of future site-specific streetscape projects, prior to implementing Plan-proposed streetscape improvements. Where appropriate, interpretative signage, plaques, and markers should be considered in the context of their historic setting when new streetscape improvement projects are conceived. Consideration should also be given to potential impacts that the Plan-proposed streetscape improvements could have on a specific site's ability to convey its significance.

Street Furniture, Light Standards and Signage. Street furniture, such as benches, trash cans, gas main and telephone enclosures, and the like; light standards; and street signage can be individually significant or they can be contributing elements to historic districts. San Francisco has two designated historic groupings of light standards that are considered individually significant: the Golden Triangle in Union Square, and the Path of Gold along Market Street. In addition, one grouping of light standards along Van Ness Avenue is currently under review for historic designation. There are also some signs under consideration for landmark status, such as the signs marking the 49 Mile Scenic Drive. However, much of San Francisco's historic street furniture, light standards and signage have not been evaluated to determine what significance they may have in telling the history of the City or how they contribute to a historic district. Project sponsors of future site-specific projects that include Plan-proposed streetscape improvements should evaluate whether or not existing street furniture, light standards or signage in their project area have historic significance. Those streetscape elements that are determined to be of historic significance should be preserved and integrated into their future site-specific streetscape improvement project. The BSP includes Standard Improvement SI-10: Street Lighting, which calls for preservation and restoration of historic light standards according to the Secretary of the Interior's Standards as funding allows, in the event that such materials are present on the site of a future streetscape improvement project.

Overall, the BSP includes policies and guidelines that would minimize impacts to historic resources. It is also anticipated that the potential of Plan-proposed streetscape improvements to affect historic resources will be evaluated under CEQA, as future site-specific improvement projects are developed.

b. and d.) Archeological Resources and Human Remains.

The Archeological Record. For reasons related to its historical development and site formation, San Francisco has one of the most abundant, complex, and well-preserved archeological records of any major American urban area At least 50 prehistoric/ Native American sites have been documented in San Francisco largely dating from the Late Holocene period (4,000 – 300 B.P.) but Emergent period Native American sites (330 B.P. -) and Middle Holocene period (8,0000 – 4,0000 B.P.) prehistoric sites are also well documented. Prehistoric sites include functionally and diachronically complex shellmound sites, lithics workshops, food processing sites, isolated burials, and cemeteries. Prehistoric deposits in San Francisco have varied from a few centimeters to several meters in depth and from three to 75 feet below the surface. Dating of San Francisco prehistoric sites has shown some sites to have been in discontinuous or continuous use for durations well in excess of a millennium. San Francisco's prehistoric archeological record is also significant because, in contrast to the comparatively disturbed state of the upper portions of the majority of Bay Area prehistoric sites, many prehistoric sites in San Francisco have excellent integrity as a result of preservation beneath aeolian sand dune deposits formed over several hundred years. San Francisco has a rich and complex historical archeological record extending from the establishment of the first Franciscan mission and Spanish Presidio in 1776. As new theories and methodologies for understanding the past are developed in disciplines related to archeology, maritime history, social sciences, and culture theory, the range of archeological resource types investigated in San Francisco becomes increasingly diverse. Historical archeological resources present in San Francisco include sites associated with the Hispanic period (1776-1850), Yerba Buena period (1835-1848), and Gold Rush period (1848-1855 ~~1555~~) such as encampments, saloons, emporiums, gun-powder factories, mining equipment foundries, cemeteries, and domestic remains. Archeological maritime remains, for which San Francisco is best known, encompass buried Gold Rush period storeships, ships, chandlers, marine ways, and ship salvage/repair yards, shipwrecks, wharves, ropeworks, and the Old Seawall. Many 19th century archeological deposits are important, in part, for their ethnic, racial, religio-cultural, or socio-economic associations such as domestic features associated with Chinese, Japanese, Maltese, Azore Island, regional German or French households, the Irish skilled and unskilled working class, and Jewish households. Domestic remains associated with certain occupational or lifestyle categories have also been of documented research value such as residence-workshops of Dumpville, the shack dwellers of Rincon Hill, sailor boarding houses/saloons, Chinese shrimp fishing villages, the highly graded system of prostitution houses, convents, and Chinese men's barracks associated with farms and various typically hazardous industries. There are the many Victorian institutions for the marginalized such as asylums, orphanages, prisons, reform homes, workhouses, and hospitals for the poor, the orphaned, abandoned or "rescued" children, unwed mothers, the abused, the physically- or socially-impaired such as the tubercular, blind, syphilitic, alcoholic, lame, elderly, or repentant prostitutes. The archeological record reveals how these institutions, in fact, operated under wide ranging philosophies and care regimens. Institutions ministering to the marginalized tended to be also geographically marginalized and, as a rule, were located on the periphery of 19th century San Francisco in Bayview, Ingleside, Potrero Hill, Hayes Valley, and

Laguna Honda. In some cases, it has been useful to understand and approach certain types of San Francisco archeological resources as forming discrete historically and physically interconnected archeological themes that can be geographically delineated as continuous or discontinuous archeological districts warranting a common set of research and methodological approaches. An example of this thematic approach is San Francisco's Hispanic Period (1776-1850) Archeological District.

Human Remains. Human remains are legally significant under various State statutes as archeological resources under CEQA (Public Resources Code §15064.5), as Native American burials remains (Public Resources Code § 5097.98), and as publicly unrecorded internments outside of a dedicated cemetery (Health and Safety Code § 7050.5). The archeological discovery of human remains may, therefore, require compliance with several and sometimes inconsistent legal directives. Human remains associated with prehistoric sites, historic period non-cemetery internments and former cemetery sites are frequently encountered in San Francisco. Human remains have been encountered in depths ranging from 3 feet to 75 feet below the existing surface and within both primary and secondary (re-deposited) soils contexts. Not only human remains but associated burial items may also be protected under State laws (Public Resources Code 5097.99, 5097.991, and 15064.5).

Potential Effects to Archeological Resources and Human Remains: Although sub-grade impacts of the Proposed Project are largely restricted to public right-of-ways, it cannot be assumed prima facie that there is no potential to affect legally-significant archeological resources since the distribution of pre-1850 archeological sites in San Francisco has no relationship to the existing block, lot, and street pattern. In addition, post-1850 archeological deposits within existing public right-of-ways have been documented related to streets themselves (paving materials), infrastructure, and the late improvement of some streets in San Francisco. Specific potential effects to archeological resources from the Proposed Project include the following:

Safety Improvements. The Proposed Project may result in the installation of new pedestrian countdown signals and accessible pedestrian signals which could disturb soils to the depth of several feet. In areas where archeological deposits are located relatively close to the existing surface, excavation for the installation of new safety-oriented signals could affect archeological resources.

Pedestrian Improvements. The Proposed Project may result in the construction of pedestrian connections across barriers where at-grade crossings are not feasible. The creation of pedestrian bridges or tunnels could disturb soils in areas where archeological deposits are documented/expected.

Street Trees. The Proposed Project could result in the removal, relocation, replacement, and installation of new street trees within the public right-of-way which would result in soils disturbance at variable depths based on the type and size of tree. The Plan recommends the tallest trees (over 30 feet) within the Bay (Soil and Microclimate) Zone which comprises the eastern half of the City, that may include areas in which archeological deposits are

documented/expected to be close to the existing grade surface.

Stormwater Management. The Plan recommends the use of a range of stormwater management tools, such as permeable paving systems, swales, rain gardens and infiltration trenches within medians and public sidewalk areas. These stormwater management techniques could require excavation several feet in depth for multi-layered installations comprised of various substrata including underdrains, filtration layers, topsoil and surface pavers that could adversely affect archeological deposits.

Lighting. The Proposed Project could result in the installation of new street and pedestrian lighting. Based, in part, on lighting pole height (20 ft. to 30 ft for street lighting and 12 ft. to 15 ft. for pedestrian lighting), the installation of new lighting would disturb soils at various depths. New street/pedestrian lighting installation could, thus, potentially adversely affect archeological deposits.

Utilities. The Proposed Project could potentially result in the increased undergrounding of utilities especially dry utilities (telephone, CATV, electricity, natural gas, street lighting, traffic signals), because utility undergrounding is the Plan-preferred distribution alternative to overhead or surface-mounted utilities. Soils disturbance resulting from the increase in undergrounding of utilities, including distribution lines and vaults, could adversely affect archeological deposits.

Summary: Mitigation Measure CUL-1 (Accidental Discovery) would mitigate the potential, but not specifically identifiable, impacts of the Proposed Project (excepting impacts identified below in the HPAD) to archeological resources to a less-than-significant level. In general, it is anticipated that the potential of Plan-proposed right-of-way improvements to affect archeological properties will be evaluated under CEQA as future site-specific improvement projects are developed.

Hispanic Period (1776-1850) Archeological District (HPAD): Potential Project Effects. Archeological features and deposits within the HPAD are significant for associations with the specific careers of diverse ethnic and religious groups, including Native Americans, Californios, Franciscan missionaries, Anglo squatters, and early Mormons and with historic movements such as missionization and de-tribalization of Native Americans and Indian polities present in the late 18th century and the social changes resulting from Mission secularization. Archeological remains associated with the HPAD are potentially eligible for listing in the CRHR on the basis of their association with the Spanish/Mexican Period, Franciscan missionization of California Native Americans (Criterion A), with important historical personages such as Juan Bernal, Francisco Guerrero, and Francisco De Haro (Criterion B), with architectural and technological history (Criterion C) and with a broad range of significant current historical and scientific research topics (Criterion D). Archeological resources within the HPAD are, in general, located in areas of shallow fill and comparatively minor, localized historical disturbance and, thus, are exceptionally vulnerable to disturbance from human activities. As pre-1850 archeological deposits, the geographical distribution of archeological resources within the HPAD is unrelated

to existing landuse and street patterns. Based on the documented presence of CRHR-eligible HPAD archeological resources within San Francisco public right-of-ways and the comparative shallow depth of their deposition, the Proposed Project has the potential to adversely affect CEQA-significant archeological resources related to Spanish-Mexican period San Francisco. Mitigation Measure CUL-2 would mitigate potential impacts of the Proposed Project to archeological resources within the Hispanic Period (1776-1850) Archeological District to a less-than-significant level.

Mitigation Measure Cul-1 (Archeological Resources - Accidental Discovery):

The following archeological mitigation measure shall apply to any soils disturbing activities resulting from the Proposed Project excepting soils disturbing activities below a depth of two (2) feet below grade surface (bgs) within the Hispanic Period Archeological District.

To avoid any potential adverse effect from the Proposed Project on accidentally discovered buried or submerged historical resources as defined in *CEQA Guidelines* Section 15064.5(a)(c). The project sponsor shall distribute the Planning Department archeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc. firms); or utilities firm involved in soils disturbing activities within the project site. Prior to any soils disturbing activities being undertaken each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel including, machine operators, field crew, pile drivers, supervisory personnel, etc. The project sponsor shall provide the Environmental Review Officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) to the ERO confirming that all field personnel have received copies of the Alert Sheet.

Should any indication of an archeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or project sponsor shall immediately notify the ERO and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.

If the ERO determines that an archeological resource may be present within the project site, the project sponsor shall retain the services of a qualified archeological consultant. The archeological consultant shall advise the ERO as to whether the discovery is an archeological resource, retains sufficient integrity, and is of potential scientific/historical/cultural significance. If an archeological resource is present, the archeological consultant shall identify and evaluate the archeological resource. The archeological consultant shall make a recommendation as to what action, if any, is warranted. Based on this information, the ERO may require, if warranted, specific additional measures to be implemented by the project sponsor.

Measures might include: preservation in situ of the archeological resource; an archaeological monitoring program; or an archeological testing program. If an archeological monitoring program or archeological testing program is required, it shall be consistent with the Major Environmental Analysis (MEA) division guidelines for such programs. The ERO may also

require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions.

Human Remains, Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal Laws, including immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, curation, possession, and final disposition of the human remains and associated or unassociated funerary objects.

The project archeological consultant shall submit a Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describing the archeological and historical research methods employed in the archeological monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.

Mitigation Measure CUL-2 (Archeological Monitoring: Hispanic Period Archeological District)

The following archeological mitigation measure shall apply to any soils disturbing activities below a depth of two (2) feet below grade surface (bgs) resulting from the Proposed Project within the Hispanic Period Archeological District.

Based on the reasonable potential that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological monitoring program. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

Archeological monitoring program (AMP). The archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the project archeologist shall determine what project activities shall be archeologically monitored. In most cases, any soils disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the potential risk these activities pose to archaeological resources and to their depositional context;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archaeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with the archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction crews and heavy equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall, after

making a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, present the findings of this assessment to the ERO.

If the ERO in consultation with the archeological consultant determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or

B) An archeological data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

If an archeological data recovery program is required by the ERO, the archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The project archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP. The archeological consultant shall prepare a draft ADRP that shall be submitted to the ERO for review and approval. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program.* Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report.* Description of proposed report format and distribution of results.
- *Curation.* Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains, Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity

shall comply with applicable State and Federal Laws, including immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, curation, possession, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the draft final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.

c.) Paleontological Resources and Geological Features.

Paleontology is a multidisciplinary science that combines elements of geology, biology, chemistry, and physics in an effort to understand the history of life on earth. Paleontological resources, or fossils, are the remains, imprints, or traces of once-living organisms preserved in rocks and sediments. Paleontological resources include vertebrate, invertebrate, and plant fossils or the trace or imprint of such fossils.

The fossil record is the only evidence that life on earth has existed for more than 3.6 billion years. Fossils are considered non-renewable resources because the organisms from which they derive no longer exist. Thus, once destroyed, a fossil can never be replaced. Paleontological resources are lithologically dependent; that is, deposition and preservation of paleontological resources are related to the lithologic unit in which they occur. If the rock types representing a deposition environment conducive to deposition and preservation of fossils are not favorable, fossils will not be present. Lithological units which may be fossiliferous, include sedimentary and volcanic formations. The Plan Area is thoroughly urbanized with concrete, asphalt, or buildings covering nearly the entire surface area. No rock outcrops or exposures of

undisturbed sediments occur on or near the Project Area. No unique geologic features are located in the Project Area.

Geologic materials underlying the Project Area alignment that would be disturbed by project grading and excavation consist of artificial fill. Construction would occur in relatively flat terrain along existing Project Area streets, which are underlain primarily by artificial fill, and would involve minimal grading and excavations ranging from three- to ten feet deep. Due to low likelihood of encountering fossil containing beds during construction, any impacts on paleontology would be less than significant.

Cumulative Effects. The streetscapes of the Project Area, including those in and around existing historic resources, have undergone various improvements and modernization at different times during the area's development, without apparent widespread impairment to the overall historic character of the area. Federal and state laws protect historic resources in most cases through project redesign. Overall, the BSP includes policies and guidelines that would minimize impacts to historic resources. It is also anticipated that the potential of Plan-proposed streetscape improvements to affect historic resources will be evaluated under CEQA, as future site-specific improvement projects are developed. This will ensure the any potential Project effect to historic resources would not contribute to a cumulative considerable adverse effect to historical resources.

Archeological resources are non-renewable members of a finite class. All adverse effects to archeological resources erode a dwindling cultural/scientific resource base. Federal and state laws protect archeological resources in most cases either through project redesign or requiring that the scientific data present within an archeological resource is archeologically recovered. Even so, it is not always feasible to protect these resources, particularly when preservation in place would frustrate implementation of project objectives. Implementation of Archeological Mitigation Measure Measures CUL-1 and CUL-2 would ensure that any potential BSP-related effect to an archeological resource would not contribute to a cumulative considerable adverse effect to archeological resources.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for cultural resources.

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E.5 Transportation and Circulation

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
5. TRANSPORTATION AND CIRCULATION— Would the project:					
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks?	☐	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	☐	☐	☒	☐	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐	☐

The Better Streets Plan (BSP) would involve the adoption of a set of citywide streetscape and pedestrian policies and design guidelines, as well as identification of strategies to improve San Francisco's pedestrian environment in the future. These policies and design guidelines would provide guidance for the implementation of proposed standard and optional streetscape improvements citywide.

Presented in the BSP is a range of possible streetscape improvements to existing sidewalks, crosswalks, and portions of roadways located within the public right-of-way in San Francisco. The BSP addresses 10 major elements of the public realm – ranging from safety and accessibility to vibrancy and sustainability. Based on these elements, 47 specific policies have been developed for making improvements to San Francisco's streetscapes. These policies are grouped and presented on page 8 of this Preliminary Mitigated Negative Declaration (PMND).

Proposed in the BSP are 12 standard streetscape improvements and 26 optional or case-by-case

streetscape improvements (See pages 18 through 30 of this PMND for a complete list of proposed standard and optional streetscape improvements). If the BSP were to be adopted, the 12 standard streetscape improvements would be implemented throughout the City as opportunities arise. That is, for a particular street type, they would typically be required to be included in any future site-specific streetscape project or proposed development (that includes streetscape improvements) on any street within that particular street typology.

The 26 optional improvement guidelines recommended for particular street types would not be mandatory for future site-specific streetscape projects or proposed developments in that street type, but would be considered for implementation as budgets, physical conditions, and/or neighborhood preferences permit. While no specific project has been identified in the BSP, BSP-related policies and improvements that could result in potential physical changes to the transportation network are discussed in this section.

San Francisco does not consider parking supply as part of the permanent physical environment and therefore, does not consider changes in parking conditions to be environmental impacts as defined by CEQA. However, this report presents a parking analysis to inform the public and the decision makers as to the parking conditions that could occur as a result of implementing the Proposed Project.

Parking conditions are not static, as parking supply and demand varies from day to day, from day to night, from month to month, etc. Hence, the availability of parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people change their modes and patterns of travel.

Parking deficits are considered to be social effects, rather than impacts on the physical environment as defined by CEQA. Under CEQA, a project's social impacts need not be treated as significant impacts on the environment. Environmental documents should, however, address the secondary physical impacts that could be triggered by a social impact. (CEQA Guidelines § 15131(a).) The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. In the experience of San Francisco transportation planners, however, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles or travel by foot) and a relatively dense pattern of urban development, induces many drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service in particular, would be in keeping with the City's "Transit First" policy. The City's Transit First Policy, established in the City's Charter Section 16.102 provides that "parking policies for areas well served by public transit shall be designed to encourage travel by public transportation and alternative transportation."

The transportation analysis accounts for potential secondary effects, such as cars circling and looking for a parking space in areas of limited parking supply, by assuming that all drivers

would attempt to find parking at or near the project site and then seek parking farther away if convenient parking is unavailable. Moreover, the secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts which may result from a shortfall in parking in the vicinity of BSP projects would be minor, and the traffic assignments used in the transportation analysis, as well as in the associated air quality, noise and pedestrian safety analyses, reasonably addresses potential secondary effects.

Construction-related impacts generally would not be considered significant due to their temporary and limited duration.

c.) Air Traffic The Proposed Project is not located within an airport land use plan area, within two miles of a public airport, or in the vicinity of a private airstrip. No above-ground structures would be constructed that would affect air traffic patterns. Therefore, Checklist item 5c is not applicable.

a., b., d., e., f. and g)
Transportation Policies, Plans, Programs, and Standards
Street design in San Francisco is subject to federal, state, and local laws, policies, standards, and guidelines. Key federal, state and local policies and standards related to street design include the following:

- San Francisco Department of Public Works Standard Specifications and Plans;
- Americans with Disabilities Act (ADA) and its related accessibility standards;
- The California Manual on Uniform Traffic Control Devices (MUTCD); and
- The Clean Water Act and the National Pollutant Discharge Elimination System (NPDES) permit.[49]

Locally, San Francisco has passed the "Transit-First Policy" (City Charter Section 16.102), the "Better Streets Policy" (Administrative Code Chapter 98), and the "Complete Streets Policy" (Public Works Code 2.4.13). These policies prioritize street and streetscape improvements that encourage transit, pedestrian, bicycle, and carpool modes of transportation over the single-occupant vehicle mode of transportation, as well as encourage pedestrian-oriented and multi-functional street design. In addition, the San Francisco Bicycle Plan sets forth policies, actions, near- and long-term improvements, and design elements for improving the San Francisco bicycle network. Additional street design-related City policies can be found in the *San Francisco General Plan* and its constituent elements. Existing City standards related to street design can also be found in the Administrative Code, Building Code, Fire Code, Planning Code, Public Works Code, and Transportation Code.

[49] The National Pollutant Discharge Elimination System (NPDES) regulates stormwater runoff into receiving waters of the United States. The Water Permits Division (WPD) within the U.S. Environmental Protection Agency's Office of Wastewater Management leads and manages the NPDES permit program in partnership with EPA Regional Offices, states, tribes, and other stakeholders.

If the BSP were to be adopted, plan-proposed policies would be applicable to the City's on-going and future streetscape and pedestrian design efforts. However, there are no site-specific projects proposed as part of the BSP; this PMND analyzes the BSP at a programmatic level.

As outlined in the discussion of each streetscape element (beginning on page 18 of this document), most elements of the BSP would receive environmental clearance through this PMND. Certain elements, however, would require subsequent environmental review at the time that a site-specific project was proposed (see page 107 for a list of elements that would require subsequent environmental review).

All elements of the BSP, whether environmentally cleared through this PMND or requiring subsequent site-specific clearance, would still be subject to a public hearing at the time a site-specific improvement is proposed. This public hearing would occur prior to implementation. All elements would require approval at one or more of the following public hearings:

SFMTA Board of Directors: Major traffic and parking changes may require a hearing at the SFMTA Board of Directors, which is a public hearing.

SFMTA Engineering Public Hearings: Proposed parking and traffic changes are subject to an Engineering hearing, which is a public hearing.

Color Curb Public Hearing: All proposed additions and removals of Color Curbs are subject to a Color Curb hearing, which is a public hearing.

Board of Supervisors (Sidewalk Width): Any proposed changes to the width of a sidewalk require legislation by the Board of Supervisors, amending the official sidewalk width (Ordinance 1061). This would be subject to a public hearing.

Proposed Project Policies

The following policies proposed in the BSP are relevant to the topic of Transportation and Circulation.

Policy 2: *Support Diverse Public Life*

Policies 2.2 and 2.3, in particular, support the conversion of excess portions of right-of-ways to landscaped usable areas, and the maximization of pedestrian use of open space.

Policy 3: *Create Vibrant Places for Commerce*

Policy 3.1 seeks to facilitate adjacent street space use for local businesses for outdoor seating and merchandise display, while preserving adequate pedestrian access. Policy 3.2 seeks to balance the need for short-term parking for shoppers and loading for businesses with the need for pedestrian-oriented streetscape design.

Policy 4: *Promote Human Use and Comfort*

Policy 4.2 promotes pedestrian use and comfort by the prioritization of street design that offers adequate buffer space from the passing traffic. Additionally, Policy 4.5 encourages the creation of shared space on small streets through street redesign that prioritizes pedestrians but accommodates limited vehicles at slow speeds.[50] Lastly, Policy 4.6 seeks to minimize the impact of driveway curb-cuts on pedestrian through-travel.

Policy 6: *Promote Safe Streets*[51]

Policy 6 promotes safe streets through the prioritization of the following preferred design guidelines for streets and intersections: Policies 6.1 and 6.2 call for designing pedestrian crossings that maximize pedestrian safety and comfort through the employment of traffic control devices. Policy 6.3 calls for designing intersections so that their geometry and traffic operations maximize pedestrian safety and comfort. Policy 6.4 calls for enforcing traffic and parking violations to promote pedestrian safety, comfort and accessibility. Policies 6.7 and 6.8 call for designing streets that result in maximizing safety/security, traffic calming and reduced speeds.

Policy 7: *Provide Convenient Connections*

Policy 7.1 and 7.2 call for the provision of generous sidewalks and the reduction of barriers to pedestrian travel[52] so as to ensure safe, convenient, and accessible pedestrian right-of-ways. Policies 7.3 through 7.5 call for the creation of convenient pedestrian connections between residential areas, employment centers, activity hubs, and transit stops.

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[50] Shared Streets are streets designed as a single surface where the entire right-of-way is shared by pedestrians, cyclists, and motor and transit vehicles. These streets function as a pedestrian-oriented yard, plaza or open space where cars and transit vehicles may use the streets, but pedestrians have the right-of-way of the whole street.

[51] This Policy is intended to bring attention to the need for enforcement, and to make it a policy goal for the City.

[52] The guidelines proposed in the BSP, encourage the re-opening of closed crosswalks. They also encourage the avoidance of additional future crosswalk closures, so long as pedestrian safety is not compromised. Crosswalks closures are primarily associated with pedestrian safety in the face of very high traffic volumes. However, sidewalk closures create discontinuities in pedestrian paths of travel, which makes walking inconvenient.

Policy 9: *Ensure Accessible Design*

Policies 9.1 through 9.3 promotes pedestrian accessible streets; compliance with existing rules and regulations for accessibility to public right-of-ways; and streetscape design and pedestrian projects that meet legally-mandated handicapped accessibility requirements for public right-of-ways.[53]

Proposed Project Streetscape Improvements

Standard Streetscape Improvements

The 12 standard streetscape improvements proposed in the BSP are mainly design guidelines for particular street types (see page 18 of this PMND for a description of the 12 standard streetscape improvements, and see page 12 of this PMND for description of city street types). They would typically be required to be included in any future site-specific streetscape project or proposed development on any street within those particular street typologies.

Of the 12 Plan-proposed Optional Improvements, 5 are relevant to the topic of Transportation and Circulation. The seven elements which are not (SI-6: Street trees, SI-7: Tree basin furnishings, SI-8: Sidewalk planters, SI-9: Stormwater management tools, SI-10: Street lighting, SI-11: Special paving, and SI-12: Site furnishings) do not relate to any item on Checklist E.5, except that these elements may enhance or better connect the pedestrian environment.

The following five proposed Standard Streetscape Improvement Guidelines are relevant to the topic of Transportation and Circulation:

SI-1:	Accessible curb ramps (BSP page 121);
SI-2:	Marked crosswalks (BSP page 113);
SI-3:	Pedestrian signals (BSP page 115);
SI-4:	Curb radius guidelines (BSP page 118);
SI-5:	Corner curb extensions or bulb-outs (BSP page 127).

The following is a discussion of the proposed standard streetscape improvements' potential impacts on the City's transportation and circulation network.

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[53] The policies and streetscape improvements proposed in the BSP comply with legally-mandated accessibility requirements for public right-of-ways. Legally-mandated requirements include: (1) The California Civil and Government Code basic accessibility requirements in the public right of way built by state and local governmental entities; (2) The California Building Code and US Access Board's Accessibility Guidelines for the Americans with Disability Act; (3) The San Francisco Department of Public Works Code requirements for: sidewalks; curb ramps; sidewalk café tables, chairs, merchandise and produce display encroachments on sidewalks, and (4) The *San Francisco Planning Code's* requirements for public space and design guidelines for specific use districts.

SI-1. Accessible curb ramps (BSP page 121) would involve the construction of curb ramps from sidewalks into crosswalks to meet the Americans with Disabilities Act standards. This would improve pedestrian access and safety between the roadway and the street. Curb ramps also enable easy movement between the roadway and sidewalk for hand trucks, strollers, wheeled luggage and bicycles (when walked).

Traffic

The creation of accessible ramps would not generate any new trips or reduce roadway capacity. Therefore, this Streetscape Improvement would have no effect on the Level of Service (LOS) at any particular intersection. Further, accessible curb ramps enable disabled individuals to directly travel between the roadway and the sidewalk. Without accessible curb ramps, pedestrians may be forced to use nearby driveways and travel in the roadway back to the crosswalk, which may not only endanger pedestrians, but also cause traffic congestion. The construction of accessible curb ramps would allow disabled pedestrians to cross the street directly without walking along the roadway, thus reducing the potential for traffic congestion. Given that this streetscape improvement would not create any new vehicle trips or reduce roadway capacity, and would reduce the potential for traffic congestion, it would result in a less-than-significant impact on traffic operations.

Transit

The creation of accessible ramps would not generate any new transit trips and therefore, would not increase transit demand. Further, provision of accessible curb ramps will enable easier pedestrian access to transit vehicles. The ability of disabled transit users to directly access the transit vehicle from the sidewalk may reduce transit dwell time, having a beneficial effect on transit operations. Given that this streetscape improvement would not create any new transit trips and would improve access to transit for individuals with disabilities, it would result in a less-than-significant impact on transit.

Pedestrian

The creation of accessible ramps would not result in substantial overcrowding on public sidewalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility. In fact, accessible curb ramps allow pedestrians, especially those with disabilities, to easily travel from the crosswalk to the sidewalk and generally reduce potentially hazardous pedestrian conditions. Therefore, accessible curb ramps would result in a less-than-significant impact for pedestrians.

Bicycle

Accessible ramps would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. On the contrary, accessible curb ramps allow for easy pushing of bicycles from the roadway onto the sidewalk, where bicycle parking is usually located, thus facilitating the transition between bicycle parking and bicycle travel. Therefore, accessible curb ramps would result in a less-than-significant impact on bicyclists.

Loading
Creation of accessible ramps would not create any loading demand, nor would it interfere with on-street or off-street loading access. Accessible curb ramps allow for easy pushing of hand trucks and other wheeled equipment from street parking and loading zones onto the sidewalk. Therefore, accessible curb ramps would result in a less-than-significant loading impact.

Emergency Access
Accessible curb ramps would not hinder emergency vehicle access. The impact would be less-than-significant.

Parking
Accessible curb ramps would not create any parking demand. Parking is already prohibited in all crosswalks, whether an accessible curb ramp exists or not. Therefore, the installation of accessible curb ramps would not require the removal of any parking spaces.

SI-2. Marked crosswalks (BSP page 113) would provide a visible pedestrian route across the street at most intersections with substantial traffic or pedestrian volumes. Crosswalks indicate to drivers that they should expect to see pedestrians, and that pedestrians have the right of way. (At signalized intersections, pedestrians have the right of way when they receive a WALK or DON'T WALK signal, or in the absence of pedestrian signals, when they receive a green signal).

The policy also calls for restricting parking within at least 10 feet of the crosswalk, and preferably 20 feet. In some cases, this may necessitate the removal of one parking space on each side of each approach of an intersection.

Traffic
The provision of Marked Crosswalks or the potential reduction in parking spaces would not generate any new vehicular trips, nor would it reduce roadway capacity. Therefore, it would not have an effect on the LOS as any particular intersection. By state law, crosswalks exist at all non-alley intersections whether marked or not, and drivers are required to yield to pedestrians at crosswalks. Therefore, the marking of existing crosswalks would result in a less-than-significant traffic impact.

Transit
The provision of Marked Crosswalks or the potential reduction in parking spaces would not generate any new transit trips and would not result in delay for transit vehicles. Therefore, Marked Crosswalks would have a less-than-significant impact on transit.

Pedestrian
The provision of Marked Crosswalks or the reduction in parking spaces would not result in the overcrowding of sidewalks, create potentially hazardous conditions or otherwise interfere with pedestrian accessibility. In fact, provision of Marked Crosswalks would enhance pedestrian visibility and direct pedestrians to cross a street at the safest location. Therefore, the installation of Marked Crosswalks would have a less-than-significant impact on pedestrians.

Bicycle
The provision of Marked Crosswalks would not result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. Therefore, Marked Crosswalks would result in a less-than-significant impact on bicycle traffic.

Loading
Provisions of Marked Crosswalks would not create any loading demand or interfere with on-street or off-street loading access. Loading activities are not anticipated to be affected by the presence of a marked crosswalk. The provision of marked crosswalks is not expected to reduce the supply of on-street loading spaces, because generally, parking is already prohibited near corners.

In limited circumstances, Market Crosswalks may require the removal of designated on-street loading spaces (yellow or white curb zone). The removal of a single loading space would not be considered a significant impact because other loading spaces would remain in the nearby vicinity. It should be noted that the removal of multiple loading spaces within an area could be considered a significant impact. **Mitigation Measure TR-1** presented below and in Section F, Mitigation Measures and Improvement Measures, p.174, would reduce the impacts of Marked Crosswalks to loading to less-than-significant levels. **Mitigation Measure TR-1** would require the installation of new loading spaces, of equal length, on the same block and side-of-the street for locations where truck loading spaces are removed and there is still need for truck loading spaces. **Mitigation Measure TR-1** would mitigate potential impacts to loading to less than significant levels.

Emergency Access
Marked Crosswalks would not hinder emergency vehicle access. The impact would be less-than-significant.

Parking
Provision of Marked Crosswalks would not create any parking demand. At some intersections, the installation of crosswalks and restricting of parking immediately adjacent to crosswalks may result in a small decrease in on-street parking availability. However, the majority of the on-street parking supply would not be affected. Moreover, parking is generally already prohibited at intersections and near crosswalks due to the presence of bus stops and fire hydrants.

Mitigation Measure TR-1 - Provision of New Loading Space:
The following mitigation measure shall apply to any removal of truck loading spaces, assuming that the need for the truck loading spaces is unchanged at the locations where these truck loading spaces would be removed.

To avoid any potential adverse effect from the Proposed Project on loading, the Project Sponsor shall install new loading spaces, of equal length, on the same block and side-of-the street at locations where truck loading spaces are removed. This would ensure that an equally

convenient supply of on-street loading space is provided to compensate for any space that is removed.

SI-3. Pedestrian Signals (BSP page 115) would include pedestrian countdowns, accessible pedestrian signals, and signal timing that provide an opportunity for pedestrians to cross the street.

Traffic signals in San Francisco are designed to meet the requirements and specifications contained within the MUTCD to accommodate pedestrian, bicycle, transit, truck and vehicle traffic. The Plan proposes to continue to install pedestrian signals with countdown timers at all signalized intersections, and continuing to install actuated audible signals for the visually impaired.

According to the plan, at nearly all signalized intersections in the city, pedestrians can cross the entire street (before opposing traffic receives a green signal) walking as slowly as 2.5 feet per second, if they enter the crosswalk at the beginning of the WALK/green phase. The plan mentions that the City should conduct studies to determine if lower walking speeds are appropriate, but the BSP does not propose to time signals for slower crossing speeds than 2.5 feet per second. The plan also encourages the use of pretimed signal operation with short cycle lengths, which minimizes pedestrian and bicycle delay and saves on signal installation and maintenance costs.

The SFMTA, which oversees signal installation and maintenance, would continue to monitor pedestrian crossing times, as well as traffic and transit volumes, in its management of traffic control devices.

Traffic
Pedestrian Signals would not cause an increase in vehicle trips or a reduction in roadway capacity. Therefore, these features would have a less-than-significant impact on traffic.

Transit
Pedestrian signals would not cause an increase in transit trips, nor would they result in delay for transit vehicles. Therefore, Pedestrian Signals would have a less-than-significant impact on transit.

Pedestrian
Pedestrian Signals and increasing pedestrian walking time would not result in overcrowding of sidewalks or create potentially hazardous conditions. This guideline would be expected to improve pedestrian access and safety, particularly for more vulnerable pedestrians. Therefore, the proposed Pedestrian Signals Standard Streetscape Improvement would result in less-than-significant pedestrian impact.

Bicycle
Pedestrian Signals would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. Therefore, this Streetscape Improvement would have a less-than-significant bicycle impact.

Loading
Pedestrian Signals would not create any loading demand or potentially hazardous conditions. The installation and operation of pedestrian signals would have a less-than-significant impact on loading.

Emergency Access
Pedestrian Signals would not hinder emergency vehicle access. The impact would be less-than-significant.

Parking
Pedestrian Signals would not create any parking demand, nor would it result in the removal of any on-street parking spaces.

SI-4. Curb Radius Guidelines (BSP page 118) would include changes to curb radii that would be designed to maximize pedestrian space, shorten pedestrian crossing distances and reduce vehicle speeds.

The Curb Radius Guidelines standard streetscape improvement proposed in the BSP will specify the appropriate corner radius at an intersection, based on the street type, presence of transit or significant truck volumes, traffic volumes and speeds, and other factors. The Guidelines specify when a certain size truck needs to be *designed for*, meaning that the maximum size vehicle (for that particular street type) can negotiate the turn without straddling adjacent or opposing lanes, versus being *accommodated*, meaning that the vehicle is permitted to straddle adjacent lanes while turning.

Traffic
The application of the Curb Radius Guidelines would not cause an increase in vehicle trips.

The use of all travel lanes to determine the intersection's effective turning radius is intended to increase the effective turn radii for vehicles. Depending on the intersection geometry, requiring larger vehicles to turn into opposing lanes to negotiate the turn could preclude that vehicle from executing a right turn on red (RTOR), although RTOR would not necessarily be prohibited for all vehicles. The obstruction of RTOR could cause vehicles queued behind trucks to wait at the intersection and experience delay.[54] However, the guidelines specify that intersections which experience higher volumes of large vehicles would be designed for, as opposed to

[54] On one-lane streets, through and left-turn traffic would be blocked (during the green time phase) until the opposing lane is cleared for large vehicles to negotiate their turn. The same would be true for two- lane streets, as large vehicles would swing into the adjacent lane, temporarily blocking both lanes, to negotiate the turn.

accommodate, those vehicles. In other words, on low volume streets all travel lanes (both directions) would be used to determine the effective turning radius, whereas on Muni 'Rapid' or 'Local' routes, or intersections with high volumes of truck traffic, the turning radius would be designed so that straddling of adjacent or opposing lanes does not occur. At these intersections, larger vehicles would still be able to negotiate a RTOR without straddling into opposing lanes, and there would be no increase in vehicle delay over existing conditions. Furthermore, the BSP states that on designated truck routes, the turning radii would be designed for a 60-foot truck and that on arterial and commercial streets, the effects of the turn radius on truck movements should be evaluated.

On street types that do not experience high volumes of large truck traffic, the presence of a truck (that could not complete a RTOR) would be infrequent, thus vehicles having to wait behind trucks would also be infrequent. This would not lead to a noticeable increase in delay. On streets that are 'Rapid' and Local' Muni routes and that experience high volumes of truck traffic or are designated as truck routes, turning radius would be designed so that straddling of opposing lanes is not necessary to execute a turn. In light of the above, the Curb Radius Streetscape Improvements would result in a less-than-significant traffic impact.

Transit
The application of the Curb Radius Guidelines would not result in additional transit trips. Similar to the condition for traffic, precluding a transit vehicle from executing a RTOR could lead to transit delays. However, the guidelines specify that intersections which are along Muni's 'Rapid' and 'Local' routes be designed so that the vehicle does not have to straddle opposing lanes. This would ensure that the improvement would not lead to a substantial delay to transit. Therefore, the impact on transit would be less-than-significant.

Pedestrian
The application of the Curb Radius Guidelines would not result in overcrowding of sidewalks or create potentially hazardous conditions for pedestrians. This guideline would be expected to improve pedestrian access and safety due to shortened crossing distances, greater driver visibility, and slower traffic speeds. The Curb Radius Guidelines would have a less-than-significant impact on pedestrians.

Bicycle
The Curb Radius Guidelines would not result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. Therefore, the Curb Radius Guidelines would result in a less-than-significant impact on bicycles.

Loading
The Curb Radius Guidelines would not create any loading demand.

The Curb Radii Guidelines are specifically designed to continue to allow truck access, while enhancing safety and livability for other street users. The use of all travel lanes to determine the intersection's effective turning radius is intended to increase the effective turn radii for vehicles.

Depending on the intersection geometry, requiring larger vehicles to turn into opposing lanes to negotiate the turn could preclude that vehicle from executing a RTOR, which could cause vehicles to experience delay.[55] However, the guidelines specify that intersections which experience higher volumes of large vehicles would be designed for, as opposed to accommodate, those vehicles. In other words, on streets with low truck volumes, all travel lanes (both directions) would be used to determine the effective turning radius, whereas at intersections with high volumes of truck traffic the turning radius would be designed so that straddling of adjacent or opposing lanes does not occur. At these intersections, larger vehicles would still be able to negotiate a RTOR without straddling into opposing lanes, and there would be no increase in vehicle delay over existing conditions. Furthermore, the BSP states that on designated truck routes, the turning radii would be designed for a 60-foot truck and that on arterial and commercial streets, the effects of the turn radius on truck movements should be evaluated.

On street types that do not experience high volumes of large truck traffic, the presence of a truck (that could not complete a RTOR) would be infrequent, thus vehicles having to wait behind trucks would also be infrequent. This would not lead to a noticeable increase in delay. On streets that experience high volumes of truck traffic or are designated as truck routes, turning radius would be designed so that straddling of opposing lanes does not occur, therefore, not affecting the RTOR. In light of the above, the loading impacts of the Curb Radius Streetscape Improvements would result in a less-than-significant impact.

Emergency Access

Tighter turning radii could affect emergency vehicle access, especially larger emergency vehicles such as fire trucks. However, emergency vehicles have sirens which direct other vehicles to move clear. Therefore, emergency vehicles executing a right turn will be able to use all travel lanes to determine the effective turning radii.

The Plan indicates that all intersections should be designed to accommodate a 40' emergency vehicle, using the entire roadway. Even on high-traffic streets, emergency vehicles will be able to use the entire roadway because other vehicles will move clear. Therefore, the impact of the Curb Radii Guidelines on emergency vehicle access would be less-than-significant.

Parking

The Curb Radii Guidelines would not remove any parking spaces or create any parking demand.

SI-5. Corner Curb Extensions or Bulb-outs (BSP page 127) would extend the sidewalk space into the parking lane at intersections and mid-block.

[55] On one-lane streets, through and left-turn traffic would be blocked (during the green time phase) until the opposing lane is cleared for large vehicles to negotiate their turn. The same would be true for two- lane streets, as large vehicles would swing into the adjacent lane, temporarily blocking both lanes, to negotiate the turn.

On some streets where the travel lane has excess width, corner curb extension or bulb-outs may extend beyond the edge of the parking lane into the travel lane, but they would not remove any travel lanes. Corner Curb Extensions or Bulb-outs would not be applied to streets that do not have a parking lane, or streets that have a peak-period tow-away lane; therefore, there would be no reduction in roadway capacity. The implementation of Corner Curb Extensions or Bulb-outs standard streetscape improvement would be applicable on all City street types.

Traffic
Curb Extensions or Bulb-outs would not create any vehicle trips. This feature would narrow the roadway at intersections in order to calm traffic and improve pedestrian safety at crosswalks, but it would not intrude into the travel lane, and would not reduce roadway capacity or create traffic delays. Therefore, Corner Curb Extensions or Bulb-outs would have a less-than-significant traffic impact.

Transit
Curb Extensions or Bulb-outs would not create any transit trips. This feature would not be installed in any location where it would impede the movement of a transit vehicle. Since Curb Extensions or Bulb-outs would not affect transit capacity or delay transit, it would have a less-than-significant transit impact.

Pedestrian
Curb Extensions or Bulb-outs would not result in overcrowding of sidewalks or create potentially hazardous conditions for pedestrians. Corner Curb Extensions or Bulb-outs would provide improved pedestrian visibility to vehicles, shorten crossing distances, and provide more space on the corner for pedestrians. Therefore, the impact to pedestrians would be less-than-significant.

Bicycle
Corner Curb Extensions or Bulb-outs would not result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. The BSP states that on streets with designated bike lanes or bike routes, curb extensions should not encroach on cyclists' space. Where bike lanes use a painted inside edge, the bike lane should be painted continuously as the bike lane passes the curb extension and the bulb-out should be set back so that the gutter pan does not extend into the bike lane. Further, on low-speed or low-volume streets where bikes can travel in mixed flow with vehicles, care should be taken not to force cyclists to merge unexpectedly with faster moving cars. Given the above provisions in the BSP, the Curb Extensions or Bulb-outs would result in a less-than-significant impact on bicycles.

Loading
Corner Curb Extensions or Bulb-outs would not create any loading demand. They would not impact trucks, except in the manner that they may create tighter turning radii. This issue is addressed with the Curb Radii Guidelines previously described on page 80.

In limited circumstances, a Corner Curb Extension or Bulb-out may require the removal of

designated on-street loading spaces (yellow or white curb zone). The removal of a single loading space would not be considered a significant impact because other loading spaces would remain in the nearby vicinity. It should be noted that the removal of multiple loading spaces within an area could be considered a significant impact. **Mitigation Measure TR-1,** presented on p.74 above and in Section F, Mitigation Measures and Improvement Measures, p.174, would reduce the impacts of Corner Curb Extensions or Bulb-outs to loading to a less-than-significant level. **Mitigation Measure TR-1** would require the installation of new loading spaces, of equal length, on the same block and side-of-the street for locations where truck loading spaces are removed and there is still need for truck loading spaces. **Mitigation Measure TR-1** would mitigate potential impacts to loading to less than significant levels. Thus, the impact of Corner Curb Extensions or Bulb-outs on loading would be less than significant.

Emergency Access
Corner Curb Extensions would not hinder emergency vehicle access, except in the manner that they may create tighter turning radii. This issue is addressed with the Curb Radii Guidelines previously described. The impact would be less-than-significant.

Parking
Corner Curb Extensions or Bulb-outs would not create any parking demand. They would potentially remove one or several parking spaces,[56] depending on the length of the feature. However, many intersections already prohibit parking at the intersection, for a variety of reasons such as presence of bus stops, fire hydrants, or the need for increased visibility. At locations where parking would be removed, there would be a minor reduction in the total number of on-street spaces.

Case-By-Case or Optional Streetscape Improvements

The 26 optional or case-by-case streetscape improvements proposed in the BSP are design guidelines for particular street types that would not be mandatory for future site-specific streetscape projects or proposed developments in that street type (see page 23 of this PMND for a description of the 26 case-by-case streetscape improvements, and see page 12 of this PMND for description of city street types). However, these design guidelines should be considered for implementation as budgets, physical condition, and/or neighborhood preferences permit.

Of the 26 Plan-proposed Optional Improvements, 22 are relevant to the topic of Transportation and Circulation. The four elements which are not (CBC-19: Pocket parks, CBC-20: Reuse of 'pork chops' and excess right-of-way, CBC-24: Public stairs, CBC-26: Above-ground landscaping) do not relate to any item on Checklist E.5, except that these elements may enhance or better connect the pedestrian environment.

The following 22 Plan-proposed Optional Improvements are relevant to the topic of Transportation and Circulation:

[56] Because the BSP is a set of guidelines that does not describe specific projects that could be applied Citywide, the number of parking spaces to be removed, as a result of the BSP, could not be estimated.

CBC-1: High-visibility Crosswalks
CBC-2: Special Crosswalk Treatments
CBC-3: Vehicle Turning Movements at Crosswalks
CBC-4: Removal or Reduction of Crosswalk Closures
CBC-5: Mid-block Crosswalks
CBC-6: Raised Crosswalks
CBC-7: Extended Bulb-outs
CBC-8: Mid-block Bulb-outs
CBC-9: Center or Side Medians
CBC-10: Pedestrian Refuge Island
CBC-11: Transit Bulb-outs
CBC-12: Transit Boarding Islands
CBC-13: Perpendicular or Angled Parking
CBC-14: Flexible Use of Parking Lane
CBC-15: Parking Lane Planters
CBC-16: Chicanes
CBC-17: Traffic Calming Circles
CBC-18: Roundabouts
CBC-21: Boulevard Treatments
CBC-22: Shared Public Ways
CBC-23: Pedestrian-only Streets
CBC-25: Multi-use paths

One of the proposed streetscape improvements is Roundabouts (CBC 18). Roundabouts operate differently than signalized or unsignalized intersections, and thus they may result in more or less traffic delay, depending on several factors including number of intersection approaches, approach volumes, approach speed, pedestrian and bicycle volumes, transit stops, and truck volumes.

The implementation of any roundabout would require separate site-specific analysis and environmental review, and is not covered within this document. The BSP encourages the City to study the possible implementation of roundabouts, and to ensure that they do not hinder pedestrian, bicycle or transit accessibility or safety.

Many of the above improvements have similar characteristics, or would be implemented in combination. Likewise, their environmental impacts on the transportation network would be similar. For simplicity of organization, the remaining 21 optional improvements (Roundabouts have been excluded) have been grouped into seven clusters, as listed below:

Cluster A: These improvements would restrict vehicle movements or maneuvers that could conflict with pedestrian or cyclist safety, and ensure that pedestrians and cyclists are provided safe and convenient facilities.

CBC-3: Vehicle Turning Movements at Crosswalks

CBC-4: Removal or Reduction of Crosswalk Closures

Cluster B: These improvements would involve removal of on-street parking in order to construct bulb-outs.

CBC-7: Extended Bulb-outs
CBC-11: Transit Bulb-outs

Cluster C: These improvements would enhance pedestrian accessibility and safety on long blocks by enabling pedestrians to cross mid-block.

CBC-5: Mid-block Crosswalks
CBC-8: Mid-block Bulb-outs

Cluster D: These improvements would calm traffic by reducing vehicle speeds and enhancing pedestrian visibility, as well as facilitating pedestrian crossings of the street or waiting for a transit vehicle.

CBC-9: Center or Side Medians
CBC-10: Pedestrian Refuge Island
CBC-12: Transit Boarding Island
CBC-16: Chicanes
CBC-17: Traffic Calming Circles
CBC-21: Boulevard Treatments

Cluster E: These improvements would expand the pedestrian realm, and restrict or prohibit vehicular access in that realm.

CBC-22: Shared Public Ways
CBC-23: Pedestrian-only Streets
CBC-25: Multi-use Paths

Cluster F: These improvement would enhance pedestrian visibility within crosswalks, and alert drivers to expect pedestrians, especially more vulnerable pedestrians.

CBC-1: High-visibility Crosswalks
CBC-2: Special Crosswalk Treatments
CBC-6: Raised Crosswalks

Cluster G: These improvements would involve removal or reorientation of on-street parking, to improve pedestrian amenities and enhance commercial vitality.

CBC-13: Perpendicular or Angled Parking
CBC-14: Flexible Use of Parking Lane
CBC-15: Parking Lane Planters

Cluster A:

CBC-3: Vehicle Turning Movements at Crosswalks
CBC-4: Removal or Reduction of Crosswalk Closures

Vehicle Turning Movements at Crosswalks (BSP page 119)would prohibit right turn on red (RTOR), and eliminate or preclude multiple vehicle turn lanes at intersections.

The California Vehicle Code allows drivers to turn right on red lights after coming to a complete stop and yielding to approaching traffic and crossing pedestrians before turning, unless a sign prohibits the movement. The potential benefit of the practice of turning right during the red light phase is reduced traffic delays. However, studies have reported that following the adoption of a national RTOR policy, substantial increases in pedestrian and bicycle crashes were reported at signalized intersections in urban areas. According to field evaluation results published by the Institute of Transportation Engineers, the increase in vehicle-pedestrian crashes observed since the adoption of RTOR could be due to the fact that many drivers do not come to a complete stop before turning right on red.[57] Also, vehicles executing a RTOR must encroach on the crosswalk while waiting for a gap in traffic, which impedes pedestrian circulation and can lead to dangerous pedestrian paths outside of the crosswalk. Therefore, prohibiting RTOR at intersections could be an important tool for increasing pedestrian safety at crosswalks.

RTOR is already prohibited by the SFMTA at some intersections in San Francisco, based on national guidelines as well as local SFMTA policy.[58] This proposed streetscape improvement would be a continuation of existing SFMTA policy, as well as encourage SFMTA to revisit intersections where RTOR is permitted to ensure that pedestrian safety or circulation is not compromised.

Multiple vehicle turn lanes are provided at intersections with heavy turning vehicle volumes. When more than one vehicle turn lane is provided across a crosswalk, the inside turning vehicle can block the view of the crosswalk for the outside turning vehicle, which is dangerous if a pedestrian is in the crosswalk (turning vehicles are required to yield to pedestrians).

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[57] Retting, R A; Nitzburg, M S; Farmer, C M; Knoblauch, R L, *Field Evaluation of Two Methods for Restricting Right Turn on Red to Promote Pedestrian Safety*, ITE Journal Vo. 72 No.1, 2002.

[58] According to the BSP Plan, the CA MUTCD and the Institute of Transportation Engineers suggest considering the prohibition of RTOR under the following circumstances:
Inadequate sight distance to vehicles approaching from the left (or right, if applicable)
Geometrics or operational characteristics of the intersection that might result in unexpected conflicts
An exclusive pedestrian phase
An unacceptable number of pedestrian conflicts with right-turn-on-red maneuvers
Heavy volume of pedestrian crossings
Request from pedestrians with disabilities using the intersection
School crossings
Railroad crossings
Traffic signals with three or more phases
Additionally, the City also considers high speeds on cross streets and a verified collision history caused by RTOR maneuvers. *Draft San Francisco Better Streets Plan, Policies and Guidelines for the Pedestrian Realm*, San Francisco Planning Department, San Francisco, CA, 2008.

Multiple turn lanes also pose a substantial hazard to bicycles proceeding straight, especially if one of the turn lanes is a "shared turn/through" lane. Many drivers fail to use turn indicators, making it difficult for a bicycle to determine if a vehicle will turn or proceed straight.

Removal or Reduction of Crosswalk Closures (BSP page 120)would open currently closed City crosswalks and also reduce the number of future crosswalk closures in the City. The streets of San Francisco have a number of closed crosswalks, which create discontinuous pedestrian paths of travel and make walking inconvenient. Crosswalk closures are primarily associated with pedestrian safety in the face of very high turning traffic volumes, especially when multiple turn lanes are present (as described above). However, pedestrians often ignore crosswalk closures and choose not to cross the street three times to reach a destination when it can be reached by one illegal street crossing.

Traffic

Vehicle Turning Movements at Crosswalks and Removal or Reduction of Crosswalk Closures would not result in new vehicle trips._These features could, however, potentially increase delay to vehicles at intersections that experience a high volume of right-turning movements, due to increased delay caused by having to yield to pedestrians or waiting for a green light to make a right turn. Consequently, this could lead to an increase in traffic delays. To address this issue, the BSP states that RTOR prohibitions may be considered at intersections where the volume of right-turning vehicles does not exceed 300 vehicles in the peak hour. Implementation of RTOR prohibitions at intersections where right-turning vehicles do not exceed 300 cars in the peak hour would not be expected to result in increased delay. Therefore, impacts of RTOR prohibitions would result in a less-than-significant traffic impact. As indicated in the BSP, implementation of RTOR prohibitions at intersections that experience high volumes of right-turning movements (greater than 300 vehicles in the peak hour) would require additional study and environmental clearance.

Furthermore, the BSP also recommends studying removal of crosswalk closures, and the removal of multiple turn lanes. Both of these elements would require site-specific study and additional environmental clearance prior to implementation.

Because these features would either not generate significant traffic delay, or would be subject to site-specific analysis and additional environmental clearance prior to implementation, the impact to traffic would be less-than-significant.

Transit

Vehicle Turning Movements at Crosswalks and Removal or Reduction of Crosswalk Closures would not result in new transit trips.

The prohibition of RTOR or multiple turn lanes could potentially increase transit delay at intersections that experience a high volume of right-turning movements and that have curb-running transit with near-side stops. However, implementation of RTOR prohibitions at

intersections where right-turning vehicle do not exceed 300 cars in the peak hour or where the transit stop is located at the far-side of the intersection would not be expected to result in increased transit delay. Therefore, impacts of RTOR prohibitions would result in a less-than-significant transit impacts. As indicated in the BSP, implementation of RTOR prohibitions at intersections that experience high volumes of right-turning movements (greater than 300 vehicles in the peak hour) or have near-side bus stops would require additional study and environmental review.

Furthermore, the BSP also recommends studying removal of crosswalk closures, and removal of multiple turn lanes. Both of these elements would require site-specific study and additional environmental clearance prior to implementation.

Because these features would either not generate significant transit delay, or would be subject to site-specific analysis and additional environmental clearance prior to implementation, the impact to transit would be less-than-significant.

Pedestrian

Vehicle Turning Movements at Crosswalks and Removal or Reduction of Crosswalk Closures would not result in overcrowding of sidewalks or create potentially hazardous conditions for pedestrians. On the contrary, they would be expected to improve pedestrian access and safety, due to fewer vehicle-pedestrian conflicts and more direct pedestrian routes. At intersections with high right-turn volumes, prohibition of RTOR could cause potential pedestrian and vehicle conflicts[59] during right turns on green to increase, because all turning motorists would have to wait to make their turn while pedestrians are simultaneously crossing the street. This could post a safety impact to pedestrians. To address this issue, the Plan states that RTOR prohibitions may be considered at intersections where the volume of right-turning vehicles does not exceed 300 vehicles in the peak hour. Implementation of RTOR prohibitions at intersections where right-turning vehicle do not exceed 300 cars in the peak hour would not be expected to result in a pedestrian safety impact. Therefore, impacts of RTOR prohibitions would result in a less-than-significant pedestrian impact. As indicated in the BSP, implementation of RTOR prohibitions at intersections that experience high volumes of right-turning movements (greater than 300 vehicles in the peak hour) would require additional study and environmental review.

Furthermore, the Plan also recommends studying the removal of crosswalk closures, and the removal of multiple turn lanes. Both of these features would have a beneficial impact on pedestrians.

Because these features would either improve the pedestrian realm, or would be subject to site-specific analysis and additional environmental review prior to implementation, the impact to pedestrians would be less-than-significant.

[59] A conflict point is the paths where two motor vehicles, or a vehicle and a bicycle or pedestrian queue, diverge, merge, or cross each other.

Bicycle
Vehicle Turning Movements at Crosswalks and Removal or Reduction of Crosswalk Closures would not result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. Bicycles may experience increased delay with prohibition of RTOR, but this delay would not be considered significant. Bicycles would benefit from the removal of multiple turn lanes. Therefore, these features would result in a less-than-significant impact on bicycles.

Loading
Vehicle Turning Movements at Crosswalks and Removal or Reduction of Crosswalk Closures would not create any loading demand, nor would they hinder any loading activities or lead to a removal of any loading spaces. These features would have a less-than-significant impact on loading.

Emergency Access
Vehicle Turning Movements at Crosswalks and Removal or Reduction of Crosswalk Closures would not hinder emergency vehicle access. Emergency vehicles would not have to wait for pedestrians to cross the street, because pedestrians would hear the siren of the approaching vehicle and clear the crosswalk. The impact would be less-than-significant.

Parking
Vehicle Turning Movements at Crosswalks and Removal or Reduction of Crosswalk Closures would not create any parking demand, nor would they lead to the removal of any on-street parking spaces.

Cluster B:

CBC-7:	Extended Bulb-outs
CBC-11:	Transit Bulb-outs

Extended Bulb-outs (BSP page 131)are identical to the standard streetscape improvement of Corner Curb Extensions or Bulb-outs, except they are longer and generally remove more parking spaces to provide space for seating and landscaping. This improvement could also be combined with landscape features that facilitate stormwater management and have hydrology/water quality benefits. This proposed streetscape improvement would be appropriate on all street types on an optional basis.

On some streets where the travel lane has excess width, corner curb extension or bulb-outs may extend beyond the edge of the parking lane into the travel lane. Corner Curb Extensions or Bulb-outs would not be applied to streets that do not have a parking lane, or streets that have a peak-period tow-away lane; therefore, there would be no reduction in roadway through-movement capacity.

Transit Bulb-outs (BSP page 144)would provide curb extensions at transit stops and are intended to improve transit operations by allowing transit vehicles to load from the travel lane. Under the BSP, Transit Bulb-outs are recommended to be considered for all streets with side-running transit and a parking lane, except: (1) where there is a peak-period tow-away parking lane; (2) where there is a desire to have a queue jumping lane for buses; and (3) near side stops[60] with heavy right-turn movements.

Additionally, under the BSP, the prioritization of Transit Bulb-outs is recommended on the following: (1) on Rapid Network lines, and selectively on local and other lines at critically impacted locations; (2) where the existing sidewalk width is too narrow to accommodate a transit shelter, or where pedestrian through travel is constrained; and (3) where transit performance is slowed significantly due to the time delays caused by reentering traffic flow, and a bus bulb would lessen this problem.

Traffic

Extended and Transit Bulb-outs would not create new vehicle trips or reduce the overall roadway capacity. Transit Bulb-outs could temporarily block a travel lane, which could lead to increased traffic delays. However, the installation of a Transit Bulb-out would not be expected to cause substantial increase in delay over existing conditions. When a bus bulb is not present, stopped buses generally still block the right travel lane because buses are usually not able to fully pull flush against the curb. Furthermore, the BSP does not recommend installing Transit Bulb-outs at near side stops with heavy right turn movements. The Extended Bulb-outs would not be expected to affect traffic operations or result in any delays as they would be installed in place of existing parking spaces. In light of the above, Transit and Extended Bulb-outs would have a less-than-significant impact on traffic.

Transit

Extended Bulb-outs and Transit Bulb-outs would not create new transit trips nor would they be installed in any location where they would impede the movement of a transit vehicle. Transit Bulb-outs would provide a prominent waiting area for transit passengers. They would also improve transit operations because buses would not need to wait to pull back in to traffic after each stop. Therefore, extended Bulb-outs and Transit Bulb-outs would have a less-than-significant impact on transit.

Pedestrian

Extended Bulb-outs and Transit Bulb-outs would not result in overcrowding of sidewalks or create potentially hazardous conditions for pedestrians. On the contrary, they would be expected to improve pedestrian access and safety, due to shortened crossing distances and greater driver visibility. Therefore, Extended Bulb-outs and Transit Bulb-outs would have a less-than-significant impact on pedestrians.

[60] A near-side bus stop is a bus stop located before an intersection crossing.

Bicycle
Extended Bulb-outs or Transit Bulb-outs would not result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. While they may narrow the roadway where a bicycle would be traveling, they would represent less of an impediment than a parked car. Further, the BSP states that, "on streets with designated bike lanes or bike routes, curb extensions should not encroach on cyclists' space. Where bike lanes use a painted inside edge, the bike lane should be painted continuously as the bike lane passes the curb extension, and the bulb-out should be set back so that the gutter pan does not extend into the bike lane. On lower-speed and volume streets where bikes can travel in mixed flow with vehicles, wider curb extensions may be appropriate but care should be taken not to force cyclists to merge unexpectedly with faster moving cars at the end of the block." Given the above, the Extended Bulb-outs and Transit Bulb-outs would result in a less-than-significant impact on bicycles.

Loading
Extended Bulb-outs or Transit Bulb-outs would not create any loading demand. They would not impact trucks access, except in the manner that they may create tighter turning radii. This issue is addressed with the Curb Radii Guidelines previously described on page 80.

In limited circumstances, Extended Bulb-outs or Transit Bulb-outs may require the removal of designated on-street loading spaces (yellow or white curb zone). The removal of a single loading space would not be considered a significant impact because other loading spaces would remain in the nearby vicinity. It should be noted that the removal of multiple loading spaces within an area could be considered a significant impact. **Mitigation Measure TR-1,** presented on p.74 above and in Section F, Mitigation Measures and Improvement Measures, p.174, would reduce the impacts of Bulb-outs or Transit Bulb-outs to loading to less-than-significant levels. **Mitigation Measure TR-1** would require the installation of new loading spaces, of equal length, on the same block and side-of-the street for locations where truck loading spaces are removed and there is still need for truck loading spaces. **Mitigation Measure TR-1** would mitigate potential impacts to loading to less than significant levels. Thus, the impact of Bulb-outs or Transit Bulb-outs on loading would be less than significant.

Emergency Access
Corner Curb Extensions would not hinder emergency vehicle access, except in the manner that they may create tighter turning radii. This issue is addressed with the Curb Radii Guidelines previously described. The impact would be less-than-significant.

Parking
Extended Bulb-outs or Transit Bulb-outs would not create any parking demand. They would potentially remove several parking spaces, depending on the length of the feature. However, many intersections already prohibit parking immediately adjacent to an intersection for a variety of reasons such as presence of bus stops, fire hydrants, turn pockets, or the need for

increased visibility. At locations where parking would be removed, there would be a minor reduction in the total number of on-street spaces relative to the overall supply.

Cluster C:

CBC-5: Mid-block Crosswalks
CBC-8: Mid-block Bulb-outs

Mid-block Crosswalks (BSP page 131)would allow pedestrians to legally cross the street in the middle of the block and this would be a particularly convenient feature on long blocks. It is recommended under the BSP that Mid-block Crosswalks be marked with supplementary treatments[61] to enhance visibility. Mid-block Crosswalks may be installed at signalized or unsignalized locations; however if the mid-block crosswalks are installed at unsignalized intersections, they should be accompanied by special warning devices (e.g. signs, signals, or flashing beacons).

According to the BSP, the Mid-block Crosswalks optional streetscape improvement would be appropriate on most street types on a case-by-case basis. However, the BSP recommends that mid-block crosswalks would be best utilized if implemented at the following locations in the City: (1) key civic and commercial locations; (2) areas with major pedestrian attractions that have mid-block entries like shopping areas, schools and community centers; (3) mid-block transit stop locations; and (4) long blocks (generally >500') with high expected pedestrian volumes.[62] Given these guidelines, Mid-block Crosswalks would be considered at few locations in the City relative to the entirety of the transportation network.

Mid-block Bulb-outs (BSP page 131)would provide curb extensions in a mid-block location by removing one or more parking spaces. Mid-block Bulb-outs would be often installed in

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[61] The guidelines in the BSP recommends that mid-block crosswalks:
Should be enhanced through the use of signage, stripping, signalization, or other special treatments such as flashing beacons, special paving materials, or raised crossings.
Should be constructed in combination with mid-block curb extensions wherever possible.
Include pedestrian lighting oriented toward the crossing after dark.

[62] According to the BSP, in San Francisco, mid-block crosswalks must be established by ordinance or resolution. The guidelines proposed in the BSP also recommend that new mid-block crosswalks should generally only be marked if all of the following five conditions are present:
1) Sufficient demand exists to justify the installation of a crosswalk;
2) The mid-block location is 200 feet or more from another crossing location;
3) The location is visible to motorists, allows for adequate stopping distance, and visibility is protected (e.g. by limiting on-street parking immediately adjacent to approaches to the crosswalks);
4) The location has adequate street lighting to illuminate the crosswalk;
5) The crosswalk will be controlled by traffic signal or will have special warning devices.
Additionally, candidate locations for the installation of mid-block crosswalks should meet the pedestrian demand guidelines set forth in the BSP. (Adam Varat, *Plan Revisions to the Better Streets Plan, Memorandum,* San Francisco Planning Department, San Francisco, CA, March 2, 2009.)

combination with a mid-block crossing. This improvement could provide space for seating and landscaping. This improvement could also be combined with landscape features that facilitate stormwater management and have hydrology/water quality benefits. The installation of Mid-block Bulb-outs would be appropriate on all street types on an optional basis.

Traffic
Mid-block Crosswalks and Bulb-outs would not create any new vehicle trips. Mid-block Bulb-outs would not intrude into the travel lane or reduce roadway capacity.

An unsignalized mid-block crosswalk could increase traffic delay, because vehicles would be required to yield to a pedestrian in the crosswalk. A signalized mid-block crosswalk could also result in traffic delay, although to a lesser effect than an unsignalized crossing, because it would be synchronized with upstream and downstream intersections to minimize the disruption to traffic. On one-way streets, a signalized crossing would result in minimal traffic delay, but on two-way streets, some amount of increased delay could be anticipated. An actuated signalized crossing (where a pedestrian must push a button to receive a WALK signal) would result in less traffic delay than a pre-timed signal (where the WALK signal is called each signal cycle and no pushbutton is necessary). This is because traffic would only be delayed when a pedestrian is present.

The installation of signalized or unsignalized mid-block crossings could result in traffic delays on two-way streets, while signalized crossings on one-way streets would not be expected to cause delay. Unsignalized crossings on one-way streets would not be considered under the BSP, because these streets are typically high-volume and high-speed streets, therefore crossings would need to be signalized. Therefore, only mid-block crossings on two-way streets could cause traffic delay.

To address this issue, on two-way streets with moderate traffic volumes, the BSP calls for an analysis of any proposed mid-block crossing to identify whether it would result in or contribute to unacceptable levels of service. On streets with greater than 500 vehicles per hour in either direction, subsequent site-specific environmental analysis would be required.

Given that the implementation of this feature would either be implemented where it would not have an impact on traffic, or would be subject to additional analysis and subsequent environmental review prior to implementation, its impact on traffic would be less-than-significant

Transit
Mid-block Crosswalks and Mid-block Bulb-outs would not create new transit trips. Mid-block Bulb-outs would not intrude into the travel lane or reduce roadway capacity.

Similar to traffic operations discussed above, the installation of a mid-block crossing could increase transit delay on two-way streets. To address this issue, the BSP calls for subsequent analysis of any proposed mid-block crossing to identify whether the prohibition would result in

or contribute to unacceptable delay to transit vehicles. Given that the implementation of this feature would be subject to analysis at specific locations where the feature is proposed, its impact on transit would be less-than-significant.

Pedestrian

The provision of Mid-block Crosswalks or Mid-Block Bulb-outs would not result in the overcrowding of sidewalks, create potentially hazardous conditions or otherwise interfere with pedestrian accessibility. In fact, these features would enhance pedestrian visibility and provide a more direct route for pedestrians. Therefore, the installation of Mid-Block Crosswalks and Mid-block Bulb-outs would have a less-than-significant impact on pedestrians.

Bicycle

Mid-block Crosswalks and Mid-Block Bulb-outs would not result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. While a Mid-block Bulb-out may narrow the roadway where a bicycle would be traveling, they would represent less of an impediment than a parked car. Therefore, Mid-block Crosswalks and Mid-Block Bulb-outs would result in a less-than-significant impact on bicycles.

Loading

Mid-block Crosswalks and Mid-Block Bulb-outs would not create any loading demand. In limited circumstances, Mid-block Crosswalks and Mid-Block Bulb-outs may require the removal of designated on-street loading spaces (yellow or white curb zone). The removal of a single loading space would not be considered a significant impact because other loading spaces would remain in the nearby vicinity. It should be noted that the removal of multiple loading spaces within an area could be considered a significant impact. **Mitigation Measure TR-1,** presented on p.74 above and in Section F, Mitigation Measures and Improvement Measures, p.174, would reduce the impacts of Mid-block Crosswalks and Mid-Block Bulb-outs to loading to less-than-significant levels. **Mitigation Measure TR-1** would require the installation of new loading spaces, of equal length, on the same block and side-of-the street for locations where truck loading spaces are removed and there is still need for truck loading spaces. **Mitigation Measure TR-1** would mitigate potential impacts to loading to less than significant levels. Thus, the impact of Mid-block Crosswalks and Mid-Block Bulb-outs on loading would be less than significant.

Emergency Access

Mid-block Crosswalks and Mid-Block Bulb-outs would not hinder emergency vehicle access. Emergency vehicles would not have to wait for pedestrians to cross the street, because pedestrians would hear the siren of the approaching vehicle and clear the crosswalk. The impact would be less-than-significant.

Parking

Mid-block Crosswalks and Mid-Block Bulb-outs would not create any parking demand. They would potentially remove several parking spaces, depending on the length of the feature. At

locations where parking would be removed, there would be a minor reduction in the total number of on-street spaces, relative to the overall supply on a block. This is especially true of the long blocks where Mid-block Crosswalks and Mid-Block Bulb-outs would be most beneficial.

Cluster D:

CBC-9:	Center or Side Medians
CBC-10:	Pedestrian Refuge Island
CBC-12:	Transit Boarding Island
CBC-16:	Chicanes
CBC-17:	Traffic Calming Circles
CBC-21:	Boulevard Treatments

Center or Side Medians (BSP page 133) would physically separate opposing travel lanes within a roadway, control left-turn vehicle access, and create space for landscaping and pedestrian refuge. This improvement would be appropriate on major streets, such as Downtown Commercial streets.

Pedestrian Refuge Islands (BSP page 135) are elements within the roadway where a pedestrian can safely rest or wait for a gap in traffic, before completing a crossing of the street. They are similar to center or side medians, except they are designed with sufficient width and buffer from traffic that they provide additional comfort and safety. They can be installed at signalized or unsignalized intersections, or at a mid-block location.

Transit Boarding Islands (BSP page 145) are installed whenever transit operates in the center of the street, rather than the curb lane. It allows pedestrians waiting for transit to directly access the vehicle upon its arrival, rather than waiting on the sidewalk and crossing a travel lane upon its arrival. This increases pedestrian safety and reduces transit dwell time. For bus and streetcar lines, Transit Boarding Islands are typically at a standard curb height of six inches. For light rail lines, the island may be at a standard curb height, or it may be raised to allow level boarding of light rail vehicles (such as Third Street).

Chicanes (BSP page 154) are traffic calming devices that slow traffic by forcing vehicles to travel a serpentine path (i.e., shift from side to side) along a street. Chicanes could be combined with the provision of pedestrian amenities, such as landscaping and seating. This improvement could also be combined with landscape features that facilitate stormwater management and have hydrology/water quality benefits. This improvement would be appropriate on low-volume, low-speed streets such as Neighborhood Residential streets and Alleys, on an optional basis.

Traffic Calming Circles (BSP page 155) slow traffic by adding a raised island at the center of an intersection, which forces vehicles to slow down to maneuver around. The BSP recommends that traffic calming circles include a mountable outer ring so that large vehicles can navigate the otherwise small curb radius. Further, the BSP recommends that traffic calming circles not be

located on transit routes and maintain sufficient space such that vehicles do not swing into crosswalks. According to the BSP, traffic calming circles would be appropriate on streets such as the Neighborhood Residential street type at intersections that generally have low traffic volumes. This improvement could also be combined with pedestrian amenities, such as landscaping and seating that facilitate stormwater management and have hydrology/water quality benefits. The feature's primary purpose is to reduce speeds at intersections, but when two or more Traffic Calming Circles are used in a series they can reduce speeds for several blocks.

Boulevard Treatments (BSP page 162) would include construction of side medians on major streets and the separation of through traffic from local access, thereby creating a pedestrian-friendly zone from the side median all the way to the private property line. This improvement would be appropriate on street types, such as major commercial and residential streets where the street width would allow implementation of this streetscape improvement.

The Boulevard Treatments could be designed as two-sided or one-sided boulevards. A two-sided boulevard involves the installation of access lanes on both sides of the street.[63] These access lanes would be separated from the center traffic lane by a side median. A one-sided boulevard involves the installation of a local access lane on only one side of the street and would be appropriate in areas where enough right-of-way width is unavailable to install a two-sided boulevard. The local access lanes manage the local traffic and could also be treated with a Shared Street[64] (a separate streetscape improvement, discussed later in this document) for local uses, such as parking, loading, bicycle access and pedestrian space.

Traffic

Center Medians, Chicanes, Traffic Circles, Boulevard Treatments, Pedestrian Refuge Islands and Transit Boarding Islands would not create new vehicle trips. Furthermore, these features would not reduce roadway capacity, although they may slightly reduce travel speeds.

Center Medians would control left-turn access in to and out of driveways along the street, only allowing left-turns at major vehicle destinations (such as a parking garage). This could lead to an increase in U-turns at adjacent intersections (assuming U-turns are permitted—if U-turns are not permitted, vehicles would be required to make several turns around a block in order to access a driveway). While this may represent an inconvenience to drivers, it would not be considered a significant impact. Furthermore, if a median were to preclude left-turn access in to or out of driveways along a block, the increase in U-turns at the intersections bounding the block would be only a few cars in the peak hour at each intersection. Compared to the overall traffic volumes at an intersection, this increase in traffic movements would be negligible, and would therefore, not be expected to result in additional delay at intersections.

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[63] Octavia Boulevard is an example of a multi-way boulevard.

[64] Shared streets are streets designed as a single surface where the entire right-of-way is shared among pedestrians, cyclists, and motor vehicles.

In light of the above, Center Medians, Chicanes, Traffic Circles, Boulevard Treatments, Pedestrian Refuge Islands and Transit Boarding Islands would have a less-than-significant impact on traffic.

Transit
Center Medians, Chicanes, Traffic Circles, Boulevard Treatments, Pedestrian Refuge Islands and Transit Boarding Islands would not create new transit trips. Furthermore, these features would not inhibit transit operations. Transit Boarding Islands would allow transit to operate in the center, rather than the curb lane, which eliminates delay from right-turning vehicles.

As outlined in the BSP, Chicanes and Traffic Circles would not be installed on streets with high-frequency transit routes, such as the TEP Rapid Network, because this would introduce delay which could compromise schedule adherence. However, Chicanes and Traffic Circles may be considered on less frequent Muni routes, such as Community routes, because these routes operate at low frequencies, so minor delay to these routes would not compromise schedule adherence. Therefore, the impact of these features on transit would be less-than-significant.

Pedestrian
Center Medians, Chicanes, Traffic Circles, Boulevard Treatments, Pedestrian Refuge Islands and Transit Boarding Islands would not result in the overcrowding of sidewalks, create potentially hazardous conditions or otherwise interfere with pedestrian accessibility. In fact, these features would enhance pedestrian visibility, reduce vehicle speeds and provide safer connections for pedestrians. Therefore, the installation of these features would have a less-than-significant impact on pedestrians.

Bicycle
Center Medians, Chicanes, Traffic Circles, Boulevard Treatments, Pedestrian Refuge Islands and Transit Boarding Islands would not result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. In fact, these features would enhance bicycle safety by reducing vehicle speeds. These features would result in a less-than-significant impact on bicycles.

Loading
Center Medians, Chicanes, Traffic Circles, Boulevard Treatments, Pedestrian Refuge Islands and Transit Boarding Islands would not create additional loading demand. These features would make turning movements more difficult for large trucks because they could reduce the effective turning radii. However, these features would be designed in keeping with the Curb Radii Guidelines addressed on page 80 of this document (see **p. 118** of the Final Better Streets Plan).

In limited circumstances, these elements may require the removal of designated on-street loading spaces (yellow or white curb zone). The removal of a single loading space would not be considered a significant impact because other loading spaces would remain in the nearby vicinity. It should be noted that the removal of multiple loading spaces within an area could be

considered a significant impact. **Mitigation Measure TR-1,** presented on p.74 above and in Section F, Mitigation Measures and Improvement Measures, p.174, would reduce the impacts of Center Medians, Chicanes, Traffic Circles, Boulevard Treatments, Pedestrian Refuge Islands and Transit Boarding Islands to loading to less-than-significant levels. **Mitigation Measure TR-1** would require the installation of new loading spaces, of equal length, on the same block and side-of-the street for locations where truck loading spaces are removed and there is still need for truck loading spaces. **Mitigation Measure TR-1** would mitigate potential impacts to loading to less than significant levels. Thus, the impact of Center Medians, Chicanes, Traffic Circles, Boulevard Treatments, Pedestrian Refuge Islands and Transit Boarding Islands on loading would be less than significant.

Emergency Access

Center Medians, Boulevard Treatments, Pedestrian Refuge Islands and Transit Boarding Islands could prevent an emergency vehicle from directly accessing a location, if not designed appropriately. To address this issue, before any of these features could be implemented, they would be subject to review by emergency responder staff (from the San Francisco Fire Department) to ensure that they do not pose a hindrance to emergency vehicles. Features could be designed with mountable curbs, so that emergency vehicles could drive over them. This would allow emergency vehicles to access any location.

Chicanes and Traffic Circles, which are designed to slow vehicle traffic, would slow the movement for emergency vehicles as well. While some delay would be expected, the delay that would be attributed to a Chicane or Traffic Circle would be negligible, generally less than five seconds of delay.[65]

Because Center Medians, Boulevard Treatments, Pedestrian Refuge Islands and Transit Boarding Islands would be designed (and reviewed by SFFD) to ensure that emergency access is maintained, and because Chicanes and Traffic Circles would cause negligible delay, the impact to emergency response vehicles would be less-than-significant.

Parking

Center Medians, Chicanes, Traffic Circles, Boulevard Treatments, Pedestrian Refuge Islands and Transit Boarding Islands would not create additional parking demand. Chicanes, Traffic Circles, Pedestrian Refuge Islands and Transit Boarding Islands could potentially require the removal of several on-street parking spaces. At locations where parking would be removed, there would be a minor reduction in the total number of on-street spaces relative to the overall supply on a block and in the immediate vicinity.

Cluster E:

CBC-22: Shared Public Ways
CBC-23: Pedestrian-only Streets

[65] If an emergency response vehicle was traveling at 30 miles per hour, and had to decelerate to negotiate a traffic circle, the delay would be between 1.7 and 4.9 seconds, depending on the type of vehicle. See "The Influence of Traffic Calming on Emergency Response Times," Crystal Atkins and Michael Coleman, ITE Journal, August 1997.

CBC-24: Multi-use Paths

Shared Streets (BSP page 164) are streets designed as a single surface where the entire right-of-way is shared by pedestrians, cyclists, and motor vehicles. Shared streets function as a pedestrian-oriented yard, plaza or open space, where cars may use the streets but pedestrians have the right-of-way along the whole street. According to the BSP, shared streets would be designed to force vehicles to proceed very slowly to access adjacent properties. Additionally, shared streets are appropriate in areas where pedestrian volumes and neighborhood uses of street space outweigh vehicular traffic needs, but where auto access is necessary and can be accommodated at a very slow pace.

Pedestrian-only Streets (BSP page 168) prioritize pedestrian use by closing streets to vehicular traffic. Pedestrian only streets would include temporary closures, pedestrian malls,[66] and transit malls.[67] Under the BSP, it is recommended that Pedestrian-only Streets be applied as a streetscape improvement for street types such as Ceremonial streets and Alleys.

Multi-use Paths are trails that allow only for pedestrians and bicycles, but do not allow vehicles, transit or trucks.

Traffic

Shared Streets, Pedestrian-only Streets and Multi-use Paths would not create new vehicle trips. Multi-use Paths would not reduce any roadway capacity. Therefore, Multi-use Paths would result in a less-than significant-impact on traffic.

As described in the BSP, Shared Streets would only be implemented on streets or alleys with low traffic volumes and no transit service. While streets would be designed to enforce very low vehicle speeds, existing capacity would remain at adjacent intersections for the movement of vehicles, and because the street would remain open to vehicles, diversions to adjacent streets would not be expected. Therefore, Shared Streets would have a less-than-significant impact on traffic.

As described in the BSP, Pedestrian-only streets would be implemented on streets meeting the following conditions: there is no parking or loading access, garages, or driveways; the through traffic is less than 100 vehicles per hour; and there is no transit service. While the permanent closure of existing streets for the application of Pedestrian-only Streets would require the removal of travel lanes, which could potentially divert traffic to other parallel streets and increase traffic delays on those streets, the above described parameters would ensure that any amount of traffic diversion, and subsequent delay on parallel streets, would be minimal.

[66] Pedestrian malls are permanent closures in areas that are used by high volumes of pedestrians, such as tourist areas and major downtown shopping areas.

[67] Transit malls are a type of street closure that closes the street to private automobiles but continues to allow use by transit vehicles.

As indicated in the BSP, implementation of Pedestrian-only Streets may be appropriate on streets that do not meet the above conditions but would require additional study and environmental review. Because the listed criteria above would ensure no significant traffic delay, and subsequent environmental review would be conducted if the criteria are not met, the traffic impact would be less than significant.

Transit
Shared Streets, Pedestrian-only Streets and Multi-use Paths would not create new transit trips, nor would they hinder the operation of transit. According to the BSP, Shared Streets and Pedestrian-only Streets would not be implemented on streets with transit.

The permanent closure of existing streets for the application of Pedestrian-only Streets would require the removal of travel lanes. While this could potentially divert traffic to other parallel streets and potentially increase transit delays on those streets, the above described parameters would ensure that any such delay would be minimal.

Because the listed criteria above would ensure no significant transit delay, and subsequent environmental review would be conducted if the criteria are not met, the transit impact would be less than significant.

Pedestrian
Shared Streets, Pedestrian-only Streets and Multi-use Paths would not result in overcrowding of sidewalks or create potentially hazardous conditions for pedestrians. On the contrary, they would be expected to improve pedestrian circulation and comfort, due to slower traffic speeds or the absence of vehicles altogether. Therefore, Shared Streets, Pedestrian-only Streets, and Multi-use Paths would have a less-than-significant impact on pedestrians.

Bicycle
Shared Streets, Pedestrian-only Streets and Multi-use Paths would not result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. Bicycles would be permitted access to any Shared Street, Pedestrian-only Street or Multi-use Path. Depending on the design of a Pedestrian-only street, bicycles may be required to walk their bicycles, but this would not be considered a significant impact. Therefore, Shared Streets, Pedestrian-only Streets and Multi-use Paths would result in a less-than-significant impact on bicycles.

Loading
Shared Streets, Pedestrian-only Streets and Multi-use Paths would not result in an increase in loading demand.

Typically with Pedestrian-only Streets, the closure of the street to vehicles and trucks only occurs during the day, while loading access is permitted in the early morning or evening. While this may be an inconvenience for trucks due to limited delivery times, it would not be considered a significant impact. In some cases, the closure would completely eliminate access

to on-street loading spaces, and if the spaces are well-utilized, relocation within a convenient distance would not be possible. In these instances, subsequent environmental review would be necessary.

Because loading would still be accommodated at certain hours of the day, or further environmental clearance would be required, there would be a less-than-significant impact to loading.

Emergency Access
Shared Streets, Pedestrian-only Streets and Multi-use Paths would not hinder emergency vehicle access. Emergency vehicles would still be provided access to these areas, either through signage or removable bollards and gates. The impact would be less-than-significant.

Parking
Shared Streets, Pedestrian-only Streets and Multi-use Paths would not result in an increase in parking demand. The closure of streets to vehicle access could also eliminate access to on-street parking spaces. However, the streets indicated in the BSP that would be appropriate for street closures (Ceremonial Streets, Alleys, Paseos) generally only have a limited supply of on-street parking, if any at all. The reduction in on-street parking supply would therefore, be minimal in the context of overall supply in the area surrounding the street closure.

Cluster F:

CBC-1:	High-visibility Crosswalks
CBC-2:	Special Crosswalk Treatments
CBC-6:	Raised Crosswalks

High-visibility Crosswalks (BSP page 114) are identical to Marked Crosswalks, discussed above on page 77, except they are marked with different (typically yellow) paint or thermoplastic. This is done to call special attention to vulnerable pedestrians which may use that crosswalk, such as children or seniors.

Special Crosswalk Treatments (BSP page 115) are also identical to Marked Crosswalks, except that rather than using typical paint or thermoplastic material, they use decorative treatments such as stamped or colored concrete. Their applicability and function remains the same as Marked Crosswalks.

Raised Crosswalks (BSP page 117) are also identical to Marked Crosswalks, except the crosswalk is raised up to the level of the sidewalk, so that a pedestrian crossing the street does not need to descend into the street and ascend at the far side. Rather, a vehicle driving through a crosswalk is raised to that level. This feature reduces vehicle speeds (similar to a speed hump) and enhances pedestrian visibility.

Traffic
The provision of High-visibility Crosswalks, Special Crosswalk Treatments and Raised Crosswalks would not generate any new vehicular trips, nor would it reduce roadway capacity. Therefore, these features would result in a less-than-significant traffic impact.

Transit
The provision of High-visibility Crosswalks, Special Crosswalk Treatments and Raised Crosswalks would not generate any new transit trips and would not result in delay for transit vehicles. Therefore, these features would have a less-than-significant impact on transit.

Pedestrian
The provision of High-visibility Crosswalks, Special Crosswalk Treatments and Raised Crosswalks would not result in the overcrowding of sidewalks, create potentially hazardous conditions or otherwise interfere with pedestrian accessibility. In fact, provision of these features would enhance pedestrian visibility and calm traffic. Therefore, the installation of High-visibility Crosswalks, Special Crosswalk Treatments and Raised Crosswalks would have a less-than-significant impact on pedestrians.

Bicycle
The provision of High-visibility Crosswalks, Special Crosswalk Treatments and Raised Crosswalks would not result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. All decorative crosswalk materials would be tested to ensure they do not become slippery when wet, so that bicycles are not endangered. Therefore, marked crosswalks would result in a less-than-significant impact on bicycle traffic.

Loading
Provisions of High-visibility Crosswalks, Special Crosswalk Treatments and Raised Crosswalks would not create any loading demand or potentially hazardous conditions.

In limited circumstances, these elements may require the removal of designated on-street loading spaces (yellow or white curb zone). The removal of a single loading space would not be considered a significant impact because other loading spaces would remain in the nearby vicinity. It should be noted that the removal of multiple loading spaces within an area could be considered a significant impact. **Mitigation Measure TR-1,** presented on p.74 above and in Section F, Mitigation Measures and Improvement Measures, p.174, would reduce the impacts of High-visibility Crosswalks, Special Crosswalk Treatments and Raised Crosswalks to loading to less-than-significant levels. **Mitigation Measure TR-1** would require the installation of new loading spaces, of equal length, on the same block and side-of-the street for locations where truck loading spaces are removed and there is still need for truck loading spaces. **Mitigation Measure TR-1** would mitigate potential impacts to loading to less than significant levels. Thus, the impact of High-visibility Crosswalks, Special Crosswalk Treatments and Raised Crosswalks on loading would be less than significant.

Emergency Access
High-visibility Crosswalks, Special Crosswalk Treatments and Raised Crosswalks would not hinder emergency vehicle access. The impact would be less-than-significant.

Parking
Provision of High-visibility Crosswalks, Special Crosswalk Treatments and Raised Crosswalks would not create any parking demand, nor would they remove any on-street parking spaces.

Cluster G:

CBC-13:	Perpendicular or Angled Parking
CBC-14:	Flexible Use of Parking Lane
CBC-15:	Parking Lane Planters

Flexible Use of Parking Lane (BSP page 149) would allow for parking lanes to be used for other commercial uses, such as café seating, at certain hours of the day, days of the week, or months of the year. When extra space is needed for commercial activities, the parking lane would be repurposed, but when business is closed or an event is over, the space would revert back into on-street parking. Flexible Use of Parking Lane would be managed either by the City, by the merchant who fronts the parking spaces, or by a Community Benefit District or similar organization.

The BSP discusses potential enhancements to the zone to distinguish it as a pedestrian area where parking is permitted, rather than vice versa. Such enhancements include landscaping and planters (every five parking spaces), special paving treatments, and a level change of one to two inches.

Parking Lane Planters (BSP page 148) would permanently remove one or several parking spaces in order to create landscaping or tree planters.[68] This would be appropriate on streets where the sidewalk is not wide enough for tree planting. It could be constructed both at intersection corners (perhaps in conjunction with a Corner Bulb-out) or mid-block between parked cars (perhaps in conjunction with a Mid-Block Bulb-out). This feature could be combined with stormwater management tools discussed in the BSP.

Perpendicular or Angled Parking (BSP page 148) would increase the on-street parking supply while also serving to calm traffic. This feature would geometrically fit with other BSP traffic-calming devices, such as Chicanes, Traffic Calming Circles, Corner or Mid-block Bulb-outs and/or Parking Lane Planters.

[68] Parking lane planters would be considered on a case-by-case basis and may not be appropriate in all circumstances.

Traffic
Flexible Use of Parking Lane, Parking Lane Planters and Perpendicular or Angled Parking would not result in an increase in vehicle trips. These features would not extend beyond an existing parking lane and therefore, would not reduce roadway capacity. Similar to other BSP elements, Perpendicular or Angled Parking would have a traffic calming affect because the roadway would be narrowed, but travel lanes would not be removed. The delay caused by a vehicle pulling into or out of a perpendicular or angled parking space is similar to the delay caused by parallel parking. Therefore, these elements would have a less-than-significant impact on traffic.

Transit
Flexible Use of Parking Lane, Parking Lane Planters and Perpendicular or Angled Parking would not result in an increase in transit trips. These features would not extend beyond the parking lane and therefore, would not interfere with transit operations. These elements would have a less-than-significant impact on transit.

Pedestrian
The provision of Flexible Use of Parking Lane, Parking Lane Planters and Perpendicular or Angled Parking would not result in the overcrowding of sidewalks, create potentially hazardous conditions or otherwise interfere with pedestrian accessibility. In fact, these features would enhance pedestrian visibility. Therefore, these elements would have a less-than-significant impact on pedestrians.

Bicycle
Flexible Use of Parking Lane, Parking Lane Planters and Perpendicular or Angled Parking would not result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. Front-in angled parking can represent a hazard to bicycles, because when these vehicles reverse out, the driver cannot see approaching bicycles. However, the BSP calls for all new angled parking to be back-in angled parking, which puts the driver in a position where bicycles are visible when pulling forward from the space. Therefore, these features would result in a less-than-significant impact on bicycles.

Loading
Flexible Use of Parking Lane, Parking Lane Planters and Perpendicular or Angled Parking would not create any loading demand. In limited circumstances, these elements may require the removal of designated on-street loading spaces (yellow or white curb zone). The removal of a single loading space would not be considered a significant impact because other loading spaces would remain in the nearby vicinity. It should be noted that the removal of multiple loading spaces within an area could be considered a significant impact. **Mitigation Measure TR-1,** presented on p.74 above and in Section F, Mitigation Measures and Improvement Measures, p.174, would reduce the impacts of Flexible Use of Parking Lane, Parking Lane Planters and Perpendicular or Angled Parking to loading to less-than-significant levels. **Mitigation Measure TR-1** would require the installation of new loading spaces, of equal length,

on the same block and side-of-the street for locations where truck loading spaces are removed and there is still need for truck loading spaces. **Mitigation Measure TR-1** would mitigate potential impacts to loading to less than significant levels. Thus, the impact of Flexible Use of Parking Lane, Parking Lane Planters and Perpendicular or Angled Parking on loading would be less than significant.

Emergency Access
Flexible Use of Parking Lane, Parking Lane Planters and Perpendicular or Angled Parking would not hinder emergency vehicle access. Emergency vehicles do not require on-street parking spaces, because they can stage in the travel lane. The impact would be less-than-significant.

Parking
Flexible Use of Parking Lane, Parking Lane Planters and Perpendicular or Angled Parking would not create any parking demand. They would potentially remove on-street parking spaces, either temporarily or permanently, depending on the length of the feature. Flexible Use of Parking Lane, Parking Lane Planters and Perpendicular or Angled Parking could potentially require the removal of several on-street parking spaces. At locations where parking would be removed, there would be a minor reduction in the total number of on-street spaces relative to the overall supply on a block and in the immediate vicinity.

Cumulative Analysis
The BSP would involve the adoption of a set of citywide streetscape and pedestrian policies and design guidelines. The proposed 12 standard streetscape improvements and 26 optional or case-by-case streetscape improvements would result in relatively minor changes to the overall vehicular circulation patterns in San Francisco and would not be expected to worsen traffic or transit conditions. Therefore, the cumulative traffic, transit and emergency access impacts of the BSP streetscape improvements would be less than significant. With respect to pedestrian impacts, one of the goals of the BSP is to improve the pedestrian environment. As such, pedestrian cumulative impacts would also be less than significant. None of proposed streetscape improvements would result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. Therefore, cumulative bicycle impacts would be less than significant.

Flexible Use of Parking Lane, Parking Lane Planters and Perpendicular or Angled Parking would not result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. Implementation of the BSP streetscape improvements could result in the loss of on-street loading and parking spaces throughout the City. However, the loss of on-street parking spaces is expected to be minimal in the context of the City's overall parking supply. Furthermore, San Francisco does not consider parking supply as part of the permanent physical environment. Parking conditions are not static, as parking supply and demand varies from day to day, from day to night, from month to month, etc. Hence, the availability of parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people change their modes and patterns of travel.

Parking deficits are considered to be social effects, rather than impacts on the physical environment as defined by CEQA. Under CEQA, a project's social impacts need not be treated as significant impacts on the environment. Environmental documents should, however, address the secondary physical impacts that could be triggered by a social impact. (CEQA Guidelines § 15131(a).) The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. In the experience of San Francisco transportation planners, however, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles or travel by foot) and a relatively dense pattern of urban development, induces many drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service in particular, would be in keeping with the City's "Transit First" policy. The City's Transit First Policy, established in the City's Charter Section 16.102 provides that "parking policies for areas well served by public transit shall be designed to encourage travel by public transportation and alternative transportation."

The transportation analysis accounts for potential secondary effects, such as cars circling and looking for a parking space in areas of limited parking supply, by assuming that all drivers would attempt to find parking at or near the project site and then seek parking farther away if convenient parking is unavailable. Moreover, the secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts which may result from a shortfall in parking in the vicinity of BSP projects would be minor, and the traffic assignments used in the transportation analysis, as well as in the associated air quality, noise and pedestrian safety analyses, reasonably addresses potential secondary effects.

In conclusion, implementation of the streetscape improvements set forth in the BSP would not be expected to result in cumulative transportation impacts.

Elements Requiring Subsequent Site-Specific Environmental Review

Most of the elements of the Better Streets Plan will receive environmental clearance through this PMND. This means that they could be implemented without further environmental review (although, as listed on page 73, all elements would still be subject to at least one public hearing prior to implementation).

However, as described in the descriptions of the various Standard (page 18) and Case-by-Case (page 23) streetscape elements, once a location for implementation of a particular feature has been determined, it may require additional, site-specific environmental analysis. This subsequent analysis could be required unilaterally, or only if certain criteria are met, as described below.

For loading, as described throughout the report, removal of a single loading space in order to implement a streetscape element would not be considered a significant impact, because alternate loading spaces would remain nearby. However, removal of multiple loading spaces may create a significant Cumulative impact to loading in certain part of the City.

To address this issue, a mitigation measure was identified, **MM TR-1**, which would require the installation of new loading spaces, of equal length, on the same block and side-of-the street for locations where truck loading spaces are removed and there is still need for truck loading spaces.[69] By replacing any removed loading spaces within a convenient distance, the Cumulative impact of the MDSP on loading would be less than significant.

Standard Streetscape Improvements

- SI-2: Marked Crosswalks – If implementation of a marked crosswalk requires the removal of loading spaces, and the loading spaces cannot be replaced on the same block and the same side of the street, then subsequent environmental clearance would be required.
- SI-5: Corner Curb Extensions or Bulb-outs: – If implementation of a bulb-out requires the removal of loading spaces, and the loading spaces cannot be replaced on the same block and the same side of the street, then subsequent environmental clearance would be required.

Optional or Case-by-Case Streetscape Improvements

- CBC-1: High Visibility Crosswalks – If implementation of a High Visibility Crosswalk requires the removal of loading spaces, and the loading space cannot be replaced on the same block and the same side of the street, then subsequent environmental clearance would be required.
- CBC-2: Special Crosswalk Treatments – If implementation of a Special Crosswalk Treatment requires the removal of loading spaces, and the loading space cannot be replaced on the same block and the same side of the street, then subsequent environmental clearance would be required.
- CBC-3: Vehicle Turning Movements at Crosswalks – Right turn on red (RTOR) prohibitions would require subsequent environmental clearance, if the peak hour right-turning traffic volume exceeds 300 vehicles per hour. Also, any removal of multiple turn lanes would require site-specific analysis and environmental clearance.
- CBC-4: Removal of Crosswalk Closures – This feature would require site-specific

[69] MTA holds public hearings for all proposed parking regulations changes. At least ten days prior to the hearing date, the hearing notices are posted on utility poles in the vicinity of the proposed change; MTA's survey techs will hand deliver a copy of the notice to any neighboring businesses; and the notices are also placed on the SFMTA website. However, not all revocations/removals may have to go to a public hearing. MTA can revoke the loading zone for non-payment, if the business, that is responsible for a loading zone, neglects to pay the 2 year renewal fee or the business closes.

analysis and environmental clearance.

- CBC-5: Mid-block Crosswalks – If implemented on a two-way street where traffic volumes exceed 500 vehicles per hour in either direction during the peak hour, subsequent environmental clearance would be required.
- CBC-6: Raised Crosswalks – If implementation of a Raised Crosswalk requires the removal of loading spaces, and the loading space cannot be replaced on the same block and the same side of the street, then subsequent environmental clearance would be required.
- CBC-7: Extended Bulb-outs - If implementation of an Extended Bulb-out requires the removal of loading spaces, and the loading space cannot be replaced on the same block and the same side of the street, then subsequent environmental clearance would be required.
- CBC-8: Mid-block Bulb-outs – If implementation of a Mid-block Bulb-out requires the removal of loading spaces, and the loading space cannot be replaced on the same block and the same side of the street, then subsequent environmental clearance would be required.
- CBC-11: Transit Bulb-outs – If implementation of a Transit Bulb-out requires the removal of loading spaces, and the loading space cannot be replaced on the same block and the same side of the street, then subsequent environmental clearance would be required.
- CBC-13: Perpendicular or Angled Parking – If implementation of Perpendicular or Angled Parking requires the removal of loading spaces, and the loading space cannot be replaced on the same block and the same side of the street, then subsequent environmental clearance would be required.
- CBC-14: Flexible Use of Parking Lane – If implementation of Flexible Use of Parking Lane requires the removal of loading spaces, and the loading space cannot be replaced on the same block and the same side of the street, then subsequent environmental clearance would be required.
- CBC-15: Parking Lane Planters – If implementation of a Parking Lane Planters requires the removal of loading spaces, and the loading space cannot be replaced on the same block and the same side of the street, then subsequent environmental clearance would be required.
- CBC-18: Roundabout – The BSP does not provide guidance on the location or design of Roundabouts. Therefore, at the time a location for implementation is proposed, it would be subject to site-specific environmental review.
- CBC-23: Pedestrian-only Streets – If implemented on a street where through traffic is greater than 100 vehicles per hour in the peak hour, or there are driveways or parking garages, or loading activities cannot be accommodated during off-peak hours, then subsequent environmental clearance would be required.
- CBC-24: Multi-use Paths – The BSP does not provide guidance on the location or design of Multi-use Paths. Therefore, at the time a location for implementation is proposed, it would be subject to site-specific environmental review.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for transportation and circulation.

E.6 Noise

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
6. NOISE—Would the project:					
a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐	☐
b) Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐	☐
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐
e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☐	☐	☒
f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☐	☒
g) Be substantially affected by existing noise levels?	☐	☐	☐	☒	☐

a-g)

Existing Noise. The noise environment (ambient noise and vibration levels) of an urban area like San Francisco is dominated by vehicular traffic (including trucks, cars, Muni buses, emergency vehicles) and surrounding land use activities. The San Francisco Department of Health (DPH) has prepared a map of daily traffic noise levels for the entire City, based on their modeling of traffic noise volumes.[70] Noise generated by residential and commercial uses is common and generally tolerated in urban areas. Furthermore, the Proposed Project includes recommendations for future physical improvements to the City's pedestrian network, but does not involve development of land uses affected by existing noise levels. Therefore, the project would not be subject to significant adverse effects related to existing noise levels.

Operational Noise. The following Plan-proposed policy addresses improvement of the

[70] http://www.sfdph.org/dph/files/EHSdocs/ehsPublsdocs/Noise/TransitNoiseMap.pdf

ambient noise environment of public right-of-ways: Policy 4.4, which is related to making residential and small streets more tranquil and relatively free of noise and over-stimulation. Since the Proposed Project envisions physical improvements to the City's pedestrian network in the future, operational noise associated with the project would be related to mainly alternative modes of transportation (transit and pedestrian activity) and vehicular traffic to some extent. Based on published scientific acoustic studies, the traffic volumes in a given project area would need to approximately double to produce an increase in ambient noise levels noticeable to most people in the area.[71] Implementation of the Plan-proposed streetscape improvements in the future would not result in any new traffic volumes being added to the roadway network; accordingly, no change in the intersection traffic volume under Proposed Project conditions would be expected. The Proposed Project does not involve substantial physical development that would, in turn, lead to a doubling in traffic volumes. Because the Proposed Project would not alter existing traffic volumes, it would not lead to a substantial increase in traffic-related noise. It is also likely that since the Proposed Project promotes pedestrian use over vehicular use for short trips (particularly trips that are one mile or less), it could cause a slight reduction in local traffic noise levels. Overall, the Proposed Project would have less-than-significant impacts related to traffic noise.

The Proposed Project could result in provision of streetscape amenities such as new stormwater facilities that could produce operational noise. All operations would be subject to the San Francisco Noise Ordinance, Article 29 of the San Francisco Police Code, amended November 2008, which establishes noise limits for fixed noise sources such as mechanical equipment. Compliance with Article 29, Section 2909, would minimize noise from future project-related operations. The project would not significantly contribute to the existing groundborne vibration or noise in the project vicinity. Therefore, noise and vibration impacts related to the Proposed Project would be less than significant.

Construction Noise. As previously stated, no buildings would be constructed as part of the Proposed Project. The Proposed Project provides guidelines for future streetscape improvements within the public right-of-way. The Plan-proposed streetscape improvements would not involve substantial amounts of construction within the public right-of-way, and would thus result in less-than-significant project-related noise effects. The Proposed Project could result in future implementation of standard streetscape improvements that require construction activities, such as excavation, grading, and repaving of sidewalks; installation of new/improved stormwater amenities; and removal, relocation, or installation of new street lighting, other utilities, and traffic signals. Additionally, the Proposed Project could also result

[71] Decibels are logarithmic units and are not added arithmetically. The sound pressure level from two equal sources is 3 dBA greater than the sound pressure level of just one source. So, two trucks producing 90 dBA each combine to produce 93 dBA, not 180 dBA. In other words, a doubling of the noise source produces only a 3 dBA increase in the sound pressure level. Studies have shown that a 3 dBA increase is barely perceptible by the human ear. Generally, an increase of 5 dBA is required in order to be perceptible to most people. **http://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/polguide01.cfm.** Accessed 09/08/10. ***And 690 5th Street FMND, Case No. 2007.0690.*** This document is available for review at the San Francisco Planning Department at 1650 Mission Street, SF, CA 94080.

in implementation of optional streetscape improvements (on a case-by-case basis as conditions permit) that require construction activities, such as development or reconfiguration of extended and midblock bulb-outs and transit bulb-outs, center and side medians, pedestrian refuge islands and transit boarding islands, traffic circles and chicanes, among other improvements. These demolition, excavation, and construction activities would temporarily increase noise and possibly vibration in the vicinity and may be considered an annoyance by occupants of nearby properties. During implementation of the Plan-proposed streetscape improvements, occupants of nearby properties could be disturbed by construction noise. Construction noise and vibration levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between construction activities (noise source) and the nearest noise-sensitive uses (listener), existing noise levels at those uses, and presence or absence of barriers (including subsurface barriers). There would be times when noise and vibration could interfere with indoor activities in nearby residences and other businesses near the construction site.

All construction activities for the Plan-proposed streetscape improvements would be required to comply with the San Francisco Noise Ordinance (Article 29 of the *San Francisco Police Code*). Sections 2907 and 2908 of the *San Francisco Police Code*[72] regulate construction noise and provided that:

- Construction noise is limited to 80 decibels (dBA)[73] at 100 feet from the source equipment during daytime hours (7 a.m. to 8 p.m.). Impact tools such as pile drivers are exempt provided that they are equipped with intake and exhaust mufflers to the satisfaction of the Director of Public Works or the Director of Building Inspection.

- Nighttime construction (8 p.m. to 7 a.m.) that would increase ambient noise levels by 5 dBA or more is prohibited unless a permit is granted by the Director of Public Works or the Director of Building Inspection.

The increase in noise and vibration in the project area during future construction of Plan-proposed streetscape improvements would be considered a less-than-significant impact, because it would be temporary, intermittent, and restricted in occurrence and level, as the contractor would be required to comply with the City's Noise Ordinance.

Airports. The project area is not located within an airport land use plan area, within two miles of a public airport, or in the vicinity of a private airstrip. Therefore, Checklist items 6(e) and 6(f) are not applicable.

Cumulative Effects. The construction periods of other development projects may overlap with construction activities associated with the Proposed Project. It is conservatively assumed that construction with the Proposed Project and other foreseeable development would occur simultaneously. Assuming concurrent construction, noise from nearby construction of other

[72] City and County of San Francisco, Police Code – Article 29 – Regulation of Noise, last updated November 25, 2008.

[73] A decibel, or "dBA", is a unit of measure for sound. "A" denotes the A-weighted scale, which simulates the response of the human ear to various frequencies of sound.

approved and foreseeable projects in combination with project-related construction could potentially increase ambient noise levels in the affected portions of the City.

The construction industry, in general, is an existing source of noise emissions within the Bay Area. Construction equipment operates at one site on a short-term basis and, when finished, moves on to a new construction site. However, because construction activities associated with the Proposed Project would be temporary and intermittent, their contribution to the cumulative context would be less-than-significant. Additionally, construction noise impacts related to the Proposed Project would be reduced to less-than-significant levels, because the project would comply with the Noise Ordinance as is required by law.[74] Furthermore, as with the Proposed Project, construction noise related to these future cumulative development activities would also be subject to the Noise Ordinance, which places time limits and noise level limits on construction activities. All of the cumulative projects would therefore be required to comply with the City's Noise Ordinance, which would assure that cumulative construction noise impacts from these projects collectively would not be cumulatively considerable. Construction activities related to cumulative projects, similar to project-related construction activities, are expected to occur during the hours permitted under the *San Francisco Municipal Code.* Consequently, concurrent construction activity with the Proposed Project would not result in a cumulatively considerable construction noise impact.

As discussed above, the Proposed Project would result in less-than-significant impacts related to groundborne noise or vibration. Due to the localized nature of vibration impacts, cumulative groundborne vibration impacts would arise, and be contributed to, from only those projects within the immediate vicinity of the project area. Groundborne vibration would be further isolated to close proximity to the individual pieces of vibration-producing construction equipment at each construction site in the vicinity of Plan-proposed streetscape improvements. Because development of Plan-proposed streetscape improvements would not contribute to the localized groundborne vibration impacts associated with construction of other simultaneous foreseeable development within the project area, the Proposed Project would not result in a cumulatively considerable groundborne noise or vibration impact.

As discussed above, the Proposed Project would result in less-than-significant impacts related to stationary/operational noise. Noise from project-related operations would have the potential to add to cumulative noise conditions, in combination with other simultaneous foreseeable development in the City. These cumulative projects would however be expected to include standard mitigation measures related to incorporation of appropriate noise insulation features into their respective project designs so as to comply with the City's Noise Ordinance (Section 2909 of Article 29 of the Police Code), which would ensure that noise impacts from stationary and operational sources would be less than significant. This would ensure that noise impacts from stationary and operational noise sources as a result of these future cumulative projects, in combination with the Proposed Project, would not be cumulatively considerable.

[74] As noted in the Setting section above, the noise ordinance is not currently in correspondence with the Planning Code use districts, having not been amended since 1973. Therefore, enforcement of the noise ordinance requires interpretation as to applicability of its standards.

Implementation of the Proposed Project would not result in any new traffic volumes being added to the roadway network. It is possible that the alleys that would be closed to traffic under the BSP would become pedestrian only and this may add traffic to adjacent streets and intersections. However, this additional traffic would be incremental and overall City intersection traffic volumes would be expected to stay the same for existing and existing-plus-project conditions and, therefore, noise levels resulting from traffic would also remain unchanged for existing and existing-plus-project conditions. Therefore, the Proposed Project would lead to no near-term or long-term increase in traffic-related noise, and the Proposed Project would not contribute to a cumulatively considerable traffic noise impact.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for noise and vibration.

E.7 Air Quality

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
7. **AIR QUALITY** - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**					
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒	☐

The purpose of the *Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines* is to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the San Francisco Bay Area Air Basin. The Guidelines provide procedures for evaluating potential air quality impacts during the environmental review process consistent with CEQA requirements. The BAAQMD recently adopted new thresholds of significance for air quality impacts under CEQA and issued revised Guidelines that supersede the 1999 BAAQMD *CEQA Guidelines*.[75]

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[75] Bay Area Air Quality Management District (BAAQMD), *California Environmental Quality Act Air Quality Guidelines*, June 2010.

According to the BAAQMD, the recently adopted thresholds of significance for criteria air pollutants, and health risks from new sources emissions are intended to apply to environmental analyses that have begun on or after adoption of the revised CEQA thresholds. Thresholds pertaining to the health risk impacts of sources upon sensitive receptors are intended to apply to environmental analyses begun on or after January 1, 2011. Therefore, the Proposed Project would be subject to the thresholds identified in BAAQMD's *1999 CEQA Guidelines*. However, in anticipation of BAAQMD adopting revised thresholds of significance, an analysis of the Proposed Project's impact with respect to recently adopted CEQA significance thresholds was performed. Thus, the following discussion addresses the BAAQMD's recently adopted CEQA thresholds of significance.

On June 2, 2010, the BAAQMD adopted revised thresholds of significance for the air quality impacts of Proposed Projects. The BAAQMD adopted a set of thresholds for projects and a separate set of thresholds for plans. The plan-level thresholds are intended to apply to long-range plans including general plans, redevelopment plans, specific plans, area plans, community plans, regional plans and congestion management plans. The *Air Quality Guidelines* goes on to explain that such plans "often contain development strategies for 20-year or longer time horizons...[and] usually provide a wide range of potential land uses and densities to accommodate all types of development. The Proposed Project is a programmatic document that identifies objectives, policies and design guidelines for streetscape improvement projects. As such the policies in the BSP would not directly emit GHGs. The Proposed Project does not contain a long range development program that has identified individual projects, however individual projects could emit GHGs during project construction and operation (mostly during construction). Given that the Proposed Project does not contain a development program and that the proposed plan would not change land uses or densities, the BAAQMD's plan-level thresholds of significance for GHGs are not applicable to the proposed BSP. Further, given that the plan does not include any specific projects, for which to analyze, the BAAQMD's project-level thresholds are also not applicable to the BSP project.

This air quality analysis relies on the *CEQA Guidelines*, Appendix G checklist questions (identified above) for determining whether the BSP could result in significant air quality impacts. This analysis, consistent with the *CEQA Guidelines*, considers the potential for the BSP objectives, policies and design strategies to conflict with an applicable air quality plan, to violate or contribute to the violation of an air quality standard, result in an increase in criteria air pollutants for which the region is in nonattainment, expose sensitive receptors to a substantial amount of pollutant concentrations, and to emit odors. This analysis considers the potential for the proposed BSP to result in individual impacts from the plan itself as well as cumulative air quality impacts.

The Federal Clean Air Act (CAA), as amended, and the California Clean Air Act (CCAA) legislate ambient air quality standards and related air quality reporting systems for regional regulatory agencies to then develop mobile and stationary source control measures to meet the standards. The BAAQMD is the primary responsible regulatory agency in the Bay Area for planning, implementing and enforcing the federal and state ambient standards for criteria

pollutants.[76] Criteria air pollutants include ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$) and lead. The San Francisco Bay Area Air Basin encompasses the following counties: San Francisco, Alameda, Contra Costa, Marin, San Mateo, Napa and parts of Solano and Sonoma Counties. The basin has a history of air quality violations for ozone, carbon monoxide and particulate matter and currently does not meet the state ambient air quality standards for ozone, PM_{10}, and $PM_{2.5}$.[77] The BAAQMD has adopted air quality management plans over the years to address control methods and strategies to meeting air quality standards, the latest plans being the *2005 Ozone Strategy.*

a) Air Quality Plans

As discussed above, the most recent air quality plan is the *2005 Ozone Strategy.* The BAAQMD is currently in the process of updating its air quality plan and have released a draft of its *2010 Air Quality Plan.* This update is intended to: (1) update the *2005 Ozone Strategy* in accordance with the requirements of the CCAA to implement "all feasible measures" to reduce ozone; (2)provide a control strategy to reduce ozone, particulate matter (PM), air toxics, and greenhouse gases in a single, integrated plan; (3) review progress in improving air quality in recent years; and (4) establish emission control measures to be adopted or implemented in the 2010-2012 timeframe. The *2010 Air Quality Plan* is currently undergoing environmental review and as such, the draft plan may be revised to reflect any changes based on environmental review and/or community input. Therefore, this analysis considers the currently applicable air quality plan, the *2005 Ozone Strategy.*

The *2005 Ozone Strategy* is intended to reduce the number of automobile trips and vehicle miles traveled through implementation of various Transportation Control Measures (TCM's). The BSP includes a vision, policies, guidelines and a number of proposed streetscape improvements that are intended to enhance the pedestrian environment. This vision of the BSP and its policies and guidelines that are intended to achieve this vision is consistent with TCM#19 in the *2005 Ozone Strategy,* which calls for the improvement of pedestrian access and facilities. Given that the proposed BSP is intended to improve the pedestrian realm to result in pedestrian-friendly streetscapes, the proposed BSP would be consistent with *2005 Ozone Strategy.* Therefore, the Proposed Project would not conflict with, or obstruct implementation of, an applicable air quality plan, and impacts related to air quality plans would be ***less than significant.***

b-c) Criteria Air Pollutants and Ozone Precursors

As discussed at the beginning of this section, the BAAQMD is the primary responsible regulatory agency in the Bay Area for implementing and enforcing the federal and state

[76] State and Federal air quality standards for and the Bay Area's attainment status can be viewed on the BAAQMD website at http://www.baaqmd.gov.

[77] PM_{10} refers to particulate matter 10 microns or less in size; $PM_{2.5}$ refers to particulate matter 2.5 microns or less in size.

ambient standards for criteria air pollutants.[78] Criteria air pollutants include ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$) and lead. The basin has a history of air quality violations for ozone, carbon monoxide and particulate matter and currently does not meet the state ambient air quality standards for ozone, PM_{10}, and $PM_{2.5}$. The BAAQMD has set project-level thresholds of significance for reactive organic gases (ROG), oxides of nitrogen (NO_x), PM_{10} and $PM_{2.5}$. However, as discussed previously, the proposed BSP, a programmatic document, would not directly emit GHGs. The Proposed Project does not contain a long range development program that has identified individual projects, however individual projects could emit GHGs during project construction and operation (mostly during construction). This analysis considers the potential for the BSP objectives, policies and design guidelines to result in increased criteria air pollutants and ozone precursors, if implemented at the project-level. Subsequent environmental review, pursuant to CEQA, would be required for specific streetscape improvement projects. This analysis would consider, at the project-level, based on the proposed design, the potential for the project to emit criteria air pollutants and ozone precursors.

Construction-Related Exhaust Emissions. The BAAQMD considers construction-related exhaust emissions separately from fugitive dust that result from construction activities. Construction-related exhaust emissions emit criteria air pollutants and ozone precursors from construction equipment, construction-related vehicular activity and construction-worker automobile trips. The BSP includes a vision, policies, and streetscape design guidelines that are intended to enhance the pedestrian environment. As discussed extensively in Section E-8 Greenhouse Gas Emissions, some BSP policies and design guidelines could result in individual streetscape projects that could incrementally increase the amount of excavation required for a project, or increase the duration of construction activities. For example, streetscape projects that incorporate wider sidewalks, extended bulb outs, and other treatments that could incrementally increase the amount of excavation required, or increase the duration of construction, could result in increased construction-related exhaust emissions. For individual streetscape projects carried out with BSP design elements, emissions of criteria air pollutants and ozone precursors from construction activities would vary depending on the number and type of equipment, duration of use, operation schedules, and the number of construction workers. Streetscape improvement project carried out by the City or its contractors would be required to comply with the Clean Construction Ordinance, which would reduce project-level emissions of criteria air pollutants and ozone precursors. The Clean Construction Ordinance requires that all contracts for large (20+ day) City projects:

- Fuel diesel vehicles with B20 biodiesel,[79] and
- Use construction equipment that meets USEPA Tier 2 standards or best available control technologies for equipment over 25 hp.

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[78] State and Federal air quality standards for and the Bay Area's attainment status can be viewed on the BAAQMD website at http://www.baaqmd.gov.

[79] Biodiesel is a fuel produced from domestic renewable resources. Biodiesel contains no petroleum, but it can be blended at any level with petroleum diesel to create a biodiesel blend. Source: http://www.biodiesel.org/pdf_files/fuelfactsheets/CommonlyAsked.PDF

While, compliance with the City's Clean Construction Ordinance would reduce construction-related criteria air pollutant and ozone precursor exhaust emissions, individual streetscape projects may emit criteria air pollutants and ozone precursors that exceed the BAAQMD's thresholds of significance. These individual streetscape projects would be evaluated on a project-level basis that considers the project design and construction schedule.

Based on the BAAQMD screening levels for construction criteria air pollutant emissions,[80] the BAAQMD considers projects that would construct more than 114 single family homes, a high-rise apartment building with more than 249 dwelling units, or a commercial development greater than 277,000 square feet to have the potential to emit criteria air pollutants and precursor emissions at levels that may exceed the BAAQMD's recently adopted thresholds of significance. The policies of the BSP that could incrementally increase construction duration or amount of excavation required for streetscape projects to accommodate wider sidewalks, etc., would clearly not exceed the BAAQMD's thresholds of significance for construction-related criteria air pollutants, therefore the proposed BSP would result in a ***less than significant*** impact related to emitting criteria air pollutants and precursors from construction exhaust.

Construction Period Fugitive Dust Control. Fugitive dust is generated primarily from activities such as demolition, excavation, site clearing and grading. These activities could generate substantial amounts of windblown dust that could contribute particulate matter into the local atmosphere. Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and weather conditions. Construction activities may result in significant quantities of dust, and as a result, local visibility and PM_{10} concentrations may be adversely affected on a temporary basis during the construction period of individual site-specific projects. In addition, larger dust particles would settle out of the atmosphere close to the construction site, potentially resulting in soiling nuisances for adjacent uses. Dust can be an irritant causing watering eyes or irritation to the lungs, nose and throat. Excavation, grading and other construction activities can cause wind-blown dust to add to particulate matter in the local atmosphere. Depending on exposure, adverse health effects can occur due to this particulate matter in general and also due to specific contaminants such as lead or asbestos that may be constituents of soil.

Although there are federal standards for air pollutants and implementation of state and regional air quality control plans, air pollutants continue to have impacts on human health throughout the country. California has found that particulate matter exposure can cause health effects at lower levels than national standards. The current health burden of particulate matter demands that, where possible, public agencies take feasible available actions to reduce sources of particulate matter exposure. According to the California Air Resources Board, reducing ambient particulate matter from 1998-2000 levels to natural background concentrations in San Francisco would prevent over 200 premature deaths.

[80] Bay Area Air Quality Management District. *California Environmental Quality Act, Air Quality Guidelines,* June 2, 2010. This document is available online at www.baaqmd.gov. Accessed July 14, 2010.

For fugitive dust emissions, BAAQMD's thresholds of significance for construction-related fugitive dust are based upon whether the project has incorporated the BAAQDM's recommended list of best management practices, which has been a pragmatic and effective approach to the control of fugitive dust emissions. The *Air Quality Guidelines* note that individual measures have been shown to reduce fugitive dust by anywhere from 30 percent to more than 90 percent and conclude that projects that implement construction best management practices will reduce fugitive dust emissions to a less-than-significant level.[81]

In response to the need for consistent control measures to reduce fugitive dust during construction, the San Francisco Board of Supervisors approved a series of amendments to the San Francisco Building and Health Codes generally referred hereto as the Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008), with the intent of reducing the quantity of dust generated during site preparation, demolition and construction work in order to protect the health of the general public and of onsite workers, minimize public nuisance complaints, and to avoid orders to stop work by the Department of Building Inspection (DBI). Although the Proposed Project, a programmatic document, would not directly emit fugitive dust, subsequent streetscape improvement projects could result in fugitive dust emissions during project construction. Individual projects designed and proposed pursuant to the BSP would be required to comply with the City's Construction Dust Control Ordinance (Ordinance 176-08, July 2008), which would reduce any potential construction air quality impacts to less-than-significant. Overall, the regulations and procedures set forth by the San Francisco Building and Health Codes would ensure that potential dust-related air quality impacts would be reduced to a level of insignificance.

The Construction Dust Control Ordinance requires that all site preparation work, demolition, or other construction activities within San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a permit from DBI. The Director of DBI may waive this requirement for activities on sites less than one half-acre that are unlikely to result in any visible wind-blown dust. Dust suppression activities required by the Ordinance may include watering all active construction areas sufficiently to prevent dust from becoming airborne; increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water must be used if required by Article 21, Section 1100 et seq. of the San Francisco Public Works Code. If not required, reclaimed water should be used whenever possible. Contractors shall provide as much water as necessary to control dust (without creating run-off in any area of land clearing, and/or earth movement. During excavation and dirt-moving activities, contractors shall wet sweep or vacuum the streets, sidewalks, paths and intersections where work is in progress at the end of the workday. Inactive stockpiles (where no disturbance occurs for more than seven days) greater than 10 cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base, and soil shall be covered with a 10 millimeter (0.01 inch) polyethylene plastic (or equivalent) tarp, braced down, or use other equivalent soil stabilization techniques. For

[81] *Ibid*, Section 4.2.1.

projects over one half-acre, the Ordinance requires that the project sponsor submit a Dust Control Plan for approval by the San Francisco Department of Public Health (DPH). The Dust Control Ordinance ~~wound~~ would not specifically ~~requires~~ require BSP-based projects located in the public right of way to undertake all of the measures identified in the Ordinance. However, Article 22B requires equivalent protections by DPW, MTA, PUC, and other City Departments.

The BSP is a City project and project-related construction would be carried out by SFMTA, DPW, City contractors and other sponsors of future site-specific projects proposed under the BSP. Pursuant to Health Code Article 22B, Section 1247, "All departments, boards, commissions, and agencies of the City and County of San Francisco that authorize construction or improvements on land under their jurisdiction under circumstances where no building, excavation, grading, foundation, or other permit needs to be obtained under the San Francisco Building Code shall adopt rules and regulations to insure that the same dust control requirements that are set forth in this Article are followed." To ensure equivalent measures are in place, any proposed BSP-based project shall implement **Mitigation Measure AQ-1**, set forth below. **Mitigation Measure AQ-1** would require the preparation of Site-specific Dust Control Plans prior to starting construction of BSP-based projects. Thus, compliance with **Mitigation Measure AQ-1** will ensure that potential dust-related air quality impacts resulting from future streetscape improvement project prepared in accordance with the BSP would be reduced to a level of insignificance; therefore impacts of the proposed BSP project on fugitive dust would be ***less than significant.***

Mitigation Measure AQ-1 - Dust Control Plans:

To ensure that potential dust-related air quality impacts resulting from future streetscape improvement project prepared in accordance with the BSP would be reduced to a level of insignificance, Site-specific Dust Control Plans shall be prepared pursuant to the Dust Control Ordinance by SFMTA, DPW, City Contractors, and other sponsors of future site-specific projects proposed under the BSP. Future Project Sponsors implementing BSP-related site specific projects shall: (1) submit a map to the Director of Health showing all sensitive receptors within 1000 feet of the site; (2)wet down areas of soil at least three times per day; (3) provide an analysis of wind direction and install upwind and downwind particulate dust monitors; (4) record particulate monitoring results; hire an independent, third-party to conduct inspections and keep a record of those inspections; (5) establish shut-down conditions based on wind, soil migration, etc.; (6) establish a hotline for surrounding community members who may be potentially affected by project-related dust; (7) limit the area subject to construction activities at any one time; (8) install dust curtains and windbreaks on the property lines, as necessary; (8) limit the amount of soil in hauling trucks to the size of the truck bed and securing with a tarpaulin; (10) enforce a 15 mph speed limit for vehicles entering and exiting construction areas; (11) sweep affected streets with water sweepers at the end of the day;(12) install and utilize wheel washers to clean truck tires; (13) terminate construction activities when winds exceed 25 miles per hour; (14)apply soil stabilizers to inactive areas; and (15) to sweep off adjacent streets to reduce particulate emissions. The Project Sponsor would be required to designate an individual to monitor compliance with dust control requirements.

Operational Emissions. The proposed BSP includes objectives, policies and design guidelines for future streetscape improvements within the public right-of-way for the purpose of encouraging pedestrian use and perhaps resulting in mode shifts that decrease automobile use and associated vehicle emissions. There are reasonably foreseeable benefits of implementing the Proposed Project; increased pedestrian use has no associated emissions and promoting walking, particularly for shorter trips (about one mile distance or less) can reasonably be expected to reduce emissions citywide by shifting a portion of motor vehicle trips to pedestrian trips. Any potential mode shift from vehicles to pedestrian transport resulting from the Proposed Project would be difficult to quantify, however, the intent of the project is to create a safe pedestrian-friendly environment and promote walking as a viable alternative to other means of transport. The transportation analysis concludes that the proposed BSP would not generate any new vehicle trips. However, potential impacts from Plan-proposed streetscape improvements that result in reduced roadway capacity could cause an increase in criteria air pollutants. In particular, localized motor vehicle congestion could potentially result in localized air quality effects, as discussed below.

A number of the Plan-proposed streetscape improvements would not involve substantial construction or development of major structures within the public right-of-way. Standard streetscape improvements such as marked crosswalks with curb ramps and wayfinding signage, and optional case-by-case streetscape improvements such as high-visibility crosswalks would only require additional signage and pavement markings and would not affect motor vehicle operations. These improvements would result in less-than-significant adverse air quality impacts. Standard streetscape improvements such as pedestrian-scale street lighting, pedestrian signals, street trees and landscaping (understory and aboveground planting), site furnishings, special sidewalk paving, as well as optional case-by-case streetscape improvements such as sidewalk pocket parks, and parking lane planters would likely involve minor demolition and construction. These would also not be expected to affect motor vehicle operations, and thus, would result in less-than-significant adverse air quality impacts.

Some of the proposed standard streetscape improvements, such as corner curb extensions or bulb-outs, as well as the optional case-by-case streetscape improvements such as mid-block crosswalks; extended and mid-block bulb-outs; center or side medians; pedestrian refuge islands; transit bulb-outs and boarding islands; special crossing treatments (warning signs, beacons, crosswalk parking restrictions, crosswalk paving, and raised crosswalks); vehicle turning movements at crosswalks; perpendicular or angled parking lanes; flexible use of parking lane; chicanes; traffic calming circles; removal or reduction of crosswalk closures; reuse of 'pork chops' and excess right-of-way; boulevard treatments; shared public ways ; and pedestrian-only streets could potentially result in modifications to the configuration and operation of roadway travel lanes, including reduction in width of vehicle travel lanes and reduction or reconfiguration of turn lanes. The reduction in width and reconfiguration of vehicle travel and turn lanes could potentially result in localized traffic congestion. The transportation analysis conducted for the Proposed Project identifies the proposed design features that could potentially result in traffic delays. However, for all design features analyzed, the transportation analysis concludes that these delays would not result in a substantial increase

in delay over existing conditions. Therefore, delays resulting from design features proposed by the BSP would not result in significant localized air quality impacts. Additionally, the transportation analysis concludes that the BSP would not generate any new vehicle trips. Further, as discussed in the Project Description on pp. 1-35, these Plan-proposed streetscape improvements are not intended to be applied to sections of streets adjacent to traffic intersections where it could lead to a demonstrable worsening of traffic congestion, and, in turn, result in localized elevated levels of criteria air pollutants, ozone precursors, or CO. Standard streetscape improvements are intended to be applicable to future public right-of-way projects for designated street types to improve the pedestrian environment; however, they are only expected to be applied where they do not adversely impact a given street's vehicular traffic conditions. Therefore, these standard streetscape improvements would not adversely affect motor vehicle operations, and in turn, would result in less-than-significant adverse air quality impacts.

Overall, the Proposed Project would not result in modifications to City roadways and intersections that could potentially result in adverse operational air quality impacts. As discussed above, the Proposed Project's operational air quality impacts would be ***less than significant.***

c) Exposure of Sensitive Receptors to Pollutants.

Sensitive receptors are people or institutions with people that are particularly susceptible to illness from environmental pollution, such as the elderly, very young children, people already weakened by illness (e.g., asthmatics), residents and persons engaged in strenuous exercise. In general, those persons engaged in activities along the public right-of-way where streetscape improvements are anticipated to be constructed would not be considered sensitive receptors. Although the proposed BSP includes objectives, policies and design guidelines for future streetscape improvements within the public right-of-way for the purpose of encouraging pedestrian use, and could result in an increase in pedestrian activity, these pedestrians would not be considered sensitive receptors because their exposure would be limited in extent and duration; pedestrians, including those from sensitive population groups, are generally in transition and do not typically spend long periods of time in the public right-of-way. Therefore, the Proposed Project would not result in the exposure of new sensitive receptors to elevated levels of pollutants. The potential for the Proposed Project to emit pollutants that may affect existing sensitive populations is addressed below.

As discussed above, the Proposed Project is a programmatic document that outlines goals, policies and design strategies to be used when designing streetscape improvement projects. As such, the proposed BSP would not directly result in the generation of air pollutants that could affect nearby sensitive receptors. Individual projects could affect sensitive receptors if they were to result in an increase in vehicle trips or emit any other sources of air pollutants during project operations. As discussed above, the proposed BSP would not result in the generation of vehicle trips and any increases in vehicle delay would not be anticipated to result in substantial increases in air pollutants which have the potential to affect nearby sensitive receptors. Therefore, the proposed BSP would not be anticipated to generate air pollutants during

implementation of individual streetscape projects. None of the BSP policies or design recommendations would be anticipated to emit air pollutant during project operations, therefore, the Proposed Project would have a ***less than significant*** impact with respect to emitting air pollutants during project operations that could affect sensitive receptors.

Construction of individual projects would require construction equipment and would result in an increase in vehicle trips associated with construction workers and other off-road construction equipment. Diesel powered construction equipment emit diesel particulate matter, which may affect nearby sensitive receptors. As discussed above, the proposed BSP includes policies that could result in an increase in construction duration or an increase in the amount of excavation required to accommodate BSP-related streetscape design elements. As a program-level document, the proposed BSP would not directly result in changes to the physical environment, however, individual projects implemented pursuant to the BSP could result in physical changes, including emitting diesel particulate matter during construction of individual streetscape projects. An analysis of whether a Proposed Project's construction emissions would affect a nearby sensitive receptor is most appropriately addressed at the project-level where site specific conditions are known. Any such analysis is influenced by: (1) location of construction activities to nearest sensitive receptor, (2) types of equipment used, (3) duration of use of each type of equipment, and (4) amount of ground disturbance expected. Any such analysis at the programmatic level would be speculative[82] at this point because the BSP does not contain a development program that has identified the location or extent of individual streetscape projects. As such, individual projects prepared pursuant to the BSP would be required to undergo a separate environmental review that would consider whether the Proposed Project's location and construction plan could affect nearby sensitive receptors. Therefore, the proposed BSP, a programmatic document, would not expose sensitive receptors to substantial amount of pollutants and impacts to sensitive receptors are considered ***less than significant***.

e) Potential to Emit Odors

The Proposed Project would not result in a perceptible increase or change in odors in the project area or its vicinity, as it would not include uses prone to the generation of odors.

Cumulative Impacts. The Proposed Project would be generally consistent with the *General Plan* and air quality management plans such as the *Bay Area 2005 Ozone Strategy.* Additionally, the *General Plan, Planning Code,* and the City Charter implement various transportation control measures identified in the City's Transit First Program, bicycle parking regulations, transit development fess and other actions. Accordingly, the Proposed Project would not contribute considerably to cumulative air quality impacts; nor would it interfere with implementation of the *Bay Area 2005 Ozone Strategy,* which is the applicable regional air quality plans developed to improve air quality towards attaining the state and federal air quality standards. The Proposed Project, as a plan-level document, would not directly emit air pollutants. The proposed BSP could, however, result in an increase in construction related air pollutants because the BSP calls for design elements that may incrementally increase construction duration or the amount of

[82] Implementation of individual streetscape improvements will vary based on location, neighborhood needs, street constraints, etc.; therefore, it is speculative to assess their impacts at the program level.

excavation required for individual streetscape projects. However, these design treatments are not anticipated to result in a substantial amount of air pollutants that would otherwise be emitted by streetscape improvement projects. Furthermore, the construction emissions associated with individual projects would be evaluated under CEQA, as future site-specific improvement projects are developed.

With respect to cumulative impacts from criteria air pollutants, BAAQMD's approach to cumulative air quality analysis is that any Proposed Project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. As discussed above, implementation of the Proposed Project would not result in any new automobile trips being added to the roadway network. A goal of the BSP is to create a pedestrian-friendly streetscape environment. Pedestrian activity has no associated emissions and the Proposed Project can reasonably be expected to reduce emissions citywide by shifting a portion of motor vehicle trips to pedestrian trips, therefore the Proposed Project would not contribute to a cumulative air quality impact, or result in a cumulative affect to sensitive receptors. The Proposed Project would also not generate any new sources of odors.

Therefore, the Proposed Project would result in a ***less than significant*** impact with respect to cumulative air quality.

E.8 Greenhouse Gas Emissions

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
E-8. GREENHOUSE GAS EMISSIONS— Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐	☐
b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐	☐

Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide, methane, nitrous oxide, ozone, and water vapor.

While the presence of the primary GHGs in the atmosphere are naturally occurring, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) are largely emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of carbon dioxide are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in

certain industrial processes. Greenhouse gases are typically reported in "carbon dioxide-equivalent" measures (CO_2E).[83]

There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.[84]

The California Air Resources Board (ARB) estimated that in 2006 California produced about 484 million gross metric tons of CO_2E ($MMTCO_2E$), or about 535 million U.S. tons.[85] The ARB found that transportation is the source of 38 percent of the State's GHG emissions, followed by electricity generation (both in-state and out-of-state) at 22 percent and industrial sources at 20 percent. Commercial and residential fuel use (primarily for heating) accounted for 9 percent of GHG emissions.[86] In the Bay Area, fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) and the industrial and commercial sectors are the two largest sources of GHG emissions, each accounting for approximately 36 percent of the Bay Area's 95.8 $MMTCO_2E$ emitted in 2007.[87] Electricity generation accounts for approximately 16 percent of the Bay Area's GHG emissions followed by residential fuel usage at 7 percent, off-road equipment at 3 percent and agriculture at 1 percent.[88]

Senate Bill 97 (SB 97) requires the Office of Planning and Research (OPR) to amend the state CEQA guidelines to address the feasible mitigation of GHG emissions or the effects of GHGs. In response, OPR amended the CEQA guidelines, effective March 18, 2010, by amending various sections of the guidelines to provide guidance for analyzing GHG emissions. Among other CEQA Guidelines changes, the amendments add a new section to the CEQA Checklist (CEQA Guidelines Appendix G) to address questions regarding the project's potential to emit GHGs. OPR's amendments to the CEQA Guidelines have been incorporated into this analysis accordingly.

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[83] Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

[84] California Climate Change Portal. Frequently Asked Questions About Global Climate Change. Available online at: http://www.climatechange.ca.gov/publications/faqs.html. Accessed March 2, 2010.

[85] California Air Resources Board (ARB), "California Greenhouse Gas Inventory for 2000-2006— by Category as Defined in the Scoping Plan." http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_2009-03-13.pdf. Accessed March 2, 2010.

[86] Ibid.

[87] Bay Area Air Quality Management District, Source Inventory of Bay Area Greenhouse Gas Emissions: Base Year 2007, Updated: February 2010. Available online at: http://www.baaqmd.gov/~/media/Files/Planning percent20and percent20Research/Emission percent20Inventory/regionalinventory2007_2_10.ashx. Accessed March 2, 2010.

[88] Ibid.

a. Program-level Greenhouse Gas Emissions Analysis

The most common GHGs resulting from human activity are CO_2, CH_4, and N_2O.[89] State law defines GHGs to also include hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. These latter GHG compounds are usually emitted in industrial processes, and therefore not applicable to the Proposed Project. Individual projects contribute to the cumulative effects of climate change by emitting GHGs during construction and operational phases. Both direct and indirect GHG emissions are generated by project operations. Operational emissions include GHG emissions from new vehicle trips and area sources (natural gas combustion). Indirect emissions include emissions from electricity providers, energy required to pump, treat, and convey water, and emissions associated with landfill operations.

As discussed in the previous section, on June 2, 2010, the BAAQMD adopted new CEQA thresholds of significance for the air quality impacts of Proposed Projects. Additionally BAAQMD adopted thresholds of significance for GHGs emitted during project operations. The BAAQMD did not adopted threshold of significance for construction-related GHG emissions at this time because the BAAQMD could not determine the level by which a project's GHG emissions could be considered significant. However, the BAAQMD does recommend that the Lead Agency quantify and disclose GHG emissions that would occur during construction, and make a determination on the significance of these construction-generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals.

The BAAQMD's companion document, *California Environmental Quality Act, Air Quality Guidelines (Air Quality Guidelines)*, provides guidelines to lead agencies in evaluating the air quality (and GHG) impacts of a Proposed Project or plan. This document presents recommended procedures and methodologies for evaluating air quality impacts.[90] According to the BAAQMD, the recently adopted thresholds of significance for GHG emissions are intended to apply to environmental analyses begun on or after adoption of the revised CEQA thresholds (i.e., environmental analyses begun after June 2, 2010). Therefore, the Proposed Project would not be subject to the BAAQMD's thresholds of significance for GHG emissions. However, given that no other jurisdiction has adopted thresholds of significance for GHG emissions, the BAAQMD's thresholds are discussed herein.

On June 2, 2010, the BAAQMD adopted two sets of thresholds for projects that could emit GHGs: one that applies at a project-level, and one that applies at a plan-level. At the plan-level, the BAAQMD has identified two thresholds: one qualitative, and one quantitative.

- Whether the plan is consistent with a Qualified GHG Reduction Strategy, or

[89] Governor's Office of Planning and Research. Technical Advisory- CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review. June 19, 2008. Available at the Office of Planning and Research's website at: http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf. Accessed March 3, 2010.

[90] Bay Area Air Quality Management District (BAAQMD). *California Environmental Quality Act, Air Quality Guidelines.* June 2010. This document is available online at: www.baaqmd.gov. Accessed July 14, 2010.

- Whether the plan would result in GHG emissions of 6.6 metric tons/ service population, where service population is equivalent to total increase in residents and employees generated by the Proposed Project.

The City's Climate Action Plan addresses issues related to climate change on a citywide context and the project's consistency with the Climate Action Plan is discussed further below under criterion b. While the Climate Action Plan does contain the City's vision for reducing GHG emissions, at this time the City has not complied all the materials to required for a Qualified GHG Reduction Strategy, therefore the Proposed Project would not be able to rely upon the BAAQMD's qualitative GHG threshold. Additionally, the plan-level thresholds are intended to apply to long-range plans including general plans, redevelopment plans, specific plans, area plans, community plans, regional plans and congestion management plans. The *Air Quality Guidelines* goes on to explain that such plans "often contain development strategies for 20-year or longer time horizons...[and] usually provide a wide range of potential land uses and densities to accommodate all types of development. The Proposed Project is a programmatic document that identifies objectives, policies and design guidelines for streetscape improvement projects. As such the policies in the BSP would not directly emit GHGs. The Proposed Project does not contain a long range development program that has identified individual projects, however individual projects could emit GHGs during project construction and operation (mostly during construction). Given that the Proposed Project does not contain a development program and that the proposed plan would not change land uses or densities, the BAAQMD's plan-level thresholds of significance for GHGs are not applicable to the proposed BSP. Further, given that the plan does not include any specific projects, for which to analyze, the BAAQMD's project-level thresholds are also not applicable to the BSP project.[91]

Although the BAAQMD's GHG thresholds are not applicable to the proposed BSP project, pursuant to the *CEQA Guidelines*, as amended by SB 97, the CEQA analysis prepared for the Proposed Project must address the potential for the Proposed Project to emit GHGs and determine whether the project's GHG emissions would be significant. The potential for the BSP, a programmatic document, to emit GHGs is discussed below.

Construction Emissions.

The Proposed Project, as a policy-level document, would not directly emit GHG emissions. However, individual streetscape projects would emit GHGs during future construction of site-specific streetscape projects that apply the Better Streets Plan policies and guidelines; the emitted GHGs would be related to construction vehicles and construction worker trips. Some BSP policies and design guidelines could result in individual streetscape projects that would incrementally emit more GHGs during construction than current streetscape projects that do not incorporate BSP policies and design guidelines. For example, streetscape projects that incorporate wider sidewalks, extended bulb outs, and other treatments which could

[91] The project level thresholds consider: 1) whether the project is consistent with a Qualified GHG Reduction Strategy, 2) whether the project's operational emissions would result in GHGs of 1,100 $MTCO_2E$/year, or 3) whether the proposed project would result in 4.6 $MTCO_2E$/Service Population (residents + employees).

incrementally increase the amount of excavation required or duration of construction, could result in increased construction-related GHG emissions. Construction emissions are temporary in nature and would not persist beyond the construction period. Furthermore, construction emissions from individual projects are likely offset by the following anticipated operational benefits of the BSP plan: (i) a shift in some modes of transportation (from vehicular to pedestrian use) resulting from the construction of more pedestrian-friendly streetscapes; (ii) incorporation of energy efficient lighting and other energy efficiency requirements, (iii) promotion of increased onsite stormwater treatment, reducing the energy required to treat stormwater; and (iv) a decrease in the embodied energy of building materials used for streetscape furnishing. The operational GHG reductions from the BSP policies and design guidelines are likely to result in a net GHG benefit. In addition, any streetscape improvement project carried out by the City or its contractors would be required to comply with the Clean Construction Ordinance. The Clean Construction Ordinance requires that all contracts for large (20+ day) City projects:

- Fuel diesel vehicles with B20 biodiesel, and
- Use construction equipment that meets USEPA Tier 2 standards or best available control technologies for equipment over 25 hp.

For every gallon of waste vegetable oil that is converted into biodiesel displaces a gallon of petroleum diesel, which amounts to 17.3 pounds net reduction of carbon emissions per gallon of displaced petroleum.[92] Furthermore, individual streetscape projects would be required to undergo a separate environmental review pursuant to CEQA, as future site-specific improvement projects are developed. This project-level environmental review would include an analysis of the individual project's potential to emit GHGs. Therefore, the proposed BSP would not result in a substantial increase in construction-related GHG emissions, and construction related GHG emissions from the BSP would be less than significant. **Operational Emissions.**

As discussed in the project description for the BSP initial study, the BSP contains Objectives, Policies, and Streetscape Improvement Measures (i.e., design guidelines) that in the future, upon BSP adoption, would need to be considered when upgrading existing, and designing new, streetscapes within San Francisco. Many of the BSP-related objectives, policies and streetscape improvements would have no discernable direct or indirect impact related to emitting greenhouse gases at levels above standard streetscape improvements that are currently carried out in the City. The following table identifies those objectives, policies, and improvements that could potentially influence the amount of greenhouse gases emitted by a BSP-related project. Table 6, below, identifies each applicable BSP objective, policy or streetscape improvement measure that could result in a general GHG reduction (which may include a reduction in GHGs emitted or increased carbon sequestration) or a GHG increase; the table also includes a general discussion. For this analysis, it is assumed that existing streetscape projects include sidewalks, curb ramps, marked crosswalks, and pedestrian signals.

[92] San Francisco Public Utilities Commission. "Combating Climate Change." Accessed 19 Dec. 2009. <http://www.sfgreasecycle.org/climate_change.shtml>

TABLE 6: BSP OBJECTIVES, POLICIES AND IMPROVEMENT MEASURES AFFECTING GREENHOUSE GAS EMISSIONS

BSP Objective/ Policy/ Improvement Measure	GHG Reduction	GHG Increase	Discussion
BSP Objectives			
Encourage residents and visitors to walk and use local shopping areas, rather than to drive to regional shopping centers.	☒	☐	Measures which reduce reliance on personal vehicles in favor of walking would reduce the amount of vehicle-miles traveled (VMT) and subsequent greenhouse gas emissions.[93]
Promote healthy lifestyles by encouraging walking to daily and occasional destinations, minimizing pedestrian injuries and helping to decrease major chronic diseases related to air quality and pedestrian activity.	☒	☐	This is the same concept as the previous objective; reducing reliance on personal vehicles could result in a reduction in VMTs and subsequent GHGs.
Enhance the City's long-term ecological functioning.	☒	☐	To the extent that this objective could result in increased carbon sequestration, it could result in a reduction in GHGs (i.e. by additional tree planting or maintaining healthy vegetation).
BSP Policies			
Policy 2.2: Use excess portions of right-of-way such as overly wide lanes, unused street space, or spaces created by streets coming together at odd angles to create landscaped and/or usable areas.	☒	☒	This policy could render both GHG reductions and increases. GHG reductions could occur if these spaces are used for landscaping, thereby increasing the amount of carbon sequestration onsite. Should these spaces require additional concrete to create expanded sidewalks, this policy could increase construction-related GHG emissions.[94]
Policy 2.3: Design sidewalks to maximize the amount of pedestrian and usable open space.	☒	☒	Similar to Policy 2.2, this policy could result in both GHG increases and decreases, depending on whether usable open space includes vegetated surfaces or hardscape. The BSP policies encourage more permeable sidewalk surfaces and therefore, it is expected that such surfaces would be vegetated and are more likely to result in a GHG reduction. If permeable hardscape is not vegetated, other methods may be employed to increase permeability. Increased permeability would reduce the amount of energy required for stormwater treatment, resulting in a reduction of GHGs.
Policy 2.4: Facilitate and encourage adjacent residents and businesses to make streetscape improvements that promote street use and activity, landscaping, or other aesthetic elements.	☒	☐	To the extent that this policy results in changes from hardscape to landscape or encourages people to reduce their personal VMTs the policy could incrementally result in GHG benefits.

[93] It should be noted that vehicles currently represent approximately 50 percent of the greenhouse gases emitted in the Bay Area.

[94] Construction-related GHG emissions would occur from construction worker vehicle trips, construction-related equipment, and from the amount of new concrete required for an expanded sidewalk area. However, construction-related GHG increases would occur only during the temporary construction period and would not result in ongoing GHG increases.

BSP Objective/ Policy/ Improvement Measure	GHG Reduction	GHG Increase	Discussion
Policy 2.5 Facilitate and encourage temporary community use of street space for public life, such as street fairs, performances, and farmer's markets.	☐	☐	Temporary street closures would not have a discernable impact on GHG emissions. While street closures could result in increased congestion, and increase VMT or vehicle hours, this would be temporary and would not result in a significant permanent increase in GHGs.
Policy 3.2: In commercial districts, balance the need for short-term parking for shoppers and loading for businesses with the need for pedestrian-oriented design.	☒	☒	This policy implies that parking needs would be met. However, in parts of the City parking is already constrained. Therefore, to the extent that parking becomes more constrained and results in increased travel time, personal VMTs could increase incrementally, only slightly increasing GHG emissions. However, in the experience of San Francisco transportation planners, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel and a relatively dense pattern of urban development, induces many drivers to shift to other modes of travel or change their overall travel habits. Any such mode shifts would result in an overall decrease in VMTs. This observation is supported by the California Air Pollution Control Officer's (CAPCOA's) *CEQA and Climate Change*[95] report which substantiates that reducing the amount of parking yields a GHG reduction score on the order of 1 to 30 percent.
Policy 5.1: Enable opportunities to create active recreational spaces on streets, such as paths or pocket parks.	☒	☒	Similar to Policy 2.1, this policy could result in GHG increases from construction and additional hardscape. However, the policy could yield GHG reductions should hardscaped surfaces be converted to carbon-sequestering landscape or permeable surfaces. Again, the BSP policies encourage more permeable sidewalk surfaces and therefore, a GHG reduction is expected.
Policy 6.8: Design streets to calm traffic and reduce speeding.	☒	☒	The intent of this policy is to reduce traffic speeds, therefore the policy would not be applied to congested areas of the City where traffic speeds are already slow. As discussed in the transportation analysis, these measures would not result in additional vehicle trips or create new transit trips, and therefore these measures would not increase VMT. These measures would not decrease roadway capacity, but could

[95] The California Air Pollution Control Officer's, *CEQA and Climate Change* (January 2008) white paper identifies minimum parking as resulting in a "high" emissions reduction score (1%-30%), Appendix B, page 8. This paper is available online at: http://www.capcoa.org/ceqa/CAPCOA%20White%20Paper%20-%20CEQA%20and%20Climate%20Change.pdf. Accessed April 15, 2008.

BSP Objective/ Policy/ Improvement Measure	GHG Reduction	GHG Increase	Discussion
			slightly reduce travel speeds, resulting in longer trip times. These longer trip times could result in a negligible increase in GHGs. On the other hand, CAPCOA has identified traffic calming devices as an emissions reduction strategy, because such devices are designed to encourage pedestrian and bicycle trips, thereby reducing overall VMT.[96] Therefore, overall GHG emissions are expected to decrease.
Policy 8.1: Maximize opportunities in the streetscape for on-site stormwater retention and infiltration.	☒	☐	This policy could result in a reduction in the amount of stormwater requiring treatment, thereby reducing the amount of energy required to treat stormwater, resulting in a reduction in GHG emissions.
Policy 8.2: Use sustainable streetscape materials in street designs, taking into account the life-cycle energy costs of such materials.	☒	☐	To the extent that life-cycle energy costs are taken into account during design and construction, this policy would result in reduced GHG emissions.
Policy 8.3: Minimize energy use in street lighting and other energy-requiring streetscape elements.	☒	☐	This policy would result in reduced energy requirements for streetscape elements, resulting in reduced GHG emissions.
Policy 8.4: Use streetscape landscaping to increase the ecological value of public streets for people and wildlife.	☒	☐	To the extent that this policy increases carbon sequestration, it could result in GHG benefits. Revisions to this policy were made to emphasize water conservation and selection of drought tolerant plantings, thereby further reducing GHGs associated with water transport.
Policy 10.1: Maximize opportunities for street trees and other plantings.	☒	☐	Should this policy result in additional street trees, it could increase the amount of carbon sequestered, resulting in GHG benefits.
Policy 10.5 Ensure adequate light levels and quality for pedestrians and other sidewalk users; minimize light trespass and glare to adjacent buildings.	☒	☒	To the extent that this policy could increase the amount of light considered adequate for pedestrians, it could increase energy requirements. However, these energy requirements would be partially or wholly off-set by Policy 8.3, which requires energy efficient lighting.
Standard Improvements			
Curb radii guidelines	☒	☒	To the extent that these guidelines expand the sidewalk areas, this measure could incrementally increase construction-related GHG emissions from a BSP project. However, construction emissions would occur over a limited period and would not result in increased emissions during the operational phase of a specific project.

[96] The California Air Pollution Control Officer's, *CEQA and Climate Change* (January 2008) white paper identifies traffic calming devices as resulting in a "high" emissions reduction score (1%-10%), Appendix B, page 6. This paper is available online at: http://www.capcoa.org/ceqa/CAPCOA%20White%20Paper%20-%20CEQA%20and%20Climate%20Change.pdf. Accessed April 15, 2008.

BSP Objective/ Policy/ Improvement Measure	GHG Reduction	GHG Increase	Discussion
			Further, the use of permeable pavement could reduce stormwater treatment, thereby resulting in GHG reductions from a decrease in energy required to treat stormwater.
Corner curb extensions	☒	☒	Similar to curb radii guidelines, to the extent that these extensions expand the sidewalk areas, this measure could incrementally increase construction-related GHG emissions from a BSP project. However, long-term operational benefits may be realized by increasing permeable surfaces.
Street trees	☒	☐	Additional street trees could increase the amount of carbon sequestered, thereby resulting in GHG benefits.
Sidewalk planters	☒	☐	Similar to street trees, additional vegetation would increase the amount of carbon sequestered, thereby resulting in GHG benefits.
Stormwater management tools	☒	☐	Similar to Policy 8.1, reducing the amount of stormwater requiring treatment could reduce energy usage associated with stormwater treatment and result in a GHG benefit. Revisions were made to this measure to include vegetated stormwater management tools. This revision would incrementally reduce GHG emissions by creating a stormwater treatment system that would also increase carbon sequestration.
Street lighting	☐	☒	As discussed in the analysis of Policy 10.5, to the extent that additional street lighting is required, it could increase energy requirements. However, energy requirements would be partially or wholly off-set by Policy 8.3 which requires energy efficient lighting. Revisions were made to the BSP to preserve street lighting in historic districts. To the extent that this would increase the amount of electricity required, preservation of historic lighting conditions could increase GHG emissions.
Special Paving	☒	☐	Permeable paving could result in reduced stormwater treatment, thereby resulting in reduced GHG emissions. This measure was revised to include guidelines for the use of recycled or re-used paving, further reducing the embodied energy of this material.
Site Furnishings	☒	☒	Policy 10.3 is designed to reduce visual clutter. However, the BSP also includes policies to increase public use of the streets. Streetscape furnishings have embodied energy (energy used to produce the item). To the extent that the number of site furnishings is increased, the BSP could result in an incremental increase in GHGs associated with the embodied energy of these new items. However, policy 8.2 directs BSP projects to take into account the lifecycle energy cost of such materials. Therefore BSP projects could equally result in an overall decrease in the embodied

BSP Objective/ Policy/ Improvement Measure	GHG Reduction	GHG Increase	Discussion
			energy of site furnishings.
Case-by-Case Improvements			
Special crosswalk treatments	☐	☒	To the extent that these treatments require additional energy (from roadway flashing lights and roadway beacons), these could incrementally increase GHGs. However, this energy demand would be partially off-set by policy 8.3, which requires energy efficient lighting.
Raised crosswalks	☐	☒	Should raised crosswalks require additional concrete, these measures could increase construction-related GHG emissions from BSP projects. However, this would only occur during the construction period and no operational GHG increases would be expected.
Extended bulb-outs	☐	☒	Should additional concrete be required, this measure could increase GHG emissions from BSP projects. However, this would only occur during the construction period and no operational GHG increases would be expected.
Mid-block blub-out	☐	☒	Similar to extended bulb-outs, should additional concrete be required, this measure could increase GHG emissions from BSP projects. However, this would only occur during the construction period and no operational GHG increases would be expected.
Center or side medians	☒	☒	This policy could result in additional GHG emissions by requiring additional curbs or concrete. However, these construction-related emissions could be partially or wholly off-set by the median being vegetated and increasing the amount of carbon sequestered. GHGs would only be emitted during the construction period and no operational GHG emissions increases would be expected.
Transit bulb-out	☐	☒	Similar to extended bulb-outs, should additional concrete be required, this measure could increase GHG emissions from BSP projects. However, this would only occur during the construction period and no operational GHG increases would be expected.
Transit boarding islands	☐	☒	Similar to extended bulb-outs, should additional concrete be required, this measure could increase GHG emissions from BSP projects. However, this would only occur during the construction period and no

BSP Objective/ Policy/ Improvement Measure	GHG Reduction	GHG Increase	Discussion
			operational GHG increases would be expected.
Perpendicular or angled parking	☐	☒	To the extent that this increases curb extensions, this measure could require additional concrete and increase GHG emissions from BSP projects. However, this would only occur during the construction period and no operational GHG increases would be expected.
Parking lane planters	☒	☐	To the extent that these planters add vegetation and reduce stormwater run off, they could result in incremental GHG benefits. No operational GHG increases would be expected.
Chicanes, traffic calming circles and roundabouts	☒	☒	The intent of these measures is to reduce traffic speeds; therefore, the policy would not be applied to congested areas of the City where traffic speeds are already slow. As discussed in the transportation analysis, these measures would not result in additional vehicle trips or create new transit trips, and therefore these measures would not increase VMT. These measures would not decrease roadway capacity, but could slightly reduce travel speeds, resulting in longer trip times. These longer trip times could result in a negligible increase in GHGs. On the other hand, CAPCOA has identified traffic devices as an emissions reduction strategy, because such devices are designed to encourage pedestrian and bicycle trips, thereby reducing overall VMT.[97] Therefore, overall GHG emissions are expected to decrease. Additional concrete required for curbs, etc., could result in increased GHG emissions during the construction period.
Pocket parks	☒	☒	Similar to Policy 2.1, pocket parks could result in GHG increases from construction and additional hardscape. However, the policy could yield GHG reductions, should hardscaped surfaces be converted to carbon-sequestering vegetated landscape or permeable surfaces.

[97] The California Air Pollution Control Officer's, *CEQA and Climate Change* (January 2008) white paper identifies traffic calming devices as resulting in a "high" emissions reduction score (1%-10%), Appendix B, page 6. This paper is available online at: http://www.capcoa.org/ceqa/CAPCOA%20White%20Paper%20-%20CEQA%20and%20Climate%20Change.pdf. Accessed April 15, 2008.

BSP Objective/ Policy/ Improvement Measure	GHG Reduction	GHG Increase	Discussion
Reuse of 'pork chops' and excess right-of-way	☒	☒	Similar to pocket parks, reuse of 'pork chops' could result in GHG increases from construction and additional hardscape. However, the policy could yield GHG reductions, should hardscaped surfaces be converted to carbon-sequestering vegetated landscape or permeable surfaces.
Boulevard treatments	☒	☒	Boulevard treatments would include landscaping, stormwater and urban design amenities. Additional curbs, requiring concrete construction, could result in incremental increases in GHGs, which would be offset by carbon-sequestering vegetated landscape or permeable surfaces.
Shared streets	☒	☐	To the extent that shared streets include landscaping and treatment of stormwater, these streets could yield a GHG benefit.

Overall there are some objectives, policies and streetscape improvement measures which could result in increased GHG emissions. However, these measures are expected to be partially or wholly offset by objectives, policies and streetscape improvement measures that would decrease GHG emissions. Many of the GHG increases and reductions are unquantifiable without a project-level design to analyze, and are therefore discussed qualitatively. In general, BSP elements that could increase the amount of GHGs emitted from streetscape improvement projects include: (1) policies that would increase construction duration or amount of excavation resulting from an increase in the amount of concrete/hardscape required for streetscape improvements (bulb-outs, wider sidewalks, medians, raised crosswalks, boarding islands, Chicanes, roundabouts, etc); (2) policies that would increase the amount of electricity required by increasing lighting and signage requirements (although this impact would be offset by policies that call for using energy-efficient fixtures); (3) traffic-related policies that could potentially increase vehicle drive times (although this impact also is likely off-set by BSP-related increases in pedestrian and bicycle activity, thereby reducing overall vehicle trips and VMT). BSP elements that would result in reduced GHG emissions include: (1) policies that encourage tree planting and vegetation, policies that would convert existing hardscape to vegetated landscapes, and policies designed to increase stormwater filtration (i.e., policies designed to make sidewalks more permeable), thereby reducing the energy required to treat stormwater; (2) policies encouraging energy-efficient lighting and fixtures; (3) policies that encourage resource-efficient materials (i.e., policies that consider the lifecycle energy cost of its materials); and (4) policies that would encourage people to walk and/or bike to local shopping centers and destinations instead of driving to such places.

At the program-level, the BSP includes policies that could incrementally increase GHG emissions. However, these emissions would be off-set by policies that could equally incrementally decrease GHG emissions. The GHG benefits, however, are more abstract and therefore not as easily quantifiable. Increased GHG emissions that could occur from specific projects would mainly occur during the temporary construction period, while the GHG benefits of a Proposed Project (i.e., a more pedestrian-friendly environment) would be realized throughout the life of the project. Overall, the proposed objectives, policies and design

guidelines of the BSP are not anticipated to generate substantial amount GHG emissions, either directly or indirectly and the proposed BSP would result in less than significant impacts related to emitting GHGs.

San Francisco has been actively pursuing cleaner energy, alternative transportation and solid waste policies, many of which have been codified into regulations. In an independent review of San Francisco's communitywide emissions it was reported that San Francisco has achieved a 5 percent reduction in communitywide GHG emissions below the Kyoto Protocol 1990 baseline levels. The 1997 Kyoto Protocol sets a greenhouse gas reduction target of 7 percent below 1990 levels by 2012. The "community-wide inventory" includes greenhouse gas emissions generated by San Francisco by residents, businesses, and commuters, as well as municipal operations. The inventory also includes emissions from both transportation and building energy sources.[98]

The BSP identifies goals, objectives, policies and design guidelines, as well as future strategies to improve the pedestrian realm in San Francisco. Pedestrian areas mainly include sidewalks and crosswalks, but in some instances also include portions of the roadway. The project would involve implementation of the proposed standard and optional or case-by-case streetscape improvements. The Better Streets Plan itself is a program-level policy document and does not identify site-specific projects in the City. However, according to California Environmental Quality Act (CEQA) Guidelines Section 15002 (a)(1), one of the basic purposes of CEQA is to inform governmental decision makers and the public about the potential significant environmental effects of proposed activities. In an effort to make "good faith effort at full disclosure" of a project's potential environmental effects (King's County Farm Bureau v. City of Hanford (1990) 221Cal. App.3d 692), the approach for the greenhouse gas analysis for this program-level document includes a program-level analysis of policies identified in the BSP that could result in increases and decreases to greenhouse gas emissions, and concludes that the BSP would result in less than significant GHG emissions.

The Proposed Project includes policy direction and guidelines that, when implemented on a project-level basis, would result in sustainable streetscape improvements and design that promotes the use of pedestrian trips; combined transit and pedestrian trips; decreased vehicle trips; energy efficient lighting and other energy efficiency requirements; increased onsite stormwater treatment; and a decrease in the embodied energy of building materials. These sustainable features would reduce GHG emissions citywide. Therefore, the Proposed Project would not contribute significantly, either individually or cumulatively, to global climate change. Given that San Francisco has implemented binding and enforceable programs to reduce GHG emissions applicable to the Proposed Project (Clean Construction Ordinance), that San Francisco's sustainable policies have resulted in the measured success of reduced GHG emissions levels, and that the policies and design guidelines proposed in the BSP are anticipated to result in a net GHG benefit, the Proposed Project's potential to emit GHGs is determined to be **less than significant.**

[98] *City and County of San Francisco: Community GHG Inventory Review.* August 1, 2008. IFC International, 394 Pacific Avenue, 2nd Floor, San Francisco, CA 94111. Prepared for City and County of San Francisco, Department of the Environment.

b. Consistency with Applicable Plans. Both the State and the City of San Francisco have adopted programs for reducing greenhouse gas emissions, as discussed below.

Assembly Bill 32

In 2006, the California legislature passed Assembly Bill No. 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires ARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

Pursuant to AB 32, ARB adopted a Scoping Plan in December 2008, outlining measures to meet the 2020 GHG reduction limits. In order to meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business as usual emissions levels, or about 15 percent from today's levels.[99] The Scoping Plan estimates a reduction of 174 million metric tons of CO_2E ($MMTCO_2E$) (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and high global warming potential sectors, see Table 7, below. ARB has identified an implementation timeline for the GHG reduction strategies in the Scoping Plan.[100] Some measures may require new legislation to implement, some will require subsidies, some have already been developed, and some will require additional effort to evaluate and quantify. Additionally, some emissions reductions strategies may require their own environmental review under CEQA or the National Environmental Policy Act (NEPA).

Table 7. GHG Reductions from the AB 32 Scoping Plan Sectors[101]

GHG Reduction Measures By Sector	GHG Reductions ($MMT CO_2E$)
Transportation Sector	62.3
Electricity and Natural Gas	49.7
Industry	1.4
Landfill Methane Control Measure (Discrete Early Action)	1
Forestry	5
High Global Warming Potential GHGs	20.2
Additional Reductions Needed to Achieve the GHG Cap	34.4
Total	**174**
Other Recommended Measures	
Government Operations	1-2
Agriculture- Methane Capture at Large Dairies	1
Methane Capture at Large Dairies	1
Additional GHG Reduction Measures	
Water	4.8
Green Buildings	26
High Recycling/ Zero Waste • Commercial Recycling • Composting • Anaerobic Digestion • Extended Producer Responsibility • Environmentally Preferable Purchasing	9
Total	**42.8-43.8**

[99] California Air Resources Board, California's Climate Plan: Fact Sheet. Available online at: http://www.arb.ca.gov/cc/facts/scoping_plan_fs.pdf. Accessed March 4, 2010.

[100] California Air Resources Board. AB 32 Scoping Plan. Available Online at: http://www.arb.ca.gov/cc/scopingplan/sp_measures_implementation_timeline.pdf. Accessed March 2, 2010.

[101] California Air Resources Board, California's Climate Plan: Fact Sheet. Op cit.

AB 32 also anticipates that local government actions will result in reduced GHG emissions. ARB has identified a GHG reduction target of 15 percent from current levels for local governments themselves and notes that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions.

The Scoping Plan relies on the requirements of Senate Bill 375 (SB 375) to implement the carbon emission reductions anticipated from land use decisions. SB 375 was enacted to align local land use and transportation planning to further achieve the State's GHG reduction goals. SB 375 requires regional transportation plans, developed by Metropolitan Planning Organizations (MPOs), to incorporate a "sustainable communities strategy" in their regional transportation plans (RTPs) that would achieve GHG emission reduction targets set by ARB. SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development. SB 375 would be implemented over the next several years and the Metropolitan Transportation Commission's 2013 RTP would be its first plan subject to SB 375.

City and County of San Francisco GHG Reduction Strategy

In addition to the State's GHG reduction strategy (AB 32), the City has developed its own strategy to address greenhouse gas emissions on a local level. The vision of the strategy is expressed in the City's Climate Action Plan, however implementation of the strategy is appropriately articulated within other citywide plans (General Plan, Sustainability Plan, etc.), policies (Transit-First Policy, Precautionary Principle Policy, etc.), and regulations (Green Building Ordinance, etc.). The following plans, policies and regulations highlight some of the main components of San Francisco's GHG reduction strategy.

Overall GHG Reduction Sector

San Francisco Sustainability Plan. In July 1997 the Board of Supervisors endorsed the Sustainability Plan for the City of San Francisco establishing sustainable development as a fundamental goal of municipal public policy.

The Climate Action Plan for San Francisco. In February 2002, the San Francisco Board of Supervisors passed the Greenhouse Gas Emissions Reduction Resolution (Number 158-02) setting a goal for the City and County of San Francisco to reduce GHG emissions to 20 percent below 1990 levels by the year 2012. In September 2004, the San Francisco Department of the Environment and the Public Utilities Commission published the Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Emissions.[102] The Climate Action Plan provides the context of climate change in San Francisco and examines strategies to meet the 20 percent GHG reduction target. Although the Board of Supervisors has not formally committed the City to perform the actions addressed in the Plan, and many of the actions require further development and commitment of resources, the Plan serves as a blueprint for GHG emission reductions,

[102]San Francisco Department of the Environment and San Francisco Public Utilities Commission, Climate Action Plan for San Francisco, Local Actions to Reduce Greenhouse Emissions, September 2004.

and several actions have been implemented or are now in progress.

Greenhouse Gas Reduction Ordinance. In May 2008, the City of San Francisco adopted an ordinance amending the San Francisco Environment Code to establish City GHG emission targets and departmental action plans, to authorize the Department of the Environment to coordinate efforts to meet these targets, and to make environmental findings. The ordinance establishes the following GHG emission reduction limits for San Francisco and the target dates to achieve them:

- Determine 1990 City GHG emissions by 2008, the baseline level with reference to which target reductions are set;
- Reduce GHG emissions by 25 percent below 1990 levels by 2017;
- Reduce GHG emissions by 40 percent below 1990 levels by 2025; and
- Reduce GHG emissions by 80 percent below 1990 levels by 2050.

The ordinance also specifies requirements for City departments to prepare departmental Climate Action Plans that assess, and report to the Department of the Environment, GHG emissions associated with their department's activities and activities regulated by them, and prepare recommendations to reduce emissions. As part of this, the San Francisco Planning Department is required to: (1) update and amend the City's applicable *General Plan* elements to include the emissions reduction limits set forth in this ordinance and policies to achieve those targets; (2) consider a project's impact on the City's GHG reduction limits specified in this ordinance as part of its review under CEQA; and (3) work with other City departments to enhance the "transit first" policy to encourage a shift to sustainable modes of transportation thereby reducing emissions and helping to achieve the targets set forth by this ordinance.

Transportation Sector

Transit First Policy. In 1973 San Francisco instituted the Transit First Policy (Article 8A, Section 8A.115. of the City Charter) with the goal of reducing the City's reliance on freeways and meeting transportation needs by emphasizing mass transportation. The Transit First Policy gives priority to public transit investments; adopts street capacity and parking policies to discourage increased automobile traffic; and encourages the use of transit, bicycling and walking rather than use of single-occupant vehicles.

San Francisco Municipal Transportation Agency's Zero Emissions 2020 Plan. The SFMTA's Zero Emissions 2020 plan focuses on the purchase of cleaner transit buses including hybrid diesel-electric buses. Under this plan hybrid buses will replace the oldest diesel buses, some dating back to 1988. The hybrid buses emit 95 percent less particulate matter (PM, or soot) than the buses they replace, they produce 40 percent less oxides of nitrogen (NOx), and they reduce GHGs by 30 percent.

San Francisco Municipal Transportation Agency's Climate Action Plan. In November 2007 voters passed Proposition A, requiring the SFMTA to develop a plan to reach a 20 percent GHG reduction below 1990 levels by 2012 for the City's entire transportation sector, not merely in the SFMTA's internal operations. SFMTA has prepared a Draft

Climate Action Plan outlining measures needed to achieve these targets.

Commuter Benefit Ordinance. The Commuter Benefit Ordinance (Environment Code, Section 421), effective January 19, 2009, requires all employers in San Francisco that have 20 or more employees to offer one of the following benefits: (1) A Pre-tax Transit Benefit, (2) Employer Paid Transit Benefits, or (3) Employer Provided Transit.

The City's Planning Code reflects the latest smart growth policies and includes: electric vehicle refueling stations in city parking garages, bicycle storage facilities for commercial and office buildings, and zoning that is supportive of high density mixed-use infill development. The City's more recent area plans, such as Eastern Neighborhoods, Rincon Hill and the Market and Octavia Area Plan, provide transit-oriented development policies that allow for neighborhood-oriented retail and services and where off-street parking is limited to accessory parking spaces.[103] At the same time there is also a community-wide focus on ensuring San Francisco's neighborhoods as "livable" neighborhoods, including the Proposed Better Streets Plan that would improve San Francisco's streetscape, the Proposed Transit Effectiveness Plan, that aims to improve transit service, and the Bicycle Plan, all of which promote alternative transportation options.

Renewable Energy

The Electricity Resource Plan (Revised December 2002). San Francisco adopted the Electricity Resource Plan to help address growing environmental health concerns in San Francisco's southeast community, home of two power plants. The plan presents a framework for assuring a reliable, affordable, and renewable source of energy for the future of San Francisco.

Go Solar SF. On July 1, 2008, the San Francisco Public Utilities Commission (SFPUC) launched their "GoSolarSF" program to San Francisco's businesses and residents, offering incentives in the form of a rebate program that could pay for approximately half the cost of installation of a solar power system, and more to those qualifying as low-income residents. The San Francisco Planning Department and Department of Building Inspection have also developed a streamlining process for Solar Photovoltaic (PV) Permits and priority permitting mechanisms for projects pursuing LEED® Gold Certification.

Green Building

LEED® Silver for Municipal Buildings. In 2004, the City amended Chapter 7 of the Environment code, requiring all new municipal construction and major renovation projects to achieve LEED® Silver Certification from the US Green Building Council.

City of San Francisco's Green Building Ordinance. On August 4, 2008, Mayor Gavin Newsom signed into law San Francisco's Green Building Ordinance for newly constructed residential and commercial buildings and renovations to existing buildings. The ordinance specifically requires newly constructed commercial buildings over 5,000

[103] See *Planning Code* Sections 206.4 and 155.1.

square feet (sq. ft.), residential buildings over 75 feet in height, and renovations on buildings over 25,000 sq. ft. to be subject to an unprecedented level of LEED® and green building certifications, which makes San Francisco the city with the most stringent green building requirements in the nation. Cumulative benefits of this ordinance includes reducing CO2 emissions by 60,000 tons, saving 220,000 megawatt hours of power, saving 100 million gallons of drinking water, reducing waste and stormwater by 90 million gallons of water, reducing construction and demolition waste by 700 million pounds, increasing the valuations of recycled materials by $200 million, reducing automobile trips by 540,000, and increasing green power generation by 37,000 megawatt hours.[104]

Waste Reduction

Zero Waste. In 2004, the City of San Francisco committed to a goal of diverting 75 percent of its' waste from landfills by 2010, with the ultimate goal of zero waste by 2020. San Francisco currently recovers 72 percent of discarded material.

Construction and Demolition Debris Recovery Ordinance. In 2006 the City of San Francisco adopted Ordinance No. 27-06, requiring all construction and demolition debris to be transported to a registered facility that can divert a minimum of 65 percent of the material from landfills. This ordinance applies to all construction, demolition and remodeling projects within the City.

Universal Recycling and Composting Ordinance. Signed into law on June 23, 2009, this ordinance requires all residential and commercial building owners to sign up for recycling and composting services. Any property owner or manager who fails to maintain and pay for adequate trash, recycling, and composting service is subject to liens, fines, and other fees.

The City has also passed ordinances to reduce waste from retail and commercial operations. Ordinance 295-06, the Food Waste Reduction Ordinance, prohibits the use of polystyrene foam disposable food service ware and requires biodegradable/compostable or recyclable food service ware by restaurants, retail food vendors, City Departments and City contractors. Ordinance 81-07, the Plastic Bag Reduction Ordinance, requires many stores located within the City and County of San Francisco to use compostable plastic, recyclable paper and/or reusable checkout bags.

AB 32 contains a comprehensive approach for developing regulations to reduce statewide GHG emissions. ARB acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas sectors. Many of the measures in the Scoping Plan—such as implementation of increased fuel efficiency for vehicles (the "Pavley" standards), increased efficiency in utility operations, and development of more renewable energy sources—require statewide action by government, industry, or both.

Some of the Scoping Plan measures are at least partially applicable to construction projects, such as increasing energy efficiency in new construction, installation of solar panels on

[104] These findings are contained within the final Green Building Ordinance, signed by the Mayor August 4, 2008.

individual building roofs, and a "green building" strategy. As evidenced above, the City has already implemented several of these measures that require local government action, such as a Green Building Ordinance, a Zero Waste strategy, a Construction and Demolition Debris Recovery Ordinance, and a solar energy generation subsidy program, to realize meaningful reductions in GHG emissions. These programs (and including others not listed) collectively comprise San Francisco's GHG reduction strategy and continue San Francisco's efforts to reduce the City's greenhouse gas emissions to 20 percent below 1990 levels by the year 2012, a goal outlined in the City's 2004 Climate Action Plan. The City's GHG reduction strategy also furthers the State's efforts to reduce statewide GHG emissions as mandated by AB 32.

The Proposed Project would be required to comply with GHG reduction regulations as discussed above, as well as applicable AB 32 Scoping Plan measures that are ultimately adopted and become effective during implementation of the Proposed Project. Given that the City has adopted numerous GHG reduction strategies recommended in the AB 32 Scoping Plan, that the City's GHG reduction strategy includes binding, enforceable measures to be applied to the Proposed Project, and that the City's GHG reduction strategy has produced measurable reductions in GHG emissions, the Proposed Project would not conflict with either the state or local GHG reduction strategies. As discussed above, many of the policies in the BSP would result in GHG reductions and would further the City's GHG reduction goals. Therefore, the Proposed Project would not conflict with any plans, policies, or regulations adopted for the purpose of reducing GHG emissions, and the Proposed Project would have a **less than significant impact** with respect to GHG emissions.

Conclusion. Individual projects contribute to the cumulative effects of climate change by emitting GHGs during project construction and operation. An individual project could not emit enough GHGs on its own to result in a physical climate change-related impact on the environment. It is the cumulative impact of all past, present and future projects that have, and will continue, to emit GHGs that result in environmental impacts associated with climate change. As such, impacts related to GHG emissions are discussed in the cumulative context.

At the program-level, the site-specific streetscape projects under the BSP could result in increased construction-related GHG emissions by possibly increasing the construction duration and amount of excavation required for streetscape improvements. However, construction emissions would be temporary and only persist during the duration of construction activities. Long-term operational benefits (discussed below) would likely result in a net GHG benefit.

Operation of project-specific streetscape improvements would require electricity used to operate signs and signals with consequent indirect GHG emissions attributed to power plants providing that electricity. However, Policy 8.3 directs new streetscape improvements to minimize energy use in street lighting and other energy-requiring streetscape elements. To the extent that this policy is implemented on a project-specific basis, the Better Street's Plan's policies and guidelines would reduce electricity use from lighting and other operational electricity requirements than if streetscape improvements were implemented without incorporating Better Street's policies and design guidelines. Given that electricity used for streetscape improvements designed using Better Streets policies and guidelines would be less than that for streetscape improvements that did not incorporate Better Streets policies and

guidelines for energy efficiency, the Proposed Project would result in reduced GHG emissions associated with energy use.

Similarly, the Proposed Project includes policies for onsite stormwater treatment. Specifically, Policy 8.1 states that new streetscapes should maximize opportunities for on-site stormwater retention and infiltration within streetscapes. Reducing stormwater runoff by onsite retention and infiltration reduces the amount of energy needed to transport and treat stormwater. Therefore, the Proposed Project would result in additional energy savings from a reduced amount stormwater requiring treatment.

As discussed previously, some design elements could result in traffic delays, resulting in increased levels of GHGs. However, streetscape improvements are only expected to be applied where they do not adversely affect a given streets' vehicular traffic conditions. Therefore, the Proposed Project would not be expected to affect motor vehicle operations. Additionally, the goal of the Better Streets Plan is to provide a pedestrian friendly environment. Pedestrians have no associated emissions and promoting walking for shorter trips can reasonably be expected to reduce emissions citywide by shifting a portion of motor vehicle trips to pedestrian trips. Pedestrian travel is an environmentally friendly means of transportation because there are no tailpipe emissions, no evaporative emissions, no emissions from gasoline pumping or oil refining, and zero carbon dioxide or other greenhouse gases that contribute to global warming. Therefore, it can be reasonably concluded that implementing Better Streets policies and guidelines in the form of future project-specific streetscape improvements and designs would result in GHG benefits, and impacts related to GHG emissions are considered ***less than significant.***

E.9 Wind and Shadow

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
8. WIND AND SHADOW—Would the project:					
a) Alter wind in a manner that substantially affects public areas?	☐	☐	☒	☐	☐
b) Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas?	☐	☐	☒	☐	☐

a) Wind. The Proposed Project would not result in the construction or removal of substantial (tall and/or bulky) above-grade structures that could affect street-level wind conditions. The Proposed Project could result in implementation of optional streetscape improvements, such as extended and mid-block bulb-outs; center or side medians; pedestrian refuge islands; boulevard treatments; reuse of 'pork chops' and excess right-of-way; and creation of pocket parks, shared public ways and multi-use paths. These streetscape improvements would include seating, landscaping and/or other pedestrian-friendly amenities. Provision of these streetscape improvements would increase the amount of open space and recreational areas citywide which would, in turn, likely result in more people congregating and using these spaces. Increase in streetscape-related open space and recreational areas citywide could therefore result in

incrementally increasing the exposure of people sensitive to the effects of wind, as a result of project implementation. Since implementation of these optional streetscape improvements would occur on a case-by-case basis as conditions permit, these streetscape improvements would not be implemented in City areas where it could demonstrably expose substantial numbers of people to adverse wind conditions. The Proposed Project would therefore have less-than-significant wind impacts.

b) Shadow. Section 295 of the *Planning Code* was adopted in response to Proposition K (passed in November 1984), in order to protect certain public open spaces from additional shadowing by new structures in all zoning districts. The Proposed Project would not result in the construction of substantial (tall and/or bulky) above-ground structures which could cast shadows, and would not be subject to Section 295. The Proposed Project could result in implementation of optional streetscape improvements, such as extended and mid-block bulb-outs; center or side medians; pedestrian refuge islands; boulevard treatments; reuse of 'pork chops' and excess right-of-way; and creation of pocket parks, shared public ways and multi-use paths. These streetscape improvements would include seating, landscaping and/or other pedestrian-friendly amenities. Provision of these streetscape improvements would increase the amount of open space and recreational areas citywide which would, in turn, result in more people congregating and using these spaces. Some of the new streetscape-related open space and recreational areas citywide would likely be shadowed by existing and future proposed development, which would incrementally increase the exposure of people using these spaces to shadow effects. Because implementation of these optional streetscape improvements would occur on a case-by-case basis as conditions permit, these streetscape improvements would not be implemented in City areas where it could demonstrably expose substantial numbers of people to adverse shadow effects. Therefore, the Proposed Project would have less-than-significant shadow impacts.

Cumulative Effects. As discussed above, the Proposed Project would not involve substantial above-ground construction. Implementation of the optional streetscape improvements under the Proposed Project could increase the amount of open space and recreational areas citywide, which could incrementally increase the exposure of people using these spaces to adverse wind and shadow effects. However, since implementation of these optional streetscape improvements would occur on a case-by-case basis as conditions permit, these streetscape improvements would not be implemented in City areas where it could demonstrably expose substantial numbers of people to adverse wind and shadow effects. Overall, the Proposed Project would not have any significant cumulative wind or shadow impacts; nor would it contribute to cumulatively considerable wind or shadow impacts.

In view of the above, the Proposed Project would have no cumulative or project-related impacts for cultural resources.

E.9 Recreation

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
9. RECREATION—Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☐	☐	☒	☐	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐	☐
c) Physically degrade existing recreational resources?	☐	☐	☒	☐	☐

a-c)

Use of Recreational Facilities and Resources. The Proposed Project is a plan ('Better Streets Plan') for improving San Francisco's pedestrian environment in the future. The Plan would involve the adoption of a set of citywide streetscape/pedestrian policies and guidelines, as well as recommended standard and optional streetscape improvements to help realize the Plan's central vision (discussed below). As stated in Project Description, pp. **1-34** above, the Better Streets Policy establishes that City streets are meant to serve more than just transportation needs; they are also meant to serve various social, recreational, and ecological needs of the City. Accordingly, the central vision of the Proposed Project is to prioritize the needs of walking, bicycling, transit use, and the use of streets as public recreational spaces for social interaction and community life, following San Francisco's Better Streets Policy. The Better Streets Policy requires that City agencies coordinate their activities throughout San Francisco, so that streets serve a variety of roles, including social and recreational purposes. The objectives of the project sponsors related to the topic of 'Recreation' include providing opportunities for diverse experiences and encouraging users to engage in social and recreational activities. Some of the Better Streets Plan policies and design guidelines, as well as future streetscape improvements are intended to confer these recreation-related benefits to City streets users engaged in pedestrian activity.

The following Plan-proposed policies are relevant to the topic of 'Recreation' (see pp. **8-11** above): Policy 5.1, which is related to creating opportunities for provision of active recreational spaces on streets, such as paths or pocket parks; and Policy 5.2, which is related to implementing streetscape improvements that help create linkages to parks, recreation centers, and other social community uses. Some Plan-proposed optional streetscape improvements, such as creation of pocket parks, are also relevant to the topic of 'Recreation' (see pp. **29**). The Better Streets Plan recommends that pocket parks be placed in sidewalk or median areas to function as recreational areas, where space constraints allow. This improvement could involve widening of sidewalks or construction of new medians in the roadway. Pocket parks would be appropriate on most street types on a case-by-case basis as conditions permit.

As described under Checklist Item 3, Population and Housing, pp. **56-57** above, the proposed streetscape improvements would not induce population growth. However, the Proposed Project may result in the increased use of existing parks and other recreational facilities due to the increased accessibility of these facilities by pedestrians along the City's existing street network. The increase in use of existing parks and recreational facilities would be throughout the City and not concentrated on a particular facility. Therefore, increased access and use would not be expected to result in the substantial physical deterioration of existing parks and recreational facilities.

In addition, the project would likely result in an increase in recreational facilities throughout the City, because it promotes the reuse of 'pork chops' and excess right-of-way and creation of pocket parks in sidewalk or median areas of the public right-of-way. These streetscape improvements would include seating, landscaping and/or other recreational amenities. Provision of these streetscape improvements would increase the amount of open space and recreational areas citywide Overall, the Proposed Project would have less-than-significant impacts related to the use of recreational facilities and resources.

Construction/Degradation of Recreational Facilities and Resources. The Proposed Project would not physically degrade existing recreational resources. The Proposed Project may result in the construction of recreational facilities, in the form of pocket parks and pedestrian paths in the public right-of-way. These Plan-proposed streetscape improvements would be built so as to avoid any significant adverse impacts on specific park resources or to public areas. As previously discussed in Checklist item 2: Aesthetics, pp. **46-55** above, tree removal and/or relocation may be required for development of the Proposed Project's streetscape improvements. Tree removal on RPD land would follow RPD's Tree Removal Procedures.[105] Trees that are on property maintained by the Port or the PUC would be subject to approval by those City agencies. Any tree removal on land under the jurisdiction of the National Park Service or the State of California would be subject to the regulations and procedures of that agency. Additionally, future site-specific streetscape projects or proposed developments (that includes streetscape improvements) under the BSP would likely add new trees and plantings in the public right-of-way. Therefore, the Proposed Project would result in less-than-significant impacts with respect to the construction or degradation of recreational facilities and resources.

Cumulative Effects. The Proposed Project would have a dispersed, citywide effect on recreational facilities that would not have cumulatively considerable impacts on any one specific location.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for recreation.

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[105] RPD has jurisdiction over parks and has their own regulations. Parks are not included in the scope of the BSP.

E.11 Utilities and Service Systems

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
11. UTILITIES AND SERVICE SYSTEMS— Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐	☐
d) Have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements?	☐	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒	☐

a-g)

The project area encompasses the public right-of-way within the City's street system. The Proposed Project would occur in an urban area that is served by existing utilities and service systems, including solid waste collection and disposal, wastewater and storm water collection and treatment, and water facilities. The Proposed Project provides for implementation of standard and optional streetscape improvements for existing sidewalks, crosswalks, and roadways located within the public right-of-way in San Francisco.

Potential changes to curbs in some areas of the City would affect how drainage occurs and necessitate re-grading and re-crowning of City streets. Additional concrete and paving required for curbs, medians, chicanes, traffic calming circles and roundabouts etc., could result in increased stormwater runoff. However, long-term operational benefits may be realized by increasing permeable surfaces. The use of permeable pavements as called for in the BSP could reduce stormwater treatment and potential impacts of runoff would be partially or wholly off-set by curb cuts, medians, chicanes, traffic calming circles and roundabouts being vegetated. The Proposed Project overall would not be expected to affect the citywide demand for utilities and service systems.

Water, Wastewater, and Stormwater. No new water delivery or wastewater collection and treatment facilities would be required to serve the Proposed Project. In addition, the Proposed Project would not result in an expanded demand for water supply citywide, because the project does not involve development of any new land uses. The area of the Proposed Project's impact is within the public right-of-way, located within the City's street system. As discussed above, under the Proposed Project's streetscape improvements implementation program, stormwater drainage patterns in some places may change due to the reconfiguration of features in the right-of-way, such as curb cuts, medians, chicanes, traffic calming circles and roundabouts, and stormwater amenities (paving, planters, swales, channels and runnels, and trenches). [106] Stormwater would however continue to flow to the City's combined storm water and sewer system. It would be treated to standards contained in the City's National Pollutant Discharge Elimination System (NPDES) Permit, prior to discharge into the Pacific Ocean. Changes in drainage resulting from the Proposed Project would not require expansion of wastewater treatment facilities or an extension of a sewer trunk line. Therefore, the Proposed Project would not result in significant adverse impacts related to water or wastewater. In addition, the Proposed Project would result in less-than-significant adverse impacts related to stormwater.

Solid Waste. Solid waste associated with the Proposed Project would be solely related to construction of Plan-proposed streetscape improvements; there would be no solid waste associated with operation of the Proposed Project. San Francisco's solid waste, following the sorting of recyclable materials at the Norcal transfer station near Candlestick Park, is disposed of at the Altamont Landfill in Alameda County and is required to meet federal, state and local solid waste regulations. With waste diversion and expansions that have occurred at the Altamont Landfill, the landfill has adequate capacity to accommodate San Francisco's solid waste. The solid waste associated with the Proposed Project's construction would be minimal, and therefore, would not substantially affect the projected life of the landfill. Thus, less-than-significant impacts related to solid waste would occur as a result of the Proposed Project.

Cumulative Effects. Because project-related construction activities would be temporary and intermittent, the Proposed Project's contribution to cumulative impacts on utilities and service systems would not be cumulatively considerable. There are no project-specific or cumulative impacts associated with project operations.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for utilities and service systems.

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[106] Stormwater facilities augment the capacity of the water treatment system by detaining water before releasing it into the system. Their purpose is to reduce sewer overflows.

E.12 Public Services

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
12. PUBLIC SERVICES— Would the project:					
a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other services?	☐	☐	☒	☐	☐

a)

Public Services. The project area encompasses the public right-of-way within the City's street system. The Proposed Project would occur in an urban area that is served by existing public services including fire protection, police protection, schools, and parks. Because the Proposed Project would not induce growth or result in construction of new buildings, it would not result in an increase in demand for fire protection, police service, schools or parks. Because the Proposed Project would not increase demand of public services, no new facilities would be required. Therefore, project impacts related to public services would be less than significant.

Cumulative Effects. The Proposed Project would not induce growth and thus would not contribute to a citywide cumulative demand for public services. Each public service provider must plan to accommodate growth within its service area under cumulative conditions. The Proposed Project would not exceed growth projections for the area, and as such, would be accommodated in the cumulative demand for public services.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for public services.

E.13 Biological Resources

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
13. BIOLOGICAL RESOURCES— Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒	☐

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☐	☒

a-f)

Biological Resources. The Plan would involve the adoption of a set of citywide pedestrian policies and guidelines to help improve San Francisco's pedestrian environment in the future. It would provide guidance for the implementation of standard and optional or case-by-case streetscape improvements citywide. The Plan presents potential streetscape improvements to existing sidewalks, crosswalks, medians, and roadways located within the public right-of-way in San Francisco. The Proposed Project could lead to future physical changes within the public right-of-way, which consists primarily of paved surfaces, but also includes trees and landscaping located along the streets and in the medians. The project area (entire City and County of San Francisco) is a densely developed urban area and, in general, does not support or provide habitat for rare or endangered species. The project sponsors would also provide guidance for future site-specific pedestrian/streetscape improvements projects within the public right-of-way to avoid significant adverse effects on designated natural resource management areas and other biological resources.

Any future pedestrian/streetscape improvements projects constructed on land owned by the Port or the PUC would be subject to City review by those agencies and would be required to comply with state and federal wildlife regulations. Any tree removal on land under the jurisdiction of the National Park Service, the State of California, Caltrans or the San Francisco Redevelopment Agency would be subject to the regulations and procedures of that agency. All

City and non-City agencies would be required to comply with state and federal wildlife regulations. There would be no project-related significant impacts on biological resources.

As discussed above in Project Description, pp. **1-35**, and under Checklist Item 2, Aesthetics, pp. **44-56**, Plan-envisioned streetscape/pedestrian improvements include planting of street trees and sidewalk greenery. Certain Plan-proposed policies are relevant to the topic of street trees; for instance, Policy 10.1, which is related to maximizing opportunities for street trees and other plantings. The Proposed Project also provides a framework for locating street trees, and landscaping within a public right-of-way, and street trees and landscaping are generally recommended to be located in the "Furnishings Zone" of City sidewalks. The Proposed Project also provides direction regarding appropriate placement of street trees along the length of a block. Some Plan-proposed standard streetscape improvements are also relevant to the topic of street trees and include (i) encouraging street trees on all proposed street types; and (ii) providing tree basin furnishings (tree grates, tree guards, and railings) on more heavily-traveled street types.

The Proposed Project could potentially result in the removal, relocation, and/or replacement of trees (primarily street trees) in the public right-of-way. Therefore, the Proposed Project could affect migratory nesting birds. Nests of most birds (excludes only starlings and English sparrows) are protected under the federal Migratory Bird Treaty Act of 1918 (MBTA) and California Department of Fish and Game (DFG) Codes 3503 and 3513. The DFG regulations protect nesting birds, their nests, and eggs prior to, during, and at the conclusion of construction activities. The exact location and number of trees affected by development resulting from the Proposed Project are unknown at this time. Mitigation Measure **BIO-1,** described below, addresses how to comply with DFG regulations and avoid potential adverse impacts related to nesting birds for future pedestrian/streetscape improvements projects where trees would be removed. Mitigation Measure BIO-1 would mitigate potential impacts to these biological resources to less-than-significant levels.

Mitigation Measure BIO-1: Biological Resources-Nesting Birds

To implement California Fish and Game Code Section 3503, the Project Sponsor would conduct a field survey 14 to 21 days prior to construction activities that would result in vegetation removal during the breeding season (February 1 through August 31).[107] A qualified biologist shall
determine if active nests of native birds are present in the construction zone. In the event an active nest is discovered in areas to be disturbed, removal of the nesting substrate shall be postponed until the nest is vacated and juveniles have fledged (typically 3-4 weeks for most small passerines), as determined by the biologist, and there is no evidence of second nesting attempts, unless the California Department of Fish and Game (and the U.S. Fish and Wildlife Service for migratory birds) authorize otherwise. No surveys are required and no impact would occur if vegetation removal, grading or other heavy construction activities would occur

[107] MEA standard language developed in consultation with the California Department of Fish and Game.

between September 1 to January 31, outside the nesting season.

Tree Preservation. As described under Checklist Item 2, Aesthetics, **pp. 46-56**, removal of protected trees within the DPW right-of-way or significant trees within ten feet of the right-of-way requires a permit from DPW. Also, all such trees are subject to certain maintenance and protection standards.[108] Protected trees include landmark trees, significant trees, or street trees located on private or public property within San Francisco as defined and described in the City's Urban Forestry Ordinance in the *Public Works Code*. Descriptions of these trees also are provided under Checklist Item 2, p. **52**.

The Proposed Project may result in the future removal, relocation and/or replacement of significant or street trees. Accordingly, the project sponsors would be required to obtain a permit from the DPW.[109] In addition, the *Public Works Code* requires that another significant or street tree be planted in place of a removed tree or that an in-lieu planting fee be paid. The project sponsors would comply with these requirements. Therefore, impacts related to significant or street tree removal would be less than significant.

As stated in Topic E-2, Aesthetics, pp. **53**, implementation of Mitigation **Measure M-AE-1: Tree Root Protection**, presented below and in Section E-2-Aesthetics, pp.53, would reduce the impacts of the BSP to street trees to less-than-significant levels. Mitigation Measure M-AE-1 would require that if trimming of roots greater than two inches in diameter is necessary during construction of the project, a qualified arborist would be on site to ensure that trimming does not cause an adverse impact to the trees. Therefore, impacts related to significant tree or street tree removal would be less than significant.

Mitigation Measure M-AE-1: Tree Root Protection
If trimming of roots greater than two inches in diameter is necessary during construction of the project, a qualified arborist would be on site during construction to ensure that trimming does not cause an adverse impact to the trees. Pruning would be done using a Vermeer root pruning machine[110] (or equivalent) to sever the uppermost 12 inches of the soil profile. Roots would be pruned approximately 12 to 20 linear inches back (toward tree trunks) from the face of the proposed excavation.

The project site is not within a Habitat or Natural Community Conservation Plan area. Nor is it within any approved habitat conservation plan. Therefore, Checklist item ~~12(f)~~ 13(f) is not applicable.

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[108] Board of Supervisors, Ordinance No. 17-06, amending *Public Works Code* Sections 801 et seq.

[109] As part of the review process for an application for street or significant tree removal, a DPW inspector would evaluate the trees proposed for removal. If DPW approves the tree to be removed, it will be posted for a period of up to 30 days. If objections to the removal are received, the removal will be scheduled for public hearing. If DPW denies the removal, the applicant can request the case be scheduled for a public hearing. After the hearing, a hearing officer will make a recommendation to the DPW Director, who in turn will issue a final decision. The DPW Director's decision may be appealed to the Board of Appeals.

[110] Motorized digging equipment produced by Vermeer or other brand name.

Cumulative Effects. The geographic scope of potential cumulative impacts for biological resources encompasses the City of San Francisco. The Plan Area is urban, and highly developed, so impacts on biological resources are focused on street trees along the Plan Area roadways. There would be no impacts to sensitive species, riparian habitat or natural communities, wetlands, habitat, or Natural Community Conservation Plans, because none exist in the Plan Area.

Although activities associated with all of the reasonably foreseeable cumulative projects in the Plan Area could affect nesting birds, the potential effects would be mitigated by implementation of **Mitigation Measure M-BIO-1: Nesting Birds. M-BIO-1** would require that biological surveys and timing of tree removal be performed in accordance with the California Department of Fish and Game (CDFG) regulations. These would ensure that effects on migratory bird species would not be cumulatively considerable.

If the Proposed Project would result in a loss of street trees, the removal of street trees would be regulated by permits from the DPW and would include relocation or replacement at some other location. Also, in the event trimming of tree roots greater than two inches in diameter is necessary during project excavation, **Mitigation Measure M-AE-1: Tree Root Protection** would require that a qualified arborist would be on site during excavation to ensure that trimming does not cause a significant adverse impact to trees. The Proposed Project would not contribute considerably to cumulative impacts on street trees and nesting birds. Moreover, in time, projects such as the BSP and Mission District Streetscape Plan would incrementally increase the number of street trees in the Plan Area, which would provide more nesting locations for birds. For the reasons discussed above, the Proposed Project would not result in a significant cumulative impact on biological resources.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for biological resources.

E.14 Geology and Soils

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
14. GEOLOGY AND SOILS— Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	☐
iv) Landslides?	☐	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☐
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☐	☒
f) Change substantially the topography or any unique geologic or physical features of the site?	☐	☐	☐	☒	☐

a-f)

Seismic Hazards. The Bay Area is one of the most seismically-active regions in the United States. Each year, low- and moderate-magnitude earthquakes occurring in or near the Bay Area are felt by residents of the City. The *General Plan* Community Safety Element and other local resources contain maps of areas of the City subject to geologic hazards. The project area is not within an Alquist-Priolo Earthquake Fault Zone. However, the project area would be subject to groundshaking from earthquakes along faults in the Bay Area, including the San Andreas and Northern Hayward faults. Because the Proposed Project is in a seismically active region, there is a potential for seismic-related ground failure in the project area. Portions of the project area may be subject to seismic-related liquefaction or landslides.[111] Although the potential for seismic groundshaking and ground failure to occur within the project area is unavoidable, no structures would be constructed which could expose people to new seismic-related hazards. Therefore, project-related impacts related to seismic hazards would be less than significant.

Soil Stability. Streetscape improvement-related activities under the Proposed Project could involve minor excavation, grading, and paving for the reconfiguration of the public right-of-way in certain places. The project area is mostly paved, with the exception of areas with

[111] State of California Division of Mines and Geology, *Seismic Hazard Zone Map* for San Francisco; *San Francisco General Plan*, Community Safety Element, Maps 4 and 5, 1995; and ABAG Liquefaction Hazard Maps, 2003.

street trees located along the streets/sidewalks and in the medians. Even with future site-specific implementation of Plan-proposed standard and optional streetscape improvements (for e.g. street trees and sidewalk planting, sidewalk and median pocket parks, and stormwater control amenities including permeable paving, bioretention facilities, swales, infiltration and soakage trenches, and infiltration boardwalks) that are designed to reduce impervious surfaces in the public right-of-way, the project area would continue to remain mostly paved. Thus, project implementation would not result in substantial soil erosion or loss of topsoil and this impact would be less than significant. A grading permit would not be required for construction activities related to the Proposed Project, per *San Francisco Building Code* Section 3306 which exempts "Grading necessary for and incidental to and in connection with the construction of any parks, public streets or roadways, or the construction of sewers, or utilities under or within the boundaries of such roadways or streets when such work is under the direct supervision of the Recreation and Park Department (RPD), Department of Public Works (DPW), the Public Utilities Commission (PUC), or other governmental agencies." Although project-related construction activities would not require a grading permit, the Plan-proposed streetscape improvements would be either constructed by (or construction would be either directed by or permitted by) DPW, MTA or RPD. Thus, they would comply with DPW or other applicable requirements from the department with jurisdiction over the project area subject to Plan-proposed streetscape improvements.

The *San Francisco General Plan* Community Safety Element contains maps that show areas of the City subject to geologic hazards. No portion of the City is in an Alquist-Priolo Special Studies Zone, and no known active faults exist on or in the immediate vicinity of the project area.[112] The project area is located in an area subject to ground shaking from earthquakes along the San Andreas and Northern Hayward Faults and other faults in the San Francisco Bay Area. Ground shaking and damage level maps of the area indicate that the project area is located in an area subject to "very strong" to "violent" shaking and "moderate" damage due to ground shaking from an earthquake along the San Andreas Fault and "strong" shaking and "nonstructural" damage along the Northern Hayward Fault.[113] The project area is located in an area of liquefaction potential, as shown in a Seismic Hazards Study Zone (SHSZ) designated by the California Division of Mines and Geology, but is not located in an area of potential landslide hazard. For any development proposal in an area of liquefaction potential, the Department of Public Works (DPW), in its review of the building permit application, requires the project sponsor to prepare a geotechnical report pursuant to the State Seismic Hazards Mapping Act. A preliminary permit would not be required for construction activities related to the Proposed Project per *San Francisco Building Code* Section 3306 as explained above. Although project-related construction activities would not require a grading permit, the Plan-proposed

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[112] California State Department of Conservation, Division of Mines and Geology (CDMG), *Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of May 1, 1998*, [http://www.consrv.ca.gov], November 16, 1998, and CDMG, *Fault Rupture Hazard Zones in California*, Alquist Priolo Earthquake Zoning Act, Special Publication 42, Revised 1997.

[113] San Francisco General Plan, Community Safety Element, Maps 2 and 3, 1995; and Association of Bay Area Governments (ABAG) Earthquake Shaking Intensity Maps, 2003. Available for viewing at www.abag.ca.gov.

streetscape improvements would be either constructed by (or construction would be either directed by or permitted by) DPW, MTA or RPD. Thus, they would comply with DPW or other applicable requirements from the department with jurisdiction over the area subject to improvement. Overall, because the Proposed Project would not result in substantial construction of above or below-ground structures or substantially alter the topography of the project area, project-related impacts related to soil stability would be less than significant.

Wastewater Disposal. Wastewater disposal would not be required for the Proposed Project. Therefore, Checklist Item 13(e) is not applicable.

Unique Geologic or Physical Features. Future implementation of Plan-proposed optional streetscape improvements would occur within the public right-of-way. There are no unique geologic or physical features within the public right-of-way. Therefore, segments of the Proposed Project in the public right-of-way would not impact unique geologic or physical features. Therefore, there would be no impacts with respect to unique geologic or physical features.

Cumulative Effects. The Proposed Project would not have a significant impact on geology or soil resources, nor would the Proposed Project contribute to any potential cumulatively considerable effects on geology or soils.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for Geology and Soils.

E.15 Hydrology and Water Quality

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
15. **HYDROLOGY AND WATER QUALITY— Would the project:**					
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion of siltation on- or off-site?	☐	☐	☒	☐	☐

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐	☐
e)	Create or contribute runoff water which would exceed the capacity of existing or planned storm-water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐	☐
f)	Otherwise substantially degrade water quality?	☐	☐	☒	☐	☐
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	☐	☐	☐	☐	☒
h)	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☐	☒
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒	☐
j)	Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐	☐

a-j)

Water Quality and Runoff. The Proposed Project would involve the adoption of a set of citywide pedestrian policies and guidelines to help improve San Francisco's pedestrian environment in the future. According to the project sponsors, if fully realized, the Proposed Project is anticipated to confer multiple benefits to San Francisco, including reduction of sewer/stormwater overflows into the Bay. The Proposed Project would provide guidance for the implementation of standard and optional or case-by-case streetscape improvements citywide. The Proposed Project also categorizes streets into different typologies for the purposes of streetscape design, and these street types are intended to direct decisions about pedestrian realm and streetscape design. For instance, for each proposed street type, the Proposed Project lists standard improvements and optional or case-by-case improvements that could be applicable to that particular street type. As discussed above in Project Description, pp. **1-35**, some of the major project concepts of Plan-envisioned streetscape improvements include improving the ecological performance of streets and greening of the streetscape with incorporation of (i) on-site stormwater management techniques to reduce combined sewer overflows; (ii) the use of resource-efficient elements and materials; (iii) design of streets as green corridors and habitat connectors; and (iv) urban forest maintenance. Certain Plan-proposed policies are relevant to the topic of stormwater management; for instance, Policy 8.1 p. 11, which is related to maximizing opportunities for on-site stormwater retention and infiltration within streetscapes.

Some Plan-proposed standard streetscape improvements are also relevant to the topic of Hydrology and Water Quality (see pp. **18-30**). These standard streetscape improvements are related to incorporation of stormwater management tools into streetscape design. The stormwater management tools include permeable paving; bioretention facilities; swales; channels and runnels; infiltration and soakage trenches; and infiltration boardwalks; all of these tools would encompass a range of strategies to detain, retain, infiltrate and/or convey stormwater, reduce flooding, and overall improve water quality. The Better Streets Plan provides a framework for appropriate location of the Plan-proposed stormwater techniques/tools by particular street types (see Table 3: Appropriate Stormwater Facilities by Street Type on p. **22.**) Several other Plan-proposed standard and optional or case-by-case streetscape improvements are also recommended to be combined with stormwater techniques/tools so as to further contribute to ecological benefits. These include street trees and sidewalk plantings; sidewalk and median pocket parks; sidewalk and parking lane planters; special paving; extended and mid-block bulb-outs; chicanes; traffic calming circles; flexible use of parking lane; reuse of 'pork chops' and excess right-of-way; boulevard treatments; and shared public ways.

The Proposed Project is anticipated to be implemented within the existing public right-of-way, which consists primarily of paved surfaces. The project could potentially lead to future physical changes within the public right-of-way. The Proposed Project would not change the amount of impervious surface area or alter the drainage pattern for the affected streets substantially. Elements of the Proposed Project would involve minor excavation, grading, and repaving in the future. Even with future implementation of Plan-proposed standard and optional streetscape improvements (for e.g., street trees and sidewalk planting, sidewalk and median pocket parks, and stormwater control amenities including permeable paving, bioretention facilities; swales, infiltration and soakage trenches, and infiltration boardwalks) that are designed to reduce impervious surfaces in the public right-of-way, the Proposed Project would mostly replace paved surfaces with paved surfaces, and the project area would continue to remain substantially paved. In the case of removed trees, some public right-of-way areas that are currently not paved might be paved over and rendered impervious, adding to stormwater runoff. These effects would be limited to small areas and generally balanced by the replacement of trees in alternative street areas of the public right-of-way, and would thus not be expected to significantly change project area runoff patterns.

The Proposed Project would not measurably affect related levels of stormwater runoff or groundwater recharge; nor increase the demand for stormwater treatment or stormwater capacity needs substantially. Because the Proposed Project would not result in substantial construction of above or below-ground structures, stormwater flow during and after project-related construction would be similar to existing conditions. Stormwater would continue to flow to the City's combined storm-sewer system and would be treated to standards contained in the City's National Pollutant Discharge Elimination System (NPDES) Permit prior to discharge. The Proposed Project would not generate or result in a discharge that would have the potential to degrade water quality, contaminate a public water supply, or violate water or

wastewater discharge requirements. Project impacts related to water quality and run-off would therefore be less than significant.

Construction. It is anticipated that Plan-proposed streetscape improvements would be included in future site-specific street improvement projects in San Francisco. Construction of these streetscape improvements would involve minor excavation and grading. These activities could cause erosion and transportation of soil particles that, once in surface water runoff, could cause sediment and other pollutants to leave the construction area. Because the Proposed Project would not result in substantial construction of above or below-ground structures, the amount of sediment and pollutants would be minimal, and would result in less-than-significant impacts to water quality. Furthermore, any stormwater runoff from the Proposed Project's construction would be directed to the City's combined storm-sewer system and would be treated to standards contained in the City's NPDES Permit for the Southeast Water Pollution Control Plant prior to discharge. Therefore, project impacts to water quality resulting from project construction would be less than significant.

Groundwater. No groundwater would be used by the Proposed Project; therefore, there would be no impacts regarding depletion of groundwater resources. No significant groundwater recharge occurs along the Proposed Project alignment, most of which is paved. Because the Proposed Project would not result in substantial construction of above or below-ground structures, post-construction conditions would be generally the same. Regarding groundwater quality, refer to the water quality discussion above, and Checklist Item 16, pp. **144** below, concerning hazardous materials.

Flood and Other Hazards.[114] The City of San Francisco does not participate in the National Flood Insurance Program (NFIP) and no final flood maps are published for the City. The Federal Emergency Management Agency (FEMA) released a preliminary Flood Insurance Rate Map (FIRM) for the City and County of San Francisco on September 21, 2007. The preliminary map is for review and comment only. FEMA anticipates that a revised preliminary map will be published in sometime in 2009 or 2010.[115] Once the City has reviewed the revised preliminary map, FEMA will publish a final FIRM, which will be used for floodplain management and flood insurance purposes. Based on the preliminary map, portions of the City's existing public right-of-way (including pedestrian areas) and some of the proposed streetscape improvements would be located within a coastal flood hazard zone.[116] The Proposed Project would involve the implementation of future site-specific streetscape improvements within the public right-of-way; however, it would not include the construction of any housing or other structures. Therefore, no

[114] *San Francisco General Plan* Community Safety Element, Maps 6 and 7.

[115] City and County of San Francisco, Office of the City Administrator, National Flood Insurance Program Flood Sheet, http://www.sfgov.org/site/uploadedfiles/risk_management/factsheet.pdf, accessed December 8, 2008.

[116] Federal Emergency Management Agency, Preliminary Flood Insurance Rate Map, City and County of San Francisco, California, Panels 92A, 94A, 110A, 111A, 112A, 120A, 130A, 140A, 210A, 235A, and 255A, September 21, 2007, available on the Internet at http://www.sfgov.org/site/risk_management_ index.asp?id=69690, accessed December 8, 2008.

impacts related to placement of housing or other structures in a 100-year flood zone would occur.

As stated above, portions of the project area are located in areas identified for potential flooding, including inundation, resulting from reservoir damage following an earthquake. However, the Proposed Project would involve the implementation of streetscape improvements within the public right-of-way, and it would not include the construction of any housing or other structures. Thus, it would not expose people or structures to a significant risk of loss, injury or death involving flooding. Therefore, no impact would occur.

A tsunami is an advancing ocean wave originating from an earthquake epicenter. In San Francisco, the potential for damage due to direct wave action resulting from a tsunami would be expected to be limited to the coastline along the Pacific Ocean, including Ocean Beach between the Golden Gate Bridge and Fort Funston. Because the advancing ocean wave would be restricted at the Golden Gate, damage due to direct wave action along the San Francisco Bay shoreline is not considered likely. However, the Bay shoreline between the Palace of Fine Arts and the Central Basin could be subjected to a seiche, or oscillation of the Bay water surface, as a result of a tsunami reaching the Golden Gate and damage could occur in inundated areas. Portions of the project area are located in City areas identified for potential inundation in the event of a tsunami along the San Francisco coast, based on a 20-foot water level rise at the Golden Gate (Map 6 of the Community Safety Element of the San Francisco General Plan). Although extremely rare, a tsunami could cause damage to potentially affected areas. However, the Proposed Project would not substantially change or worsen this existing condition and there is a well-established warning system in place that would provide early notification of an advancing tsunami. This system would allow for evacuation of people from potentially affected areas. In addition, it is unlikely that the project area would be subject to mudflow. Therefore, impacts related to tsunami, seiche, and mudflow are considered less than significant.

Cumulative Effects. The Proposed Project would result in temporary site-specific effects on water quality and runoff during project-related construction and would not contribute considerably to cumulative impacts in these areas. The Proposed Project would not contribute considerably to cumulative hydrology impacts, as it would have less-than-significant impacts related to hydrology.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for Hydrology and Water Quality.

E.15 Hazards and Hazardous Materials

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
15.	**HAZARDS AND HAZARDOUS MATERIALS Would the project:**					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐	☐
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☐	☒
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	☐
h)	Expose people or structures to a significant risk of loss, injury or death involving fires?	☐	☐	☒	☐	☐

a-h)

Hazardous Materials. The Proposed Project could involve handling or disposal of hazardous materials that might be encountered during project-related construction (related to construction of Plan-proposed streetscape improvements in the future), but would not be expected to generate hazardous emissions or hazardous materials once constructed.

There are portions of the project area (certain public right-of-ways in the City) that may contain hazardous materials. The general area south and southeast of Market Street is known to contain fill materials from the 1906 Earthquake and Fire, and such fill may contain elevated concentrations of metal and petroleum hydrocarbons. Furthermore, the areas along the eastern and northeastern edges of the City may also contain fill materials from the 1906 Earthquake and Fire. The City has adopted the Maher Ordinance,[117] which requires analyzing soil for hazardous

[117] San Francisco Board of Supervisors, 1986. Ordinance 253-86, signed by the Mayor on June 27, 1986.

wastes within specified areas and on sites specifically designated by the Director of Public Works when over 50 cubic yards of soil is to be disturbed. The Maher Ordinance specifically includes sites, some of which are located within the project area, which are bayward of the high tide line as shown on maps available from the Department of Public Health (DPH) and referred to as Maher Sites.[118]

Where hazardous wastes are found to be in excess of state or federal standards, future project sponsors of affected site-specific street improvement projects in the City would be required to submit a site mitigation plan (SMP) to the appropriate state or federal agency(ies), and to implement an approved SMP, prior to issuance of any permit. Where toxics are found for which no standards are established, future project sponsors of affected site-specific street improvement projects would need to request a determination from state and federal agencies as to whether an SMP is needed.

Some of the Plan-proposed streetscape improvements would likely require minimal groundbreaking and the amount of soil excavation is not expected to be substantial. There however remains some potential for soil excavation to occur in Maher-designated areas, and soil with hazardous concentrations of metals or petroleum hydrocarbons could be encountered. Therefore, project-related construction activities have the potential to create a potentially significant hazardous materials impact in the future related to excavation and transport exposure to contaminated soil during the construction phase of future Plan-proposed streetscape improvements. Future project sponsors of affected site-specific street improvement projects would be required to adhere to existing local, state, and federal requirements regarding handling and disposal of soil and groundwater containing chemical contaminants. The implementation of Mitigation Measure **HAZ-1** below, would further reduce potentially significant impacts associated with hazardous materials to less-than-significant levels.

Mitigation Measure HAZ-1: Hazardous Materials

Step 1: Determination of Presence of Contaminated Soils

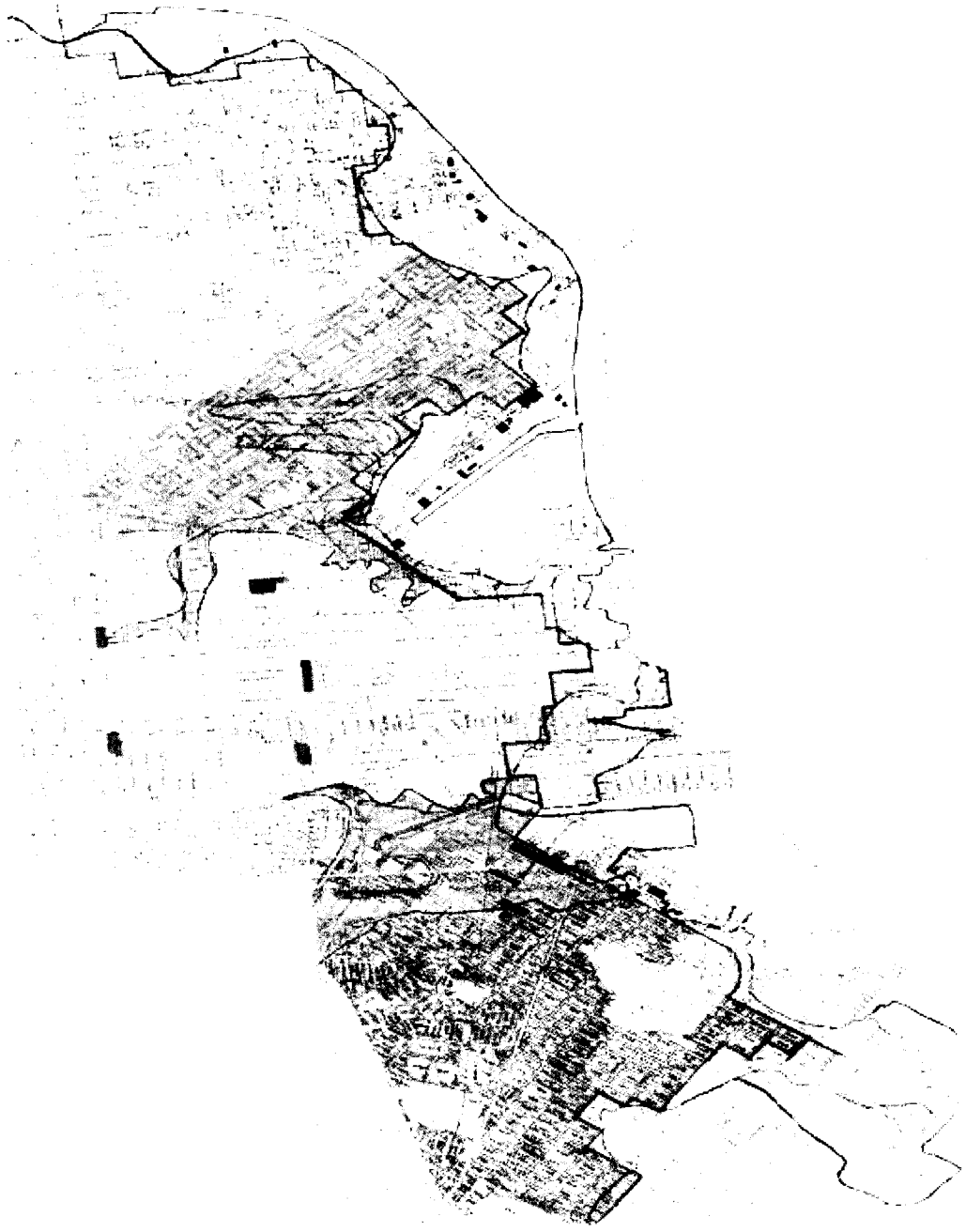
The project site is located in an area of the city known to contain fill material form the 1906 Earthquake and Fire, and such fill may contain elevated concentrations of metal and petroleum hydrocarbons. Therefore, prior to approval of a building permit for the Proposed Project, the project sponsor shall hire a consultant to collect soil samples (borings) from areas on the site in which soil would be disturbed and test the soil samples for total lead and petroleum hydrocarbons. The consultant shall analyze the soil borings as discrete, not composite samples. The consultant shall prepare a report on the soil testing for lead that includes the results of the soil testing and a map that shows the locations of stockpiled soils from which the consultant collected the soil samples.

[118] San Francisco Department of Public Health, Environmental Health Hazardous Waste Program, Maher Sites Map. Available online at http://www.sfdph.org/dph/comupg/oprograms/EHS/ HazWaste/MaherSiteMap.asp. Accessed December 8, 2008.

FIGURE - 9

Source: San Francisco Department of Public Health
Environmental Health
Hazardous Waste

Maher Site Map



http://www.sfdph.org/dph/EH/HazWaste/MaherSiteMap.asp

Legend:
Yellow and pink are designated Maher areas.
Green is areas of known fill.
Blue is for serpentine rock (asbestos).

The project sponsor shall submit the report on the soil testing for lead and a fee of $425 in the form of a check payable to the San Francisco Department of Public Health (SFDPH), to the Hazardous Waste Program, Department of Public Health, 101 Grove Street, Room 214, San Francisco, California 94102. The fee of $425 shall cover five hours of soil testing report review and administrative handling. If additional review is necessary, DPH shall bill the project sponsor for each additional hour of review over the first five hours, at a rate of $85 per hour. These fees shall be charged pursuant to Section 31.47(c) of the San Francisco Administrative Code. DPH shall review the soil testing report to determine to whether soils on the project site are contaminated with lead at or above potentially hazardous levels.

If DPH determines that the soils on the project site are not contaminated with lead at or above a potentially hazardous level (i.e., below 50 ppm total lead), no further mitigation measures with regard to lead-contaminated soils on the site would be necessary.

Step 2: Preparation of Site Mitigation Plan:

If based on the results of the soil tests conducted, DPH determines that the soils on the project site are contaminated with lead at or above potentially hazardous levels, the DPH shall determine if preparation of a Site Mitigation Plan (SMP) is warranted. If such a plan is requested by the DPH, the SMP shall include a discussion of the level of lead contamination of soils on the project site and mitigation measures for managing contaminated soils on the site, including, but not limited to: (1) the alternatives for managing contaminated soils on the site (e.g., encapsulation, partial or complete removal, treatment, recycling for reuse, or a combination); (2) the preferred alternative for managing contaminated soils on the site and a brief justification; and (3) the specific practices to be used to handle, haul, and dispose of contaminated soils on the site. The SMP shall be submitted to the DPH for review and approval. A copy of the SMP shall be submitted to the Planning Department to become part of the case file.

Step 3: Handling, Hauling, and Disposal of Lead-Contaminated Soils

(a) specific work practices: If based on the results of the soil tests conducted, DPH determines that the soils on the project site are contaminated with lead at or above potentially hazardous levels, the construction contractor shall be alert for the presence of such soils during excavation and other construction activities on the site (detected through soil odor, color, and texture and results of on-site soil testing), and shall be prepared to handle, profile (i.e., characterize), and dispose of such soils appropriately (i.e., as dictated by local, state, and federal regulations, including OSHA lead-safe work practices) when such soils are encountered on the site.

(b) dust suppression: Soils exposed during excavation for site preparation and project construction activities shall be kept moist throughout the time they are exposed, both during and after work hours.

(c) surface water runoff control: Where soils are stockpiled, visqueen shall be used to create an impermeable liner, both beneath and on top of the soils, with a berm to contain any potential surface water runoff from the soil stockpiles during inclement weather.

(d) soils replacement: If necessary, clean fill or other suitable material(s) shall be used to bring portions of the project site, where lead-contaminated soils have been excavated and removed, up to construction grade.

(e) hauling and disposal: Contaminated soils shall be hauled off the project site by waste hauling trucks appropriately certified with the State of California and adequately covered to prevent dispersion of the soils during transit, and shall be disposed of at a permitted hazardous waste disposal facility registered with the State of California.

Step 4: Preparation of Closure/Certification Report

After excavation and foundation construction activities are completed, the project sponsor shall prepare and submit a closure/certification report to DPH for review and approval. The closure/certification report shall include the mitigation measures in the SMP for handling and removing lead-contaminated soils from the project site, whether the construction contractor modified any of these mitigation measures, and how and why the construction contractor modified those mitigation measures.

Pursuant to *San Francisco Public Works Code Article 2.4 Excavation in the Public Right-of-Way, Section 2.4.53 Regulations Concerning Excavation Sites (d) Hazardous Material*, "Each owner and its agent shall be subject to hazardous material guidelines for date collection; disposal, handling, release, and treatment of hazardous material; site remediation; and worker safety and training. DPW, in consultation with DPH, shall develop, prescribe, and update such hazardous material guidelines. The guidelines shall require the owner and its agent to comply with all federal, state and local laws regarding hazardous material. For purposes of this subsection, "hazardous materials" shall mean any gas, material, substance, or waste which, because of its quantity, concentration, or physical or chemical characteristics, is deemed by any federal, state, or local governmental authority to pose a present or potential hazard to human health or safety or to the environment."

Future project sponsors of affected site-specific street improvement projects would be required to consult with DPH prior to excavation and grading and undertake all requirements imposed by DPH. DPH may require that, prior to groundbreaking, these project sponsors conduct soil surveys to identify potentially hazardous materials, and prepare a site safety and health plan, as needed. In addition to measures that protect on-site workers, the site safety and health plan would be required to include measures to minimize public exposure to contaminated soils. Such measures could include dust control, appropriate site security, restriction of public access, and posting of warning signs. Such measures would apply from the time of surface disruption through the completion of earthwork construction.

Soil levels in excess of applicable federal, state, or local limits for petroleum hydrocarbon or lead concentrations would be disposed of off-site in accordance with California hazardous waste disposal regulations (CCR Title 26) or managed in place with approval of the California Department of Toxic Substances Control or the Regional Water Quality Control Board. Future project sponsors of affected site-specific street improvement projects would be required to

follow the applicable rules with respect to disposal of contaminated soils. Therefore, construction of Plan-proposed streetscape improvements would not pose direct or indirect public health hazards to their surrounding neighborhoods, and the Proposed Project impacts and cumulative impacts related to this topic would be less than significant.

Although sections of City streets undergoing future Plan-proposed streetscape improvements could potentially be within a quarter-mile of schools, compliance of future project sponsors of affected site-specific street improvement projects with existing regulations in *Public Works Code Article 2.4* would ensure that project-related hazardous materials impacts to schools would remain less than significant. In the event a site-specific project is located on or near a site listed in the California Department of Toxic Substances Control Hazardous Waste and Substances Sites List, as described above, compliance with existing regulations would ensure that impacts remained less than significant.

Airport Hazards. The Proposed Project is not located within two miles of a public-use airport, or in an area covered by an airport land use plan, or within the vicinity of a private airstrip. Therefore, Checklist Items 15 (e) and 15(f) are not applicable to the Proposed Project.

Emergency Response. The Proposed Project calls for streetscape improvements within the City's public right-of-way. Compliance with the *Public Works Code* and the *Fire Code* would ensure that neither project-related construction activities nor the reconfiguration of City streets would affect existing emergency response or evacuation plans. Therefore, there would be less-than-significant impacts with respect to emergency response or evacuation plans.

Fire Hazards. The Proposed Project would not result in demolition or construction of substantial above or below-ground structures; nor would the Proposed Project alter the current exposure of people or structures to potential hazards involving fires. Accordingly, there would be less-than-significant impacts with respect to fire hazards.

Cumulative Effects. As described above, project-related potential impacts with respect to hazards and hazardous materials would be less than significant. Procedures in effect through DPW, the Fire Department and DPH would ensure that any potential impacts would be reduced to less-than-significant levels. Therefore, the Proposed Project would have less-than-significant impacts related to hazardous material conditions in the City; nor would the project contribute to any cumulative impacts with respect to hazards and hazardous materials.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for Hazards and Hazardous Materials.

E.16 Mineral and Energy Resources

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
16. MINERAL AND ENERGY RESOURCES—Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☐	☒
c) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	☐	☐	☒	☐	☐

Mineral Resources. All land in San Francisco, including the project area, is designated Mineral Resource Zone 4 (MRZ-4) by the California Division of Mines and Geology (CDMG) under the Surface Mining and Reclamation Act of 1975 (CDMG, Open File Report 96-03 and Special Report 146 Parts I and II). This designation indicates that there is adequate information available for assignment to any other MRZ and thus the project area in not a designated area of significant mineral deposits. There are no operational mineral resource recovery sites in the Proposed Project area whose operations or accessibility would be affected by project-related construction or operation. As no known mineral deposits exist within the project area, there would be no impacts with respect to mineral resources.

Energy Use. As discussed above in Project Description, pp. **1-35**, one the major project concepts related to Plan-envisioned streetscape improvements include implementation of universal pedestrian-oriented streetscape design incorporating energy-efficient street lighting and efficient utility location where appropriate. Certain Plan-proposed policies are relevant to the topic of energy; for instance, Policy 8.2, which is related to using sustainable materials in streetscape designs, taking into account the life-cycle energy costs of such materials; and Policy 8.2, which is related to minimizing energy use in street lighting and other energy-requiring streetscape elements. Per Policy 10.5, adequate light levels and quality should be ensured for pedestrians, and light trespass and glare to adjacent uses should be minimized. The topic of energy efficiency is also discussed under Checklist Item 7: Air Quality, p. **114**.

As discussed under Checklist Item 2: Aesthetics, pp. **45-56**, the Proposed Project includes streetscape improvements related to street lighting, which would likely result in the reconfiguration and upgrading of City street lighting in the future. However, it is not anticipated that the Proposed Project would result in the development of "new" streets or new sources of street lighting. While the Proposed Project would potentially result in physical changes to the City's public right-of-way (including changes related to the reconfiguration and upgrading of street lighting), overall there would be no substantial change to amount of the street lighting that currently exists. The Proposed Project calls for adequate light levels and quality of street lighting to ensure pedestrian safety, while minimizing light trespass and glare to adjacent uses. Street lighting would also be expected to be consistent with light produced by

existing land uses and the existing street lighting in the neighborhood. The Proposed Project would not be expected to result in the use of large amounts of energy, and consequently, would not be considered wasteful. Overall, the Proposed Project would have less-than-significant impacts related to energy use.

Cumulative Mineral and Energy Resources. The Proposed Project would not impact mineral resources, directly or indirectly, and therefore would not contribute to cumulative mineral resource impacts. The Proposed Project would have less-than-significant impacts related to energy use, and therefore, would not contribute to cumulative energy resource impacts.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for Mineral and Energy Resources.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
18. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **—Would the project**					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)) or timberland (as defined by Public Resources Code Section 4526)?	☐	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use?	☐	☐	☐	☐	☒

Agricultural and Forest Resources. All land in San Francisco, including the project area, is urban area, and therefore not agricultural in nature. The California Department of Conservation's Farmland Mapping and Monitoring Program identify the Plan Area as "Urban

and Built-up Land". Because the project area does not include agricultural uses and is not zoned for such uses, the proposed project would not convert any Prime Farmland, Unique Farmland, Farmland of Statewide Importance to non-agricultural use. Similarly, because the project area does not include forest uses and is not zoned for such uses, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. The Proposed Project would not conflict with existing zoning for agricultural uses or a Williamson Act contract. The Proposed Project also would not conflict with existing zoning for forest land or timberland or result in the rezoning of forest land or timberland. The Proposed Project also would not involve other changes in the existing environment, which could result in conversion of farmland to non-agricultural use or forest land to non-forest use. No impacts to farmlands of forest lands would occur.

Cumulative Impacts

All land in San Francisco, including the project area, is urban area and impacts related to agricultural and forest use of areas within the Proposed Project's vicinity are not applicable. The proposed project would have no impact on agricultural and forest resources, nor would other proposed cumulative projects in the vicinity. Therefore, the project would not contribute to cumulative impacts on agricultural and forest resources.

In view of the above, the Proposed Project would have less-than-significant cumulative or project-related impacts for agricultural and forest resources.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
19. MANDATORY FINDINGS OF SIGNIFICANCE— Would the project:					
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐	☐
b) Have impacts that would be individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐	☐

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐	☐

a. Environmental Quality. As described above, the Proposed Project would have less than significant impacts on the environmental topics discussed. The Proposed Project, however, could have potentially significant impacts to aesthetics, cultural, transportation and circulation, biological, and hazards and hazardous materials resources, which would be mitigated to less than significant levels through implementation of **Mitigation Measures M-AE-1: Tree Root Protection, pp.53; M-CUL-1: Archeological Resources: Accidental Discovery, pp. 67; M-CUL-2: Archeological Monitoring: Hispanic Period, pp.74; M-TR- 1: Provision of New Loading Space, pp. 78-79 ~~120~~; M-AQ-1: Dust Control Plans, p.120; M-BIO-1: Nesting Birds, pp. 151 ~~160~~;** and **M-HZ-1: Hazards and Hazardous Materials, pp. 161 – 164 ~~170~~,** prescribed above in the individual topic areas and described in detail in Section F below. Implementation of these mitigation measures would reduce the potential environmental impacts of the Proposed Project to less-than-significant levels to aesthetics, cultural, transportation and circulation, biological, and hazards and hazardous materials resources. As such, the Proposed Project would not have the potential to degrade the quality of the environment or have project-level impacts that would cause substantial adverse effects on human beings.

18b. Cumulative Impacts. The geographic context for cumulative impacts is the entire City of San Francisco. The CEQA Guidelines define cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or increase in environmental impacts. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." (Guidelines, Section 15355(a)(b)).

Cumulative Impacts

This Initial Study for the BSP determined that the topics of Mineral and Energy Resources and Agriculture Resources are not applicable to the BSP; therefore, the Proposed Project would not contribute to cumulative impacts related to these environmental topics.

The Proposed Project would have less than significant impacts on Land Use and Land Use Planning, Population and Housing, Noise, Green House Gases, Wind and Shadow, Recreation, Utilities and Service Systems, Public Services, Geology and Soils, and Hydrology and Water Quality; therefore, the Proposed Project would not contribute to cumulative impacts related to these environmental topics.

The Proposed Project would have less-than-significant impacts on the environment with the implementation of mitigation measures for the topics of Aesthetics, Cultural and Paleontological Resources, Transportation and Circulation, Air Quality, Biological Resources, and Hazards and Hazardous Materials. It is also determined that the BSP would not contribute to cumulative impacts related to these topics. Cumulative impacts for these topics are analyzed in each individual Check List topic in the body of this Initial Study and summarized below:

Cumulative Effects to Aesthetics. The Proposed Project would not contribute to any substantial degradation of the existing visual character along the Plan Area, because the City of San Francisco is an already developed urban area. The Proposed Project would not involve the construction of substantial above-ground structures within the public right-of-way. Implementation of the Proposed Project could result in the implementation of streetscape improvements in the public right-of-way that would likely require changes to sidewalks, crosswalks and roadways. These proposed changes would follow the City policies and ordinances applicable to any proposed project within the City boundaries, and therefore would not contribute to a cumulative impact to visual resources in the Plan Area.

Any removal of Landmark Trees or street trees required by the Proposed Project would be subject to compliance with the *Public Works Code* and DPW regulation. Any new signage required by the Proposed Project would comply with the *Planning Code* and thus would not contribute to any cumulative visual impacts beyond those already anticipated by the *Planning Code*. For these reasons and those discussed in Section E-2 Aesthetics, **pp.46**, the Proposed Project's impacts, individually or in combination with other projects, related to aesthetics would not be cumulatively considerable.

Cumulative Cultural and Paleontological Impacts. Archeological resources are non-renewable members of a finite class. All adverse effects to archeological resources erode a dwindling cultural/scientific resource base. Federal and state laws protect archeological resources in most cases either through project redesign or requiring that the scientific data present within an archeological resource is archeologically recovered. Even so, it is not always feasible to protect these resources, particularly when preservation in place would frustrate implementation of project objectives. Implementation of Archeological **Mitigation Measure M-CUL-1** and Archeological **Mitigation Measure M-CUL-2** will ensure the any potential Project effect to an archeological resource would not contribute to a cumulative considerable adverse effect to archeological resources.

Cumulative Transportation and Circulation Impacts

The BSP would involve the adoption of a set of citywide streetscape and pedestrian policies and design guidelines. The proposed 12 standard streetscape improvements and 26 optional or case-by-case streetscape improvements would result in relatively minor changes to the overall vehicular circulation patterns in San Francisco and would not be expected to worsen traffic or transit conditions. Therefore, the cumulative traffic, transit and emergency access impacts of the BSP streetscape improvements would be less than significant. With respect to pedestrian

impacts, one of the goals of the BSP is to improve the pedestrian environment. As such, pedestrian cumulative impacts would also be less than significant. None of proposed streetscape improvements would result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility. Therefore, cumulative bicycle impacts would be less than significant. Overall the implementation of the streetscape improvements set forth in the BSP would not be expected to result in cumulative transportation impacts.

Cumulative Air Quality Impacts. The BSP could result in an increase in construction related air pollutants because the BSP calls for design elements that may incrementally increase construction duration or the amount of excavation required for individual streetscape projects. However, these design treatments are not anticipated to result in a substantial amount of air pollutants that would otherwise be emitted by streetscape improvement projects. Furthermore, the construction emissions associated with individual projects would be evaluated under CEQA, as future site-specific improvement projects are developed.

Implementation of the BSP would not result in any new automobile trips being added to the roadway network. A goal of the BSP is to create a pedestrian-friendly streetscape environment. Pedestrian activity has no associated emissions and the Proposed Project can reasonably be expected to reduce emissions citywide by shifting a portion of motor vehicle trips to pedestrian trips, therefore the Proposed Project would not contribute to a cumulative air quality impact, or result in a cumulative affect to sensitive receptors. The Proposed Project would also not generate any new sources of odors. Therefore, the Proposed Project would result in a ***less than significant*** impact with respect to cumulative air quality.

Cumulative Biological Resource Impacts. Although activities resulting from the implementation of Plan-proposed guidelines in the Plan Area could affect nesting birds, the potential effects would be mitigated by implementation of **Mitigation Measure M-BIO-1: Nesting Birds. M-BIO-1** would require that biological surveys and timing of tree removal be performed in accordance with the CDFG regulations. These would ensure that effects on migratory bird species would not be cumulatively considerable. Additionally, the Proposed Project would not result in a loss of street trees; removal of street trees would be regulated by permits from the DPW and would include relocation or replacement at some other location. Therefore, the Proposed Project would not result in a significant cumulative impact on biological resources.

Cumulative Hazards and Hazardous Materials Impacts. Potential impacts with respect to hazards and hazardous materials would be limited to the construction phase of projects resulting from the implementation of the Plan-proposed guidelines, and therefore would not

accumulate overtime. Also, procedures in effect through the DPW, the Fire Department and the DPH would ensure that any potential impacts would be kept at less than significant levels. Therefore, the Proposed Project would not contribute to cumulative considerable significant effects related to hazards and hazardous materials.

c. Potential Effects on Human Beings. Construction activities associated with the project have the potential to result in impacts on aesthetics, cultural resources, biology, and hazards and hazardous materials. However, with implementation of **Mitigation Measures M-AE-1: Tree Root Protection, pp.53; M-CUL-1: Archeological Resources: Accidental Discovery, pp. 67; M-CUL-2: Archeological Monitoring: Hispanic Period, pp.74; M-TR- 1: Provision of New Loading Space, pp. 78-79 ~~120~~; M-AQ-1: Dust Control Plans, p.120; M-BIO-1: Nesting Birds, pp. 151 ~~160~~; and M-HZ-1: Hazards and Hazardous Materials, pp. 161 – 164 ~~170~~,** prescribed above in the individual topic areas and described in detail in Section F below, all potentially significant project-related impacts would be less than significant.

F. MITIGATION MEASURES & IMPROVEMENT MEASURES

The following mitigation measures have been adopted by the Project Sponsor and are necessary to avoid potential significant effects of the Proposed Project.

There are no improvement measures associated with this project.

AESTHETICS

Mitigation Measure M-AE-1: Tree Root Protection

If trimming of roots greater than two inches in diameter is necessary during construction of the project, a qualified arborist would be on site during construction to ensure that trimming does not cause an adverse impact to the trees. Pruning would be done using a Vermeer root pruning machine[119] (or equivalent) to sever the uppermost 12 inches of the soil profile. Roots would be pruned approximately 12 to 20 linear inches back (toward tree trunks) from the face of the proposed excavation.

CULTURAL AND PALEONTOLOGICAL RESOURCES

Mitigation Measure Cul-1 (Archeological Resources - Accidental Discovery):

The following archeological mitigation measure shall apply to any soils disturbing activities resulting from the Proposed Project excepting soils disturbing activities below a depth of two (2) feet below grade surface (bgs) within the Hispanic Period Archeological District.

The following mitigation measure is required to avoid any potential adverse effect from the proposed project on accidentally discovered buried or submerged historical resources as defined in *CEQA Guidelines* Section 15064.5(a)(c). The project sponsor shall distribute the Planning Department archeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc. firms); or utilities firm involved in soils disturbing activities within the project site. Prior to any soils

[119] Motorized digging equipment produced by Vermeer or other brand name.

disturbing activities being undertaken each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel including, machine operators, field crew, pile drivers, supervisory personnel, etc. The project sponsor shall provide the Environmental Review Officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) to the ERO confirming that all field personnel have received copies of the Alert Sheet.

Should any indication of an archeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or project sponsor shall immediately notify the ERO and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.

If the ERO determines that an archeological resource may be present within the project site, the project sponsor shall retain the services of a qualified archeological consultant. The archeological consultant shall advise the ERO as to whether the discovery is an archeological resource, retains sufficient integrity, and is of potential scientific/historical/cultural significance. If an archeological resource is present, the archeological consultant shall identify and evaluate the archeological resource. The archeological consultant shall make a recommendation as to what action, if any, is warranted. Based on this information, the ERO may require, if warranted, specific additional measures to be implemented by the project sponsor.

Measures might include: preservation in situ of the archeological resource; an archaeological monitoring program; or an archeological testing program. If an archeological monitoring program or archeological testing program is required, it shall be consistent with the Major Environmental Analysis (MEA) division guidelines for such programs. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions.

Human Remains, Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal Laws, including immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, curation, possession, and final disposition of the human remains and associated or unassociated funerary objects.

The project archeological consultant shall submit a Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describing the archeological and historical research methods employed in the archeological

monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.

Mitigation Measure CUL-2 (Archeological Monitoring: Hispanic Period Archeological District)

The following archeological mitigation measure shall apply to any soils disturbing activities below a depth of two (2) feet below grade surface (bgs) resulting from the Proposed Project within the Hispanic Period Archeological District.

Based on the reasonable potential that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological monitoring program. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

Archeological monitoring program (AMP). The archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the project archeologist shall determine what project activities shall be archeologically monitored. In most cases, any soils disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the potential risk these activities pose to archaeological resources and to their depositional context;

- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archaeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with the archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction crews and heavy equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, present the findings of this assessment to the ERO.

If the ERO in consultation with the archeological consultant determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

C) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or

D) An archeological data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

If an archeological data recovery program is required by the ERO, the archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The project archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP. The archeological consultant shall prepare a draft ADRP that shall be submitted to the ERO for review and approval. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program.* Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report.* Description of proposed report format and distribution of results.
- *Curation.* Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains, Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal Laws, including immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, curation, possession, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the draft final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances

of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.

TRANSPORTATION AND CIRCULATION

Mitigation Measure TR-1 - Provision of New Loading Space:
The following mitigation measure shall apply to any removal of truck loading spaces, assuming that the need for the truck loading spaces is unchanged at the locations where these truck loading spaces would be removed.

To avoid any potential adverse effect from the Proposed Project on loading, the Project Sponsor shall install new loading spaces, of equal length, on the same block and side-of-the street at locations where truck loading spaces are removed. This would ensure that an equally convenient supply of on-street loading space is provided to compensate for any space that is removed.

AIR QUALITY

Mitigation Measure AQ -1 – Dust Control Plans:
To ensure that potential dust-related air quality impacts resulting from future streetscape improvement project prepared in accordance with the BSP would be reduced to a level of insignificance, Site-specific Dust Control Plans shall be prepared pursuant to the Dust Control Ordinance by SFMTA, DPW, City Contractors, and other sponsors of future site-specific projects proposed under the BSP. Future Project Sponsors implementing BS_-related site specific projects shall: (1) submit a map to the Director of Health showing all sensitive receptors within 1000 feet of the site; (2)wet down areas of soil at least three times per day; (3) provide an analysis of wind direction and install upwind and downwind particulate dust monitors; (4) record particulate monitoring results; hire an independent, third-party to conduct inspections and keep a record of those inspections; (5) establish shut-down conditions based on wind, soil migration, etc.; (6) establish a hotline for surrounding community members who may be potentially affected by project-related dust; (7) limit the area subject to construction activities at any one time; (8) install dust curtains and windbreaks on the property lines, as necessary; (8) limit the amount of soil in hauling trucks to the size of the truck bed and securing with a tarpaulin; (10) enforce a 15 mph speed limit for vehicles entering and exiting construction areas; (11) sweep affected streets with water sweepers at the end of the day;(12) install and utilize wheel washers to clean truck tires; (13) terminate construction activities when winds exceed 25 miles per hour; (14)apply soil stabilizers to inactive areas; and (15) to sweep off adjacent streets to reduce particulate emissions. The project sponsor would be required to designate an individual to monitor compliance with dust control requirements.

BIOLOGICAL RESOURCES

Mitigation Measure BIO-1: Biological Resources-Nesting Birds

To implement California Fish and Game Code Section 3503, the Project Sponsor would conduct a field survey 14 to 21 days prior to construction activities that would result in vegetation removal during the breeding season (February 1 through August 31). A qualified biologist shall determine if active nests of native birds are present in the construction zone. In the event an active nest is discovered in areas to be disturbed, removal of the nesting substrate shall be postponed until the nest is vacated and juveniles have fledged (typically 3-4 weeks for most small passerines), as determined by the biologist, and there is no evidence of second nesting attempts, unless the California Department of Fish and Game (and the U.S. Fish and Wildlife Service for migratory birds) authorize otherwise. No surveys are required and no impact would occur if vegetation removal, grading or other heavy construction activities would occur between September 1 to January 31, outside the nesting season.

HAZARDS AND HAZARDOUS MATERIALS

Mitigation Measure HAZ-1: Hazardous Materials

Step 1: Determination of Presence of Contaminated Soils

The project site is located in an area of the city known to contain fill material form the 1906 Earthquake and Fire, and such fill may contain elevated concentrations of metal and petroleum hydrocarbons. Therefore, prior to approval of a building permit for the Proposed Project, the project sponsor shall hire a consultant to collect soil samples (borings) from areas on the site in which soil would be disturbed and test the soil samples for total lead and petroleum hydrocarbons. The consultant shall analyze the soil borings as discrete, not composite samples. The consultant shall prepare a report on the soil testing for lead that includes the results of the soil testing and a map that shows the locations of stockpiled soils from which the consultant collected the soil samples.

The project sponsor shall submit the report on the soil testing for lead and a fee of $425 in the form of a check payable to the San Francisco Department of Public Health (SFDPH), to the Hazardous Waste Program, Department of Public Health, 101 Grove Street, Room 214, San Francisco, California 94102. The fee of $425 shall cover five hours of soil testing report review and administrative handling. If additional review is necessary, DPH shall bill the project sponsor for each additional hour of review over the first five hours, at a rate of $85 per hour. These fees shall be charged pursuant to Section 31.47(c) of the San Francisco Administrative Code. DPH shall review the soil testing report to determine to whether soils on the project site are contaminated with lead at or above potentially hazardous levels.

If DPH determines that the soils on the project site are not contaminated with lead at or above a potentially hazardous level (i.e., below 50 ppm total lead), no further mitigation measures with regard to lead-contaminated soils on the site would be necessary.

Step 2: Preparation of Site Mitigation Plan:

If based on the results of the soil tests conducted, DPH determines that the soils on the project site are contaminated with lead at or above potentially hazardous levels, the DPH shall determine if preparation of a Site Mitigation Plan (SMP) is warranted. If such a plan is requested by the DPH, the SMP shall include a discussion of the level of lead contamination of soils on the project site and mitigation measures for managing contaminated soils on the site, including, but not limited to: (1) the alternatives for managing contaminated soils on the site (e.g., encapsulation, partial or complete removal, treatment, recycling for reuse, or a combination); (2) the preferred alternative for managing contaminated soils on the site and a brief justification; and (3) the specific practices to be used to handle, haul, and dispose of contaminated soils on the site. The SMP shall be submitted to the DPH for review and approval. A copy of the SMP shall be submitted to the Planning Department to become part of the case file.

Step 3: Handling, Hauling, and Disposal of Lead-Contaminated Soils

(a) specific work practices: If based on the results of the soil tests conducted, DPH determines that the soils on the project site are contaminated with lead at or above potentially hazardous levels, the construction contractor shall be alert for the presence of such soils during excavation and other construction activities on the site (detected through soil odor, color, and texture and results of on-site soil testing), and shall be prepared to handle, profile (i.e., characterize), and dispose of such soils appropriately (i.e., as dictated by local, state, and federal regulations, including OSHA lead-safe work practices) when such soils are encountered on the site.

(b) dust suppression: Soils exposed during excavation for site preparation and project construction activities shall be kept moist throughout the time they are exposed, both during and after work hours.

(c) surface water runoff control: Where soils are stockpiled, visqueen shall be used to create an impermeable liner, both beneath and on top of the soils, with a berm to contain any potential surface water runoff from the soil stockpiles during inclement weather.

(d) soils replacement: If necessary, clean fill or other suitable material(s) shall be used to bring portions of the project site, where lead-contaminated soils have been excavated and removed, up to construction grade.

(e) hauling and disposal: Contaminated soils shall be hauled off the project site by waste hauling trucks appropriately certified with the State of California and adequately covered to prevent dispersion of the soils during transit, and shall be disposed of at a permitted hazardous waste disposal facility registered with the State of California.

Step 4: Preparation of Closure/Certification Report

After excavation and foundation construction activities are completed, the project sponsor shall prepare and submit a closure/certification report to DPH for review and approval. The closure/certification report shall include the mitigation measures in the SMP for handling and removing lead-contaminated soils from the project site, whether the construction contractor

modified any of these mitigation measures, and how and why the construction contractor modified those mitigation measures.

Pursuant to *San Francisco Public Works Code Article 2.4 Excavation in the Public Right-of-Way, Section 2.4.53 Regulations Concerning Excavation Sites (d) Hazardous Material*, "Each owner and its agent shall be subject to hazardous material guidelines for date collection; disposal, handling, release, and treatment of hazardous material; site remediation; and worker safety and training. DPW, in consultation with DPH, shall develop, prescribe, and update such hazardous material guidelines. The guidelines shall require the owner and its agent to comply with all federal, state and local laws regarding hazardous material. For purposes of this subsection, "hazardous materials" shall mean any gas, material, substance, or waste which, because of its quantity, concentration, or physical or chemical characteristics, is deemed by any federal, state, or local governmental authority to pose a present or potential hazard to human health or safety or to the environment."

Future project sponsors of affected site-specific street improvement projects would be required to consult with DPH prior to excavation and grading and undertake all requirements imposed by DPH. DPH may require that, prior to groundbreaking, these project sponsors conduct soil surveys to identify potentially hazardous materials, and prepare a site safety and health plan, as needed. In addition to measures that protect on-site workers, the site safety and health plan would be required to include measures to minimize public exposure to contaminated soils. Such measures could include dust control, appropriate site security, restriction of public access, and posting of warning signs. Such measures would apply from the time of surface disruption through the completion of earthwork construction.

Soil levels in excess of applicable federal, state, or local limits for petroleum hydrocarbon or lead concentrations would be disposed of off-site in accordance with California hazardous waste disposal regulations (CCR Title 26) or managed in place with approval of the California Department of Toxic Substances Control or the Regional Water Quality Control Board. Future project sponsors of affected site-specific street improvement projects would be required to follow the applicable rules with respect to disposal of contaminated soils. Therefore, construction of Plan-proposed streetscape improvements would not pose direct or indirect public health hazards to their surrounding neighborhoods, and the Proposed Project impacts and cumulative impacts related to this topic would be less than significant.

Although sections of City streets undergoing future Plan-proposed streetscape improvements could potentially be within a quarter-mile of schools, compliance of future project sponsors of affected site-specific street improvement projects with existing regulations in *Public Works Code Article 2.4* would ensure that project-related hazardous materials impacts to schools would remain less than significant. In the event a site-specific project is located on or near a site listed in the California Department of Toxic Substances Control Hazardous Waste and Substances Sites List.

H. DETERMINATION

On the basis of this initial study:

☐ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the Proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the Proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the Proposed Project, no further environmental documentation is required.

DATE: July 27, 2010

WILLIAM C. WYCKO
Environmental Review Officer
for
John Rahaim
Director of Planning

G. PUBLIC NOTICE AND COMMENT

A "Notification of Project Receiving Environmental Review" was sent out on October 21, 2008 to interested persons, neighborhood organizations and responsible agencies. Two members of the public responded to the Neighborhood Notice, with one of those requesting copies of future environmental review documents without comments at this time. The other member of the public expressed concern about the Proposed Project as it relates to: transportation and public safety; potential traffic congestion impacts of the project, potential impacts on parking with proposed removal of existing on-street parking lanes; appropriate methods for transportation and transit analysis in the environmental review process. These issues are discussed in the appropriate sections of this Initial Study (See Transportation Topics).

The Proposed Project would be generally consistent with applicable zoning controls. Comments that do not pertain to physical environmental issues and comments regarding the merits of the Proposed Project were not addressed and are more appropriately directed to the decision-makers. The decision to approve or disapprove a Proposed Project is independent of the environmental review process. While local concerns or other planning considerations may be grounds for modification or denial of the proposal, in the independent judgment of the Planning Department, there is no substantial evidence that the Proposed Project could have a significant effect on the environment.

H. INITIAL STUDY PREPARERS

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