

- **CHAPTER IX**

Appendices

APPENDIX A

Initial Study



PLANNING DEPARTMENT

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December 17, 2005

To Responsible Agencies, Trustee Agencies, and Interested Parties:

**RE: NOTICE OF AVAILABILITY OF THE INITIAL STUDY FOR THE EASTERN NEIGHBORHOODS
REZONING AND COMMUNITY PLANS
PLANNING DEPARTMENT CASE NO. 2004.0160E; STATE CLEARINGHOUSE NO. 2005032048**

This notice is to inform you of the availability of the Initial Study for the Eastern Neighborhoods Rezoning and Community Plans, described below. The Planning Department previously determined that this project could have a significant effect on the environment, and required that an Environmental Impact Report (EIR) be prepared. An Initial Study has now been prepared to provide more detailed information regarding the impacts of the proposed project and to identify the environmental issues to be considered in the Draft EIR. The Initial Study is either attached or is available upon request from **Lisa Gibson**, whom you may reach at **(415) 558-5993** or at the above address. The report may also be viewed on-line at www.sfgov.org/site/planning, starting the week of **December 19, 2005**. Referenced materials are available for review by appointment at the Planning Department's office at 30 Van Ness Avenue, Suite 4150. (Call 558-5990 to schedule an appointment.)

Project Description: The proposed project is revision of Planning Code (zoning) controls governing four of the City's Eastern Neighborhoods: the Central Waterfront, the Mission District, Showplace Square/Potrero Hill, and the eastern portion of the South of Market District ("Eastern SoMa"). The project would include amendments to the San Francisco General Plan, including the existing Central Waterfront and South of Market Area Plans, and preparation and adoption of new neighborhood or community plans for the Mission, Showplace Square/Potrero Hill, and Eastern SoMa. The plans would be intended to permit housing development in some areas currently zoned for industrial use while preserving an adequate supply of land for production, distribution and repair (PDR) (generally, light industrial) employment and businesses. The proposed rezoning would introduce new use districts, including several mixed-use districts designed to preserve PDR uses; other mixed-use districts where residential and commercial uses would be allowed; and new residential districts. The project would also include certain adjustments to height and bulk districts. Improvements to the streetscape, transportation system, and open space, as well as new urban design policies, may result from implementation of the new plans.

A Notice of Preparation of an EIR and Public Scoping Meetings was issued on March 9, 2005, and three scoping meeting were held. Based on the comments received, the Planning Department has determined that preparation of an Initial Study would be appropriate to "focus" the scope of the EIR. Preparation of an Initial Study or EIR does not indicate a decision by the City to approve or to disapprove the project.

Further comments concerning the scope of the EIR are welcomed, based on the content of the Initial Study. In order for your concerns to be considered fully, we would appreciate receiving them by January 31, 2006. Please send **written comments** to Paul Maltzer, San Francisco Planning Department, 1660 Mission Street, Suite 500, San Francisco, CA 94103.

If you work for an agency that is a Responsible or a Trustee Agency, we need to know the views of your agency as to the scope and content of the environmental information that is relevant to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR when considering a permit or other approval for this project. We will also need the name of the contact person for your agency.

If you have questions concerning environmental review of the proposed project, please contact **Lisa Gibson** at **(415) 558-5993**.

Eastern Neighborhoods Rezoning and Community Plans Initial Study

Planning Department Case No. 2004.0160E
State Clearinghouse No. 2005032048

I. Project Description

Overview

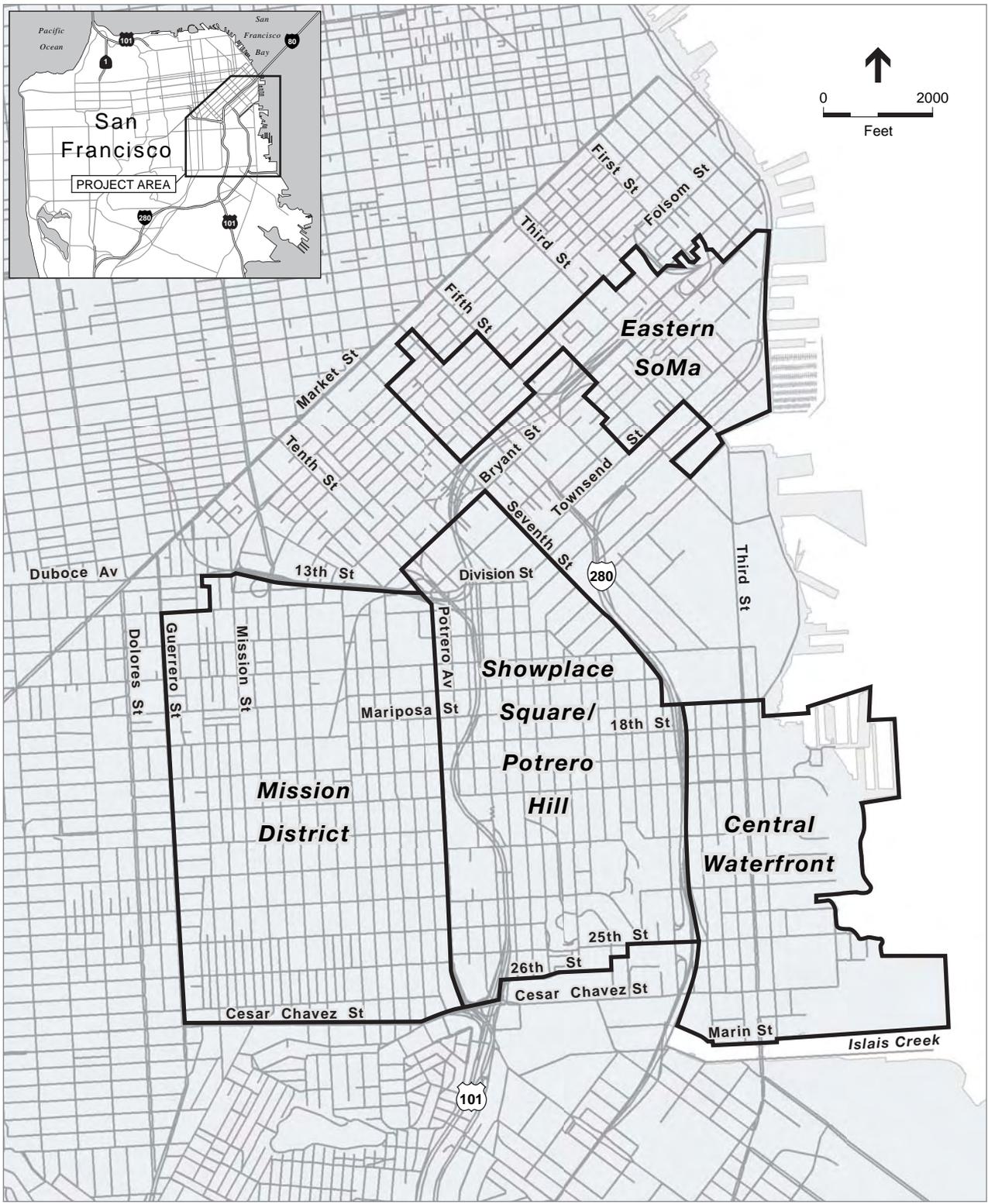
To encourage new housing while preserving sufficient lands for necessary production, distribution, and repair (PDR) (generally, light industrial) businesses and activities, the San Francisco Planning Department proposes changes in the Planning Code (zoning) controls, as well as amendments to the General Plan, for a 2,345-acre area on the eastern side of San Francisco. The proposal would cover all or part of three “Eastern Neighborhoods” included in the Department’s February 2003 draft Rezoning Options Workbook: Showplace Square/Potrero Hill, the Mission District, and the eastern portion of the South of Market (“Eastern SoMa”). It would also include the Central Waterfront, which was the subject of the draft Central Waterfront Neighborhood Plan, published in December 2002 as part of the Better Neighborhoods planning process, because the Central Waterfront is adjacent to the Eastern Neighborhoods planning area and shares similar land use issues. The project area, including the four sub-areas to be analyzed in the EIR, is shown in Figure 1. For the purposes of this Initial Study, these four sub-areas are referred to collectively as the “Eastern Neighborhoods.”

The project is intended to permit housing development in some areas currently zoned for industrial use while preserving an adequate supply of land for PDR employment and businesses. In addition to zoning changes, the project would include revisions to the existing Central Waterfront and South of Market Area Plans within the San Francisco General Plan and the preparation and adoption of new neighborhood or community plans for the Mission, Showplace Square/Potrero Hill, and Eastern SoMa. As well, there may be other changes to the General Plan to bring it in conformance with any proposed plans.

A key attribute of the proposed rezoning would be the introduction of new districts, including districts that would permit PDR uses, in combination with commercial uses, districts mixing residential and commercial uses and residential and PDR, and new residential-only districts. The districts would replace existing industrial, commercial, and residential single-use districts, except in Eastern SoMa, which has existing mixed-use districts.

Background

In response to the development boom of the late 1990s, which resulted in a variety of land use conflicts, the Planning Department conducted a citywide land use survey, proposed interim controls on industrially zoned lands, and initiated the Citywide Action Plan, a framework for balancing job growth, housing needs, and quality of life. The City initially imposed temporary zoning controls in response to these concerns and, in 2002, began a community planning process in the Eastern Neighborhoods to identify appropriate locations for housing and to determine the amount and location of industrial lands necessary for San Francisco’s continuing role as an economic hub and employment center of the region. In February 2003, the Planning Department published a draft document entitled *Community Planning in the Eastern*



SOURCE: Environmental Science Associates

Case No. 2004.0160E: Eastern Neighborhoods Rezoning and Community Plans (203091)

Figure 1
Project Location

Neighborhoods: Rezoning Options Workbook. The Rezoning Options Workbook included four neighborhoods that make up much of the City's eastern lands: Bayview-Hunters Point, Showplace Square/Potrero Hill, the Mission District, and the South of Market. A separate, accelerated planning process was also undertaken for the Visitacion Valley neighborhood, which was thus not included in the draft Rezoning Options Workbook.

Subsequent to publication of the draft Rezoning Options Workbook, the San Francisco Redevelopment Agency produced a draft Redevelopment Plan for the Bayview-Hunters Point project area, which is bounded generally by U.S. Highway 101, Cesar Chavez Street, Cargo Way, India Basin, Fitch Street and Earl Avenue, Candlestick Cove, and Jamestown Avenue.¹ A Draft EIR analyzing the effects of implementation of the Redevelopment Plan was published in September 2004. Accordingly, the Bayview-Hunters Point is not included in the area proposed for rezoning as part of the Eastern Neighborhoods Rezoning program, as zoning changes in that neighborhood are anticipated to be accomplished in the context of adoption and implementation of the Redevelopment Plan. Also following the release of the draft Rezoning Options Workbook, some residents of the western portion of the South of Market (Western SoMa) indicated to the Planning Department that they felt additional planning was needed prior to rezoning of their neighborhood. Accordingly, the plan area for the proposed Eastern Neighborhoods Rezoning excludes Western SoMa, which is generally bounded by Division, Thirteenth, Howard, Seventh, Harrison, Fourth, Townsend, Seventh, and Bryant Streets. The Planning Department is currently working to develop neighborhood plans for each of the three remaining Eastern Neighborhoods: Showplace Square/Potrero Hill, the Mission District, and Eastern SoMa.

At about the same time, in December 2002, the Planning Department published the draft Central Waterfront Neighborhood Plan as part of the Better Neighborhoods 2002 planning process. The Better Neighborhoods Program calls for building relatively higher-density housing in neighborhoods well-served by transit and other urban services; neighborhood stores that can satisfy basic needs without reliance on a car; and streets and public spaces that serve all members of the community and enliven neighborhoods. The draft Central Waterfront Neighborhood Plan aims to help determine what the neighborhood's role in the City should be—a new residential neighborhood, a place dedicated to economic activity, or a mixture of the two. Because many of the concerns that affect the Eastern Neighborhoods are also applicable to the Central Waterfront, and because of the Central Waterfront's proximity to the Eastern Neighborhoods study area, the Planning Department has determined that it will prepare a single EIR that will encompass planned rezoning and land use changes in both the remaining Eastern Neighborhoods and the Central Waterfront area. The Central Waterfront thus is considered one of the Eastern Neighborhoods for purposes of the EIR. The Eastern Neighborhoods Rezoning and Community Plans EIR will incorporate growth assumptions for the Bayview-Hunters Point neighborhood developed for the redevelopment EIR and for Western SoMa as they are known at the time the analysis is done.

¹ The Bayview-Hunters Point project area includes three existing redevelopment plan areas (Hunters Point, India Basin, and Bayview Industrial Triangle) and excludes most of the largely residential neighborhood on either side of Third Street between about Palou and Williams Avenues.

At present, the four Eastern Neighborhoods that will be the subject of the EIR (including the Central Waterfront Neighborhood Plan area) are governed by temporary zoning policies enacted by the Planning Commission and, in the case of Showplace Square, interim controls adopted by the Board of Supervisors. In general, the temporary controls follow the spirit of the proposed project, in that they recognize the need for new housing opportunities and a mix of housing types, while acknowledging that a balanced economy requires retaining sufficient land for PDR businesses that provide business services to the City, as well as relatively higher-wage employment. It is anticipated that Planning Department staff and the Planning Commission will continue working to refine the proposed rezoning and neighborhood plans during preparation of the EIR. The intent of the EIR authors is to cover a wide enough range of potential rezoning options to be able to provide CEQA review for the proposal that eventually emerges as the preferred option.

Project Components

Location

The project would include amendments to the Planning Code and Zoning Maps in four Eastern Neighborhoods:

- the **Central Waterfront**, bounded by Mariposa Street on the north, San Francisco Bay on the east, Islais Creek on the south, and Interstate Highway 280 on the west;
- the **Mission District**, bounded by 13th and Division Streets on the north, Potrero Avenue on the east, Cesar Chavez Street on the south, and Guerrero Street on the west;
- the **Showplace Square/Potrero Hill** districts, bounded by Bryant Street and 10th Street on the northwest, Seventh Street on the northeast, Interstate 280 on the east, 25th and 26th Street on the south, and Potrero Avenue on the west; and
- **Eastern SoMa** (the eastern portion of the South of Market district), bounded generally by Folsom Street on the northwest, the Rincon Hill Plan area (essentially, Second Street) on the east, Townsend Street on the south, and Fourth Street on the west, with an extension to the northwest bounded by Harrison, Seventh, Mission, Sixth (both sides), Natoma, Fifth, and Folsom Streets.

In conjunction with the proposed rezoning, the Planning Department is developing neighborhood plans for Eastern SoMa, the Mission, Showplace Square, and the Central Waterfront for inclusion in the General Plan. (Included would be revisions to the existing Central Waterfront and South of Market Area Plans.) These plans will go beyond zoning to address policy level-issues pertaining to transportation, urban design (including heights), and open space. While the role of PDR is a critical aspect of the Eastern Neighborhoods effort, the overall goal is to encourage the creation of cohesive neighborhoods. The plans will also propose public benefits and other implementation programs to address impacts identified by the EIR and related studies. Building on the community planning process to date, the Department will undertake a public process to develop these plans, along with the proposed zoning changes.

Existing zoning in the project area includes areas zoned for Light (M-1) and Heavy (M-2) Industrial uses, in the Central Waterfront, Northeast Mission, Showplace Square, and portions of Eastern SoMa. There are areas zoned for residential use at various densities in the Dogpatch enclave of the Central Waterfront, in the southeast portion and western edge of the Mission, on Potrero Hill, and in the mixed-use district around South Park in Eastern SoMa. Commercially zoned corridors exist along Third and 22nd Streets in the Central Waterfront; 18th and 20th Streets on Potrero Hill; Mission, Valencia, and 24th Street in the Mission; and in the mixed-use district around South Park. Eastern SoMa also contains areas zoned for secondary office space.

Only some of the project area is currently covered by area plans within the General Plan. The portions of the study area within existing area plans are Eastern SoMa, nearly all of which is encompassed within the South of Market Plan;² the Central Waterfront, which is entirely contained within the existing Central Waterfront Plan area; and the Showplace Square area, which is also within the Central Waterfront Plan area. No existing area plan covers Potrero Hill (south of 17th Street) or the Mission District.

Use Districts

For the Mission, Showplace Square, and Eastern SoMa, the Planning Department has developed three rezoning options, designated Options A, B, and C. (The draft Central Waterfront neighborhood proposes a single rezoning option, which is described separately below.) Options A, B, and C vary by the degree to which they would permit lands currently zoned for industrial uses to be converted to residential and mixed-use districts: Option A would permit the least amount of such conversion, while Option C would permit the greatest conversion. Under all three options, new single-use and mixed-use zoning districts would be introduced to the Planning Code. Existing Heavy Industrial (M-2) and Light Industrial (M-1) use districts would be eliminated, to be replaced, where PDR uses are to be permitted, with new mixed-use PDR use districts that would allow varying degrees of commercial (or, in one case, residential) uses along with PDR. Existing commercial districts would be replaced, where commercial activity would continue to be permitted, with new mixed-use residential/commercial districts or mixed-use PDR/commercial districts. Finally, existing residential districts would be replaced, generally with new single-use residential districts.

Single-use districts would include:

- **Residential-Transit Oriented** (moderate scale, with reduced parking requirement in recognition of transit proximity);
- **Residential Enclave** (small-scale residential, now applicable only to portions of the South of Market neighborhood);
- **Residential – Medium Density** (similar to existing RM-3); and
- **Residential – Low Density** (similar to RH-1 and RH-2).

² The southeastern edge of Eastern SoMa is within the Rincon Point-South Beach Redevelopment Plan area.

Several mixed-use districts would be designed to preserve or permit PDR uses; residential uses would not be allowed in any of these districts which would include:

- **Core PDR** (designed to encourage the building and conservation of a wide range of industrial buildings, including warehouses, showrooms, open storage facilities, and light manufacturing plants; this district would also allow small commercial activities [less than 5,000 sq. ft.] but would not permit heavy industry; light, medium, and core PDR uses would be permitted);³
- **PDR – Large Commercial** (would permit PDR but also provide an area that could accommodate large “big box” retailers in the City, which require good transportation access, including to freeways, and sufficient parking for customers who purchase large and heavy items; the draft Rezoning Options Workbook anticipates that, while PDR businesses would be permitted and encouraged in this district, many would be replaced by large retail users who are able to pay higher rents; light, medium, and core PDR uses would be permitted);
- **PDR – Medium Commercial** (would require a minimum of 2,000 sq. ft. [and permit up to 5,000 square feet] of accessory retail to PDR, which retail use must be at the street frontage to “improve the relationship between ... industrial buildings and the street”; large retail [greater than 5,000 sq. ft.] would not be permitted, unless accessory to PDR; light and medium PDR uses would be permitted; this would be the only PDR district to permit [as a Conditional Use] medical and educational institutions); and
- **Light PDR** (similar to PDR – Medium Commercial, except would permit, but not require, accessory retail with PDR; large retail [greater than 5,000 sq. ft.] would not be permitted, unless accessory to PDR; light and medium PDR uses would be permitted).

Another group of proposed mixed-use districts, all of which would permit residential uses, would include:

- **Neighborhood Commercial Transit** (would permit light PDR but intended for smaller retail uses, with retail up to 5,000 square feet permitted as of right and no parking required);
- **Neighborhood Commercial – Moderate** (retail up to 6,000 square feet permitted, parking generally not required, light PDR conditionally permitted);
- **Residential/Commercial** (intended for larger mixed-use projects than allowed elsewhere, this district would permit retail up to 15,000 square feet as of right, with larger uses by Conditional Use authorization; residential required when retail component is larger, light and medium PDR permitted); and
- **Residential – PDR** (to create opportunities for housing, while retaining and creating space for PDR businesses that can coexist with residential uses, this district would require new

³ The Rezoning Options Workbook identified potential additional controls for a portion of the Core PDR district in the Showplace Square area, permitting only design-related new PDR activities, in order to retain space for design-related activities such as showrooms, furniture design, furniture showrooms, and interior design activities.

developments to provide some space for light and medium PDR businesses, which would be encouraged on the ground floor; other small commercial uses would also be permitted).⁴

In the Central Waterfront, two new mixed-use districts are proposed:

- **Central Waterfront Mixed Use Residential** (a moderately scaled and moderately dense transit-oriented residential district intended to protect existing housing enclaves and encourage new housing and neighborhood commercial activities); and
- **PDR** (intended to protect existing and encourage new PDR activities, and thus would not allow housing [even as a Conditional Use], or office other than as an accessory use; retail would be permitted only as an accessory use).

In addition, the Central Waterfront would include a Heavy PDR zone (most Port lands), a Pier 70 Mixed Use District—designed to permit adaptive reuse of the old Union Iron Works buildings near 20th and Illinois Streets—and use districts for public lands and open space.

In October 2005, Planning Department staff indicated that it may be useful for the proposed rezoning to include two special use districts that would exist as overlays on top of the base zoning: a Design and Showroom Special Use District to encourage retention of a specialized set of buildings, jobs and uses associated with existing showroom and design uses in the general area of Showplace Square (similar to the “additional controls” described in footnotes 3 and 4); and, in an immediately adjacent area, an Arts and Technology Special Use District (generally bounded by Division, Seventh, Eighth, 16th, and Daggett Streets). These overlays would essentially combine features of more than one option and so, while not explicitly discussed herein, are covered within the range of the three options presented and analyzed.

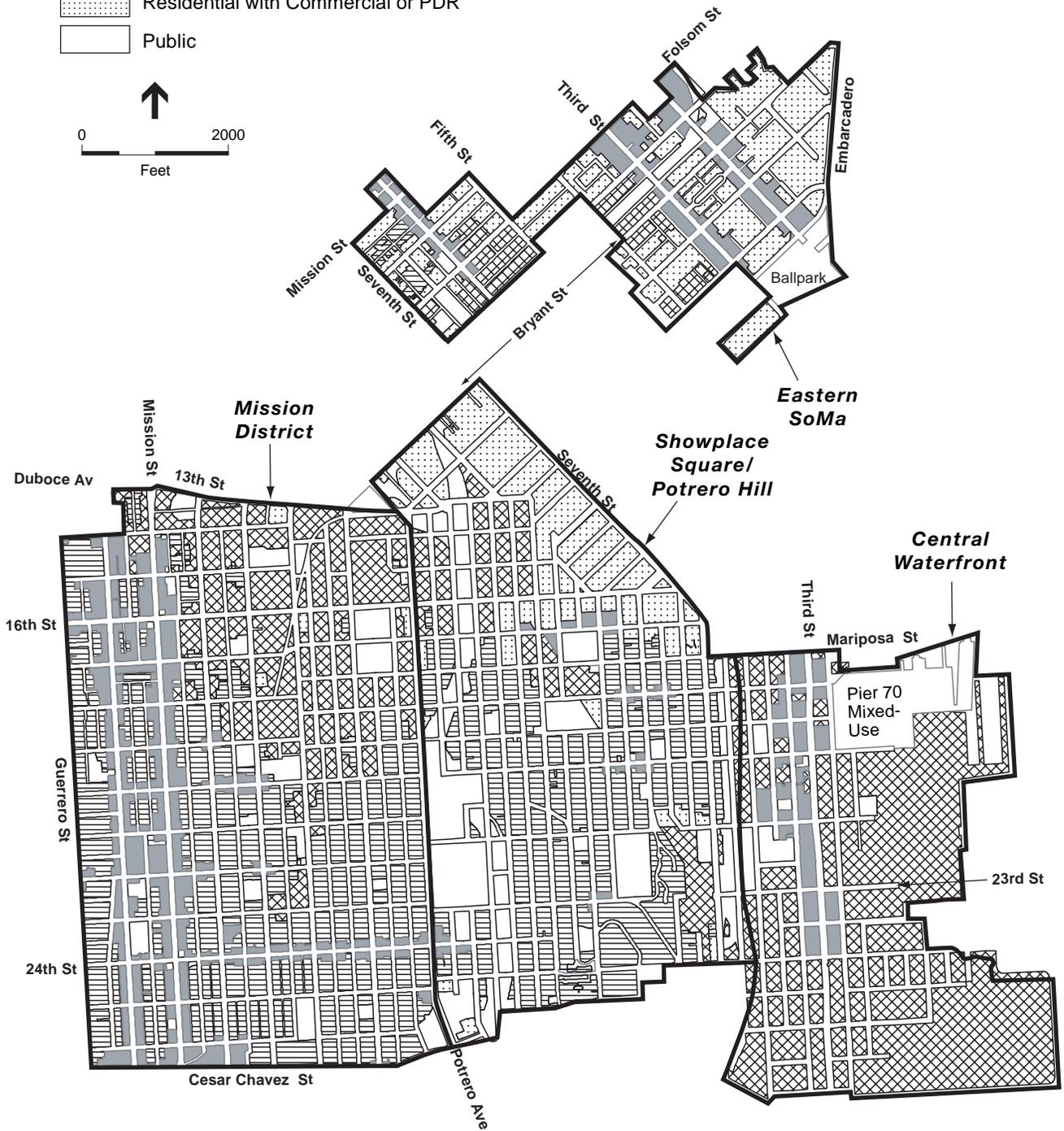
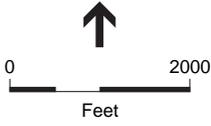
Figures 2, 3, and 4 depict the proposed use districts at a general level of detail for each of the three rezoning options.

Mission District

In the Mission District, Option A would generally preserve light industrial zoning in the Northeast Mission, changing the designation from M-1 (Light Industrial) to Core PDR, but retaining most existing controls. The Potrero Center shopping center site at 16th and Bryant Streets would be rezoned to NC-S (Neighborhood Commercial Shopping Center; an existing zone). Consistent with existing uses, retail sites on either side of Harrison Street at Division would be rezoned to Residential/Commercial. Zoning on Mission and Valencia Streets would change from Neighborhood Commercial to Neighborhood Commercial Transit, while existing higher density residential neighborhoods would be zoned Residential-Transit Oriented and lower density residential areas would become Residential-Low Density. In each instance under Option A, controls would be similar to those that currently exist. Option B for the Mission District would change portions of the Northeast Mission to Residential/PDR zoning, while retaining most

⁴ The Rezoning Options Workbook identified potential additional controls for a portion of the PDR-Residential district in the Showplace Square area, permitting only design-related new PDR activities, to retain design-related activities in this area.

-  PDR
-  Residential
-  Residential Mixed-Use
-  Residential with Commercial or PDR
-  Public

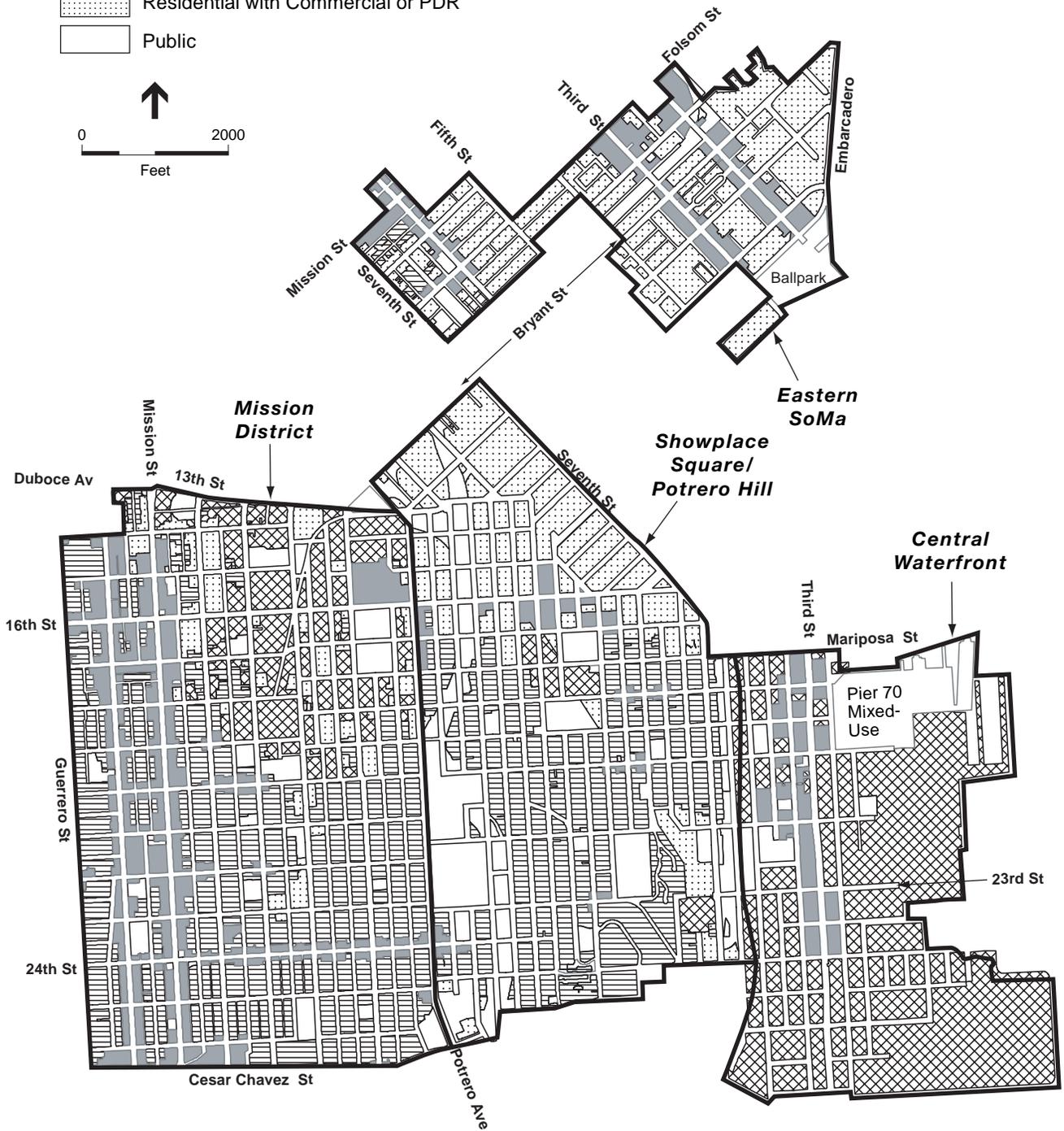
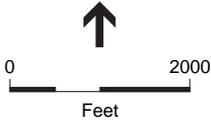


SOURCE: Environmental Science Associates

Case No. 2004.0160E: Eastern Neighborhoods Rezoning and Community Plans (203091)

Figure 2
Proposed Use Districts: Option A

-  PDR
-  Residential
-  Residential Mixed-Use
-  Residential with Commercial or PDR
-  Public

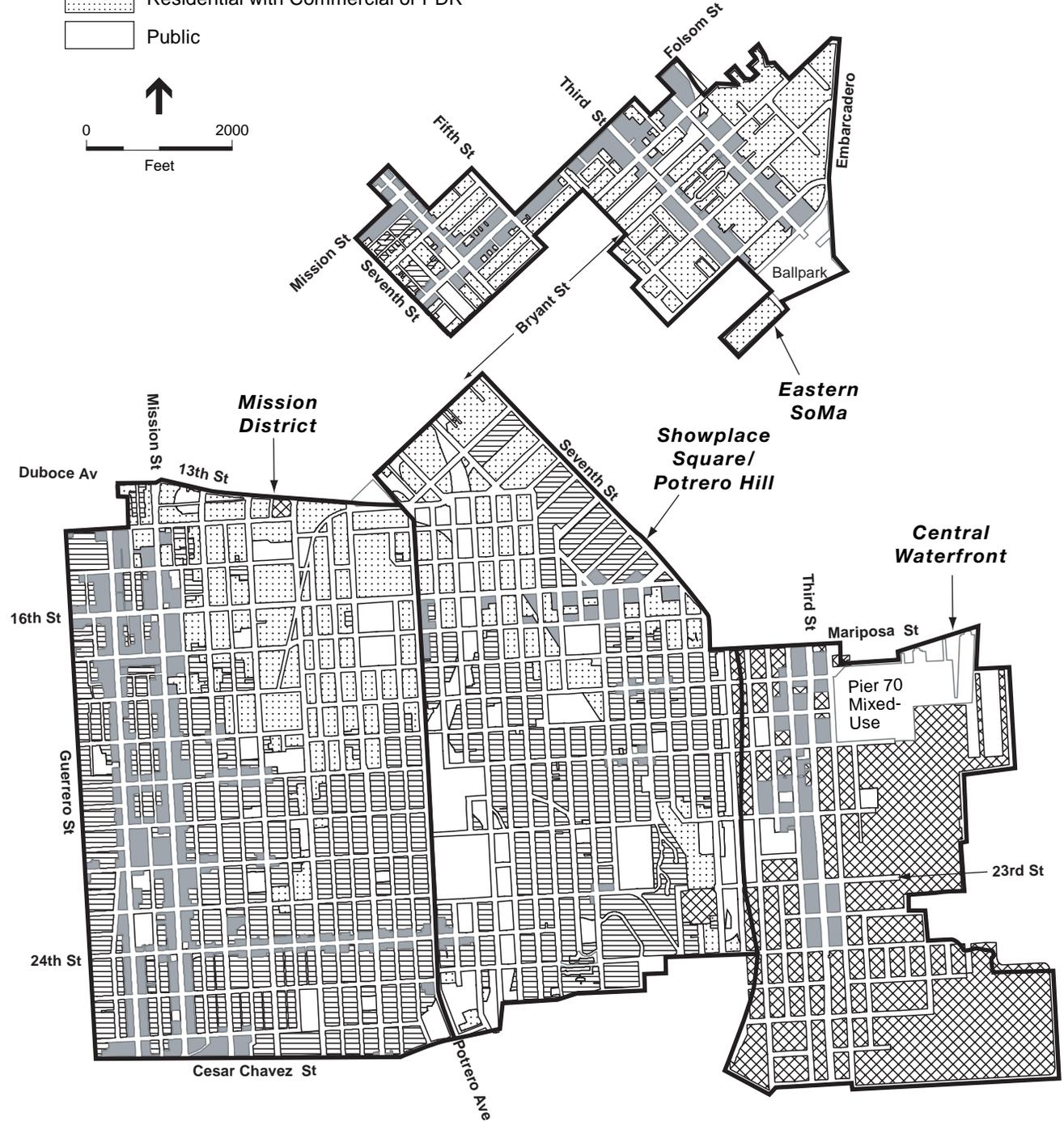
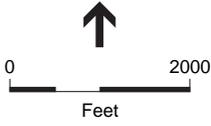


SOURCE: Environmental Science Associates

Case No. 2004.0160E: Eastern Neighborhoods Rezoning and Community Plans (203091)

Figure 3
Proposed Use Districts: Option B

-  PDR
-  Residential
-  Residential Mixed-Use
-  Residential with Commercial or PDR
-  Public



SOURCE: Environmental Science Associates

Case No. 2004.0160E: Eastern Neighborhoods Rezoning and Community Plans (203091)

Figure 4
Proposed Use Districts: Option C

of the Northeast Mission as Core PDR. In Option C, the Core PDR designation would be removed entirely in the Northeast Mission, which would be split between Residential/PDR in the western two-thirds and Residential/Commercial in the eastern third. In both Options B and C, the commercial sites at Harrison and Division would be zoned PDR/Large Commercial.

Showplace Square/Potrero Hill

Option A would rezone as Core PDR the existing M-1 (Light Industrial) and M-2 (Heavy Industrial) heart of the Showplace Square design district, bounded by Brannan, Eighth, Division, De Haro and 16th Streets and Potrero Avenue. However, in Options B and C, the design district would be rezoned as Residential/PDR, although both options would include this area in a “Design PDR Use” overlay to encourage retention of existing design-related businesses. All three options would eliminate the current M-2 use district between Seventh and Eighth Streets. Under Option A, this area would be designated a mix of Residential/Commercial and Residential/PDR, with the PDR portions included in the Design PDR Use overlay. Option B would increase the amount of Residential/Commercial zoning and reduce the size of Design PDR use overlay, and Option C would zone most of this area Residential – Transit Oriented and further limit the Design PDR use overlay. Options A and B would retain an existing industrial district around Mariposa and DeHaro Streets, changing it to Core PDR, while Option C would rezone this area Residential/PDR. As for Potrero Hill, all three rezoning options would include the same zoning that, while incorporating the new districts, would include essentially the same controls as at present, with limited exceptions. Exceptions include downzoning of areas along Rhode Island Street (between 20th and 22nd Streets) and DeHaro Street (between 24th and 25th Streets) from RH-3 to Residential – Low Density and changing the zoning on a triangular parcel along Arkansas Street between 18th and 19th from M-1 (Light Industrial) to Residential/Commercial, to reflect current land uses.

Eastern SoMa

Proposed changes in Eastern SoMa would create Neighborhood Commercial Transit use districts along Second, Third, and Sixth Streets in all three options, replacing areas of SSO (Service/Secondary Office) and SLI (Service/Light Industrial) zoning.⁵ Option A would create Residential/PDR use districts south and west of South Park and Residential/Commercial use districts north of South Park, with PDR and Residential/Commercial districts west of Third Street. Additionally, PDR would extend from Fifth to Seventh Streets and Residential/Commercial would extend from Folsom to Mission Streets. Under Option B, Residential/Commercial zoning would predominate as far west as Fourth Street. An additional Neighborhood Commercial Transit district would be created on Mission Street from Sixth to Seventh Streets and on Folsom Street from Sixth to Seventh Streets. Under Option C, the Neighborhood Commercial Transit district proposed for Folsom Street in Option B would extend east to Fourth Street.

Central Waterfront

In the Central Waterfront, the community has worked with Planning Department staff to develop a single preferred rezoning option and a draft neighborhood plan that would result in an amendment of the

⁵ The South of Market area already has mixed-use zoning districts as a result of implementation of the South of Market Plan in 1987.

General Plan Central Waterfront Area plan. Under this proposal, a Central Waterfront Mixed Use Residential District would be centered on the existing Dogpatch residential enclave centered around Tennessee, Minnesota, and 22nd Streets and would include those parcels in the area most appropriate for new housing or neighborhood commercial development. It would extend south to 25th Street and north to Mariposa Street one block east and west of Third Street; in both cases, these “extensions” would convert lands now zoned for heavy industry to allow housing and commercial (retail) activity. The PDR District would encompass those parts of the Central Waterfront that contain PDR buildings, existing PDR clusters, or are most suited to PDR uses because of the character of surrounding uses. This district would cover most of the rest of the Central Waterfront not under Port of San Francisco jurisdiction. As noted above, most Port lands would be designated PDR, except for the Pier 70 Mixed Use District around 20th and Illinois Streets. As an additional potential component of the project (under Option A only), in anticipation that the Potrero Power Plant may not remain operational through 2025, the Planning Department contemplates that additional new housing could be developed at or near the power plant site, east of Illinois Street between 22nd and 24th Streets.

Height Limits

Existing height limits are primarily 40 and 50 feet, with areas of Eastern SoMa allowing buildings up to 160 feet tall. The proposed rezoning options would not substantially change height limits. However, some increases and decreases are proposed.

Figures 5, 6, and 7 depict the proposed height limits at a general level of detail for each of the three rezoning options.

Mission District

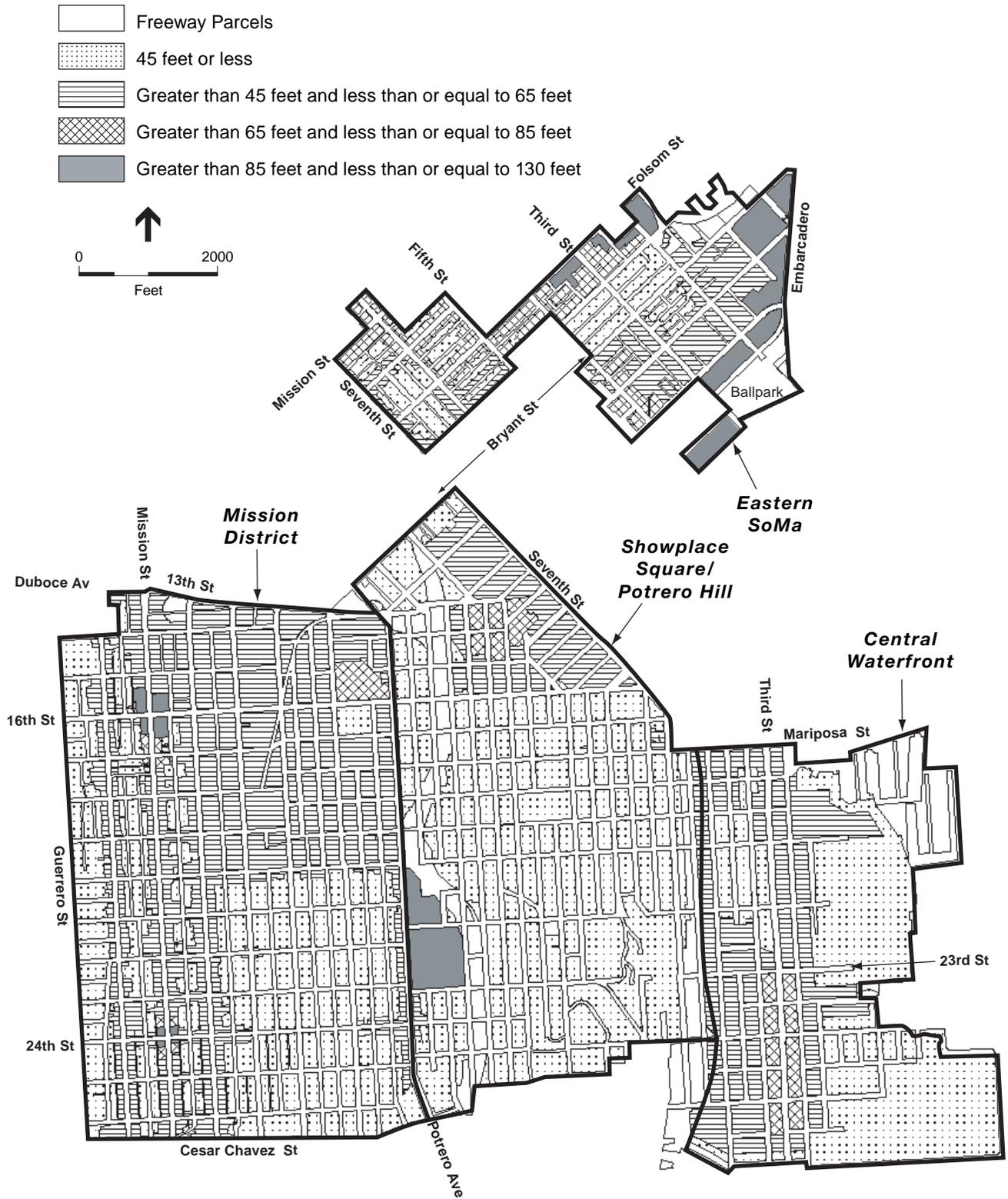
In the Mission District, under all options, the height limits would be increased to 65 feet along Mission Street between 19th and 21st Streets, but decreased to 40 feet along the alleyways (San Carlos, Lexington, and Bartlett Streets) between Mission and Valencia Streets and along Capp Street. In the northeast Mission, the height limit would be increased to 50 feet along the Central Freeway, while it would be increased to 85 feet at the Potrero Center site at 16th and Bryant Streets.

Showplace Square/Potrero Hill

In Showplace Square, under all options, height limits would increase between Seventh and Eighth Streets from Brannan southeast to China Basin Channel, to as much as 80 feet in the vicinity of Rhode Island, King, Channel, and 15th Streets. No changes in height limit are proposed on Potrero Hill.

Eastern SoMa

Under Options A and B, height limits would increase along the major arterials between Fifth and Seventh and Mission and Folsom Streets. Height limits would also increase along Second and Third Streets between Bryant and Brannan Streets. The height limits would remain the same at present around South Park and in the South End Historic District south of South Park. Option C would provide for additional height in a few select areas, primarily along sections of Folsom, Harrison, and Seventh Streets.

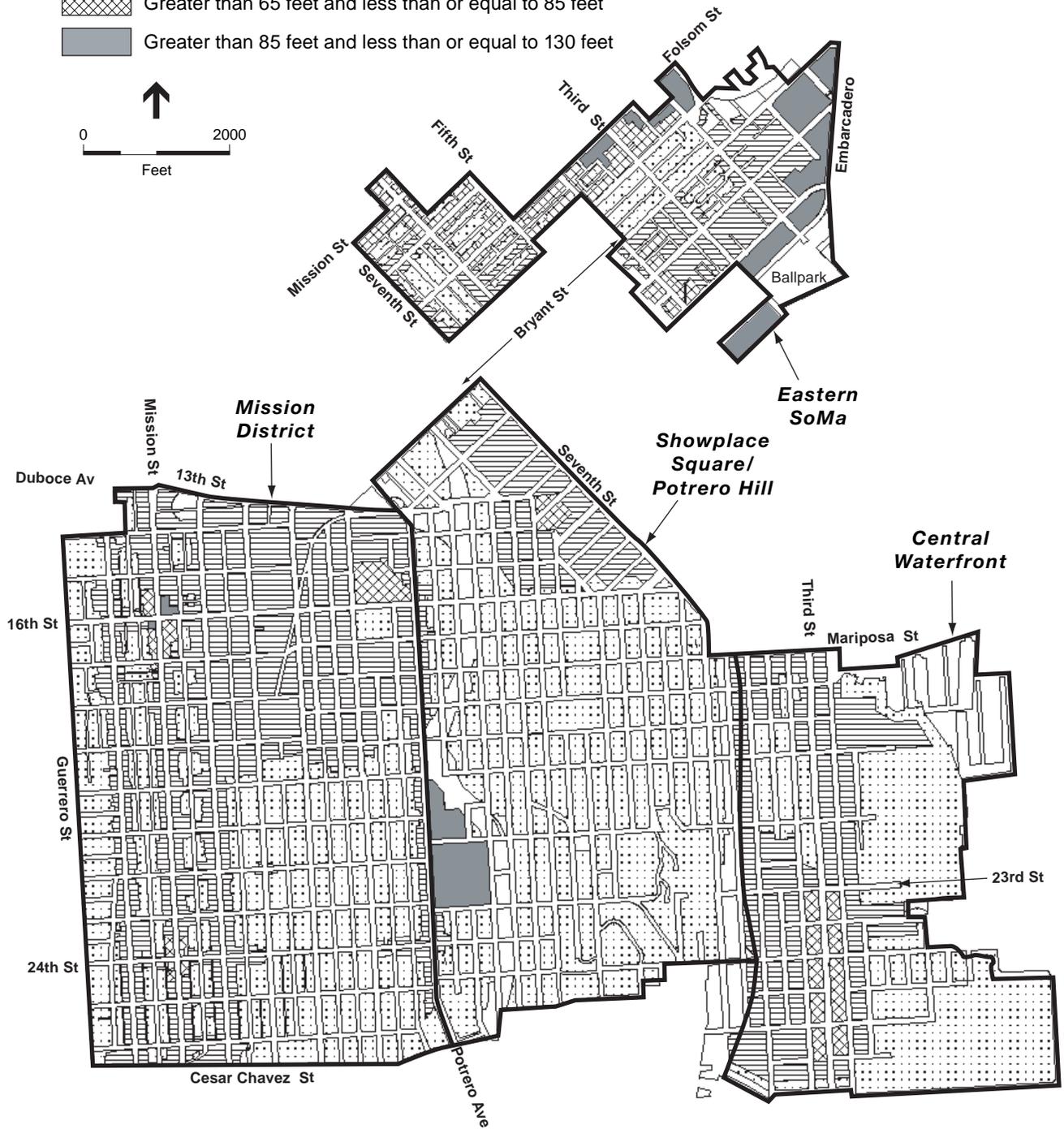
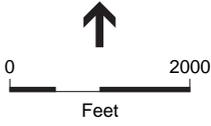


SOURCE: Environmental Science Associates

Case No. 2004.0160E: Eastern Neighborhoods Rezoning and Community Plans (203091)

Figure 5
Proposed Height Limits: Option A

-  Freeway Parcels
-  45 feet or less
-  Greater than 45 feet and less than or equal to 65 feet
-  Greater than 65 feet and less than or equal to 85 feet
-  Greater than 85 feet and less than or equal to 130 feet

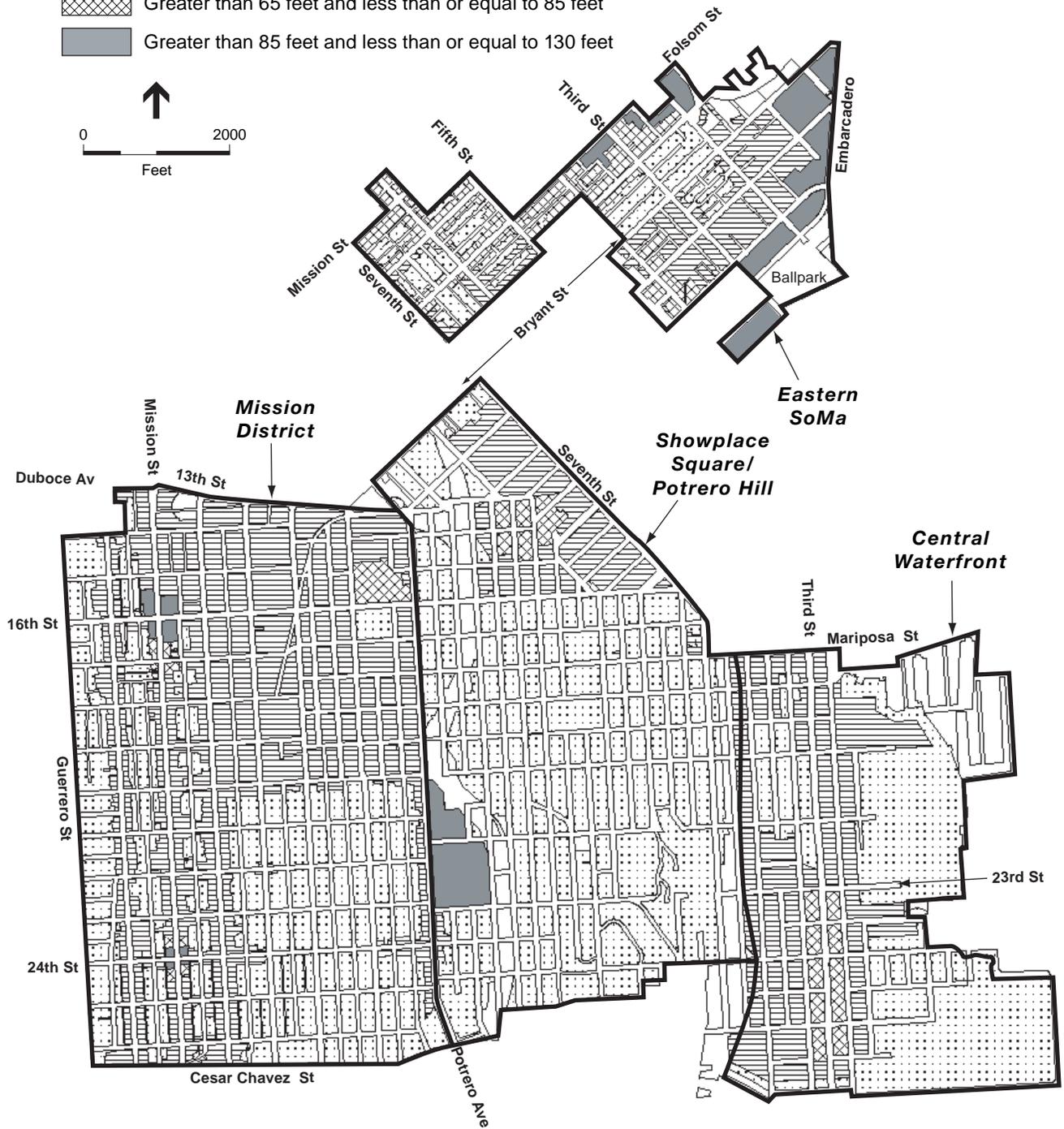
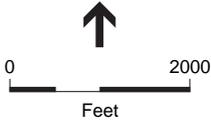


SOURCE: Environmental Science Associates

Case No. 2004.0160E: Eastern Neighborhoods Rezoning and Community Plans (203091)

Figure 6
Proposed Height Limits: Option B

-  Freeway Parcels
-  45 feet or less
-  Greater than 45 feet and less than or equal to 65 feet
-  Greater than 65 feet and less than or equal to 85 feet
-  Greater than 85 feet and less than or equal to 130 feet



SOURCE: Environmental Science Associates

Case No. 2004.0160E: Eastern Neighborhoods Rezoning and Community Plans (203091)

Figure 7
Proposed Height Limits: Option C

Central Waterfront

In the Central Waterfront, height limits are generally 50 feet west of Illinois Street and along Cesar Chavez Street, and 40 feet east of Illinois Street; height limits reach 65 feet to 85 feet between 25th and Marin Streets. Under the proposed project, a more fine-grained height scheme would be created. In general, the height limit would be 65 to 85 feet south of 22nd Street and along Third and Illinois Streets, with the exception of the Dogpatch enclave between 20th and Tubbs Streets, where height limits would be lowered to 40 to 45 feet.⁶ North and west of Dogpatch, the height limit would be 45 to 55 feet. The plan thus would permit greater height limits along the primary vehicular streets including Mariposa, 18th, 22nd, 24th, and Third Streets and would raise height limits along the northern length of Third Street to 65 feet to be compatible with existing buildings, to emphasize this corridor, to reflect the higher heights planned in the Mission Bay area to the north, and to encourage higher density development in support of the Third Street light rail line now under construction. Height limits within 100 feet from the water's edge would be reduced to 40 feet, consistent with Bay Conservation and Development Commission requirements. Height limits around the 22nd Street Caltrain station, including the Muni Woods Yard on Indiana Street, would be increased to 65 feet to encourage higher density, transit-oriented development opportunities in the event that the facility is no longer needed or can be redeveloped to include transit facilities and mixed-use housing. Minimum height limits would be established for new buildings along Third, Mariposa, 22nd, and 24th Streets to create a "comfortable sense of enclosure for pedestrians," increase commercial and housing opportunities that take advantage of transit services, and increase the vitality and sense of safety of the street environment.

Neighborhood Plans

As noted above, the Planning Department is developing neighborhood plans for Eastern SoMa, the Mission, Showplace Square, and the Central Waterfront that will address transportation, urban design, and open space. It is anticipated that the neighborhood plans will not propose specific transportation improvements, but will set forth policy aimed at guiding the eventual installation of dedicated transit lanes, additional bicycle lanes, pedestrian improvements, including widened sidewalks on selected streets, traffic calming, and possibly implementation of "living streets" programs to enhance pedestrian travel. Because none of these proposals is anticipated to be specifically identified or funded in the near future, the EIR will not evaluate any specific transportation improvements.

The Planning Department also seeks to enhance the urban design of the Eastern Neighborhoods through zoning controls that would, for example, enhance pedestrian safety and comfort, require active building frontages facing the street, and tailor height limits to promote compatible development and maximize sunlight on sidewalks. Design controls and guidelines would seek to emphasize transit use through concentrating activity around important transit stops and corridors. The Department seeks to enhance the visual quality of the neighborhoods through emphasis on visual corridors and sight lines, and to enhance

⁶ According to the Draft Central Waterfront Plan (p. 122), a height limit of 45 feet (with a maximum 4 stories) along 22nd Street (between Third and Indiana Streets) and along Third Street (across from the American Can Company buildings) would allow an extra 5 feet for higher ground floor ceilings for retail and commercial uses, providing greater flexibility and encouraging "more elegant and functional spaces." By imposing a four-story limit on 45-foot-high buildings, it is believed that such configurations would be encouraged.

neighborhood character by drawing upon successful established patterns of building scale, massing, and architectural character unique to particular neighborhoods.

It is anticipated that the new neighborhood plans developed through the community planning process will emphasize improvements to the public realm to enhance the quality of life in these neighborhoods. These improvements would increase the quantity and improve the quality of open space, such as through provision of new neighborhood and “pocket” parks, creation of sidewalk open spaces, and publicly accessible open space within larger developments. No specific sites for new parks or community facilities have been identified yet, but they could be developed through the community planning process.

As noted, a draft Central Waterfront Better Neighborhoods Plan was published in December 2002 and proposed staff revisions regarding specific parcels were presented to the Planning Commission in February 2004. Planning staff anticipates making additional refinements to the draft Central Waterfront plan prior to publishing a “final” plan for Planning Commission adoption, following certification of the EIR. Development of other neighborhood plans is currently under way, and these plans, once published, are expected to undergo public review and revision prior to presentation to the Commission for adoption.

Analysis Assumptions

Analysis of physical impacts of the proposed rezoning project will be based upon assumptions regarding the portions of the study area where the greatest change would occur and upon growth projections developed as part of the rezoning study. The areas of anticipated change will be determined by an examination of where use districts and height limits could be expected to foster new development, particularly residential construction. The resulting conclusions will inform the qualitative analysis of changing neighborhoods, while the quantitative analysis of, for example, increased traffic and transit ridership will be based on projected growth in population and employment.

Areas of Greatest Change

Within the study area, new residential development can reasonably be anticipated in certain areas, based on where the zoning would change to allow and/or encourage residential development that is currently discouraged or, in some cases, not allowed. Increases in height limits also would be expected to encourage development. For example, where the zoning designation of an area is proposed to change from M-1 (Heavy Industry) to Residential Mixed Use, and especially if the height limit would increase, the likelihood of new residential development would be relatively greater than elsewhere in the project area. This is because the zoning changes would, other things being equal, make new residential development in such an area more financially attractive to developers.

Using the above approach to identify likely clusters of future development under the proposed rezoning and community plans, the areas of greatest change are anticipated to be Showplace Square and a seven-block area immediately to the east, the Northeast Mission, and certain parts of the Central Waterfront and Eastern SoMa. In the Central Waterfront, except for Option A, which would add a large amount of housing to the existing site of the Potrero power plant, the change to residential zoning from industrial zoning would occur in a two- to three-block-wide strip along Illinois, Third, Tennessee, and Minnesota Streets, between Mariposa and 25th Streets, as well as along I-280 between Mariposa and 20th Streets. In

Eastern SoMa, the zoning is already mixed-use and housing is allowed in most existing districts except the Service/Light Industrial (SLI) District, where only affordable housing is permitted.⁷ Therefore, the area of most change in Eastern SoMa would be the blocks south, southwest, west, and northwest of the block that contains South Park, where all options would rezone most of the land from SLI to mixed-use and increase height limits. Also, in the existing Residential/Service Mixed Use (RSD) district, between 5th and 7th Streets north of Folsom Street, where height limits would be increased on the major streets (5th, 6th, 7th, Harrison, Folsom, Howard, and Mission [between 6th & 7th Streets only] Streets), the result would likely be more housing development on those arterials. In contrast, minimal change in zoning is proposed in most of the Mission District (other than the northeast portion, known as the NEMIZ, for Northeast Mission Industrial Zone⁸) and on Potrero Hill (from approximately Mariposa Street south), except along the former railroad right of way between Carolina and Arkansas streets and at the base of the hill at the southeast corner of that portion of the study area.

Forecast Growth

The Planning Department forecasts that San Francisco's household population⁹ will reach approximately 835,000 by 2025, an increase of some 78,000 residents from the 2000 total of 757,000.¹⁰ Employment in 2000 totaled approximately 635,000. The Department forecasts employment growth of about 126,500 between 2000 and 2025. The Department estimates that the citywide increase in PDR jobs could be from less than 1,000 to more than 11,000, depending on how much PDR land is created/retained by the various rezoning options.

As shown in Table 1, the Department has developed three rezoning options for accommodating the projected growth. Of the three rezoning options, Option A would retain the largest amount of existing PDR land in the three "original" Eastern Neighborhoods (Mission District, Showplace Square/Potrero Hill, and Eastern SoMa) and convert the least amount of land to residential and mixed uses. More of the population growth would occur elsewhere in the City, including the "Better Neighborhoods," Visitacion Valley, Downtown, Mission Bay, and elsewhere.¹¹

Conversely, under Option C, which would convert the most existing PDR land to residential and mixed uses, the Eastern Neighborhoods (excluding the Central Waterfront) would experience greater residential growth, compared to Option A. Correspondingly, the rest of the City would experience less housing growth under Option C, compared to Option A. Option B is forecast to perform in between Options A and C.

⁷ Housing is allowed by Conditional Use authorization in the Service/Secondary Office (SSO) district.

⁸ The NEMIZ is the area of larger, mostly industrial buildings from the Central Freeway south to about 20th Street and from Potrero Avenue west to approximately South Van Ness Avenue.

⁹ Household population excludes about 2.5 percent of the City's total population that lives in what the U.S. Census calls "group quarters," including institutions (jails, nursing homes, etc.), college dormitories, group homes, religious quarters, and the like.

¹⁰ Consistent with recent trends, this incremental growth is anticipated to occur in relatively smaller households; that is, growth would occur in households that would be smaller than the average household size in 2000 of 2.3 persons per household.

¹¹ The growth forecasts for the "Better Neighborhoods" include the Central Waterfront, originally part of the Better Neighborhoods rezoning and now being analyzed as part of the Eastern Neighborhoods project.

All three options would result in a decline in PDR employment in the study area, based on Department forecasts: the loss of PDR jobs would be greatest under Option C because the most land currently occupied by light industrial (PDR) uses would be converted to residential and mixed uses.

The Planning Department forecasts on which the options analyzed in the Eastern Neighborhoods EIR are based project more population growth in San Francisco than would occur under the 2025 “baseline”¹² condition, due to implementation of the proposed Eastern Neighborhoods Rezoning and Community Plans and other aspects of the Department’s Citywide Action Plan, including the Better Neighborhoods planning process (the Market Octavia Plan and the Balboa Park Plan, as well as the Central Waterfront Plan, now being analyzed as part of the Eastern Neighborhoods EIR), the Downtown Neighborhoods Initiative (including the Transbay and Rincon Hill neighborhoods), and other programs to encourage housing citywide, additional housing growth is anticipated. Compared to the 2025 baseline, which is based on forecasts by the Association of Bay Area Governments (ABAG) in its *Projections 2002*, the Planning Department forecasts assume more than 17,000 additional housing units would be developed by 2025, corresponding to an additional population increase of more than 35,000. In contrast, employment is forecast by the Department to grow somewhat less robustly than under the baseline, as the various planning efforts aimed at increasing housing are anticipated to result in some loss of land available for employment-generating business activity. Therefore, the Department forecasts approximately 9,500 fewer new jobs than anticipated by ABAG.

Table 1 presents the projections for housing units, household population, and PDR and non-PDR jobs under each rezoning option.¹³

II. Public Comment to Date

The Planning Department issued a Notice of Preparation (NOP) for the proposed Eastern Neighborhoods Rezoning and Community Plans project on March 9, 2005. Written comments on the scope of the EIR were accepted for a standard 30-day period, and the Department also conducted three public scoping meetings to receive comments on the EIR scope. These meetings were held on March 23, 2005, at the California College of the Arts; on March 29, 2005, at the Mission Dolores School Auditorium; and on March 30, 2005, at the SoMa Recreation Center. Comments received, particularly during the scoping meetings, emphasized concerns in a relatively few areas. In particular, commenters expressed concerns about the effects of the proposed rezoning on social and economic conditions, such as the affordability of new housing, the potential to attract and/or retain relatively higher-wage jobs in San Francisco (especially in the Eastern Neighborhoods), the potential for existing residents and businesses to be displaced, and the opportunity for building owners and business people to make economic use of their property and businesses. Many of these concerns do not address changes in the physical environment as that term is defined by the California Environmental Quality Act (CEQA) and its State implementing guidelines, and therefore are properly addressed in another context. Therefore, a number of these issues will be addressed

¹² The 2025 baseline assumes citywide growth of about 19,000 housing units (about 42,000 population) and approximately 130,000 jobs between 2000 and 2025, if no rezoning or other actions take place.

¹³ Note that the projections in the following table differ from those presented in the March 9, 2005, Notice of Preparation (NOP). Notably, the NOP projections misstated the jobs forecasts, presenting numbers that were too low for the Eastern Neighborhoods and too high for the remainder of the City.

Table 1: Forecast Growth by Rezoning Option

2025 Totals

	Eastern Neighborhoods				Subtotal	Rest of City	Total
	Mission	Showplace Sq./ Potrero Hill	Eastern SoMa	Central Waterfront			
<i>Existing (2000)</i>							
Housing Units	13,309	5,539	5,818	798	25,464	304,239	329,703
Household Population	41,788	13,501	10,211	1,704	67,204	689,763	756,967
PDR Jobs	12,071	6,966	6,579	6,851	32,467	63,080	95,547
Non-PDR Jobs	11,038	13,769	11,013	4,368	40,188	498,700	538,888
Total Jobs	23,109	20,735	17,592	11,219	72,655	561,780	634,435
<i>2025 Baseline</i>							
Housing Units	13,729	6,190	7,399	1,017	28,335	320,446	348,781
Household Population	43,906	14,293	13,276	2,014	73,489	725,728	799,217
PDR Jobs	11,086	5,280	5,514	7,211	29,091	74,226	103,317
Non-PDR Jobs	13,922	19,376	15,251	4,669	53,218	607,619	660,837
Total Jobs	25,008	24,656	20,765	11,880	82,309	681,845	764,154
<i>Option A</i>							
Housing Units	14,091	7,833	8,112	4,443	34,479	332,607	367,086
Household Population	45,116	16,911	14,049	8,314	84,390	752,100	836,490
PDR Jobs	11,210	7,718	5,357	7,175	31,460	74,757	106,218
Non-PDR Jobs	13,291	18,736	14,215	4,672	50,914	609,305	660,218
Total Jobs	24,500	26,454	19,572	11,847	82,374	684,062	766,436
<i>Option B</i>							
Housing Units	14,427	8,174	8,326	1,922	32,849	333,362	366,211
Household Population	46,089	17,550	14,410	3,632	81,681	752,767	834,448
PDR Jobs	11,038	5,176	5,099	7,038	28,351	72,064	100,415
Non-PDR Jobs	14,125	19,374	15,649	4,653	53,801	606,720	660,522
Total Jobs	25,162	24,550	20,748	11,691	82,152	678,784	760,936
<i>Option C</i>							
Housing Units	15,363	9,430	8,901	1,628	35,322	330,998	366,320
Household Population	48,865	20,360	15,388	3,079	87,692	747,058	834,750
PDR Jobs	5,602	5,063	5,122	7,211	22,998	73,265	96,263
Non-PDR Jobs	22,637	18,699	16,278	4,580	62,195	600,861	663,056
Total Jobs	28,239	23,762	21,400	11,791	85,193	674,126	759,319

SOURCE: San Francisco Planning Department, 2005.

Table 1: Forecast Growth by Rezoning Option (continued)

Change: Difference between 2025 Totals and Existing (2000) Totals

	Eastern Neighborhoods				Subtotal	Rest of City	Total
	Mission	Showplace Sq./ Potrero Hill	Eastern SoMa	Central Waterfront			
<i>2025 Baseline</i>							
Housing Units	420	651	1,581	219	2,871	16,207	19,078
Household Population	2,118	792	3,065	310	6,285	35,965	42,250
PDR Jobs	-985	-1,686	-1,065	360	-3,376	11,146	7,770
Non-PDR Jobs	2,884	5,607	4,238	301	13,030	108,919	121,949
Total Jobs	1,899	3,921	3,173	661	9,654	120,065	129,719
<i>Option A</i>							
Housing Units	782	2,294	2,294	3,645	9,015	28,368	37,383
Household Population	3,328	3,410	3,838	6,610	17,186	62,337	79,523
PDR Jobs	-861	752	-1,222	324	-1,007	11,677	10,671
Non-PDR Jobs	2,253	4,967	3,202	304	10,726	110,605	121,330
Total Jobs	1,391	5,719	1,980	628	9,719	122,282	132,001
<i>Option B</i>							
Housing Units	1,118	2,635	2,508	1,124	7,385	29,123	36,508
Household Population	4,301	4,049	4,199	1,928	14,477	63,004	77,481
PDR Jobs	-1,033	-1,790	-1,480	187	-4,116	8,984	4,868
Non-PDR Jobs	3,087	5,605	4,636	285	13,613	108,020	121,634
Total Jobs	2,053	3,815	3,156	472	9,497	117,004	126,501
<i>Option C</i>							
Housing Units	2,054	3,891	3,083	830	9,858	26,759	36,617
Household Population	7,077	6,859	5,177	1,375	20,488	57,295	77,783
PDR Jobs	-6,469	-1,903	-1,457	360	-9,469	10,185	716
Non-PDR Jobs	11,599	4,930	5,265	212	22,007	102,161	124,168
Total Jobs	5,130	3,027	3,808	572	12,538	112,346	124,884

SOURCE: San Francisco Planning Department, 2005.

in a separate socioeconomic analysis that is being prepared concurrently with the environmental impact report (EIR), and some of the conclusions of the socioeconomic analysis will be included in the EIR. Socioeconomic issues will be considered by the Planning Commission and the Board of Supervisors in their deliberations on the proposed rezoning and community plans.

Concerns expressed during the scoping process that are more properly within the purview of CEQA review include transportation issues such as pedestrian and bicycle safety, the adequacy of transit service (particularly Muni) to accommodate growth in the Eastern Neighborhoods and traffic impacts on residential neighborhoods; the adequacy of public services, especially parks; and health effects of traffic-generated emissions of air pollutants and noise. These issues will be addressed in the EIR.

The issues discussed in this Initial Study are those that can be analyzed generally, in somewhat lesser detail, regarding potential impacts of a plan covering a large geographic area. Also, based on the scoping comments, the issues discussed in the Initial Study are generally of lesser concern to the affected communities.

As noted on the cover sheet, additional comments will be accepted on this Initial Study, and on the scope of the EIR as “focused” by this Initial Study, until January 31, 2006.

III. Summary of Potential Environmental Effects

Effects Found To Be Potentially Significant

The proposed project has been evaluated to determine whether it would result in significant environmental impacts. The project could have a significant effect on **land use**, because the zoning changes could result in changes to the physical arrangement of existing communities and could affect the character of these communities; **visual quality**, because subsequent development within the project area could result in changes in visual character; **population**, because the zoning changes could induce substantial population growth and could, indirectly, displace existing residents and businesses; **transportation/circulation**, because growth resulting from the zoning changes could result in increases in traffic and transit ridership and could alter existing circulation patterns; **noise**, because growth resulting from the zoning changes could result in increased traffic-generated noise and could expose residents to existing noise; **air quality**, because growth resulting from the zoning changes could result in increased emissions of criteria air pollutants and could expose sensitive receptors to pollutants; **shadow**, because the zoning changes could lead to development that could cause additional shadow; **utilities/public services (parks)**, because the zoning changes could increase residential population in neighborhoods with existing deficiencies in parks and open space; **hazards**, because of the potential for contamination on former industrial sites and for residential development in proximity to sites that use hazardous materials; and **cultural** (archaeological and architectural) **resources**, because of the potential for these resources to be disturbed by subsequent future development projects. These topics, therefore, will be included in the EIR.

Effects Found Not To Be Significant

All other items in the following Initial Study Environmental Evaluation Checklist have been checked “No,” indicating that Planning Department staff has determined that the proposed project could not have a significant adverse effect on the environment. Several of the other checklist items have been checked “Discussed,” indicating that the Initial Study text includes discussion about those particular issues. For all of the items checked “No,” 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 Data Base and maps, published by the California Department of Fish and Game. For each checklist item, the evaluation has considered the impacts of the project both individually and cumulatively.

The following potential impacts were determined either to be insignificant or to be mitigated to a less-than-significant level through measures included in the project. These items are discussed in Section IV below, and require no further environmental analysis in the EIR: construction noise, construction air quality, wind, utilities/public services (except parks), biology, geology/topography, water, and energy.

IV. Environmental Evaluation Checklist And Discussion

A. COMPATIBILITY WITH EXISTING ZONING AND PLANS	<u>Discussed</u>	<u>Not Applicable</u>
1) Discuss any variances, special authorizations, or changes proposed to the Planning Code or Zoning Map, if applicable.	X	_____
2) Discuss any conflicts with any adopted environmental plans and goals of the City or Region, if applicable.	X	_____

Planning Code (Zoning)

The San Francisco Planning Code implements the San Francisco General Plan, and governs permitted uses, densities and configuration of buildings within San Francisco. The Code incorporates by reference the City Zoning Maps. Permits to construct new buildings or to alter or demolish existing ones may not be issued unless the proposed project conforms to the Code or an exception is granted pursuant to provisions of the Code.

As described in the project description, existing zoning in the Eastern Neighborhoods includes areas zoned for Light (M-1) and Heavy (M-2) Industrial uses, in the Central Waterfront, Northeast Mission, Showplace Square, and portions of Eastern SoMa; areas zoned for residential use at various densities in the Dogpatch enclave of the Central Waterfront, in the southeast portion and western edge of the Mission, on Potrero Hill, and in the mixed-use district around South Park in Eastern SoMa; and commercially zoned corridors along Third and 22nd Streets in the Central Waterfront, 18th and 20th Streets on Potrero Hill; Mission, Valencia, and 24th Street in the Mission, and in the mixed-use district around South Park. Eastern SoMa also contains areas zoned for secondary office space.

The project would include amendments to the Planning Code and Zoning Maps (including Height and Bulk Maps) in all four Eastern Neighborhoods, as detailed in the project description. The EIR will provide additional detail about the proposed changes.

No site-specific development is proposed, and therefore no such proposals will be analyzed in the EIR. Thus, variances and special authorizations under the Planning Code are not relevant to the proposed rezoning and community plans.

Plans and Policies

San Francisco General Plan

The City’s General Plan, which provides general policies and objectives to guide land use decisions, contains some policies which relate to physical environmental issues. As part of the project, the existing Central Waterfront and South of Market Area Plans within the *San Francisco General Plan* will be revised and new neighborhood or community plans will be prepared for the Mission, Showplace Square/Potrero Hill, and Eastern SoMa. As well, there may be other changes to the General Plan to bring it in conformance with any proposed plans. The EIR will discuss these changes to the General Plan, and will describe the proposed rezoning in the context of the citywide planning framework (e.g., the General Plan, including newly adopted Housing Element) and, as applicable, regional and other planning efforts in San Francisco, including the proposed Bayview Hunters Point Redevelopment Plan, the former Hunters Point Shipyard, the Market-Octavia and Balboa Park Better Neighborhoods Plans, the Visitacion Valley planning effort, and other growth in San Francisco and nearby communities.

B. ENVIRONMENTAL EFFECTS

1) <u>Land Use</u> – Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
(a) Disrupt or divide the physical arrangement of an established community?	<hr/> To Be Determined <hr/>		
(b) Have any substantial impact upon the existing character of the vicinity?	<hr/> To Be Determined <hr/>		

The proposed project would result in the rezoning of some areas now designated for light and heavy industrial uses to residential or mixed residential and commercial uses. These changes could result in potential conflicts between uses, such as those among industrial and residential land uses, could adversely affect existing neighborhoods, and could result in changes in neighborhood character in certain parts of the study area. The EIR will compare existing land uses to proposed land use changes under the proposed rezoning and will describe the nature and magnitude of the change and the resulting changes in neighborhood character.

2)	<u>Visual Quality</u> – Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
	(a) Have a substantial, demonstrable negative aesthetic effect?	<u>To Be Determined</u>		
	(b) Substantially degrade or obstruct any scenic view or vista now observed from public areas?	<u>To Be Determined</u>		
	(c) Generate obtrusive light or glare substantially impacting other properties?	<u>To Be Determined</u>		

The proposed changes in zoning – both in terms of allowable uses and height limits – could result in changes in the built environment, either through demolition of existing structures or development of new buildings, or a combination of the two. The EIR will discuss how these changes might affect visual character, urban form, and views.

3)	<u>Population</u> – Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
	(a) Induce substantial growth or concentration of population?	<u>To Be Determined</u>		
	(b) Displace a large number of people (involving either housing or employment)?	<u>To Be Determined</u>		
	(c) Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply?	<u>To Be Determined</u>		

In general, a project would be considered growth-inducing if its implementation would result in substantial population increases and/or new development that might not occur if the project were not approved and implemented, such as by removing barriers to subsequent development by providing new infrastructure that includes capacity for further development. The proposed project, while within an urbanized area, could permit substantial residential development in neighborhoods not currently zoned for residential use, and therefore alter existing development patterns in the Eastern Neighborhoods. The EIR will analyze these changes in population and will also examine anticipated changes in employment, based upon a separately prepared Socioeconomic Impact Report. The EIR will describe the effects of anticipated changes in land use on existing neighborhoods, including ethnic and socioeconomic composition of residents and nature of employment opportunities.

- | | | | | |
|----|---|-------------------------|-----------|------------------|
| 4) | <u>Transportation/Circulation</u> – Could the project: | <u>Yes</u> | <u>No</u> | <u>Discussed</u> |
| | (a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system? | <u>To Be Determined</u> | | |
| | (b) Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards? | <u>To Be Determined</u> | | |
| | (c) Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity? | <u>To Be Determined</u> | | |
| | (d) Cause a substantial increase in parking demand which cannot be accommodated by existing parking facilities? | <u>To Be Determined</u> | | |

Increased residential population and increased employment would result in increased demand on the local transportation system. Effects on transportation and circulation, including intersection operations, transit demand and impacts on pedestrian and bicycle circulation, parking and freight loading, will be analyzed in the EIR, based on a separately prepared transportation report.

- | | | | | |
|----|--|-------------------------|--------------|------------------|
| 5) | <u>Noise</u> – Could the project: | <u>Yes</u> | <u>No</u> | <u>Discussed</u> |
| | (a) Increase substantially the ambient noise levels for adjoining areas? | <u>To Be Determined</u> | | |
| | (b) Violate Title 24 Noise Insulation Standards, if applicable? | <u> </u> | <u> X </u> | <u> X </u> |
| | (c) Be substantially impacted by existing noise levels? | <u>To Be Determined</u> | | |

Construction

No site-specific development is proposed as part of the proposed rezoning and community plans, and therefore no such proposals are analyzed here. Rather, this analysis evaluates impacts of potential future development projects that could be approved pursuant to the proposed zoning controls.

Construction activities associated with any subsequent development project that would be permitted under the proposed rezoning would fluctuate depending upon the construction phase, equipment type and duration of use, distance between noise source and the listener, and the presence or absence of barriers. Various phases of construction, as applicable, such as demolition, excavation, foundation construction, structural erection, and finishing, would temporarily increase noise in the vicinity of a particular project site, with the duration and intensity of noise dependent on the size and nature of the subsequent project and the resultant foundation and structural design, as well as on the site-specific soils conditions. Noise impacts would be less during interior finishing. Construction noise is not typically constant, but varies considerably during construction activities as different pieces of equipment are used and different activities are undertaken. In general, these noise effects are temporary and intermittent, and therefore are considered less than significant.

During the construction period for any subsequent project, residents and workers in the vicinity of a particular site would be exposed to temporary construction noise. However, the San Francisco Noise Ordinance (Article 29 of the City Police Code) regulates construction noise. The ordinance requires that noise levels from individual pieces of construction equipment, other than impact tools, not exceed 80 dBA¹⁴ at a distance of 100 feet from the source. Impact tools such as jackhammers and impact wrenches would need both intake and exhaust mufflers as required by the Director of Public Works. Section 2908 of the Ordinance prohibits construction work between 8:00 p.m. and 7:00 a.m., if noise would exceed the ambient noise level by five dBA at the project property line, unless a special permit is authorized by the Director of Public Works. Compliance with the Noise Ordinance is required by law and would ensure that construction noise impacts would be less than significant.

Pile-driving, where required due to soil conditions, would generate greater noise levels than other construction activities. For subsequent development projects that would require pile-driving during construction, this activity would generate noise and possibly vibrations that could be considered an annoyance by occupants of nearby properties. In general, pile-driving noise could be between about 90 and 105 dBA at 50 feet from the pile-driving activity.¹⁵ Noise levels at receptors near a particular site would depend on their distance from the source and on the presence or absence of noise barriers. For sites immediately adjacent to existing buildings, vibrations from the pile-driving could be felt in those adjacent buildings.

To minimize noise and vibration from pile-driving that would not otherwise comply with the Noise Ordinance, sponsors of subsequent development projects that would include pile-driving would have to require their construction contractors to predrill holes to the maximum depth feasible on the basis of soil conditions. Contractors would be required to use pile-driving equipment with state-of-the-art noise shielding and muffling devices. Project sponsors would also require that contractors schedule pile-driving activity for times of the day that would minimize disturbance to neighbors (see Mitigation Measure 1, p. 68.)

In the event that a subsequent development project would employ particularly noisy construction procedures (including pile-driving) in proximity to sensitive land uses, the Planning Department would require the sponsor of that project to develop a site-specific noise control plan for construction (see Mitigation Measure 2, p. 68.)

Concurrent and/or sequential construction of more than one project in a particular neighborhood could intensify construction noise levels and/or lengthen the time during which residents and workers in the area would be exposed to construction noise. However, as with a single project, noise from overlapping construction or construction in sequence would remain temporary and intermittent.

¹⁴ Noise is defined as unwanted sound. Sound pressure is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 dB to 140 dB corresponding to the threshold of pain. Because sound pressure can vary by over one trillion times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Owing to the variation in sensitivity of the human ear to various frequencies, sound is “weighted” to emphasize frequencies to which the ear is more sensitive, in a method known as A-weighting and expressed in units of A-weighted decibels (dBA).

¹⁵ U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, December 1971.

With mitigation identified in this Initial Study, and with compliance with the San Francisco Noise Ordinance regulations, construction noise effects from any subsequent development projects would be reduced to a less-than-significant level, and the Eastern Neighborhoods rezoning and community plans project would therefore have less-than-significant effects related to construction noise.

Operation

Ambient noise levels in the project area, for the most part, are dominated by vehicular traffic, including trucks, cars, MUNI buses, and emergency vehicles. The project area also includes certain commercial uses, including PDR uses, that generate noise as a matter of course in their operations. The proposed rezoning and community plans would establish PDR-only zones where more intensive PDR uses – including those that make more noise – would be separated from noise-sensitive uses, such as new residential development. Other new use districts would permit a mix of uses, including some “light PDR,” “medium PDR,” and other commercial uses adjacent to, or even in the same buildings as, dwelling units. However, the new use districts would limit the kinds of PDR and other commercial uses in mixed-use districts with dwelling units such that noise levels generated by commercial uses would be comparable to those in mixed-use districts that already exist throughout the City. Therefore, noise from commercial activities permitted in mixed-use districts under the proposed zoning controls would not be expected to exceed that commonly accepted in an urban environment such as San Francisco.

Increases in traffic volumes due to residential and employment growth would increase traffic-generated noise levels, although not always at levels that would be perceptible. Therefore, the EIR will analyze potential increases in traffic-generated noise in residential and mixed-use districts, including traffic from cumulative development.

State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as the California Noise Insulation Standards and are found in Title 24 of the California Code of Regulations. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior sources, the noise insulation standards set forth an interior standard of 45 dBA, DNL¹⁶ in any habitable room and, where such units are proposed in areas subject to noise levels greater than 60 dBA, DNL demonstrating how dwelling units have been designed to meet this interior standard. If the interior noise level depends upon windows being closed, the design for the structure must also specify a ventilation or air-conditioning system to provide a habitable interior environment.

No site-specific development is proposed as part of the proposed rezoning and community plans, and therefore no such proposals are analyzed here. However, the great majority of new housing anticipated to be permitted by the proposed rezoning and community plans would be in multi-family buildings. The Department of Building Inspection reviews all building plans for proposed development in San Francisco, and its review would ensure compliance with Title 24 noise standards, thereby ensuring acceptable

¹⁶ DNL is an average 24-hour noise level that accounts for the greater sensitivity of most people to nighttime noise by giving greater weight to nighttime noise.

interior noise levels in new multi-family dwelling units. Therefore, the impact of exterior noise levels on new multi-family dwellings would not be significant with regard to Title 24, and this topic will not be discussed in the EIR.

As noted, the EIR will evaluate noise from traffic generated by project and cumulative development, including effects on existing residential units.

6) <u>Air Quality/Climate</u> – Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
(a) Violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation?			<u>To Be Determined</u>
(b) Expose sensitive receptors to substantial pollutant concentrations?			<u>To Be Determined</u>
(c) Permeate its vicinity with objectionable odors?			<u>To Be Determined</u>
(d) Alter wind, moisture or temperature (including sun shading effects) so as to substantially affect public areas, or change the climate either in the community or region?			<u>To Be Determined</u>

Air Quality

Construction

No site-specific development is proposed as part of the proposed rezoning and community plans, and therefore no such proposals are analyzed here. Rather, this analysis evaluates impacts of potential future development projects that could be approved pursuant to the proposed zoning controls.

Construction activities associated with subsequent development projects that would be permitted under the proposed rezoning would occur intermittently at different sites in the project area as subsequent individual developments are proposed, approved, and implemented. Although the related impacts at any one location would be temporary, construction of these subsequent development projects could cause adverse effects on local air quality within the planning area. Construction activities could generate dust (including PM-10 and PM-2.5¹⁷) primarily from “fugitive” sources (i.e., emissions released through means other than through a stack or tailpipe) and other criteria air pollutants¹⁸ primarily from operation of heavy equipment construction machinery (primarily diesel operated) and construction worker automobile trips (primarily gasoline operated).

Fugitive dust emissions would vary from day to day, depending on the level and type of activity (particularly demolition and excavation and other earth moving), silt content of the soil, and the

¹⁷ Particulate matter less than 10 microns and 2.5 microns in diameter, respectively.

¹⁸ Ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, and lead are the six criteria air pollutants identified by the U.S. Environmental Protection Agency pursuant to the federal Clean Air Act. They are called criteria pollutants because EPA has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels.

prevailing weather. Sources of fugitive dust during construction would include vehicle movement over paved and unpaved surfaces, demolition, excavation, earth movement, grading, and wind erosion from exposed surfaces. Without mitigation, construction activities could result in significant quantities of dust, and as a result, local visibility and particulate concentrations may be adversely affected on a temporary and intermittent basis during the construction period for any particular subsequent project. In addition, the fugitive dust generated by construction would include not only PM-10, but also larger particles, which would fall out of the atmosphere within several hundred feet of the site and could result in nuisance-type impacts. Demolition of buildings constructed prior to 1980 often involves hazardous materials such as asbestos used in insulation, fire retardants, or building materials (floor tile, roofing, etc.) and lead-based paint. These issues are discussed in Section 12, Hazards.

The Bay Area Air Quality Management District (BAAQMD), in its California Environmental Quality Act (CEQA) Guidelines, has identified a set of feasible PM-10 control measures for construction activities. The BAAQMD's approach to analyses of construction impacts is to emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions. The BAAQMD considers any project's construction-related impacts to be less than significant if the required dust-control measures are implemented. (See Mitigation Measure 3, p. 69, for the dust control measures.)

Construction activities would also result in the emission of other criteria pollutants from equipment exhaust, construction-related vehicular activity and construction worker automobile trips. Emission levels for construction activities would vary depending on the number and type of equipment, duration of use, operation schedules, and the number of construction workers. Criteria pollutant emissions of ROG and NOx from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during project construction. The BAAQMD CEQA Guidelines recognize that construction equipment emit ozone precursors, but indicate that such emissions are included in the emission inventory that is the basis for regional air quality plans. Therefore construction emissions are not expected to impede attainment or maintenance of ozone standards in the Bay Area.¹⁹ The impact would be less than significant with implementation of Mitigation Measure 3, p. 69.

In light of the foregoing, air quality impacts related to construction would be less than significant with mitigation, and construction air quality will not be discussed in the EIR.

Operation

Increased vehicle traffic resulting from residential and employment growth in the project area would result in increases in emissions of criteria air pollutants. In accordance with BAAQMD CEQA Guidelines, the EIR will evaluate operational emissions of criteria air pollutants based on the consistency of the proposed rezoning with the most recently adopted regional air quality plan. A planning document's consistency with the Clean Air Plan is established through a comparison of the projections of population and vehicle use (vehicle-miles traveled) associated with implementation of the project with those upon which the Clean Air Plan is based; the extent to which the plan implements transportation control measures identified in the Clean Air Plan; and whether the plan provides buffer zones around sources of

¹⁹ Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plan*, December 1999. Available on-line at: <http://www.baaqmd.gov/pln/ceqa/index.htm>.

odors and toxics. Because the growth forecasts that will serve as the basis for the EIR's quantitative analyses include citywide growth (i.e., growth outside the Eastern Neighborhoods study area in addition to project-induced growth), the air quality analysis will account for cumulative impacts, as well.

In 1998, California Air Resources Board (ARB) identified diesel particulate matter as a toxic air contaminant based on research indicating that long-term exposure to diesel particulate can increase the risk of a person developing cancer. Based on studies that show health risk from traffic-generated pollutants evident within 1,000 feet of major roadways (particularly for downwind receptors), and that exposure to traffic-generated pollutants is "greatly reduced at approximately 300 feet," ARB's recently published *Air Quality and Land Use Handbook* recommends that local agencies "avoid siting new sensitive land uses²⁰ within 500 feet of a freeway [or] urban roads with more than 100,000 vehicles/day...."²¹ However, the *Handbook* acknowledges that "Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues."²² The EIR will include a qualitative evaluation of air quality impacts of anticipated changes in land use patterns, particularly PDR activities, and potential conflicts with identified sensitive receptors, and will qualitatively evaluate whether the proposed rezoning would result in, facilitate, or promote development of or placement of new residential uses near, land uses generally associated with potential odor impacts and/or uses that would generate substantial quantities of toxic air contaminants, including diesel particulates.

Shadow

Section 295 of the Planning Code was adopted through voter approval of Proposition K in November 1984 to protect certain public open spaces from shadowing by new structures. Section 295 prohibits the issuance of building permits for structures or additions to structures greater than 40 feet in height that would shade property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission, during the period from one hour after sunrise to one hour before sunset, unless the Planning and Recreation and Park Commissions determine that such shadow would be insignificant. The EIR will evaluate potential shadow impacts where the proposed rezoning would increase height limits adjacent or proximate to parks protected by Section 295, and where the proposed height changes could result in development of taller structures than now permitted in the vicinity of parks.

Wind

Wind impacts are generally caused by large building masses extending substantially above their surroundings, and by buildings oriented such that a large wall catches a prevailing wind, particularly if such a wall includes little or no articulation. In general, projects less than approximately 80 to 100 feet in height are unlikely to result in substantial adverse effects on ground-level winds such that pedestrians

²⁰ ARB, *Air Quality and Land Use Handbook*, April 2005. Available on the internet at: <http://www.arb.ca.gov/ch/handbook.pdf>. The *Handbook* (Table 1-1, p. 4) describes "sensitive land uses" as including residences, schools, day care centers, playgrounds, and medical facilities, as these uses are locations where "sensitive individuals" ["those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality)"] (*Handbook*, p. 2)] are most likely to spend time.

²¹ ARB, *Air Quality and Land Use Handbook* (see footnote 20), Table 1-1, p. 4.

²² ARB, *Air Quality and Land Use Handbook* (see footnote 20), footnote to Table 1-1, p. 4.

would be uncomfortable. (Such winds may exist under existing conditions, but shorter buildings do not generally cause substantial changes in ground-level winds.) The proposed changes in permitted heights would allow relatively few new locations with heights in excess of 80 feet and no revisions to height limits are proposed that would result in permitted heights in excess of 130 feet in the study area. Furthermore, the areas of 130-foot height limits would be limited to a handful of discrete locations. These would include portions of Eastern SoMa between Folsom and Harrison Streets and Essex and Fourth Streets where the height limit is already 130 feet and most sites are occupied by mid- and high-rise residential and office buildings; areas of Eastern SoMa across from the ballpark and east of Colin P. Kelley and Delancey Streets, most of which are occupied by newer mid- and high-rise residential buildings; and the San Francisco General Hospital site in the Potrero Hill subarea. Finally, for projects that, on initial examination, are found to result in potentially significant impacts on ground-level winds, design changes can typically be made to reduce these impacts to a less-than-significant level. Therefore, wind impacts are judged to be less-than-significant at a plan level of analysis, both for any particular subsequent project that might be proposed and implemented, and for cumulative development in the study area, because the proposed rezoning and community plans would not allow for structures tall enough to create such significant impacts. The Planning Department, in review of specific future projects, would continue to require analysis of wind impacts, including wind-tunnel testing of specific project designs (where the most useful information is typically gleaned) where deemed necessary, to ensure that project-level wind impacts were mitigated to a less-than-significant level. Therefore, wind impacts would not be significant and will not be analyzed in the EIR.

7) <u>Utilities/Public Services</u> – Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
(a) Breach published national, state or local standards relating to solid waste or litter control?	_____	<u>X</u>	<u>X</u>
(b) Extend a sewer trunk line with capacity to serve new development?	_____	<u>X</u>	<u>X</u>
(c) Substantially increase demand for schools, recreation or other public facilities?	<u>To Be Determined</u>		
(d) Require major expansion of power, water, or communications facilities?	_____	<u>X</u>	<u>X</u>

This analysis is based on the growth assumptions for increased population between 2000 and 2025 that are described in Section I, beginning on p. 18, as demand for utilities and services is generally evaluated in the context of citywide capacity. No site-specific development is proposed as part of the proposed rezoning and community plans, and therefore no such proposals are analyzed here.

The project area is currently served by public utilities and public services, including provision of water, wastewater collection and treatment, solid waste collection and disposal, power and telecommunication service, fire suppression and emergency medical services, police protection, public schools, and recreational facilities. Although the project would alter development patterns and potentially increase development intensity in the Eastern Neighborhoods, the proposed rezoning and community plans are not expected to result in substantial adverse physical impacts associated with the provision of new or

physically altered public utility or governmental service facilities, as explained below. A potential exception, which will be addressed in the EIR, concerns the adequacy of parks and open spaces.

Water/Wastewater

The San Francisco Public Utilities Commission (SFPUC) provides potable water for residential and business customers in San Francisco and a number of surrounding communities, and collects, treats, and disposes of residential, commercial, and industrial wastewater in the City.

The San Francisco Water Department (SFWD), a division of the SFPUC, provides water and wastewater services to approximately 2.4 million people in San Francisco, Santa Clara, Alameda, and San Mateo Counties. Eighty-five percent of the water delivered to SFPUC customers comes from Sierra Nevada snowmelt stored in the Hetch Hetchy Reservoir on the Tuolumne River in Yosemite National Park. The remaining 15 percent comes from runoff in the Alameda and Peninsula watersheds captured in reservoirs located in San Mateo and Alameda Counties. The entire regional system delivers approximately 260 million gallons of water per day (mgd) to its customers.²³

The SFWD supply system reliability is a function of hydrology, system storage, and system demand. Supply reliability is defined by the amount and frequency of water delivery deficiencies during droughts and is measured by the system's ability to sustain deliveries in dry periods. The total system-wide water consumption averages of 260 mgd exceeds the firm delivery capacity of 239 mgd. Thus, the SFPUC expects an approximate 10 to 15 percent delivery deficiency in one year out of every 10 on average.²⁴ In 1999, the SFPUC adopted a resolution to achieve 100 percent supply reliability within the City. The SFPUC is currently developing an Integrated Water Resource Plan, a planning document detailing how retail water demand, through the year 2030, can best be met through a mix of water supply options (such as groundwater, recycled water, conservation, and imported water).

The local water system provides distribution and storage for water and fire protection within the City. This system includes 14 reservoirs, 9 water tanks, 17 pump stations, and 1,250 miles of transmission lines and water mains within the City. SFWD manages distribution of potable water through two systems: a low-pressure water main system provides water for domestic and commercial uses at about 1,000 gallons per minutes (gpm), and a high-pressure system provides a dedicated water source for fire suppression at about 10,000 gpm.

Current citywide water use is approximately 84 mgd, of which about 57 percent is used by residential customers and about 33 percent by business.²⁵ Of the remaining 10 percent, most is termed "unaccounted-

²³ San Francisco Public Utilities Commission (SFPUC), <http://www.sfgov.org/site/frame.asp?u=http://www.sfwater.org/>. Viewed September 10, 2005.

²⁴ Bay Area Water Users Association, *Water Supply Master Plan*, April 2000.

²⁵ SFPUC, *City and County of San Francisco Retail Water Demands and Conservation Potential*, Prepared for the SFPUC by Margaret A. Hannaford, P.E., and Hydroconsult, Inc., November 2004. Available on-line at: http://sfwater.org/detail.cfm/MSC_ID/16/MTO_ID/NULL/MC_ID/5/C_ID/2317/holdSession/1.

for” water, a category that includes necessary, but unmetered uses such as fire fighting, main flushing, and storage facility cleaning, as well as losses due to leaking pipes.²⁶

The SFPUC is currently undertaking an update of its 2000 Urban Water Management Plan (UWMP). The analysis for the updated UWMP estimates citywide water demand, including all foreseeable development in San Francisco, through 2030, based on growth projections prepared by the Planning Department and ABAG.²⁷ The SFPUC’s forecast of future water use in San Francisco relies upon the residential projections used by the Planning Department in this EIR, and upon the employment projections of ABAG’s *Projections 2002*, which are greater than the Planning Department estimate of future job growth. Therefore, the draft 2005 UWMP accounts for and accommodates the increased residential population and changes in employment foreseen by the three project options, given that the variance between the options is “minor.”²⁸ Therefore, the project would not require a major expansion of the SFPUC’s water facilities, nor would it adversely affect the City’s water supply.

San Francisco’s wastewater collection, treatment and disposal system consists of a combined sewer system (which collects both sewer and stormwater), three wastewater treatment plants, and effluent outfalls to San Francisco Bay and the Pacific Ocean. The collection and conveyance system consists of approximately 900 miles of underground pipes throughout the City. The City discharges approximately 87 mgd of treated wastewater during dry weather. Two of the City’s treatment plants, the Southeast Water Pollution Control Plant (Southeast plant) and Oceanside Water Pollution Control Plant, operate year-round, while the third plant, the North Point Wet Weather facility, operates only during rainy periods. The Southeast plant, which serves the study area, treats all eastside sewage flows during dry weather. Treated wastewater is discharged to San Francisco Bay through a deep water outfall at Pier 80, north of Islais Creek.

When wet-weather flows exceed the capacity of the overall system, the excess is discharged from 29 combined sewer overflow (CSO) structures located along the waterfront from Fisherman’s Wharf to Candlestick Point. All discharges, whether through the dry-weather outfall or the CSO structures, are operated in compliance with permits issued by the Regional Water Quality Control Board and with the U.S. EPA’s Combined Sewer Overflow Control Policy.

The SFPUC has identified a large area of the South of Market – mostly in the western portion, but including blocks in Eastern SoMa west of Third Street and in Showplace Square– where existing deficiencies in the sewer system have resulted in flooding during periods of heavy rain. These problems typically relate to the elevation of the street (or building basement, where applicable) being below the grade of the sewer line, and can result in interior flooding when wastewater (primarily storm runoff) flows back through the building’s sewer pipes during heavy rains. As a result, the SFPUC has begun

²⁶ According to the SFPUC’s 2000 Urban Water Management Plan, the system’s loss rate is approximately the same as the nationwide average of 10 percent. (San Francisco Public Utilities Commission (SFPUC), *Final Urban Water Management Plan for the City and County of San Francisco Public Utilities Commission*, February 2001. Available on-line at: http://sfwater.org/detail.cfm/MSC_ID/101/MTO_ID/NULL/MC_ID/7/C_ID/2442/holdSession/1.)

²⁷ Michael Carlin, Assistant General Manager—Water Enterprise, San Francisco Public Utilities Commission, letter to Environmental Science Associates, October 18, 2005. Available for review by appointment at the Planning Department, 1660 Mission Street, San Francisco, in Case File No. 2004.0160E.

²⁸ See footnote 29, above.

requiring review by Department of Public Works (DPW) hydraulic engineers of building permits in this area so that improvements can be made on a project-by-project basis to ensure that properties are removed from risk of flooding. For properties prone to flooding because of the grade differential between the building and the sewer main, a building permit application could trigger a requirement to install a valve to prevent reverse sewage flow, along with ensuring that the building's internal sewer piping can store building-generated wastewater until storm flows recede and building flows can enter the sewer. In some instances where building floor levels are particularly low relative to the sewer main, pumps could be required to force building wastewater flow into the main. This DPW-SFPUC review process will ensure, as older buildings are renovated and new structures are built, that localized internal flooding in the SoMa and Showplace Square areas is gradually eliminated as a concern.

In 2004, the SFPUC initiated a Wastewater Master Planning process to develop a long-term strategy for the management of the City's wastewater and stormwater; to address system deficiencies, community impacts, public interests, and future needs; and to maximize system reliability and flexibility. The planning process is intended to address hydraulic deficiencies, reduce and/or disinfect CSOs, redirect discharges from the Bay to the Ocean, maximize water conservation and reuse, decentralize wastewater treatment, separate sections of the combined sewer system into separate sewer and storm systems, eliminate or minimize odors, address biosolids, and incorporate innovative and environmentally-beneficial technologies. When published, the draft Master Plan will undergo separate CEQA review.

The SFPUC has already begun an interim five-year capital improvement program to, among other things, reduce the potential for on-street flooding during heavy rains that can occur in certain low-lying areas of the City. The program is aimed at reducing flood risk in many neighborhoods, upgrading treatment plants, and curbing wastewater odors at the Southeast plant. It is budgeted for \$30 million in improvements in fiscal year 2005-06, including two projects in the Mission District, flooding mitigation on Shotwell Street, and improvements to the 18th Street sewer.²⁹ (This has been an area subject to flooding on the street in heavy rains, due to inadequacy in the current sewer.) The SFPUC hopes that the interim five-year program will address some of the most urgent flooding and odor issues in the City, with more comprehensive improvements coming as part of the Wastewater Master Plan described above. Future projects in this five-year program could include enlargement of the Guerrero Street sewer and improvements on 22nd Street in the Mission (York to Hampshire), 17th Street on lower Potrero Hill (Connecticut to Missouri), and Sixth Street in the SoMa neighborhood.³⁰

Section 10, Water, p. 54, addresses the potential for the increase in the volume of CSO discharges to degrade water quality, in the context of the City's compliance with existing regulatory requirements and ongoing planning efforts addressing the citywide capacity of the combined system and long-term protection of water quality and beneficial uses of San Francisco Bay.

²⁹ "SFPUC Launches Five Year \$150 Million Wastewater Improvement Program to Reduce Flood Risk Citywide, Curb Wastewater Odors," 3/1/05; viewed December 12, 2005, on the SFPUC website at: http://sfwater.org/detail.cfm/MSC_ID/74/MTO_ID/114/MC_ID/5/C_ID/2414/holdSession/1.

³⁰ "Five Year Short Term Flood Reduction Capital Improvement Program," November 4, 2004; viewed December 12, 2005, on the SFPUC website at: http://sfwater.org/detail.cfm/MSC_ID/91/MTO_ID/NULL/MC_ID/10/C_ID/2234/holdSession/1.

In light of the above, impacts related to water and wastewater would be less than significant, and will not be discussed in the EIR.

Solid Waste

According to the California State Integrated Waste Management Act of 1989, San Francisco is required to adopt an integrated waste management plan, implement a program to reduce the amount of waste disposed, and have its waste diversion performance periodically reviewed by the Integrated Waste Management Board. Reports filed by the San Francisco Department of the Environment showed the City generated 1.88 million tons of waste material in 2002. Approximately 63 percent (1.18 million tons) was diverted through recycling, composting, reuse, and other efforts while 700,000 tons went into landfill. The diversion percentage increased from 52 percent reported in 2001.³¹

Solid waste generated in San Francisco is transported to, and disposed of at, the Altamont Landfill in Alameda County. The Altamont Landfill has a permitted peak maximum daily disposal of 11,150 tons per day and is currently operating at approximately 4,000 to 5,000 tons per day. An expansion of the landfill was approved by the county in 2000 and construction is expected to begin in 2006. This expansion will substantially increase Altamont Landfill's capacity to accommodate future waste generation by the landfill's existing clients including the City and County of San Francisco.³² While increased residential and commercial growth that would be made possible by the project would incrementally increase total waste generation from the City, the increasing rate of diversion through recycling and other methods would result in a decreasing share of total waste that requires deposition in the landfill. Given this, and given the expansion of Altamont Landfill anticipated to be started in 2006, the project would not result in this or any other landfill exceeding its permitted capacity, and the project would result in a less-than-significant impact. For these reasons, solid waste will not be discussed in the EIR.

Power and Telecommunications

San Francisco uses about 5,000 gigawatt-hours (GWh) of electricity per year and reaches a peak demand of about 900 megawatts (MW) in a given year.³³ According to the SFPUC's Electricity Resource Plan from 2002, more than 60 percent of this demand is used for commercial purposes while residential use accounts for 27 percent. From 1994 to 2000, consumption of electricity in San Francisco grew by 9 percent. Overall electricity in the City use decreased by about 2.4 percent in 2001. This pattern can partially be explained by sharp fluctuations in economic growth across multiple sectors of the economy in 2000 and 2001. The SFPUC expects an approximate 20 percent increase in peak electricity demand in San Francisco to between the years of 2002 and 2012.³⁴

³¹ City Controller's Office, "San Francisco Community Indicators: Physical Environment," May 2004. Available on the internet at: http://www.sfgov.org/wcm_controller/community_indicators/physicalenvironment/recycling/recycling.htm

³² Melissa St. John, Altamont Landfill, personal communication with Environmental Science Associates, September 13, 2005.

³³ A megawatt is one million watts. A gigawatt is one billion watts. A watt is a unit of power. Peak demand describes the instantaneous power demand. When time is added as a unit of measure (e.g., gigawatt-hour), the term becomes an expression of power (energy) used over time.

³⁴ San Francisco Public Utilities Commission (SFPUC) and San Francisco Department of Environment, *The Electricity Resource Plan*, December 2002.

Provision of an adequate supply of electricity to meet the City's needs involves two main factors: generation and transmission. Generation involves the production of electricity, whether by conventional large fossil-fueled power plants, hydroelectric dams, or some other centralized source and by decentralized sources such as solar panels on individual buildings (for purposes of this discussion, generation also includes conservation practices that reduce power demand), while transmission involves moving electricity from where it is generated to users in San Francisco. The City currently has two fossil-fuel plants, the Hunters Point plant and the Potrero plant. Electricity generated by these plants is supplemented by power produced elsewhere and brought to San Francisco over transmission lines. Because of San Francisco's location at the end of a peninsula, the transmission options have until recently been limited to Pacific Gas & Electric Co. (PG&E) lines that enter the City from the south.

The existing power plants – particularly the nearly 60-year-old Hunters Point plant – are relatively old and produce higher levels of pollutants than newer generating facilities. Accordingly, the City has been working with PG&E to enable closure of the Hunters Point plant, which the utility operates. Two key power lines that will make possible the shutdown are under construction– the Potrero-Hunters Point line, linking PG&E electrical substations adjacent to each of the existing plants, and the Jefferson-Martin line, linking PG&E's Jefferson substation in unincorporated western Redwood City near Interstate 280 to the Martin substation at Bayshore Boulevard and Geneva Avenue in Brisbane. Once finished, the Jefferson-Martin line will allow for an additional 400 megawatts of electricity to flow into the region—enough energy to power about 300,000 average homes. Its completion, expected in 2006, will permit PG&E to request permission from the California Independent System Operator (ISO), which manages the state's electricity transmission system, to close the Hunters Point plant.³⁵

The City also hopes to facilitate closure of the Potrero plant, currently operated by Mirant Corporation. As part of this strategy, the City is planning to install four low-emission, natural-gas-fired combustion turbines – three along the Bay east of the new Muni Metro maintenance facility at 25th and Illinois Streets (just south of the existing Potrero plant), and one at San Francisco International Airport. A Preliminary Staff Assessment (PSA) issued by the California Energy Commission on September 13, 2005, identified no significant unmitigated impacts of this proposed project. According to the PSA, the combustion turbine plant would be more reliable than the existing Hunters Point and Potrero plants.³⁶ The new combustion turbines and the power lines discussed above are all part of what is known as the "ISO Revised Action Plan for San Francisco," which will allow the ISO to release the Hunters Point and Potrero power plants from their Reliability Must-Run (RMR) Agreements, under which Mirant and PG&E are required to operate these plants as part of the state's overall energy supply system. Release by the ISO from the plants' RMR Agreements is required before the power plants can be closed. The Action

³⁵ Pacific Gas and Electric Co. website: http://www.pge.com/field_work_projects/street_construction/jefferson_martin/ and http://www.pge.com/field_work_projects/street_construction/potrero_hunterspoint/. Accessed November 4, 2005.

³⁶ California Energy Commission, *Preliminary Staff Assessment (PSA) of the San Francisco Electric Reliability Project*, September 13, 2005. Available on the CEC website at: <http://www.energy.ca.gov/sitingcases/sanfrancisco/index.html>. The PSA indicated that CEC staff was awaiting further information regarding archaeological resources, soil contamination, and stormwater runoff prior to reaching conclusions in these areas. (A PSA is the CEC's functional equivalent of a Draft EIR.)

Plan was approved by the ISO Board of Governors in November 2004 and is currently being implemented.³⁷

Another project that could eventually help bring about closure of the Potrero plant is a proposed transbay power line that would run beneath Suisun, San Pablo, and San Francisco Bays, from Pittsburg to San Francisco. This project, which would be privately constructed and eventually owned and operated by the City of Pittsburg, was conceptually approved by the ISO Board of Governors in September 2005 “to address the identified reliability concerns in northern San Mateo County and San Francisco,” and is currently scheduled to be operational by 2009. Separate environmental review of the Trans Bay Cable Project is currently under way.³⁸

The City is also promoting and undertaking electricity production through “distributed generation,” which involves many smaller power-generating facilities, as opposed to traditional centralized plants. For example, in 2003, the City installed a 675-kilowatt solar power array atop Moscone Convention Center and in 2005 installed another 255 kilowatts of solar generation at the Southeast Wastewater Treatment Plant and approved the installation of solar panels on the North Point Wet Weather Facility and at Norcal Waste Systems’ Recycle Central facility at Pier 96. Together, these four facilities will have the capacity to generate more than 1.5 megawatts.³⁹ Finally, the City is also actively promoting energy conservation through such projects as improving efficiency in public buildings and encouraging businesses and residents to conserve through programs operated by the Department of the Environment and the SFPUC.

In terms of statewide electrical generation, the California Energy Commission and California Public Utilities Commission in September 2005 released the state’s “Energy Action Plan II,” with the primary goal of ensuring that “California’s energy ... be adequate, affordable, technologically advanced, and environmentally-sound.” The Plan calls for “energy efficiency and demand response as the State’s preferred means of meeting growing energy needs,” with renewable power and distributed generation intended as the first sources of additional electricity, followed by “clean and efficient” fossil-fuel plants. The Plan also notes the need to improve the state’s electricity distribution grid. The Energy Action Plan II sets forth specific actions in the areas of Energy Efficiency; Demand Response; Renewables; Electricity Adequacy, Reliability and Infrastructure; Electricity Market Structure; Natural Gas Supply, Demand, and Infrastructure; Transportation Fuels Supply, Demand, and Infrastructure; Research, Development and Demonstration; and Climate Change.⁴⁰

³⁷ ISO, Staff memorandum, “Approval of the Trans Bay HVDC Cable Project,” September 2, 2005. Available on the ISO website at: <http://www.caiso.com/docs/2005/09/06/2005090614262120992.pdf>. Reviewed November 5, 2005.

³⁸ City of Pittsburg news release, “Trans Bay Cable Project Gets Green Light From California ISO.” September 12, 2005. Available on City of Pittsburg website at: <http://www.ci.pittsburg.ca.us/NR/rdonlyres/F0615329-07C2-4535-A56C-A83B5F38D025/0/PR091205TransBayCable.pdf>. Reviewed November 5, 2005. See also footnote 37, above.

³⁹ By comparison, the Potrero and Hunters Point plants have a combined on-line capacity of about 570 megawatts, according to the California Energy Commission. Available on the CEC website: <http://www.energy.ca.gov/database/index.html#powerplants>; accessed November 4, 2005.

⁴⁰ California Energy Commission and California Public Utilities Commission, *Energy Action Plan II*. September 21, 2005. Available on the CEC website at: http://www.energy.ca.gov/energy_action_plan/2005-09-21_EAP2_FINAL.PDF. Reviewed November 5, 2005.

The 5,000 gigawatt-hours of electricity used in San Francisco represents about 1.8 percent of statewide electricity production (including electricity imported from the northwest and southwest);⁴¹ the 900 megawatts of peak demand represent about 1.5 percent of statewide peak demand.⁴² Both of these figures are less than the City's proportional share of statewide population, which is about 2.2 percent. The 20 percent increase in demand forecast by the SFPUC would raise the City's share of statewide electricity to about 2.2 percent by 2012 (if other California demand held steady, which is unlikely). With continuing progress in improving the distribution network to bring power to San Francisco, future electrical demand in the City would become more an issue of statewide generating capacity, combined with state and local efforts to reduce consumption. In light of the state and local efforts under way, the incremental increase in demand for electricity in San Francisco from subsequent future projects indirectly resulting from the proposed rezoning and community plans would not be significant.

The City's demand for natural gas is about 27 million British thermal units (MMBtu) annually. Natural gas peaked for San Francisco in 1989 at approximately 32 MMBtu and has not returned to that level.⁴³ Although not subject to statewide interruptions like the electricity grid, natural gas supplies are also of concern statewide, not least because of recent price increases. According to the California Energy Commission, natural gas prices in 2004 were double the price of 2002 and earlier years, in large part because of increased demand throughout the western United States, as well as California's own demand. California imports about 85 percent of its natural gas supply, from four major supply basins located in the southwest, Rocky Mountain region, and western Canada. The Commission's 2003 *Integrated Energy Policy Report* "identified strategies to address California's natural gas supply, demand, and price challenges. These strategies included increasing energy efficiency, installing more renewable energy electricity-generating facilities, producing more domestic natural gas supplies, and importing natural gas from new supply sources."⁴⁴ In the context of these statewide planning efforts, the incremental increase in natural gas consumption that would result from subsequent future projects approved and implemented pursuant to the proposed rezoning controls would be less than significant.

In San Francisco, gas and electricity are generally distributed by PG&E and the primary communication (telephone) network is generally owned and operated by SBC. Businesses and residents within San Francisco have access to a variety of telecommunications services. Over the past decades, communities such as San Francisco have been connected with hard-wire and fiber-optic systems to provide access to telephone, cable television, internet, and other digital services. The Eastern Neighborhoods are currently served by such utilities and subsequent future development projects that would be fostered with the proposed Eastern Neighborhood Rezoning and Community Plans could tap into existing power and communications grids. In general, services are provided to consumers on a pay-

⁴¹ California Energy Commission, California Gross System Power for 2004. Available on the CEC website at: http://www.energy.ca.gov/electricity/gross_system_power.html. Viewed November 5, 2005.

⁴² California Energy Commission, California Public Utilities Commission, California Independent System Operator, "California's Electricity Situation: Summer 2005," February 22, 2005. Available on the CEC website at: http://www.energy.ca.gov/electricity/2005_summer_forecast/2005-02-22_SENATE_PRESENTATION.PDF. Viewed November 5, 2005.

⁴³ San Francisco Redevelopment Agency, *Bayview Hunters Point Redevelopment Projects and Zoning Draft EIR*, October 19, 2004. Available on SFRA website at: <http://www.sfgov.org/site/uploadedfiles/sfra/Projects/Bayview%20HP%20DEIR.pdf>. Reviewed December 9, 2005.

⁴⁴ California Energy Commission, "Natural Gas Assessment Update." February 2005. Available on the CEC website at: <http://www.energy.ca.gov/2005publications/CEC-600-2005-003/CEC-600-2005-003.PDF>, November 5, 2005.

as-you-go basis, and the physical effects that result are those from large-scale, systemwide improvements by telecommunications providers. Because the project area is intensively developed, provision of additional telecommunications services would be limited in effect to temporary construction-period impacts such as in-street trenching. These effects, common in urban area, would not be considered significant.

Based on the above discussion of electricity and natural gas supplies, the project would not, in and of itself, require a major expansion of power facilities nor would major new communications facilities be required. Therefore, the energy demand and need for communications infrastructure associated with the proposed project would not result in a significant physical environmental effect, and this topic will not be discussed in the EIR.

Fire Suppression and Emergency Medical Services

The San Francisco Fire Department (SFFD), headquartered at 698 Second Street, provides fire suppression and emergency medical services to the City and County of San Francisco, including the Eastern Neighborhoods. The SFFD consists of 2 divisions, which are further divided into 10 battalions (with 9 battalion chiefs) and 42 active stations located throughout the City.⁴⁵ Eleven fire stations serve the Eastern Neighborhoods (stations 1, 7, 8, 9, 11, 17, 25, 29, 35, 36, and 37), of which four are located in the project area and the remainder, nearby. Combined, these stations are equipped with 11 engine companies, 6 truck companies and both SFFD rescue squads.⁴⁶ Engine companies and rescue squads are staffed with one officer and three firefighters each. Truck companies are staffed with one officer and four firefighters. There are also four medic units (ambulances) in the project area, each staffed with one firefighter-EMT and one firefighter-paramedic.⁴⁷ There are two fireboats at station 35 (Pier 22 1/2), although one is a reserve vessel. Additionally, development of the Mission Bay South Redevelopment Area includes a new fire station upon completion of 1,000 new residential units south of the China Basin Channel, which will be proximate to Eastern SoMa, Showplace Square, and the Central Waterfront.⁴⁸ This station will consist of one engine company, one truck company and one medic unit, and will be between Showplace Square, the southern part of Eastern SoMa, and the northern part of the Central Waterfront.

Each of the proposed rezoning options would introduce new uses and associated population increases, which would create some additional demand for fire suppression and emergency medical services in the Eastern Neighborhoods, relative to the 2025 baseline and to existing conditions. As noted in the project description, the increase in population would vary between the three options by no more than 2.5 percent, and the increase in employment, by no more than 5 percent. Therefore, there would not be substantial differences between the options in terms of demand for fire suppression and emergency medical services. All of the options would result in fewer PDR jobs in the Eastern Neighborhoods than exist today, although Option A would result in an 11 percent increase in PDR employment citywide, compared to existing conditions – about 1.5 times the increase foreseen under the 2025 baseline – while Option C

⁴⁵ San Francisco Fire Department, http://www.sfgov.org/site/fire_index.asp?id=4451, accessed September 2, 2005.

⁴⁶ Madden, Kelly, San Francisco Fire Department, Executive Secretary to the Chief of Department, email communication, September 2005.

⁴⁷ San Francisco Fire Fighters Union Local 798, Memorandum of Understanding Between the City and County of San Francisco and the Fire Fighters Union Local 798, June 2003.

⁴⁸ Kochevar, Chief Richard, San Francisco Fire Department Chief of Operations, personal communication, September 2005.

would generate less than a 1 percent increase in PDR jobs citywide (and a substantial decrease in the Eastern Neighborhoods). Option A, therefore, could result in an incremental increase, compared to the other options, in the number of light-industrial businesses citywide that handle hazardous materials, although the actual difference would depend on which PDR businesses would be involved. (Options A and B would result in a decrease in such businesses in the study area.) This relatively small potential increase in the number of PDR businesses, and the incremental difference in numbers between options, would not be anticipated to result in the need for new or expanded Fire Department facilities, and therefore would not result in a significant impact.

In terms of differential effect on sub-areas within the Eastern Neighborhoods, the greatest percentage increase in population is forecast in the Central Waterfront, particularly under Option A, which assumes housing is developed at the Potrero Power Plant site. The Mission District would continue to be the most populous of the four Eastern Neighborhoods, although, as noted in the project description, the numerical increase in the Mission's population would represent the smallest percentage increase among the Eastern Neighborhoods (8 to 17 percent, depending on the option). Thus, the increased population would be spread among all four neighborhoods.

Development that could be accommodated by the proposed project, therefore, would increase the number of fire suppression and emergency medical service calls received from the project area, and potentially the level of regulatory oversight that must be provided in regard to hazardous materials storage and development permits. However, the increases would be incremental, funded largely through project related increases to the City's tax base, and would not likely be substantial in light of the existing demand and capacity for fire suppression and emergency medical services in the City. The proposed project would not require the construction of new or physically altered facilities or significantly increased staff. Furthermore, in November 2005, San Francisco voters passed a measure to prevent closure of any existing firehouses. Therefore, the project would not be expected to have any substantial impact on fire services. Thus, this impact would be less than significant, and fire and emergency medical services will not be discussed in the EIR.

Police Protection

The San Francisco Police Department (SFPD), headquartered at 850 Bryant Street, provides police protection for the City and County of San Francisco including the Eastern Neighborhoods. The SFPD consists of four Bureaus and 10 Districts located throughout the City. The Southern, Mission and Bayview District Police Stations have jurisdiction over the project area.⁴⁹

Each of the proposed project options would create some additional demand for police services in the Eastern Neighborhoods, relative to both 2025 baseline and existing conditions. Because of the relatively minor differences between population increases forecast for the different rezoning options, the difference between each option's effects on police services would not be substantial. Development that could be accommodated by the proposed project, therefore, would increase the number of calls received from the area or the level of regulatory oversight that must be provided. However, this increase in responsibilities

⁴⁹ San Francisco Police Department, http://www.sfgov.org/site/police_index.asp?id=19455, accessed September 2, 2005.

would not likely be substantial in light of the existing demand and capacity for police protection services in the area. The proposed project would not increase demand in excess of amounts provided for in the project area and would not require the construction of any new police facilities. The project therefore would not be expected to adversely affect the ability of the Police Department to adequately provide police protection services to the project area and to the City as a whole. Thus, this impact would be less than significant, and police services will not be discussed in the EIR.

Public Schools

There are three public high schools (John O'Connell, International Studies Academy, Downtown Continuation) in the project area, which is within the attendance district for Mission High School. There are three middle schools (Enola Maxwell, Potrero Hill, Horace Mann Alternative) within the project area which is served by six middle school districts (Enola Maxwell, Potrero Hill, Everett, Franklin C, Aptos B, Hoover C). Thirteen elementary school attendance districts serve the project area. Eight of these schools lie within the project boundary and are concentrated primarily in the Mission District (Bessie Carmichael, Daniel Webster, Starr King, Bryant, Marshall, Chavez, George R. Moscone, Buena Vista Alternative).

Student enrollment in the San Francisco Unified School District (SFUSD) has been decreasing steadily over the past ten years. During the 2004-05 academic year, total enrollment was 58,735, a decline of about 5.7 percent from enrollment for the 1994-95 academic year, which was about 62,300.⁵⁰ Student enrollment in the SFUSD has been declining approximately 0.1 percent (roughly 622 students) annually.⁵¹ Private school enrollment has also been decreasing, with student enrollment almost eight percent less for the 2004-05 academic year than student enrollment for the 1999-2000 academic year.

To estimate the number of students generated by new housing development, the state of California uses student generation rates developed by the California State Department of Education. The California State Department of Education estimates that one dwelling unit would generate an average of 0.7 students, consisting of 0.5 elementary or middle school students and 0.2 high school students. These rates are a result of statewide sampling that incorporates widely varying dwelling unit types, households, and other demographic characteristics and are routinely used by school districts that have not developed rates for their local jurisdictions. However, the state rates may not reflect the urban characteristics of the City, which has fewer children (and, therefore, students) than most communities statewide. For this reason, the SFUSD employs a student generation rate of 0.203 students per new housing unit for planning purposes.⁵² The resulting increase in enrollment due to growth forecast by 2025 would be up to about 2,000 students in the Eastern Neighborhoods, and up to about 7,500 students citywide, which would be more than 4,000 greater than the 1994-95 enrollment. Compared to the 2025 baseline, the enrollment increases would be up to about 1,400 additional students in the Eastern Neighborhoods and up to about 3,700 citywide.

⁵⁰ Ritu Khanna, San Francisco Unified School District, personal communication with Environmental Science Associates, September 7, 2005.

⁵¹ California Department of Education, *DataQuest*, <http://data1.cde.ca.gov/dataquest/>, accessed August 2005.

⁵² U.S. Department of Transportation Federal Transit Administration, City and County of San Francisco, Peninsula Corridor of Joint Powers Board, and San Francisco Redevelopment Agency, *Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Final EIS/EIR*, March 2004; p. 4-19. Available for review by appointment at the Planning Department, 1660 Mission Street, San Francisco, in Case No 2000.048E and also available at www.transbayproject.org.

Because of the relatively minor differences between population increases forecast for the different rezoning options, the difference between each option's effects on enrollment would not be substantial.

The Leroy F. Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50), restricts the ability of local agencies, such as the City and County of San Francisco, to deny land use approvals on the basis that public school facilities are inadequate. The payment of development impact fees is intended to compensate for potential impacts to local school districts that may be attributed new developments. Development impact fees are based on the type of land use and its size, rather than the anticipated number of new students that may be generated. In February 2005, the San Francisco Board of Education conducted a study of the 1994 established development impact fees and adjusted fees went into effect in June 2005. The current SFUSD fees are \$2.24 per square foot of residential development, \$0.27 per square foot of office development, and \$0.18 per square foot of retail/service/self-storage development. Fees of \$0.09, \$0.21, \$0.22 and \$0.24 per square foot of lodging/hotel/motel, warehouse/industrial/manufacturing, hospital, and research and development respectively are also charged by the SFUSD.⁵³

Local jurisdictions are precluded under state law (SB 50) from imposing school-enrollment-related mitigation beyond the school development fees. The collection of these fees, therefore, is considered under SB 50 to fully mitigate any potential effects associated with additional development that could result from implementation of the proposed Eastern Neighborhoods Rezoning and Community Plans project, and the project impact would be considered less than significant. Thus schools will not be discussed in the EIR.

Recreation

Project impacts on recreation, parks and open space will be detailed in the EIR.

Cumulative Impacts

Because each of the above analyses takes account of projected citywide population growth, the analyses include reasonably foreseeable cumulative development, and cumulative impacts, therefore, would be less than significant.

⁵³ Philip M. Smith, San Francisco Unified School District, Director of Real Estate and Asset Management Office, personal communication with Environmental Science Associates, September 8, 2005.

8) <u>Biology</u> – Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
(a) Substantially affect a rare or endangered species of animal or plant or the habitat of the species?	_____	<u>X</u>	<u>X</u>
(b) Substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any resident or migratory fish or wildlife species?	_____	<u>X</u>	<u>X</u>
(c) Require removal of substantial numbers of mature, scenic trees?	_____	<u>X</u>	<u>X</u>

The project area is virtually fully developed with buildings and other improvements such as streets and parking lots. Other than Potrero Hill and the non-NEMIZ⁵⁴ portion of the Mission District, most of the project area consists of structures that have been in industrial use for many years. As a result, there is little in the way of landscaping or other vegetation, with the exception of the relatively few parks that exist. No existing parks would be converted to non–open-space use. Trees are mostly limited to street trees, other than trees in the existing parks. Because future development projects that would be expected to occur subsequent to adoption and implementation of the proposed project would largely consist of new construction of housing in these heavily built-out former industrial neighborhoods, there would be little in the way of loss of vegetation or disturbance of wildlife other than common urban species. Furthermore, the proposed project would not result in substantial changes in zoning, height limits, or land use in large portions of the project area, including Potrero Hill and the non-NEMIZ Mission District. Therefore, the project would not affect any threatened, rare or endangered animal or plant life or habitat, nor would it interfere with any resident or migratory species, nor would it affect any threatened, rare, or endangered species or habitat. Based on the foregoing, the proposed project would not result in any significant effects related to biological resources, nor would the project –which would have virtually no biological impact in and of itself– contribute to any cumulative effects in San Francisco or regionally, and this topic will not be analyzed in the EIR.

9) <u>Geology/Topography</u> – Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
(a) Expose people or structures to major geologic hazards (slides, subsidence, erosion and liquefaction)?	_____	<u>X</u>	<u>X</u>
(b) Change substantially the topography or any unique geologic or physical features of the site?	_____	<u>X</u>	<u>X</u>

This analysis is based on the general assumptions concerning the growth assumed in the Eastern Neighborhoods that are described in the project description on p. 17. No site-specific development is proposed as part of the proposed rezoning and community plans, and therefore no such proposals are analyzed here. Rather, this section evaluates potential future development in the project area at a program level of detail and sets forth the process by which future site-specific development projects would be

⁵⁴ NEMIZ – Northeast Mission Industrial Zone

evaluated. As noted in the project description, subsequent development projects that could be approved and implemented pursuant to the proposed zoning controls are anticipated to be concentrated in a limited number of subareas within the study area. These include: Showplace Square and the area immediately to the east; the Northeast Mission; part of the Central Waterfront along Illinois, Third, Tennessee, and Minnesota Streets; and in Eastern SoMa south, southwest, west, and northwest of South Park, as well as between approximately Fifth and Seventh Streets. Therefore, the analysis focuses on these areas.

Seismic Hazards

The San Francisco General Plan Community Safety Element contains maps that show areas of the City subject to geologic and seismic hazards. In addition, the Association of Bay Area Governments (ABAG) has modeled groundshaking that would be expected in San Francisco as a result of a major earthquake on one of the regional faults and published maps showing areas of other potential geologic hazards in the Bay Area. The California Department of Conservation has published official maps designating earthquake fault zones where a fault investigation could be required or construction of structures for human occupancy could be prohibited in accordance with the Alquist-Priolo Earthquake Fault Zoning Act. This agency has also produced official maps showing areas that could be subject to liquefaction or earthquake-induced landslides and would require investigation and implementation of measures to reduce the potential for liquefaction or earthquake-induced landslides in accordance with the Seismic Hazards Mapping Act.

The Seismic Hazard Mapping Act was passed in 1990 following the Loma Prieta earthquake to reduce threats to public health and safety and to minimize the loss of life and property by identifying and reducing or avoiding seismic hazards. Under this act, the California Department of Conservation has produced seismic hazard zone maps delineating areas of potential liquefaction and earthquake-induced landslides in much of the Bay Area, and has plans to produce additional maps for those areas not currently mapped. Cities, counties, and state agencies are directed to use the seismic hazard zone maps in their land-use planning and permitting processes. The areas of potential liquefaction and earthquake-induced landslides are mapped on a broad scale based on regional information and the Seismic Hazards Mapping Act requires that site-specific geotechnical investigations be performed prior to permitting most development projects within an identified hazard zone. Evaluation and reduction of seismic hazards identified must be conducted in accordance with guidelines established by the California State Mining and Geology Board and Southern California Earthquake Center.⁵⁵ As discussed below, liquefaction and earthquake-induced hazard zones are mapped within the project area. Subsequent development projects proposed and constructed pursuant to the revised use districts and height limits that would be implemented as part of the project, if located within these zones, would be subject to the requirements of the Seismic Hazards Mapping Act. The following analysis is based on information available from these resources.

⁵⁵ California Department of Conservation, State Mining and Geology Board, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, 1997. Available at <http://gmw.consrv.ca.gov/shmp/SHMPpgminfo.htm>; Southern California Earthquake Center, *Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction Hazards in California*, 1999. Available at <http://gmw.consrv.ca.gov/shmp/SHMPpgminfo.htm>; and Southern California Earthquake Center, *Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Landslide Hazards in California*, 2002. Available at <http://gmw.consrv.ca.gov/shmp/SHMPpgminfo.htm>. Viewed September 10, 2005.

The San Francisco Bay Area is a region of high seismic activity because of faulting within the San Andreas system. The principal faults of this system are shown on Figure 8 and include the San Gregorio, San Andreas, Hayward-Rodgers Creek, Calaveras, Concord-Green Valley, and Greenville Faults plus the Mt. Diablo Thrust.⁵⁶ The U.S. Geological Survey (USGS) estimates that there is a 62 percent probability of at least one magnitude 6.7 or greater earthquake occurring within the San Francisco Bay Area before 2031. While a magnitude 6.7 or greater earthquake would most likely occur on one of the seven principal faults, it could also occur on a different known fault or a previously unidentified fault.

Surface Rupture

Surface rupture⁵⁷ is the most easily avoided seismic hazard. The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to reduce the hazard of surface faulting to structures for human occupancy. In accordance with this act, the State Geologist established regulatory zones called “earthquake fault zones” around the surface traces of active faults and published maps showing these zones. No part of the Eastern Neighborhoods study area is located within an Alquist-Priolo Special Studies Zone,⁵⁸ and no known active fault exists within San Francisco. The closest active faults are the San Andreas Fault located approximately 8 miles southwest of Eastern SoMa and the Hayward –Rodgers Creek Fault located approximately 10 miles northeast of Eastern SoMa. Therefore, surface rupture in the project area is unlikely.

Groundshaking

As is true for the entire region, the Eastern Neighborhoods study area could be subject to strong seismic shaking in an earthquake. ABAG predicts that the bedrock portions of the project area would experience light (Modified Mercalli Intensity V)⁵⁹ to strong (Modified Mercalli Intensity VII) groundshaking in the event of a major earthquake on the San Andreas, Hayward-Rodgers Creek, or San Gregorio fault systems.⁶⁰ These areas include Potrero Hill, portions of the Central Waterfront atop the former Point San Quentin (between about 18th and 22nd Streets west of Third Street, and between about 20th and 23rd Streets east of Third Street), and a small area of the Northeast Mission/Showplace Square area (around 16th Street and Potrero Avenue). However, the flat lying areas surrounding Potrero Hill which are underlain by unconsolidated materials including artificial fill – including most of Eastern SoMa and the Mission District and much of the Central Waterfront – would be subject to strong (Modified Mercalli Intensity VII) to violent (Modified Mercalli Intensity IX) groundshaking in the event of a major

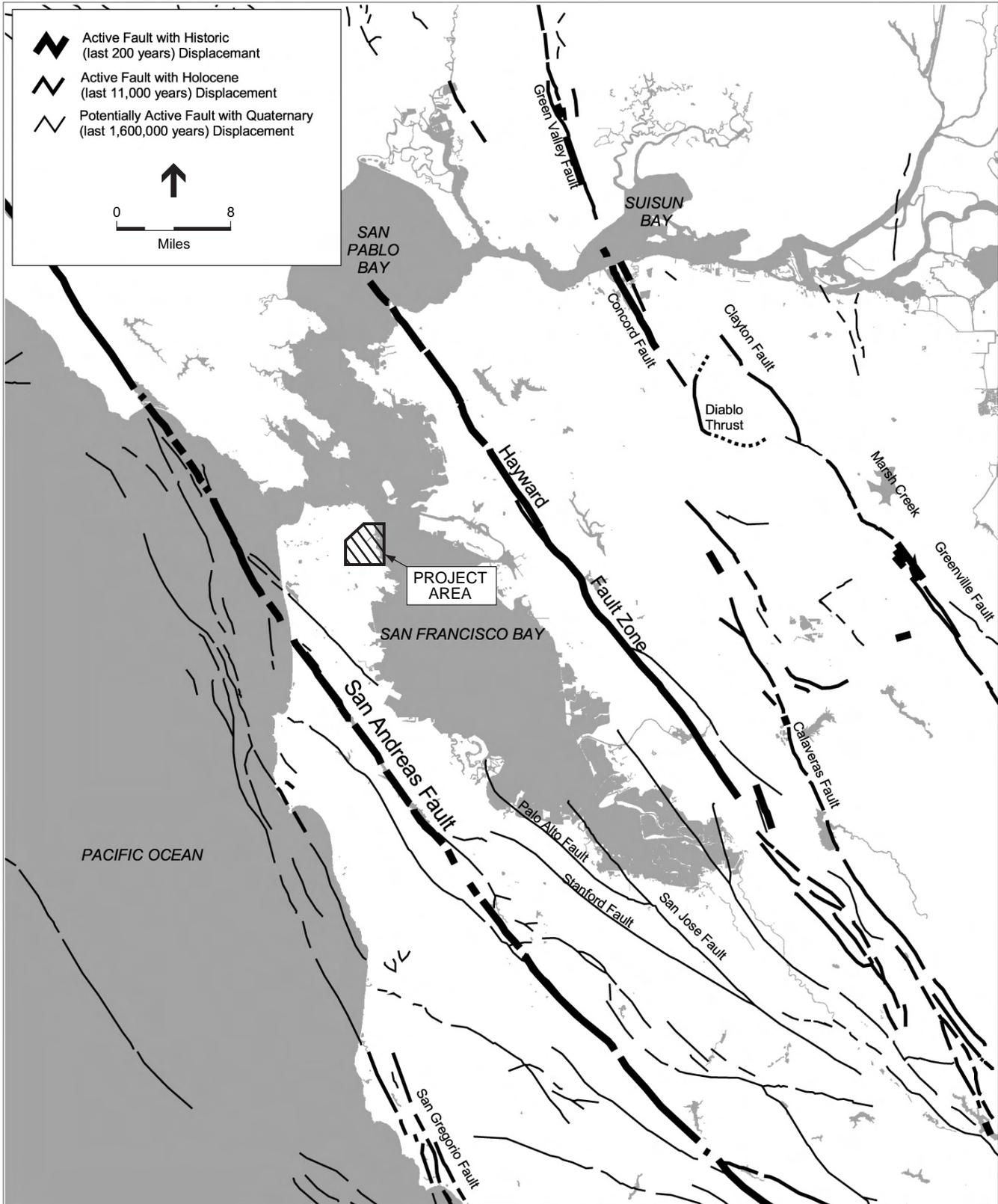
⁵⁶ United States Geological Survey, *Earthquake Probabilities in the San Francisco Bay Region: 2002 – 2031*. By Working Group on California Earthquake Probabilities, Open File Report 03-214, 2003. Available at <http://pubs.usgs.gov/of/2003/of03-214/>. Viewed September 10, 2005.

⁵⁷ Surface rupture occurs when the movement of a fault deep within the earth breaks through to the surface. The rupture almost always follows preexisting faults that are zones of weakness. When the rupture occurs suddenly during an earthquake, structures located along the fault trace can be extensively damaged.

⁵⁸ 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.

⁵⁹ MM values refer to Modified Mercalli Intensity Shaking Severity Levels. which are commonly used to measure (and to describe in lay terms) earthquake effects due to ground shaking.

⁶⁰ Association of Bay Area Governments, *Earthquake Hazard Map for San Francisco*, various scenarios, 2003. Accessed at <http://www.abag.ca.gov> on June 13, 2005.



SOURCE: California Department of Conservation, Geological Survey (After Jennings, 1994)

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Figure 8
Regional Fault Map

earthquake on one of these faults. As noted above, with the exception of the part of the Central Waterfront that is atop bedrock, these low-lying districts are anticipated to be the location of the greatest degree of growth in the Eastern Neighborhoods.

Any subsequent development project would be required to conform to the San Francisco Building Code, which includes seismic safety performance standards that apply to all new construction in the City. The San Francisco Department of Building Inspection (DBI) could, in its review of building permit applications, require the project sponsor to prepare a geotechnical report pursuant to the State Seismic Hazards Mapping Act. The report would assess the nature and severity of the ground shaking hazard(s) on the site and recommend project design and construction features that would reduce the hazard(s). All new construction within the project area would be subject to the permitting requirements of DBI to ensure compliance with applicable laws and regulations. As part of this permitting process, the final building plans would be reviewed by DBI. In reviewing building plans, DBI refers to a variety of information sources to determine existing hazards and assess requirements for reducing or avoiding those hazards. Sources reviewed include maps of Special Geologic Study areas and known landslide areas in San Francisco, as well as the building inspectors' working knowledge of areas of special geologic concern. If the need were indicated by available information, DBI would require that additional site-specific soils reports be prepared by a California-licensed geotechnical engineer prior to construction. Therefore, potential damage to structures from groundshaking on the sites of subsequent development projects that could be undertaken pursuant to the proposed zoning controls would be alleviated through the DBI requirement for a geotechnical report and review of the building permit application pursuant to DBI implementation of the Building Code.

Groundshaking could have particularly severe consequences for any unreinforced masonry buildings in the project that have not been retrofitted, demolished or exempted from the upgrades required by Chapter 16c, Section 1604B of the San Francisco Building Code. These unreinforced masonry structures have a high potential for structural failure during earthquake events and present a substantial hazard to people exposed to falling debris. However, exposure of people to falling debris from unreinforced masonry buildings should be substantially reduced by February 2006, when all upgrades to unreinforced buildings are required to be completed. Furthermore, to the extent that the proposed zoning controls would encourage reuse of older structures as part of subsequent development projects, such projects would generally involve seismic strengthening, which would decrease the risk of groundshaking, compared to existing conditions, to these structures and their occupants. Other subsequent development projects would be expected to result in the demolition of some older buildings and their replacement with newer structures designed and built in accordance with seismic safety requirements of current building codes. This, too, would reduce the relative risk of groundshaking in the study area. In light of the above, the project would not result in significant impacts with regard to groundshaking, and this topic will not be discussed in the EIR.

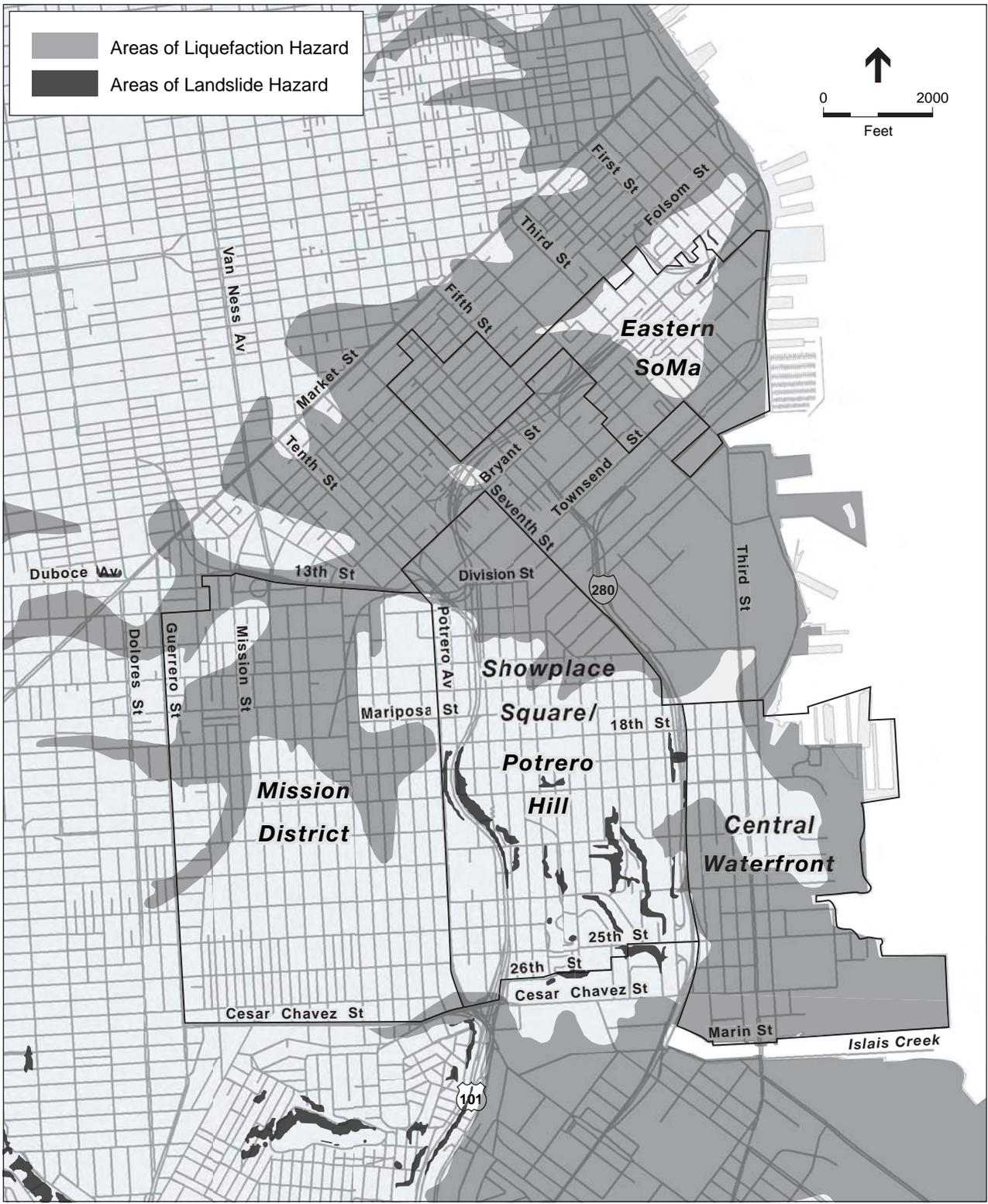
Liquefaction

Much of the project area underlain by unconsolidated sediments is identified as an area of liquefaction⁶¹ potential on Map 4 of the General Plan Community Safety Element and is identified as a Seismic Hazards Study Zone (SHSZ) for liquefaction designated by the California Geological Survey, as shown on the 2001 State of California Seismic Hazards Zone Map for San Francisco prepared by the California Geological Survey under the Seismic Hazards Mapping Act of 1990 (see Figure 9). As shown in the figure, liquefaction could affect much of the northern part of the Mission District, Showplace Square and the area just to the east, Eastern SoMa (except for the area around the flank of Rincon Hill and the historic contour of Steamboat Point, northwest of the ballpark), and the majority of the Central Waterfront (excepting the area historically known as Point San Quentin, which extended southeast to what is now Warmwater Cove). As with the likelihood of relatively stronger groundshaking in an earthquake, liquefaction hazard would thus affect most of the area where new development is anticipated to occur in the study area. Construction within this potential liquefaction zone of any subsequent development project implemented pursuant to the proposed zoning controls would require an investigation in accordance with the Seismic Hazards Mapping Act. Depending on the degree of potential liquefaction, a screening investigation or detailed field investigation could be required. For any subsequent development proposal in an area of liquefaction potential, the DBI, in its review of the building permit application, would require the project sponsor to prepare a geotechnical report pursuant to the State Seismic Hazards Mapping Act. The report would assess the nature and severity of the hazard(s) on the site and recommend project design and construction features that would reduce the hazards(s). Structures built in areas of liquefaction hazard must be designed and built to compensate for the risk that, in the event of an earthquake, the liquefiable soil will lose its bearing capacity, resulting in settlement and potential structural failure of buildings not adequately supported. Therefore, structures developed in such areas must have foundations that gain support on competent soil beneath the liquefiable layer. Typically, this requires the use of driven piles, drilled piers, or other means of gaining support deep below the actual building bottom. To ensure compliance with all San Francisco Building Code provisions regarding structural safety, when DBI reviews the geotechnical report and building plans for a potential development project, it would determine necessary engineering and design features for the project to reduce potential damage to structures from groundshaking and liquefaction. Therefore, potential damage to structures from liquefaction hazards on the site of any subsequent development project implemented pursuant to the proposed zoning controls would be alleviated through the DBI requirement for a geotechnical report and review of the building permit application pursuant to its implementation of the Building Code and impacts related to liquefaction would be less than significant, and this issue will not be discussed in the EIR.

Earthquake-Induced Landslides

Map 5 of the Community Safety Element shows much of Potrero Hill as an area with a potential landslide hazard. The state SHSZ map shows several small areas of potential earthquake-induced landslides on this

⁶¹ Liquefaction occurs when a loose saturated cohesionless soil, such as sand, is subjected to a shock and experiences an increase in pore water pressure. The soil loses a substantial amount of strength and may collapse. Potential consequences of liquefaction include the loss of bearing capacity, differential settlement and lateral spreading; these can cause serious building foundation failures and naturally buoyant structures such as underground storage tanks may be raised above ground.



SOURCE: California Geological Survey, 2001

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Figure 9
Seismic Hazard Zones in the Eastern Neighborhoods

hill (see Figure 9, p. 50). Construction within one of these zones of any subsequent development project implemented pursuant to the proposed zoning controls would require an investigation in accordance with the Seismic Hazards Mapping Act. Similar to the analysis of potential liquefaction hazards discussed above, depending on the degree of potential landslide hazards, a screening investigation or detailed field investigation could be required. For any subsequent development proposal in an area of earthquake-induced landslide potential, DBI, in its review of the building permit application, would require the project sponsor to prepare a geotechnical report pursuant to the State Seismic Hazards Mapping Act. The report would assess the nature and severity of the hazard(s) on the site and recommend project design and construction features that would reduce the hazards(s). Depending on the findings, sponsors of such projects could be required to undertake slope stabilization as part of foundation design, potentially including construction of retaining walls, installation of drilled piers, grade beams, and soil anchors, or other engineering features. To ensure compliance with all San Francisco Building Code provisions regarding structural safety, when DBI reviews the geotechnical report and building plans for a proposed project, it would determine necessary engineering and design features for the project to reduce potential damage to structures from earthquake-induced landslides. Therefore, potential damage to structures from earthquake-induced landslide hazards on the site of any subsequent development project implemented pursuant to the proposed zoning controls would be alleviated through the DBI requirement for a geotechnical report and review of the building permit application pursuant to its implementation of the Building Code and impacts related to earthquake-induced landslides would be less than significant, and this issue will not be discussed in the EIR.

Inundation by Seiche or Tsunami

Tsunamis are seismically induced sea waves that, upon entering shallow nearshore waters, may reach heights capable of causing widespread damage to coastal areas. Map 6 of the Community Safety Element shows that the waterfront portion of the Central Waterfront neighborhood is located within an area of potential tsunami runup in the event of a tsunami along the San Francisco coast, based on a twenty-foot water level rise at the Golden Gate. Although rare, a tsunami could cause damage to shoreline facilities. However, there is a well established warning system in place, described below, that would provide early notification of an advancing tsunami which would allow for evacuation of people and therefore potential impacts to public safety due to inundation by a tsunami would be less than significant.

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.⁶² Because the advancing ocean wave would be restricted at the Golden Gate, damage due to direct wave action along the Bay shoreline is not considered likely. However, the Bay shoreline between the Palace of Fine Arts and the Central Basin (adjacent to the Mission Bay area) 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.

The National Weather Service operates the Alaska Tsunami Warning Center in Palmer, Alaska which serves as the regional Tsunami Warning Center for Alaska, British Columbia, Washington, Oregon, and

⁶² City and County of San Francisco, *Emergency Operations Plan*. January 2005.

California. This center monitors seismological and tidal stations throughout the Pacific Basin to evaluate whether an earthquake is capable of producing a tsunami and disseminates tsunami warning information. In the event that an earthquake occurred that would be capable of producing a tsunami that could affect San Francisco, the County of San Francisco would receive the warning through the State Warning System. The San Francisco outdoor warning system would then be initiated which would sound an alarm alerting the public to tune into local TV, cable TV, or radio stations which would carry instructions for appropriate actions to be taken as part of the Emergency Alert System. Police would also canvas the neighborhoods sounding sirens and bullhorns, as well as knocking on doors as needed, to provide emergency instructions. Evacuation centers would be set up if required. The advance warning system would allow for evacuation of people prior to a tsunami and would provide a high level of protection to public safety.

Although people would be evacuated in the event of a tsunami, there could be property damage due to inundation. However, tsunamis are extremely rare and there would not be a substantial change from existing conditions with regard to shoreline facilities. Therefore, potential impacts related to damage to structures as a result of any subsequent development implemented pursuant to the proposed zoning controls would also be less than significant, and this issue will not be discussed in the EIR.

Topography and Other Geologic Concerns

Most of the project area is relatively flat, with elevations ranging from near sea level at the Bay shoreline to approximately 120 feet in the western portion of the Mission District. Potrero Hill, located in the Showplace Square/Potrero Hill neighborhood and the north portion of the Central Waterfront neighborhood, rises to an elevation of about 315 feet.

Most of San Francisco is underlain by bedrock of the Franciscan complex. The bedrock is exposed in steep slopes in many areas of the City, including Potrero Hill within the project area, but is deeply buried at depths of up to 200 feet beneath portions of the study area.⁶³ The Franciscan complex consists of weakly to strongly metamorphosed greywacke, argillite, basalt, serpentinite, chert, limestone, and other rocks. In Potrero Hill, the bedrock consists primarily of serpentinite, a rock consisting almost entirely of serpentine minerals including chrysotile, lizardite, and antigorite. Chrysotile is a naturally fibrous material and is one type of asbestos. The other serpentine minerals found in serpentinite do not form fibrous crystals and are not asbestos minerals. Surficial geologic materials within the project area include artificial fill, dune sand, and undifferentiated surficial deposits.⁶⁴

Construction within the project area of any subsequent development project implemented pursuant to the proposed zoning controls that involved extensive grading could increase the potential for erosion and loss of top soil unless appropriate precautions are taken during construction. However, measures to control

⁶³ California Division of Mines and Geology, 1969. *Geologic and Engineering Aspects of San Francisco Bay Fill*. Special Report 97.

⁶⁴ Blake, M. C., Graymer, R. W., and Jones, D. L., Geologic Map and Map Database of Parts of Marin, San Francisco, Alameda, Contra Costa, and Sonoma Counties, California. USGS Miscellaneous Field Studies, MF-2337, Version 1, 2000. Available at <http://sfgeo.wr.usgs.gov/sfbay/geolist.html>; and Wagner, D.L., Bortugno, E.J., and McJunkin, R.D., *Geologic Map of the San Francisco-San Jose Quadrangle, California, Regional Geologic Map Series, San Francisco-San Jose Quadrangle – Map No. 5A (Geology), Sheet 1 of 5*, 1991. Viewed September 10, 2005.

post-construction erosion would be specified in the Stormwater Pollution and Prevention Plans prepared for subsequent development projects as discussed in Section 10, Water. Furthermore, because the project area is already largely developed, and because the proposed rezoning would not make large undeveloped sites available for new development, the likelihood of mass grading is extremely low. Therefore the potential impacts of erosion would be less than significant, and this issue will not be discussed in the EIR.

Expansive soil could be located within the project area and without the appropriate measures, differential settlement and other damage could occur as a result of construction on this soil of any subsequent development project implemented pursuant to the proposed zoning controls. However, the Building Code specifies standards for determining the expansive characteristics of soil and also specifies expansion indexes for the soil. For any subsequent development project proposed and implemented pursuant to the proposed zoning controls that is located on soil with an expansion index greater than 20, a geotechnical investigation would be required and the report for this investigation would need to include a recommended foundation type and design criteria including bearing capacity, provisions to protect against the effects of liquefaction and soil strength, and effects of adjacent loads. The total and differential settlement that could occur would be provided in the geotechnical report, which would also detail the extent to which fill at the site would be excavated and/or recompacted to account for any soil settlement. The reports would be based on a sufficient analysis of soils conducted by a qualified geotechnical engineer or geologist and include appropriate soils, foundation, and structural engineering to adequately account for any differential settlement or expansive soils underlying the site. Compliance with the legally required code requirements for addressing impacts related to expansive soil would ensure that potential impacts related to expansive soils would be less than significant. Therefore, this issue will not be discussed in the EIR.

Should any subsequent development project implemented pursuant to the proposed zoning controls require grading on steep slopes, such grading could cause soil to become unstable and induce ground failures. However, the Building Code contains provisions which require that grading on slopes of greater than 2:1, or where cut sections will exceed 10 vertical feet, must be done in accordance with the recommendations of a soil engineering report, which would be required by DBI for any subsequent development project proposed and implemented pursuant to the proposed zoning controls that is located on such steep slopes. Furthermore, because the vast majority of Potrero Hill would remain unchanged as to zoning and height and bulk, the proposed rezoning would not promote substantial new development on the steepest portions of the project area. Therefore, impacts related to excavation of slopes would be less than significant, and this issue will not be discussed in the EIR.

Should dewatering be necessary for construction of any subsequent development project implemented pursuant to the proposed zoning controls, DBI would require a project-specific soils report that would address potential settlement and subsidence impacts of this dewatering. Based upon this discussion, the report would contain a determination as to whether or not a lateral movement and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, DBI would require that a Special Inspector (as defined in Article 3 of the Building Code) be retained by the project sponsor of the subsequent development project to perform this monitoring. Groundwater observation wells would be installed to monitor potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable movement were to occur during

dewatering, groundwater recharge would be used to halt this settlement. Costs for the survey and any necessary repairs to service lines under the street would be borne by the sponsor of any subsequent development project implemented pursuant to the proposed zoning controls. Therefore, impacts related to dewatering would not be significant, and this issue will not be discussed in the EIR.

Cumulative Impacts

In conjunction with other development in San Francisco (e.g., that resulting from the pending Bayview-Hunters Point Redevelopment Area, the former Hunters Point Shipyard, the Market-Octavia and Balboa Park Better Neighborhoods Plans, the Visitacion Valley planning effort, and other growth in San Francisco and nearby communities), the proposed Eastern Neighborhoods Rezoning and Community Plans project would foster development in the Eastern Neighborhoods that would indirectly increase the population that would be subject to an earthquake, including seismically induced groundshaking, liquefaction, and landslides. Such growth and development would increase the demand for emergency services following an earthquake, and could result in more persons being injured or killed. At the same time, new development is generally safer – relatively speaking – than comparable older development due to improvements in building codes and construction techniques. Compliance with applicable codes and recommendations made in project-specific geotechnical analyses would not eliminate earthquake risks, but would reduce them to an acceptable level, given the seismically active characteristics of the Bay Area.

In light of the above, the proposed Eastern Neighborhoods Rezoning and Community Plans project would not result in significant impacts with regard to geology, and this issue will not be discussed in the EIR.

10) <u>Water</u> – Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
(a) Substantially degrade water quality, or contaminate a public water supply?	_____	_____X_____	_____X_____
(b) Substantially degrade or deplete groundwater resources, or interfere substantially with groundwater recharge?	_____	_____X_____	_____X_____
(c) Cause substantial flooding, erosion or siltation?	_____	_____X_____	_____X_____

This section focuses on whether development that could occur pursuant to the proposed zoning controls would degrade the water quality of San Francisco Bay through increasing the number or frequency of discharges to the Bay from the City’s combined sewer system. Short-term construction impacts are also discussed, as are effects on groundwater and flooding. The section begins with a description of the combined sewer system and the regulatory framework in which it operates. The impact analysis in this section is based on the general assumptions concerning the growth assumed in the Eastern Neighborhoods that are described in the project description on p. 17. No site-specific development is proposed as part of the proposed rezoning and community plans, and therefore no such proposals are analyzed here.

Background

No natural surface water bodies or streams remain in the Eastern Neighborhoods, with the exception of the San Francisco Bay, which borders the east side of the project area. Historically, there were small

creeks flowing from the east side of the City to the Bay, but most of the creeks were filled during development of the City. Major water features along the Bay shoreline include China Basin and Mission Creek adjacent to Eastern SoMa and Central Basin, Warm Water Cove, and Islais Creek adjacent to the Central Waterfront neighborhood (see Figure 10). The waters are primarily used for navigation, boating, fishing, recreation, and industrial source waters. The circulation and mixing of Bay waters adjacent to the project area is governed mainly by tidal influence, although less tidal exchange occurs in this portion of the Bay compared to the area near the Golden Gate. There is also less freshwater flow into this portion of the Bay than is the case farther north, nearer the mouth of the Sacramento River delta.

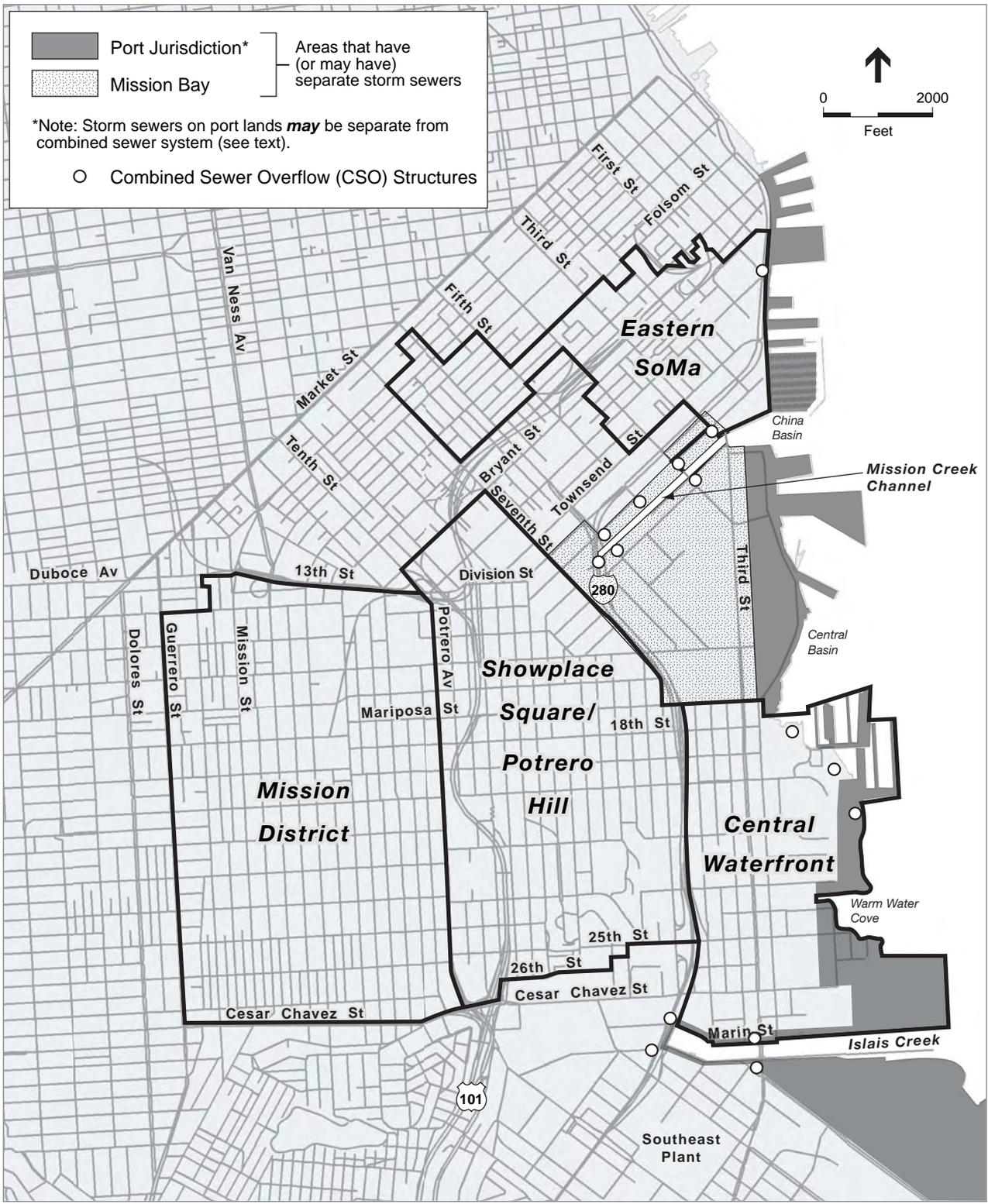
Almost all freshwater flow in the City has been diverted to the City's combined sewer and stormwater system, which collects and transports both sanitary sewage and stormwater runoff in the same set of pipes. However, stormwater runoff from Port of San Francisco piers drains directly to the Bay. Additionally, other areas of Port jurisdiction are not well mapped, and thus it is possible that waterfront portions of the Central Waterfront and Eastern SoMa may not drain to the combined sewer system, but rather directly to the Bay through isolated separate stormwater systems (see Figure 10).⁶⁵

Groundwater exists in two separate basins in the Eastern Neighborhoods, the Downtown San Francisco Groundwater Basin (beneath Eastern SoMa, the Mission District and the northern portions of Showplace Hill/Potrero Hill and the Central Waterfront), and the Islais Valley Groundwater Basin (beneath the southern portion of the Showplace Hill/Potrero Hill and Central Waterfront). Groundwater is not used for potable water in San Francisco. However, the San Francisco Public Utilities Commission (SFPUC), which provides the City's water, is exploring the possibility of using groundwater from the Islais Valley Groundwater Basin for irrigation, rehabilitating agricultural and riparian habitats, emergency water resources, and other non-potable uses such as replenishing Lake Merced.⁶⁶

The federal Clean Water Act gave the U.S. Environmental Protection Agency (EPA) authority to implement pollution control programs and set water quality standards for surface waters. The Act also established the National Pollutant Discharge Elimination System (NPDES) program to protect water quality. The EPA delegates management of California's NPDES program to the state and, therefore, implementation and enforcement of the NPDES program is conducted through the California State Water Resources Control Board (SWRCB) and the nine California Regional Water Quality Control Boards (CRWQCBs). The San Francisco Bay Region of the CRWQCB regulates water quality in San Francisco Bay under the Porter-Cologne Water Quality Control Act through regulatory standards and objectives in the *Water Quality Control Plan for the San Francisco Bay Basin*, commonly referred to as the "Basin

⁶⁵ San Francisco Public Utilities Commission (SFPUC), *Wastewater System Reliability Assessment, Baseline Facilities Report*, Draft, December 2003. Prepared by SFPUC Water Pollution Control Division, San Francisco Department of Public Works, Bureau of Engineering, Hydraulic & Mechanical Sections, and The Water Infrastructure Partners.

⁶⁶ San Francisco Public Utilities Commission, *SFPUC Breaks Ground on First New Groundwater Well of Irrigation and Emergency Use*. June 30, 2005. Accessed at http://sfwater.org/detail.cfm/MSID/14/MTO_ID/5/C_ID/2561/holdSession.



SOURCE: San Francisco Public Utilities Commission Case No. 2004.0160E: Eastern Neighborhoods Rezoning and Community Plans (203091)

Figure 10
CSO Structures and Storm Sewer Systems in the Eastern Neighborhoods

Plan.”⁶⁷ The Basin Plan identifies existing and potential beneficial uses⁶⁸ and provides numerical and narrative water quality objectives to protect those uses.

Combined Sewer System and Overflows

Wastewater flows from the east side of the City, including the Eastern Neighborhoods, are transported to the Southeast Water Pollution Control Plant (Southeast plant), which is located in the Bayview district.⁶⁹ This plant treats up to 150 million gallons per day (mgd) of sewage to a secondary level,⁷⁰ and the annual average wastewater flow during dry weather is 65 to 70 mgd. During dry weather, wastewater flows consist mainly of municipal and industrial sewage; all dry weather wastewater flow is treated to a secondary level at the Southeast plant and discharged to the Bay through the deep water outfall at Pier 80, located in the Central Waterfront, just north of Islais Creek.

During wet weather, the combined sewer system collects large volumes of stormwater runoff in addition to municipal and industrial wastewater. Depending on the amount of rainfall, wet weather flows are treated to varying levels before discharge to the Bay. Up to 150 mgd of wet weather flows receive secondary treatment at the Southeast plant. The Southeast plant can also treat up to an additional 100 mgd to a primary treatment⁷¹ standard plus disinfection. Treated wet weather discharges from the Southeast plant occur through the Pier 80 outfall directly to the Bay or through the Quint Street outfall to Islais Creek Channel (to the south of the Central Waterfront on the south bank of Islais Creek). Only wastewater treated to a secondary level is discharged at the Quint Street outfall. Up to an additional 100 mgd of wet weather flows receive primary treatment plus disinfection at the North Point Wet Weather Facility (North Point plant), located at Bay and Kearny Streets, which operates only during wet weather. Treated effluent from this facility is discharged through four deep water outfalls, approximately 800 feet from the Bay shore and about 20 feet deep.

The sewer system also includes storage and transport boxes that, during wet weather, retain the combined stormwater and sewage flows that exceed the capacities of the Southeast plant and the North Point plant for later treatment. When rainfall intensity results in combined flows that exceed the total capacity of the Southeast plant, North Point plant, and the storage and transport structures, the excess flows are discharged through 29 combined sewer overflow (CSO) structures located along the Bayside waterfront from Fisherman’s Wharf to Candlestick Point. Discharges from the CSO structures, consisting of about

⁶⁷ California Regional Water Quality Control Board, San Francisco Bay Region (CRWQCB), *Functional Equivalent Document, Proposed Groundwater Amendments to the Water Quality Control Plan (Basin Plan), Final*, April 2000. Available at <http://www.waterboards.ca.gov/sanfranciscobay/basinplan.htm>. Viewed September 12, 2005.

⁶⁸ Beneficial uses are those uses identified as appropriate for a particular water body. As identified in the Basin Plan, these include ocean, commercial and sport fishing; estuarine habitat; industrial service supply; fish migration; navigation; preservation of rare and endangered species; water contact recreation; non-contact water recreation; shellfish harvesting; wildlife habitat, industrial process supply, and fish spawning in the portions of the Bay adjacent to San Francisco.

⁶⁹ Wastewater from the west side of the City flows to a separate treatment plant near Ocean Beach.

⁷⁰ Secondary treatment is the treatment of wastewater or sewage involving removal of organic matter using biological and chemical processes. This is a higher level of treatment than primary treatment, which is removal of floating and settleable solids using physical operations such as screening and sedimentation. Secondary treatment is less intensive than tertiary treatment, in which additional chemical and biological treatment processes are used to remove additional compounds that may be required for discharge or reuse purposes.

⁷¹ Primary treatment refers to physical treatment processes, such as screening and sedimentation, which remove large and heavy solids.

6 percent sewage and 94 percent stormwater, receive “flow-through treatment,” which is similar to primary treatment, to remove settleable solids and floatable materials.

These intermittent CSO discharges occur in compliance with a NPDES permit adopted by the CRWQCB in June 2002.⁷² The permit specifies discharge prohibitions, dry-weather effluent limitations, wet-weather effluent performance criteria, receiving water limitations, sludge⁷³ management practices, and monitoring and reporting requirements. The permit prohibits overflows from the CSO structures during dry weather, and requires wet-weather overflows to comply with nine minimum controls specified in the federal Combined Sewer Overflow Control Policy. The CSO Control Policy, part of the Clean Water Act, establishes a two-phased process for controlling combined sewer system discharges, with higher priority given to more environmentally sensitive areas. During the first phase, the permittee is required to implement nine minimum controls to reduce the frequency of CSOs and their effects on receiving water quality:

1. Conduct proper operation and regular maintenance programs for the combined sewer system and CSO outfalls;
2. Maximize the use of the collection system for storage;
3. Review and modify pretreatment programs to ensure that CSO impacts are minimized;
4. Maximize flow to the treatment plant for treatment;
5. Prohibit CSOs during dry weather;
6. Control solids and floatable materials in CSOs;
7. Develop and implement pollution prevention programs that focus on contaminant reduction activities;
8. Notify the public; and
9. Monitor to effectively characterize CSO impacts and the efficacy of CSO controls.

The City is currently implementing these controls, focusing on minimizing pollutants entering the combined sewer and addressing pollutants from residential, commercial, industrial, and non-point pollutant sources. During the second phase, the City must also implement a post-construction monitoring program, and therefore will select CSO controls to either reduce CSOs to an average of four events per year; eliminate or capture at least 85 percent of the combined sewer volume system-wide during storms; or remove the mass of any contaminant causing water quality impairment that would be otherwise removed by eliminating or capturing the flow as specified in the other options.

As defined in the CSO Control Policy, San Francisco has no remaining untreated overflow events because the overflows that occur receive the equivalent of primary treatment within the storage/transport boxes. The City is currently in full compliance with the CSO Control Policy, having completed construction, in 1997, of a 20-year, \$1.6 billion Wastewater Master Plan that included extensive storage, transport, and

⁷² California Regional Water Quality Control Board, San Francisco Bay Region (CRWQCB), *2002 CWA Section 303(d) List of Water Quality Limited Segment*, Approved by the USEPA: July 2003. Accessed September 12, 2005, at <http://www.waterboards.ca.gov/sanfranciscobay/303dlist.htm>.

⁷³ Municipal sewage sludge is a nutrient-rich mixture of water and solids that is left after the discharge of treated wastewater. Some pollutants are destroyed during treatment, but others end up concentrated in sludge.

treatment upgrades to the combined sewer system that meet approved design criteria for overall protection of beneficial uses. Operation and implementation of these facilities satisfies the CSO Control Policy.

All discharges from the combined sewer system to the Bay, through either the outfalls or the CSO structures, are operated in compliance with the federal Clean Water Act and the State's Porter-Cologne Water Quality Control Act through the City's NPDES permit.⁷⁴ The 15 CSO structures within and near the Eastern Neighborhoods, shown on Figure 10, p. 56, are permitted for a long-term average of 10 overflows per year, although overflow frequencies in the project area have on occasion exceeded the system's design targets in recent years. Discharges to the Bay from isolated separate stormwater drainage systems within Port jurisdiction are regulated under the statewide General Permit for Stormwater Discharges from Small Separate Storm Sewer Systems and stormwater management activities are currently conducted by the Port.

The SFPUC Water Pollution Control Division manages the City's wastewater collection, treatment, and disposal system. In 2004, the SFPUC initiated a Wastewater Master Planning process to develop a long-term strategy for the management of the City's wastewater and stormwater; to address system deficiencies, community impacts, public interests, and future needs; and to maximize system reliability and flexibility. The Master Plan, which will undergo separate CEQA review, is intended to address hydraulic deficiencies, reduce and/or disinfect CSOs, redirect discharges from the Bay to the Ocean, maximize water conservation and reuse, decentralize wastewater treatment, separate sections of the combined sewer system into a separate sewer and storm systems, eliminate or minimize odors, address biosolids (sludge), and incorporate innovative and environmentally-beneficial technologies.

The SFPUC is also preparing a Recycled Water Master Plan to provide for this highly treated wastewater to be used for non-drinking applications, such as irrigation, vehicle or facility washdown, and industrial cooling, thereby reducing the need for potable water and simultaneously reducing loading to the sewer system and, ultimately, discharges to the Bay and Ocean. The Eastern SoMa and Central Waterfront Neighborhoods are subject to the City's Recycled Water Ordinance (Public Works Code, Art. 22), which requires dual plumbing⁷⁵ in larger buildings within certain areas and eventual use of recycled water. The Wastewater Master Plan, and to some extent, the Recycled Water Master Plan will examine the combined sewer system infrastructure and facilities as part of these related planning efforts.⁷⁶ The SFPUC is also preparing sewage and stormwater management guidelines for new developments to develop a systematic, citywide approach for stormwater management systems and to ensure continued compliance with water quality regulations and protection of the Bay and ocean. The guidelines, similar to those being initiated by other Bay Area communities, will address site design, source control and structural treatment controls, to reduce improve the quality of runoff generated as well as to reduce the quantity.

⁷⁴ California Regional Water Quality Control Board, San Francisco Bay Region (CRWQCB), *National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037664, Order No.2002-0073, for City and County of San Francisco Southeast Water Pollution Control Plant, North Point Wet Weather Facility, and Bayside Wet Weather Facilities*. Adopted June 19, 2002. Available at http://www.waterboards.ca.gov/sanfranciscobay/order_nosb2.htm.

⁷⁵ Dual plumbing is a separate set of pipes installed and coded specifically for recycled water use, and there are strict regulations to prevent any cross connections with the drinking water supply.

⁷⁶ San Francisco Public Utilities Commission, *Wastewater System Reliability Assessment, Baseline Facilities Report*, Draft, December 2003. Prepared by SFPUC Water Pollution Control Division, San Francisco Department of Public Works, Bureau of Engineering, Hydraulic & Mechanical Sections, and The Water Infrastructure Partners.

Water Quality

Ambient offshore Bay water quality is not regularly monitored in the immediate vicinity of the Eastern Neighborhoods. However, in 1993, the CRWQCB initiated the Regional Monitoring Program for the San Francisco estuary to assess regional water quality conditions and characterize patterns and trends of contaminants. The program has established a database of water quality and sediment quality, particularly with regard to toxic and potentially toxic trace elements and organic contaminants. The most recent water quality data for the Central Bay,⁷⁷ the monitoring locations closest to the Eastern Neighborhoods, was collected in 2003.⁷⁸ This data indicates that, with the exception of polychlorinated biphenyls (PCBs) in all samples and copper in one sample, water quality conditions remain well within water quality objectives established by the CRWQCB for the parameters monitored.⁷⁹

To assure that discharges of treated wastewater did not adversely affect beneficial uses of the Bay and that water quality is protected, the Water Pollution Control Division (then part of the San Francisco Department of Public Works) collected periodic water quality samples from Islais Creek and Pier 80 from 1992 to 1994, as part of previous permit requirements for the Southeast plant. Over the course of the sampling (11 samples in 1992 and one each in 1993 and 1994), the most notable correlation in data was the increase in coliform level with rainfall, likely due to the presence of partially treated sewage mixed with the rainfall in the CSO discharges to Islais Creek.

Construction Impacts

Construction of individual development projects that could be proposed and approved pursuant to the proposed zoning controls could affect water quality, but the effects would be temporary and less than significant, assuming compliance with applicable permits and regulations. Water quality could be affected by grading and earthmoving operations, use of fuels and other chemicals for construction equipment, and demolition and construction. Grading and earthmoving would expose soil during construction and could result in erosion and excess sediments carried in stormwater runoff to either the Bay or to the combined sewer system. Stormwater runoff from temporary on-site use and storage of vehicles, fuels, wastes and other hazardous materials could also carry pollutants to surface water if these materials were improperly handled. However, with compliance with appropriate water quality regulations, as explained below, water quality impacts associated with construction activities would be less than significant.

The federal Clean Water Act effectively prohibits discharges of stormwater from construction projects unless the discharge is in compliance with a NPDES permit. Construction stormwater discharges to the majority of the project area that is connected to City's combined sewer system would be subject to the

⁷⁷ In previous years, the Regional Monitoring Program included collection of samples from specific sampling locations; the closest stations monitored were Alameda and Oyster Point. In 2002 the program adopted a stratified-random sampling design which included collection of samples from random locations within five specific hydrographic regions of the Bay. The data discussed in this section are for samples collected from four randomly selected locations with the Central Bay hydrographic region, which is adjacent to the Project Area.

⁷⁸ San Francisco Estuary Institute, 2005. *2003 Annual Monitoring Results, the San Francisco Estuary Regional Monitoring Program for Trace Substances (RMP)*. Accessed at http://www.sfei.org/rmp/2003/2003_Annual_Results.htm.

⁷⁹ These parameters include conventional measures (ammonia, conductivity, dissolved oxygen, dissolved organic carbon, silicates, hardness, nitrate, nitrite, pH, phosphate, salinity, temperature, suspended solids, phaeophytin, and chlorophyll); trace elements (arsenic, cadmium, cobalt, copper, iron, lead, manganese, mercury, methylmercury, nickel, selenium, silver, and zinc); and trace organics (polynuclear aromatic hydrocarbons, PCBs, pesticides, and polybrominated diphenyl ethers).

requirements of Article 4.1 of the San Francisco Public Works Code (supplemented by Department of Public Works Order No. 158170), which incorporates and implements the City's NPDES permit, and the federal CSO Control Policy described above. At a minimum, the City requires that a project sponsor develop and implement an erosion and sediment control plan to reduce the impact of runoff from a construction site. The plan must be reviewed and approved by the City prior to implementation, and the City conducts periodic inspections to ensure compliance with the plan. Any stormwater drainage during construction would flow to the City's combined sewer system, where it would receive treatment at the Southeast plant or other wet weather facilities and would be discharged through an existing outfall or overflow structure in compliance with the existing NPDES permit. Therefore, water quality impacts related to discharge of construction related stormwater runoff would be less than significant with compliance with applicable permits.

Construction stormwater discharges to a separate storm sewer system or from sites that drain directly to the Bay (in general, only applicable to areas east of Illinois Street, primarily under Port jurisdiction) would be subject to the statewide General Construction Permit. These projects would be required to prepare and implement a Stormwater Pollution Prevention Plan, which must specify Best Management Practices to protect stormwater runoff; a visual monitoring program and a chemical monitoring program for non-visible pollutants; and, in certain instances, a sediment monitoring plan.

In light of the above, construction-related water quality effects would not be significant, and will not be discussed in the EIR.

Long-Term (Operational) Impacts

Effects on Combined Sewer Overflows

Three aspects of the project could result in long-term changes to the wastewater flows to the City's combined sewer system: (1) development of individual projects that could be proposed and approved pursuant to the proposed zoning controls would locally increase sanitary sewage flows year-round to the combined sewer system, (2) a reduction in industrial land uses would likely decrease the volume of industrial discharges to the combined sewer system, and (3) increased landscaping and decreased impervious surfaces could decrease the volume of stormwater runoff to the combined sewer system. The effects of these factors on the combined sewer system are closely related, and the combined effect could indirectly result in increased volume and/or frequency of discharges to the Bay if the increase in sanitary sewage flows is greater than the decrease in industrial waste discharges and stormwater runoff. An increase in volume of CSO discharges could affect water quality and could be considered a potentially significant water quality impact due to the potential to degrade water quality. However, this potential impact must be evaluated in context of the City's compliance with existing regulatory requirements and ongoing planning efforts addressing the citywide capacity of the combined system and long-term protection of water quality and beneficial uses of San Francisco Bay.

Changes in Sanitary Sewage Flows

The proposed zoning changes would accommodate new development in the Eastern Neighborhoods, which would, in turn, result in an increase of between about 15,000 and 20,000 residents and between

about 9,500 and 12,500 jobs in the Eastern Neighborhoods. Growth in the Eastern Neighborhoods would contribute to a citywide population increase of almost 80,000, as well as a citywide employment increase of up to 130,000. Most of the citywide growth would be on the City's eastern side, which is served by the Southeast treatment plant (and the North Point plant in wet weather); in addition to the Eastern Neighborhoods, substantial growth would occur in the Market-Octavia and Balboa Park Better Neighborhood Plan areas; Visitacion Valley; Downtown; and Mission Bay, as well as, to a lesser degree, other areas such as transit corridors on Van Ness Avenue and Geary Street.

During dry weather (typically, May 1 to October 15), all sanitary sewage generated in the Eastern Neighborhoods would be treated at the Southeast plant, which currently operates at about 80 percent of its design capacity. The additional dry weather flow associated with development that would occur secondary to the implementation of the rezoning and community plans could be accommodated within the system's existing capacity.

During wet weather (typically, October 16 to April 30), however, there is a wide variation in volume of wet weather flow due to the addition of stormwater. The volume of wet weather flows is directly related to the rainfall intensity, and treatment of the wet weather flows varies depending on the characteristics of any individual rainstorm. While the system is in compliance with current regulations and permits, the incremental increase in sanitary sewage volume could affect the overall system's wet weather operations. Any net increase in combined sewage could cumulatively contribute to an increase in average volume of CSO discharges to the Bay, either in the project area or elsewhere along the Bay shore. An increase in the volume of CSO discharges could be a concern because the CRWQCB has designated this portion of the Bay as an impaired water body under Section 303(d) of the Clean Water Act, which indicates water quality standards are not expected to be met after implementation of technology-based effluent limitations, and because CSO discharges contain pollutants for which the Bay is impaired.

However, the City is developing a Wastewater Master Plan, as well as guidelines for new development, described below. The Wastewater Master Plan will include measures by the City to reduce the quantity and frequency of overflows and improve the water quality of overflows. Individual subsequent development projects would also be required to comply with the development guidelines (under preparation), which would decrease the volume of stormwater discharged to the combined sewer and help offset the effects of increased sanitary sewage flows. Therefore, the impact of the project on stormwater runoff would be less than significant.

Changes in Industrial Wastewater Discharges

The project would result in a reduction of industrial land uses in the Eastern Neighborhoods, which would likely result in a reduction of industrial wastewater discharges to the combined sewer system. Any continuing and new industrial discharges would be subject to the requirements of Article 4.1 of the San Francisco Public Works Code, which regulates the quantity and quality of discharges to the combined sewer system, and Order No. 158170 of the San Francisco Public Works Department which provides additional industrial waste discharge limits. Compliance with these industrial wastewater discharge requirements would be protective of water quality in the Bay and the expected net decrease in industrial wastewater discharges could off-set some of the effects of increased sanitary sewage flows on the

frequency of CSO discharges. Furthermore, the change from existing conditions would be a net decrease in industrial discharges, and therefore this impact would be less than significant.

Changes in Stormwater Runoff

Stormwater runoff in an urban location such as the Eastern Neighborhoods is a known source of pollution. Runoff from subsequent development projects that could be undertaken pursuant to the proposed zoning controls may contain many types of pollutants including polynuclear aromatic hydrocarbons from vehicle emissions; heavy metals, such as copper from brake pad wear and zinc from tire wear; dioxins as products of combustion; and mercury resulting from atmospheric deposition. All of these materials, and others, may be deposited on paved surfaces and rooftops as fine airborne particles, thus yielding stormwater runoff pollution that is unrelated to the particular activity or use associated with a given project. In addition, subsequent individual development projects could contribute specific pollutants including car maintenance wastes, pesticides, household hazardous wastes, pet wastes, and trash which can be washed into the combined sewer system. These pollutants can all affect water quality.

However, the extent that the project area is substantially covered by impervious surfaces at present and the vast majority of subsequent development projects that could be undertaken pursuant to the proposed zoning controls would be located on sites that are already developed. Therefore, development fostered by the proposed Eastern Neighborhoods Rezoning and Community Plans would not substantially change the amount of impervious surfaces within the project area and, therefore, would not increase stormwater runoff.

In fact, to the extent that implementation of the rezoning and community plans would be successful in creating additional open space in the Eastern Neighborhoods, there would be an incremental decrease in impervious surface, which could slightly decrease stormwater runoff. The draft Central Waterfront Better Neighborhoods Plan includes an objective promoting the creation of “a linked system of new and improved open spaces within the neighborhood and along the shoreline... [and connection of] this system to transit stops and other major or important destinations through a network of pathways and improved public right-of-ways.” While the Central Waterfront’s shoreline is a unique feature of that neighborhood, the draft plan includes policies that could be applied elsewhere in the Eastern Neighborhoods. These policies include, “Ensure that open spaces are linked by the public street system and that the street system serves as an extension of the open space system” and “Work with private landowners to convert abandoned rail alignments into public open space and access.” Policies in the draft plan also identify specific sites, both city-owned and otherwise, for potential conversion to open space. Any comparable open space objectives and policies included in the community plans for the Mission District, Showplace Square/Potrero Hill, and Eastern SoMa would further increase open space and result in a commensurate decrease in impervious surfaces. Along with implementation of other stormwater Best Management Practices, this increase in pervious surface through creation of new open space would increase stormwater infiltration into the ground, resulting in a reduction in the volume of stormwater runoff discharged to the combined sewer system. However, neither the details of these enhancement programs, the site design measures, nor the extent of such improvements are known at this time.

Regardless of the potential increase in open space that would allow more infiltration of stormwater, no increase in stormwater runoff is anticipated because, as noted, the project area is virtually entirely covered

with impervious surfaces (buildings, streets, and sidewalks) at present and there would be no increase in impervious surfaces with implementation of the project. Therefore, as a worst-case scenario, the volume of stormwater runoff draining to the combined sewer system would remain the same if the project is implemented and ongoing planning efforts by the City would reduce water quality impacts associated with CSO discharges as discussed below. Therefore, the impact of the project on stormwater runoff would be less than significant.

Regulations and Policies Governing CSO Discharges

Under the proposed Eastern Neighborhood Rezoning and Community Plans project, all discharges from the combined sewer system to the Bay, through either the outfalls or the CSO structures, would continue to operate in compliance with its NPDES permit and the federal CSO Control Policy, including the Policy's nine minimum controls discussed above. The following two control measures would apply to subsequent development projects that could be undertaken pursuant to the proposed zoning controls:

- Review and modify pretreatment programs to ensure that CSOs are minimized; and
- Develop and implement pollution prevention programs that focus on contaminant reduction activities.

These two control aspects of the CSO Control Policy are implemented by the SFPUC. When individual developments are proposed subsequent to implementation of the rezoning and community plans, the sponsor of each individual project would be required to coordinate with the SFPUC to ensure that the developments are in compliance with ongoing, existing pretreatment and pollution prevention programs. Application of the pretreatment program, which protects the sewer system and treatment plant from upsets and interference and applies to industrial dischargers (including construction dewatering), is through Article 4.1 of the Public Works Code. The Water Pollution Prevention Program prevents pollutants from entering the combined sewer, and addresses residential, commercial, industrial, and non-point-source pollutants.⁸⁰ Water pollution prevention strategies implemented in accordance with this program minimize pollutant loading into the combined sewer system, thereby decreasing the potential for violating discharge limits and also decreasing the City's reliance on treatment technologies as a means to reduce pollutant loads.⁸¹ The Program relies primarily on public education, outreach, and technical assistance to reduce pollutant loading into the combined sewer system at the source, and also includes motor oil recycling, street cleaning, a green business program, and catch basin labeling.

Net Impact to CSO Discharges

Based on the above discussion, implementation of the proposed project would facilitate new development that would generate increased year-round sanitary sewage flows, decrease in industrial wastewater

⁸⁰ The pollutants addressed by the program include fats, oil, and grease; mercury; copper, organophosphorous pesticides; and dioxin. Each of these pollutants is listed either because it affects performance of the sewer system, is identified as a potential pollutant as a result of analyses conducted in support of the NPDES permit, or is listed as a pollutant under state or federal regulations.

⁸¹ San Francisco Public Utilities Commission (SFPUC), *Wastewater System Reliability Assessment, Baseline Facilities Report*, Draft, December 2003. Prepared by SFPUC Water Pollution Control Division, San Francisco Department of Public Works, Bureau of Engineering, Hydraulic & Mechanical Sections, and The Water Infrastructure Partners; and San Francisco Public Utilities Commission, *Water Pollution Prevention Program Progress Report*, July 2003 to December 2003. February 13, 2004.

discharges, and result in no net change in stormwater runoff. However, compliance with the following existing regulations and policies would protect water quality and beneficial uses of the Bay:

- The individual sponsor of any development project proposed subsequent to implementation of the rezoning and community plans would be required to coordinate with the SFPUC to ensure that new developments resulting from implementation of the project would remain in full compliance with all aspects of the federal CSO Control Policy, including the nine minimum controls and appropriate pretreatment and pollution prevention programs. This includes compliance of all new developments with Article 4.1 of the Public Works Code during both construction and operation. This would ensure consistency with existing water quality regulation protecting Bay water quality.
- The individual sponsor of any development project proposed subsequent to implementation of the rezoning and community plans would be required to comply with conservation of water use consistent with existing and future guidelines recommended by the SFPUC. This would reduce the volume of sanitary flow to the combined sewer system.
- The individual sponsor of any development project proposed subsequent to implementation of the rezoning and community plans would be required to incorporate recycled water use in planning and design (e.g., install dual plumbing) of major new developments consistent with guidelines in the Recycled Water Ordinance and the Recycled Water Master Plan when adopted. This would reduce the volume of sanitary flow to the combined sewer system.

In addition, as described in the setting, concurrent with the proposed schedule for implementation of the project, the SFPUC has a number of ongoing planning efforts to address CSO discharges and associated water quality impacts as part of citywide plans and programs. These planning efforts address long-term objectives of compliance with existing and future regulatory requirements and overall protection of water quality, aquatic resources and beneficial uses of San Francisco Bay. Any subsequent development activities secondary to implementation of the proposed rezoning and community plans that could affect wastewater and stormwater management must be conducted within the context of the existing regulatory framework. Such activities also must be coordinated within the context of ongoing and future citywide planning efforts, thereby providing additional protection of water quality and beneficial uses.

Based on compliance with existing and future regulations and coordination with ongoing planning efforts to provide long-term water quality protection of the Bay, water quality impacts associated with changes in combined sewer overflow discharges to the Bay would be considered less than significant. Further project-level water quality analysis may be required for subsequent individual development projects under the proposed Eastern Neighborhoods Rezoning and Community Plans, depending on the nature and timing of the project, and site specific mitigation measures applicable to individual developments may be required.

The relatively small waterfront portions of the project area that do not drain to the combined sewer system but rather discharge directly to the Bay are not anticipated to undergo substantial development under the proposed project, because they either would remain in use as under existing conditions or would be subject to relatively stringent limitations on development by virtue of their proximity to the Bay and

the associated regulations of the Bay Conservation and Development Commission. For any individual development proposed subsequent to implementation of the rezoning and community plans, compliance with NPDES Phase II regulations that took effect in 2003 and that apply to those portions of San Francisco not served by the combined sewer system⁸² would avoid potentially significant water quality impacts associated with stormwater runoff and changes in drainage patterns.

Groundwater

The project would not result in adverse effects related to potable water supplies, groundwater resources, or flooding. Potable water supply is not an issue because the project area would continue to be served by the existing water supply (discussed under Utilities) and is not located within a potable water supply watershed or over an existing potable groundwater aquifer. Neither groundwater resources nor groundwater recharge would be affected because subsequent development projects that could occur as a result of the proposed zoning controls would result in negligible effects on groundwater. Although dewatering may be required for construction of specific development projects in the future, this dewatering would be temporary and localized and therefore would not substantially affect groundwater resources. Further, groundwater is not used or planned as a potable water supply in this part of San Francisco. Any groundwater encountered during construction of subsequent, individual development projects approved pursuant to the proposed zoning controls would be subject to the requirements of the City's Industrial Waste Ordinance (Ordinance No. 199-77), which requires that groundwater meet specified standards before it may be discharged into the sewer system. Any groundwater pumped from a development site shall be retained in a holding tank to allow suspended particles to settle, if this is found to be necessary by the Bureau of Environmental Regulations and Management of the Public Utilities Commission, to reduce the amount of sediment entering the storm drain/sewer lines. The Bureau of Environmental Regulation and Management must be notified of projects necessitating dewatering. That office may require analysis before discharge. Therefore, effects on groundwater and potable water supplies would be less than significant, and will not be discussed in the EIR.

Flooding

Flooding hazards are not an issue because, with the possible exception of flooding due to inadequate sewer capacity, discussed in Section 7, Utilities/Public Services, the Eastern Neighborhoods are not subject to flooding and the project would have no impacts on flooding. Therefore none of these impacts will be discussed in the EIR.

Cumulative Impacts

This analysis evaluates citywide population increases on the combined sewer system and the potential for CSOs, because the eastern two-thirds of the City, where most of the growth is anticipated by 2025, functions essentially as a single large unit in terms of wastewater and stormwater collection, treatment, and discharge. Therefore, the analysis contained herein includes all reasonably foreseeable projects that

⁸² State Water Resources Control Board, *Water Quality Control Order No. 2003-0005—DWQ. National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004. Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (General Permit)*. 2003. Available at http://www.waterboards.ca.gov/stormwtr/phase_ii_municipal.html. Viewed September 12, 2005.

could affect the number and volume of CSOs and, therefore, could potentially affect water quality in San Francisco Bay.

In light of the above, effects related to water resources would not be significant, and will not be addressed in the EIR.

11)	<u>Energy/Natural Resources</u> – Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
	(a) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	_____	<u>X</u>	<u>X</u>
	(b) Have a substantial effect on the potential use, extraction, or depletion of a natural resource?	_____	<u>X</u>	<u>X</u>

The proposed project does not propose specific development projects, but would facilitate the construction of both new residential units and commercial buildings. Development of these uses would not result in use of large amounts of fuel, water, or energy in the context of energy use throughout the City and region (see also discussion of electricity in Section 7, Utilities/Services). The energy demand for individual buildings would be typical for such projects and would meet, or exceed, current state and local codes and standards concerning energy consumption, including Title 24 of the California Code of Regulations enforced by DBI. The project area does not include any natural resources routinely extracted, and the proposed rezoning would not result in any natural resource extraction program. For these reasons, the project would not cause a wasteful use of energy, and would have a less-than-significant impact on energy.

12)	<u>Hazards</u> – Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
	(a) Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?	_____ To Be Determined _____		
	(b) Interfere with emergency response plans or emergency evacuation plans?	_____ To Be Determined _____		
	(c) Create a potentially substantial fire hazard?	_____ To Be Determined _____		

The potential for exposure of construction workers and future occupants and employees of the project area to be exposed to hazardous materials will be addressed in the EIR.

13) <u>Cultural Resources</u> – Could the project:	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
(a) Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of a scientific Study?	<u>To Be Determined</u>		
(b) Conflict with established recreational, educational, religious or scientific uses of the area?	<u>To Be Determined</u>		
(c) Conflict with the preservation of buildings subject to the provisions of Article 10 or Article 11 of the City Planning Code?	<u>To Be Determined</u>		

The EIR will address the potential for development within the project area to adversely affect both archaeological and architectural resources.

C. MITIGATION MEASURES

	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>Discussed</u>
1) Could the project have significant effects if mitigation measures are not included in the project?	<u>X</u>	<u> </u>	<u> </u>	<u>X</u>
2) Are all mitigation measures necessary to eliminate significant effects included in the project?	<u>X</u>	<u> </u>	<u> </u>	<u>X</u>

The following are mitigation measures that will be required, as applicable, of all projects proposed for implementation in the project area under the City of San Francisco jurisdiction.

Mitigation Measure– Construction Noise

1. For subsequent development projects within proximity to noise-sensitive uses that would include pile-driving, individual project sponsors shall ensure that piles be pre-drilled wherever feasible to reduce construction-related noise and vibration. No impact pile drivers shall be used unless absolutely necessary. Contractors would be required to use pile-driving equipment with state-of-the-art noise shielding and muffling devices. To reduce noise and vibration impacts, sonic or vibratory sheetpile drivers, rather than impact drivers, shall be used wherever sheetpiles are needed. Individual project sponsors shall also require that contractors schedule pile-driving activity for times of the day that would minimize disturbance to neighbors.

2. Where environmental review of a development project undertaken subsequent to the adoption of the proposed zoning controls determines that construction noise controls are necessary due to the nature of planned construction practices and the sensitivity of proximate uses, the Planning Director shall require that the sponsors of the subsequent development project develop a set of site-specific noise attenuation measures under the supervision of a qualified acoustical consultant. Prior to commencing construction, a plan for such measures shall be submitted to the Department of Building Inspection to ensure that maximum feasible noise attenuation will be achieved. These attenuation measures shall include as many of the following control strategies as feasible:

- Erect temporary plywood noise barriers around a construction site, particularly where a site adjoins noise-sensitive uses;
- Utilize noise control blankets on a building structure as the building is erected to reduce noise emission from the site;
- Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings housing sensitive uses;
- Monitor the effectiveness of noise attenuation measures by taking noise measurements; and
- Post signs on-site pertaining to permitted construction days and hours and complaint procedures and who to notify in the event of a problem, with telephone numbers listed.

The above measures would reduce construction noise to a less-than-significant level.

Mitigation Measure– Construction Air Quality

3. The City shall condition approval of individual development proposals under the proposed project upon implementation of an appropriate dust abatement program, patterned after the Bay Area Air Quality Management District (BAAQMD) approach described below.

The BAAQMD approach to dust abatement, as put forth in the BAAQMD CEQA Guidelines, calls for “basic” control measures that should be implemented at all construction sites, “enhanced” control measures that should be implemented at construction sites greater than four acres in area, and “optional” control measures that should be implemented on a case-by-case basis at construction sites that are large in area, located near sensitive receptors or which, for any other reason, may warrant additional emissions reductions.

Elements of the “basic” dust control program for project components that disturb less than four acres shall include, but not necessarily be limited to the following:

- Water all active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- Pave, apply water (reclaimed if possible) three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep streets (with water sweepers using reclaimed water if possible) at the end of each day if visible soil material is carried onto adjacent paved roads.

Elements of the “enhanced” dust abatement program for project components that disturb four or more acres are unlikely to be required, in that no sites anticipated for development in the Plan area are as large as four acres. Should a site this size be proposed for development, dust control

shall include all of the “basic” measures in addition to the following measures to be implemented by the construction contractor(s):

- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).
- Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads to 15 miles per hour.
- Limit the amount of the disturbed area at any one time, where possible.
- Pave all roadways, driveways, sidewalks, etc. as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Replant vegetation in disturbed areas as quickly as possible.
- Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the BAAQMD prior to the start of construction.

The “optional” dust-control measures supplement the “basic” and “enhanced” programs to address site-specific issues. They include:

- Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site.
- Install windbreaks, or plant tree/vegetative wind breaks at windward side(s) of construction areas.
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.

Ordinance 175-91, passed by the San Francisco Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities. Therefore, project sponsors would require that construction contractors obtain reclaimed water from the Clean Water Program for this purpose.

The City would also condition project approval such that each subsequent project sponsor would require the contractor(s) to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as a prohibition on idling motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period.

Implementation of the above measure would reduce construction air quality impacts to a less-than-significant level.

D. OTHER

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
Require approval and/or permits from City Departments other than Planning Department or Department of Building Inspection, or from Regional, State, or Federal Agencies?	<u>X</u>	<u> </u>	<u> X </u>

Approval and implementation of the proposed project would require the following actions, with acting bodies shown in italics:

- Amendment of the General Plan Rincon Central Waterfront and South of Market Area Plans and the preparation and adoption of new neighborhood or community plans for the Mission, Showplace Square/Potrero Hill, and Eastern SoMa, and other changes to the General Plan to bring it in conformance with any proposed plans. *Planning Commission recommendation; Board of Supervisors Approval*
- Determination of consistency of the proposed rezoning with the General Plan and Planning Code Section 101.1 Priority Policies. *Planning Commission recommendation; Board of Supervisors Approval*
- Amendment of the Planning Code to adopt the proposed zoning districts and to apply the new use districts to the project area. *Planning Commission recommendation; Board of Supervisors Approval*
- Amendment of the Planning Code Zoning Maps to change height limits throughout the Plan area. *Planning Commission recommendation; Board of Supervisors Approval*

E. ALTERNATIVES

The EIR will analyze the three zoning options as CEQA alternatives, and will also analyze a No Project Alternative. (As noted in the project description, the draft Central Waterfront plan includes only a single rezoning option.) In addition, the EIR will describe and analyze two community-based alternatives for the Northeast Mission entitled, one entitled “The People’s Plan,” put forth by the Mission Anti-Displacement Partnership, and another entitled, “An Alternative Future for the NEMIZ,” proposed by the Mission Coalition for Economic Justice and Jobs. The possible selection of an additional alternative for evaluation would be guided by the EIR’s analysis of significant environmental impacts.

F. MANDATORY FINDINGS OF SIGNIFICANCE

Yes No Discussed

- | | | | |
|--|--------------|--------------|--------------|
| 1) Does the project 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 pre-history? | <u> X </u> | <u> </u> | <u> X </u> |
| 2) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? | <u> </u> | <u> X </u> | <u> </u> |
| 3) Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects.) | <u> X </u> | <u> </u> | <u> X </u> |
| 4) Would the project cause substantial adverse effects on human beings, either directly or indirectly? | <u> </u> | <u> X </u> | <u> </u> |

G. ON THE BASIS OF THIS INITIAL STUDY

 I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Planning Department.

 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 the mitigation measures, numbers 1-3 AND the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

 X I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

December 15, 2005
Date



PAUL E. MALTZER
Environmental Review Officer
for
DEAN L. MACRIS
Director of Planning
Planning Department

APPENDIX B

Draft Area Plan Objectives and Policies

Eastern Neighborhoods Policy Matrix: East SoMa

Land Use	Housing	Open Space	Transportation	Urban Design	Community Facilities	Historic Resources
<p>OBJECTIVE 1.1: PROMOTE EXISTING BUSINESSES AND FACILITATE THEIR EXPANSION</p> <p>Policy 1.1.1: Provide sufficient land and building area to accommodate the reasonable growth and expansion of the East SoMa's diverse economic activities.</p> <p>Policy 1.1.2: Help businesses to thrive and expand.</p> <p>Policy 1.1.3: Where appropriate, establish a mixed-use district that requires new development to provide space for PDR activities.</p> <p>OBJECTIVE 1.2: RETAIN AND ENHANCE THE VIBRANT, MIXED-USE CHARACTER OF EAST SOMA</p> <p>Policy 1.2.1: Refine current SoMa zoning controls in the East SoMa Plan Area so that they encourage mixed-use development more effectively.</p> <p>Policy 1.2.2: Encourage commercial or light industrial uses in new construction or substantial expansion of existing buildings.</p> <p>Policy 1.2.3: Encourage 6th Street, Mission Street and Folsom Street to become lively, neighborhood-serving streets by designating them as a Neighborhood Commercial Transit District (NC-T).</p>	<p>OBJECTIVE 2.1: ENCOURAGE THE DEVELOPMENT OF PERMANENTLY AFFORDABLE HOUSING</p> <p>Policy 2.1.1: Increase opportunity sites for affordable housing development.</p> <p>Policy 2.1.2: Require a higher percentage of affordable housing units in developments along major streets in the existing RSD district, where permitted heights are increased.</p> <p>Policy 2.1.3: Identify appropriate public parcels for the development of permanently affordable housing in East SoMa.</p> <p>OBJECTIVE 2.2: ENCOURAGE IN-FILL HOUSING PRODUCTION IN APPROPRIATE AREAS</p> <p>Policy 2.2.1: Revise controls to allow or encourage in-fill housing development in areas where it is appropriate for uses to transition to predominantly mixed-use neighborhoods.</p> <p>Policy 2.2.2: Encourage commercial or light industrial uses in new construction or substantial expansion of existing buildings.</p> <p>Policy 2.2.3: Encourage higher density, residential mixed-use development along the major streets of East SoMa.</p>	<p>OBJECTIVE 3.1: INCREASE THE AMOUNT OF OPEN SPACE AND ENSURE THAT IT MEETS THE NEEDS OF RESIDENTS, WORKERS AND VISITORS</p> <p>Policy 3.1.1: Identify sites for possible transit service linking East SoMa to the rest of the city, in addition to downtown, through cross-town and east-west connections.</p> <p>Policy 3.1.2: Require new development to provide or contribute to the development of publicly accessible open space.</p> <p>Policy 3.1.3: Amend current open space requirements and in-lieu fees for commercial development.</p> <p>Policy 3.1.4: Ensure that new open spaces are designed to meet the needs of intended users, including residents, workers and visitors.</p> <p>Policy 3.1.5: Re-examine current private open space requirements to ensure the space meets the needs of residents.</p>	<p>OBJECTIVE 4.1: IMPROVE PUBLIC TRANSPORTATION</p> <p>Policy 4.1.1: Improve and expand public transit service linking East SoMa to the rest of the city, in addition to downtown, through cross-town and east-west connections.</p> <p>Policy 4.1.2: If the Central Subway is built along the 4th Street corridor, consider placing a stop on 4th Street between Bryant and Brannan.</p> <p>Policy 4.1.3: Support innovative transit solutions that improve service, reliability and overall quality of the transit rider's experience.</p> <p>Policy 4.1.4: Support the proposed E-line Historic streetcar line.</p> <p>OBJECTIVE 4.2: ESTABLISH PARKING POLICIES THAT IMPROVE THE QUALITY OF NEIGHBORHOODS AND REDUCE TRAFFIC CONGESTION BY ENCOURAGING TRAVEL BY PUBLIC TRANSIT OR OTHER NON-AUTO TRANSPORTATION MODES</p> <p>Policy 4.2.1: Eliminate minimum off-street parking requirements and establish parking caps for new residential and commercial developments.</p> <p>Policy 4.2.2: Make the cost of parking visible to users. Require parking to be rented, leased or sold separately from residential and commercial space for all new major development.</p>	<p>OBJECTIVE 5.1: AN URBAN FORM THAT CREATES EAST SOMA'S DISTINCTIVE PLACE IN THE CITY'S LARGER FORM AND STRENGTHENS ITS PHYSICAL FABRIC AND CHARACTER</p> <p>Policy 5.1.1: Infill development should harmonize the visual relationship and transition between new and older buildings by respecting the heights, massing and materials of the older, surrounding buildings, while reflecting high quality, innovative design.</p> <p>Policy 5.1.2: Heights should reflect the importance of key streets in the City's overall urban pattern, while protecting the lower scale development that surrounds South Park and the residential enclaves in the western section of the plan area (see heights map).</p> <p>Policy 5.1.3: Development should step down in heights as it approaches the Bay to reinforce the City's natural topography.</p> <p>Policy 5.1.4: Enforce alleyway sunlight access guidelines to maintain adequate light and air to sidewalks and ground floor units along alleys.</p> <p>Policy 5.1.5: Respect public view corridors. Of particular interest are the east-west views to the bay or hills, and several views towards the downtown. (Refer to the public view corridor map.)</p> <p>Policy 5.1.6: Respect the views towards the downtown from the freeway deck west of 4th Street, where the height of the building fabric remains low.</p> <p>Policy 5.1.7: For blocks with an established mid-block open space, rear-yard setbacks should respect prevailing conditions.</p>	<p>OBJECTIVE 6.1: IMPROVE LIVABILITY BY MAINTAINING AND PROVIDING ESSENTIAL COMMUNITY SERVICES AND FACILITIES</p> <p>Policy 6.1.1: Encourage appropriate location and expansion of essential neighborhood-serving community and human services activities throughout East SoMa, exclusive of the residential enclave districts.</p> <p>Policy 6.1.2: Encourage community recreation, arts and educational facilities as part of major rehab projects or planned unit developments.</p> <p>Policy 6.1.3: Expand outreach to increase resident participation in local educational and cultural programs.</p> <p>Policy 6.1.4: Consider the establishment of a new middle school in East SoMa.</p> <p>Policy 6.1.5: Ensure childcare services are located to serve neighborhood workers and residents.</p> <p>Policy 6.1.6: Ensure adequate maintenance of existing community facilities.</p> <p>OBJECTIVE 6.2: REINFORCE THE IMPORTANCE OF THE SOUTH OF MARKET AS THE CENTER OF FILIPINO-AMERICAN LIFE IN SAN FRANCISCO</p>	<p>OBJECTIVE 7.1: PROMOTE THE PRESERVATION OF NOTABLE HISTORIC LANDMARKS, HISTORIC DISTRICTS, INDIVIDUAL HISTORIC BUILDINGS AND FEATURES THAT HELP TO PROVIDE CONTINUITY WITH THE PAST</p> <p>Policy 7.1.1: Undertake an historic survey for the East SoMa Plan area in a timely manner.</p> <p>Policy 7.1.2: Until the survey is completed, project proposals should be carefully evaluated for their historic character.</p> <p>Policy 7.1.3: Review and, if necessary, revise policies in this plan to reflect the results of currently underway and future surveys.</p> <p>Policy 7.1.4: Preserve landmark and other buildings of historic value as invaluable neighborhood assets.</p> <p>Policy 7.1.5: Encourage preservation, rehabilitation, and adaptive reuse of historic buildings and resources.</p> <p>Policy 7.1.6: Protect and preserve groupings of historic resources that have integrity, and that convey a period of significance.</p> <p>Policy 7.1.7: Preserve resources in existing and future historic districts identified through survey.</p>

Eastern Neighborhoods Policy Matrix: East SoMa

Land Use	Housing	Open Space	Transportation	Urban Design	Community Facilities	Historic Resources
Policy 1.2.4: Require active ground floor uses in designated neighborhood commercial districts.	OBJECTIVE 2-3: ENSURE A MIX OF INCOME, UNIT SIZE AND TENURE IN MAJOR NEW HOUSING DEVELOPMENTS TO SATISFY AN ARRAY OF HOUSING NEEDS	Policy 3.2.2: Consider transforming Folsom Street, from the Bay waterfront to the Mission District, into a civic boulevard.	Policy 4.2.3: Encourage innovative parking arrangements that make efficient use of space.	Policy 5.1.8: Discourage the consolidation of lots to preserve a diverse and fine grain development pattern.	Policy 6.2.1: Preserve and enhance the role of social and cultural institutions.	Policy 7.1.8: Support future preservation efforts, including the designation of historic landmarks and districts where they exist, throughout the plan area.
Policy 1.2.5: Incorporate the Ballpark Special Use District provisions into the East SoMa controls.	Policy 2.3.1: Require that 40 percent of all units in new development have two or more bedrooms.	Policy 3.2.3: Require new developments to implement the street designs established by the City's Streetscape Master Plan and the SoMa Transportation Study.	Policy 4.2.4: Establish parking pricing that favors short-term use.	Policy 5.1.9: Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development.	Policy 6.2.2: Encourage the location of new social and cultural facilities in the East SoMa area.	Policy 7.1.9: Ensure that changes in the built environment respect the historic character and cultural heritage of the area, and that resource sustainability is supported.
Policy 1.2.6: In the Rincon Point/South Beach Redevelopment area, change the existing industrial zoning designations to match and support the residential uses that have been built.	Policy 2.3.2: Establish a target that at least 10 percent of all units in new development have three or more bedrooms.	OBJECTIVE 3-3: INCREASE THE QUALITY OF LANDSCAPED ELEMENTS IN BOTH PUBLIC AND PRIVATE OPEN SPACES	Policy 4.2.5: Discourage construction of new public parking facilities.	OBJECTIVE 5-2: PROMOTE AN URBAN FORM AND ARCHITECTURAL CHARACTER THAT SUPPORTS WALKING AND SUSTAINS A DIVERSE, ACTIVE AND SAFE PUBLIC REALM		Policy 7.1.10: Encourage sustainability of historic resources in the plan area consistent with the goals and objectives of the Sustainability Plan for the City and County of San Francisco.
Policy 1.2.7: Eliminate residential density maximums.	Policy 2.3.3: Encourage rental housing.	Policy 3.3.1: Require minimum ecological standards for urban landscaping for all new development and provide incentives for existing development to meet these standards.	Policy 4.2.6: Prohibit parking as a principal use in the 6th Street Neighborhood Commercial Transit District.	Policy 5.2.1: Require high quality design of street-facing building exteriors.		Policy 7.1.11: Encourage new building design that respects the character of nearby older development.
Policy 1.2.8: Allow Planned Unit Developments.	Policy 2.3.4: Require that off-site inclusionary housing be built within the East SoMa plan boundaries and consider increasing the incentive for inclusionary housing to be built on-site.	Policy 3.3.2: Enhance the pedestrian environment by planting street trees along sidewalks.	OBJECTIVE 4-3: SUPPORT THE CIRCULATION NEEDS OF EXISTING PDR USES IN EAST SOMA	Policy 5.2.2: Ground floor retail and PDR uses should be as tall and roomy as possible, with a minimum clear ceiling height of 12 feet, and should include visually permeable facades in order to permit a view inwards from the street to the activities within. The facade should be at least 75-percent transparent and windows should not be tinted.		Policy 7.1.12: Promote preservation incentives that encourage reusing older buildings in the East SoMa plan area.
Policy 1.2.9: Create mixed residential areas by encouraging the development of affordable housing.	OBJECTIVE 2-4: LOWER THE COST OF HOUSING	OBJECTIVE 3-4: ENSURE THAT EXISTING OPEN SPACE AND PARK FACILITIES ARE WELL MAINTAINED	Policy 4.3.1: Provide an adequate amount of short-term, on-street curbside freight loading spaces throughout the East SoMa.	Policy 5.2.3: In use, design and entry, orient buildings towards corners where appropriate. Promote architectural features such as towers, bays and cupolas on corner buildings to help define and convey these buildings' visual and programmatic significance to the public realm. Major entrances should be located at corners, if at all possible.		Policy 7.1.13: Apply the "Secretary of the Interior's Standards for the Treatment of Historic Properties" for all projects that impact historic resources in the plan area.
	Policy 2.4.1: Eliminate residential parking requirements.	Policy 3.4.1: Maintain existing park facilities.	Policy 4.3.2: Require off-street facilities for freight loading and service vehicles in all new major non-residential developments.	Policy 5.2.4: Minimize the visual impact of parking.		Policy 7.1.14: Apply the Secretary of the Interior's Standards for the Treatment of Historic Properties for infill construction in Historic Districts and Conservation Districts (designated at the local, state, or national level) to assure compatibility with the character of districts.

Eastern Neighborhoods Policy Matrix: East SoMa

Land Use	Housing	Open Space	Transportation	Urban Design	Community Facilities	Historic Resources
	<p>Policy 2.4.2: Encourage accessory residential units in existing buildings.</p>	<p>Policy 3.4.2: Renovate existing park facilities to provide high quality, safe and sustainable resources.</p>	<p>OBJECTIVE 4.4: ENSURE THE LEAST POSSIBLE NEGATIVE IMPACT FROM PARKING ON THE PHYSICAL CHARACTER AND QUALITY OF THE NEIGHBORHOOD</p>	<p>Policy 3.2.5: Residential buildings should be strengthened and opportunities for additional green landscaping should be maximized by adhering to the following design requirements:</p> <p>A. Blank and blind walls at the ground floor are highly discouraged and should be minimized. Frontage should not be used for utilities, storage, and refuse collection wherever possible; where they must be on the street, they should be integrated into the overall articulation and fenestration of the façade.</p> <p>B. Parking should be accessed from secondary streets on lots with two or more street frontages.</p> <p>C. Ground-floor units should be primarily accessed directly from the public way (not through common corridors or lobbies). Upper story units should connect to a lobby entry that opens directly onto the public way.</p> <p>D. Ground-floor units should be setback at least 5 feet and no more than 10 feet from the street-fronting property line, and should be at least 18 inches, and ideally 3 feet, above sidewalk level.</p> <p>E. The setback area should be generously landscaped.</p> <p>F. Physically intimidating security measures such</p>		<p>Policy 7.1.15: Preserve the cultural and socio-economic diversity of the plan area through preservation of historic resources.</p>
	<p>Policy 3.4.3: Encourage a sense of ownership of public parks and park facilities by organizing regular “Neighborhood Park Appreciation” days.</p>		<p>Policy 4.4.1: Encourage parking and loading access from alleys, rather than primary streets.</p>	<p>OBJECTIVE 5-3: IMPROVE NEIGHBORHOOD WALKABILITY BY CREATING A CIRCULATION NETWORK THROUGH INTERIOR BLOCKS AND BY DEFINING A STREET SCALE AND CHARACTER COMPARABLE TO THOSE IN EXISTING MIXED-USE AREAS ELSEWHERE IN THE CITY</p>		<p>Policy 7.1.16: To maintain the City’s supply of affordable housing, historic rehabilitation projects may need to accommodate other considerations in determining the level of restoration.</p>
	<p>Policy 2.4.3: Facilitate housing production through simple, clear zoning and planning controls and processes.</p>		<p>Policy 4.4.2: Prohibit curb cuts to access off-street parking and loading in the 6th Street Neighborhood Commercial Transit District and along all Transit Preferential Streets; discourage along 2nd Street.</p>	<p>Policy 5.3.1: Apply locally appropriate guidelines and street typologies from the Streetscape Master Plan (SMP) throughout the plan area.</p>		
	<p>Policy 2.4.4: Encourage innovative programs that improve housing rental and ownership opportunities and affordability.</p>	<p>Policy 3.4.4: Encourage the installation of permanent art at the new Victoria Manolo Draves Park.</p>	<p>OBJECTIVE 4-5: PROMOTE AND IMPROVE INFRASTRUCTURE FOR BICYCLING AND WALKING AS IMPORTANT MODES OF TRANSPORTATION</p>	<p>Policy 5.3.2: The intersection of major streets should be designed as prominent public spaces. The design, scale, massing, and orientation of buildings should reflect the significance of these intersections while providing the necessary improvements to create vibrant and sustainable public spaces.</p>		
	<p>Policy 2.4.5: Promote the South of Market as a “Location Efficient Mortgage” neighborhood.</p>	<p>Policy 3.4.5: Explore opportunities to use existing recreation and open space resources and facilitates more efficiently.</p>	<p>Policy 4.5.1: Establish East SoMa’s linkages with the citywide bicycle network to ensure a comprehensive system of safe, convenient and attractive routes for all travel needs.</p>	<p>Policy 5.3.3: Developments that occupy a significant portion of a block, that abut historical alley rights of way, or that include logical alley extensions of existing alleys, shall provide easements that would allow for future alley networks to be built.</p>		
	<p>Policy 2.4.6: Separate the cost of parking from the cost of housing.</p>					

Eastern Neighborhoods Policy Matrix: East SoMa

Land Use	Housing	Open Space	Transportation	Urban Design	Community Facilities	Historic Resources
	<p>OBJECTIVE 2-5: ENCOURAGE, RETAIN AND ENHANCE SROs AND EFFICIENCY UNITS AS AFFORDABLE HOUSING RESOURCES FOR LOW-INCOME SINGLE-PERSON AND INDEPENDENT ELDERLY HOUSEHOLDS.</p> <p>Policy 2.5.1: Encourage new construction of residential hotels (SROs) and "efficiency" units suitable for single-person households or independent elderly households.</p> <p>Policy 2.5.2: Establish affordability standards for development projects containing SROs and efficiencies.</p> <p>Policy 2.5.3: Support the rehabilitation of existing SROs that improve habitability and expand common-use facilities and areas.</p> <p>OBJECTIVE 2-6: ENCOURAGE THE RETENTION OF HOUSING</p> <p>Policy 2.6.1: Retain and enhance the existing housing stock.</p> <p>Policy 2.6.2: Prohibit residential demolitions unless they would result in sufficient replacement of existing housing units.</p>		<p>Policy 4.5.2: Provide quality bicycle parking, particularly at transit stops, outside stores, and near concentrations of employment.</p> <p>Policy 4.5.3: Require alleys that break up the scale of large-scale projects and allow additional access to buildings in the project.</p> <p>Policy 4.5.4: Prohibit the vacation or sale of streets or alleys.</p> <p>Policy 4.5.5: Consider implementing pedestrian improvements especially near freeway on- and off-ramps.</p> <p>OBJECTIVE 4-6: ENCOURAGE ALTERNATIVES TO CAR OWNERSHIP</p> <p>Policy 4.6.1: Require any new commercial use or public garages to provide carshare spaces.</p>	<p>Policy 5.3.4: Available portions of freeway right-of-way should be transformed into landscapes that foster both qualities of place and visual and pedestrian interest. Areas underneath freeway overpasses should be designed to soften the otherwise uninviting character of these areas and to promote neighborhood walkability.</p> <p>Policy 5.3.5: Significant above grade infrastructure, such as freeways, should be retrofitted with architectural lighting.</p> <p>OBJECTIVE 5-4: PROMOTE THE ENVIRONMENTAL SUSTAINABILITY, ECOLOGICAL FUNCTIONING AND THE OVERALL QUALITY OF THE NATURAL ENVIRONMENT IN THE PLAN AREA</p> <p>Policy 5.4.1: Require new development to meet minimum standards for on-site landscaping that considers rainwater retention and filtration through the use of permeable surfaces, green roofs, and other architectural elements. Provide strong incentives for existing development to meet these standards.</p> <p>Policy 5.4.2: Although discouraged, surface parking lots should be designed to minimize negative effects on microclimate and stormwater infiltration. The City's Stormwater Management plan, upon completion, shall guide how best to adhere to these guidelines.</p> <p>Policy 5.4.3: The City shall explore providing strong incentives in order to encourage the retrofit of existing parking areas and other paved areas to meet the guidelines in Policy 5.4.2.</p> <p>Policy 5.4.4: Enhance the connection between building form and ecological sustainability by promoting use of renewable energy, energy-efficient building envelopes, passive heating and cooling, and sustainable materials in addition to ecological landscaping elements as discussed in Policy 5.4.1. Compliance with Leadership in Energy and Environmental Design (LEED) certification standards and/or other evolving environmental efficiency standards is strongly encouraged.</p>		

Eastern Neighborhoods Policy Matrix: East SoMa

Land Use	Housing	Open Space	Transportation	Urban Design	Community Facilities	Historic Resources
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OBJECTIVE 4.7: DESIGN STREETS THAT REFLECT THEIR ROLE AS AN IMPORTANT PART OF CIVIC SPACE AND FOR MULTIPLE USERS AND MEANS OF TRAVEL

Policy 4.7.1: Consider transforming Folsom Street, from the Bay waterfront to the Mission District into a civic boulevard through the heart of South of Market with priority bus transit treatments and significant pedestrian improvements.

Policy 4.7.2: Consider transforming Howard Street into a neighborhood-oriented street with calm traffic and bicycle improvements and pedestrian improvements.

Policy 4.7.3: Consider improvements to 2nd Street as an important pedestrian corridor and commercial street, as well as for bicycles and transit, connecting the ballpark area to downtown.

Policy 4.7.4: Explore improvements to 3rd and 4th Streets through South of Market as important pedestrian corridors connecting Mission Bay to downtown.

Policy 4.7.5: Consider north-south transit improvements in the 7th/8th Street corridor to better serve the Showplace Square area and mid-SOMA with transit and link them to Market Street, Civic Center, Van Ness and Geary transit corridors.

Eastern Neighborhoods Policy Matrix: The Mission Land Use

Land Use	HOUSING	Transportation	Open Space	Urban Design	Community Facilities	Historic Preservation
<p>OBJECTIVE 2A: EXPAND EMPLOYMENT OPPORTUNITIES FOR MISSION RESIDENTS, PARTICULARLY THE UNEMPLOYED AND ECONOMICALLY DISADVANTAGED</p> <p>Policy 2.1.1: Establish an Employment and Business Development District in the Mission that provides PDR and other employment opportunities for a variety of skill levels.</p> <p>Policy 2.1.2: Attract new industries that create employment opportunities for Mission residents and strengthen and diversify the local economy.</p> <p>Policy 2.1.3: Develop and promote training programs that target Mission residents for employment opportunities resulting from new economic development.</p> <p>Policy 2.1.4: Promote PDR and arts activities expansion, by maintaining and increasing existing facilities and properties, rehabilitating older structures, and developing vacant land with these uses in areas designated for them.</p> <p>Policy 2.1.5: Establish and promote programs to provide funds for local business development that serves Mission residents.</p> <p>Policy 2.1.6: Support the expansion of small businesses and firms in newly emerging industries that employ Mission residents.</p> <p>Policy 2.1.7: Assist PDR firms displaced from other parts of San Francisco, to relocate in areas designated for PDR in the Mission.</p> <p>Policy 2.1.8: Protect and promote the existing cluster of auto-related businesses on land currently zoned industrial in the Mission.</p> <p>Policy 2.1.9: Promote more family and neighborhood serving uses by retaining additional bars, liquor stores, adult entertainment, tourist hotels and tobacco related businesses in neighborhood commercial areas.</p> <p>OBJECTIVE 1: TO ENSURE THAT THE MAJORITY OF NEW HOUSING IS DEVELOPED IN, OR IMMEDIATELY ADJACENT TO, ESTABLISHED NEIGHBORHOOD COMMERCIAL AREAS; THAT IT IS COMPATIBLE WITH ITS SURROUNDINGS, AND THAT IT SATISFIES COMMUNITY HOUSING NEEDS</p>	<p>OBJECTIVE 3.1: INCREASE OPPORTUNITY SITES FOR PERMANENTLY AFFORDABLE HOUSING DEVELOPMENT</p> <p>Policy 3.1.1: Encourage the development of affordable ownership housing by promoting permanently affordable homeownership projects through limited equity models and community land trusts.</p> <p>Policy 3.1.2: Encourage the development of affordable ownership housing by promoting permanently affordable homeownership projects through limited equity models and community land trusts.</p> <p>Policy 3.1.3: Encourage the development of affordable rental housing.</p> <p>Policy 3.1.4: Support the development of family affordable housing, both rental and ownership, permanently using Mission, Valencia, and 24th Streets.</p> <p>Policy 3.2.1: Ensure the compatibility of infill housing developed in established residential areas.</p> <p>Policy 3.2.2: Identify opportunities for modest amounts of housing along South Van Ness and in the vicinity of Mariposa Street without displacing or disrupting existing PDR clusters.</p> <p>Policy 3.2.3: Encourage housing development that provides for PDR or other commercial construction or other existing buildings are substantially expanded.</p> <p>OBJECTIVE 3.3: ENSURE A MIX OF INCOME, UNIT SIZE AND TENURE OWNERSHIP IN NEW MAJOR HOUSING DEVELOPMENTS</p> <p>Policy 3.3.1: Target Below Market Rate units in families.</p>	<p>OBJECTIVE 4.1: IMPROVE PUBLIC TRANSIT TO BETTER SERVE THE MISSION</p> <p>Policy 4.1.1: The Metropolitan Transit Authority (MTA) should explore improving public transit lines linking the Mission to the rest of the city and Downtown, including cross-town connectors.</p> <p>Policy 4.1.2: The MTA should explore improvements to 16th Street as a priority transit corridor, connecting the Mission district, Showplace Square/Lower Potrero, and Mission Bay with accompanying pedestrian and landscaping improvements.</p> <p>Policy 4.1.3: The MTA should consider cost-effective transit improvements to better serve the Mission area and improve links to Mission Street transit including BART.</p> <p>Policy 4.1.4: Reduce or eliminate curb cuts and vehicle conflicts with transit on Transit Preferential Streets and neighborhood commercial areas, such as Mission, 16th, Valencia, and 24th Streets.</p> <p>Policy 4.1.5: As part of the Eastern Neighborhoods Public Benefits Program, consider establishing a fee for residential and commercial developments to fund transit, pedestrian and bicycle improvements in the Mission.</p> <p>Policy 4.1.6: Support innovative transit solutions that improve service reliability and overall quality of the transit rider's experience.</p> <p>OBJECTIVE 4.2: REDUCE TRAFFIC PARKING POLICES THAT DISCOURAGE TRAVEL BY PUBLIC TRANSIT OR OTHER ALTERNATIVE TRANSPORTATION MODES</p> <p>Policy 4.2.1: Eliminate minimum off-street parking requirements and establish parking caps for new residential and commercial developments in mixed-use areas and areas adjacent to significant transit services.</p> <p>Policy 4.2.2: Make the cost of parking viable to users. Require parking to be rented, leased or sold separately from residential and commercial spaces for tenants or owners in all new major development.</p>	<p>OBJECTIVE 5: TO ENHANCE THE PUBLIC OPEN SPACE SYSTEM SHOULD BOTH BEAUTIFY THE NEIGHBORHOOD AND STRENGTHEN THE ENVIRONMENT.</p> <p>Policy 5.1: Increase the environmental and private open spaces by improving the ecological functioning of all open space.</p> <p>Policy 5.2: Require minimum ecological standards for urban landscaping for all new developments and performance standards for existing development to meet these standards.</p> <p>OBJECTIVE 5.4: THE PUBLIC OPEN SPACE NETWORK SHOULD STRENGTHEN THE PHYSICAL AND VISUAL CONNECTIONS TO IMPORTANT NATURAL FEATURES.</p> <p>Policy 5.4.1: Polson, 17th, 20th and 25th Streets should be heavily landscaped with trees and other greenery to make a strong connection from the Mission to the surrounding topography.</p>	<p>OBJECTIVE 6.1: STRENGTHENED PHYSICAL FABRIC AN URBAN FORM THAT REINFORCES THE MISSION'S DISTINCTIVE PLACE IN HISTORIC CONTEXT AND STRENGTHENS ITS PHYSICAL FABRIC AND CHARACTER.</p> <p>Policy 6.1.1: Infill development should harmonize the visual relationship and transition between new and older buildings by respecting the heights, massing and materials of the older surrounding buildings, while reducing high quality, innovative design.</p> <p>Policy 6.1.2: The design of new mixed-use infill development in the Northeast Mission/Industrial Zone (NIMIZ) should strengthen the area's industrial character through appropriate materials, height, massing, and setback, while still maintaining the ground-floor plane.</p> <p>Policy 6.1.3: Heights should reflect the above importance of key streets, such as Mission and Valencia streets. In the City's overall urban pattern, while maintaining the lower scale residential development along secondary streets, (Refer to height map)</p> <p>Policy 6.1.4: Enforce alleyway sunlight access guidelines to maintain adequate light and air to sidewalks and ground floor units along alleys.</p> <p>Policy 6.1.5: Preserve notable landmarks and areas of historic, architectural or aesthetic value and promote the preservation of other buildings and features that provide continuity with past development.</p> <p>Policy 6.1.6: Request public view corridors, of particular interest are the westward views to the hills, the northeast views towards the downtown, and the eastward views to Bernal Heights.</p> <p>Policy 6.1.8: Architectural design should be used to highlight publicly important views generated by hills in the street grid or the termination of a street at a T-intersection.</p> <p>Policy 6.1.8: Discourage the consolidation of lots to preserve a diverse and fine grain development pattern.</p> <p>Policy 6.1.9: For blocks with an established mid-block open space, rear-yard setbacks should respect prevailing conditions.</p>	<p>OBJECTIVE 7: TO IMPROVE LIVABILITY BY MAINTAINING AND PROVIDING ESSENTIAL COMMUNITY SERVICES AND FACILITIES</p> <p>Policy 7.1.1: Encourage appropriate location and expansion of essential neighborhood-serving, community and human services facilities throughout the Mission.</p> <p>Policy 7.1.2: Ensure that services and programs at existing public health facilities are maintained and improved where possible.</p> <p>Policy 7.1.3: Require community recreation, arts and educational facilities as part of major rehabilitation projects or planned lot developments.</p> <p>Policy 7.1.4: Ensure childcare services are located to serve neighborhood workers and residents.</p> <p>Policy 7.1.5: Ensure adequate maintenance of existing community facilities.</p> <p>OBJECTIVE 7.2: REINFORCE THE IMPORTANCE OF THE MISSION AS THE CENTER OF LATINO LIFE IN SAN FRANCISCO</p> <p>Policy 7.2.1: Preserve and enhance the role of social and cultural institutions.</p> <p>Policy 7.2.2: Encourage the location of new social and cultural facilities in the Mission area.</p>	<p>OBJECTIVE 8: TO PROTECT AND PRESERVE HISTORIC RESOURCES THAT HAVE INTEGRITY AND HISTORIC SIGNIFICANCE</p> <p>Policy 8.1.1: Undertake an historic survey for the Mission area in a timely manner.</p> <p>Policy 8.1.2: Update the survey as completed project proposals should be carefully evaluated for their historic character.</p> <p>Policy 8.1.3: Review and, if necessary, revise policies in this plan to reflect the results of currently underway and future surveys.</p> <p>Policy 8.1.4: Preserve landmark and other buildings of historic value as valuable neighborhood assets.</p> <p>Policy 8.1.5: Encourage preservation, rehabilitation and adaptive reuse of historic buildings and resources.</p> <p>Policy 8.1.6: Protect and preserve geographies of historic resources that have integrity and that convey a sense of significance.</p> <p>Policy 8.1.7: Preserve resources in existing and future historic districts identified through the survey.</p> <p>Policy 8.1.8: Support future preservation efforts, including the designation of historic landmarks and districts where they exist, throughout the plan area.</p> <p>Policy 8.1.9: Ensure that changes in the built environment respect the historic character and cultural heritage of the area, and that resource sustainability is supported.</p> <p>Policy 8.1.10: Encourage sustainability of historic resources in the plan area consistent with the goals and objectives of the Sustainability Plan for the City and County of San Francisco.</p>

Eastern Neighborhoods Policy Matrix: The Mission

Jobs

HOUSING

Transportation

Open Space

Urban Design

Community Facilities

Historic Preservation

Policy 1.3.1: Encourage the development of affordable housing and locate it in ways that encourage a well-mixed and diverse housing stock by designating mixed use residential areas near neighborhood commercial districts; replace density controls with requirements to build specified proportions of family housing; Establishing joint criss in appropriate residential areas; Adding additional height and lot area bonuses for 100% affordable housing developments.

Policy 1.3.2: Identify opportunity sites for, and pursue the creation of, permanently affordable housing.

OBJECTIVE 1.4: RETAIN THE MISSION'S ROLE AS AN IMPORTANT LOCATION FOR PRODUCTION, DISTRIBUTION, AND REPAIR (PDR) ACTIVITIES

Policy 1.4.1: Establish an Employment and Business Development (EBDD) District in the Mission and Mission Park areas to promote PDR and art activities.

Policy 1.4.2: Prohibit construction of new housing and office in EBDD districts and limit the amount of other uses such as large retail that can be introduced.

Policy 1.4.3: In areas designated for PDR, protect the stock of existing buildings used by or that are appropriate for PDR businesses by: 1. Restricting conversions of industrial buildings to other building types; 2. Discouraging the demolition of existing, sound PDR buildings.

Policy 1.4.4: Promote redevelopment or infill of PDR uses at underutilized sites in PDR districts.

Policy 1.4.5: Encourage the development of flexible buildings with high floor-to-ceiling heights, large floor plates, and other features that will allow the structure to support various businesses.

OBJECTIVE 1.5: ALLOW COMPATIBLE HOUSING DEVELOPMENT THAT IS IMMEDIATELY PROXIMATE TO EXISTING NEIGHBORHOOD COMMERCIAL AREAS AND SERVICES, AND THAT DOES NOT DISPLACE EXISTING BUSINESSES AND JOBS WITHOUT CREATING COMPARABLE SPACE FOR SUCH ACTIVITIES

Policy 1.5.1: Remove some currently industrial areas to accommodate more affordable housing development.

Policy 1.5.2: Establish an urban mixed use district that allows a variety of uses including housing, retail and office and that provides new space for compatible PDR development.

Policy 3.2.4: Require that forty percent of all units in new development be two or more bedroom units.

Policy 3.3.3: Establish a target that at least ten percent of all units in new development be three or more bedroom units.

Policy 3.3.4: Encourage a mix of rental and ownership housing in new major residential development.

Policy 3.3.5: When a new housing project opens to meet its inclusionary requirement of affordable units, encourage that housing to be located in the Mission and require that housing to be located only in Neighborhood Commercial (NC) or Residentially (R) zoned areas intended for the promotion of new housing.

OBJECTIVE 3.4: LOWER THE COST OF HOUSING

Policy 3.4.1: Promote the Mission as a "Location Efficient Mergers" neighborhood where lower cost financing is available to homebuyers.

Policy 3.4.2: Separate the cost of parking from the cost of housing, so that housing costs are reduced for households that do not require a parking space.

Policy 3.4.3: Ensure one-to-one replacement of housing slated for demolition or major renovation and maintain the level of affordability for replacement units.

Policy 3.4.4: Eliminate residential parking requirements and introduce a maximum parking cap in neighborhood commercial areas well served by transit to discourage additional affordable housing units.

OBJECTIVE 3.5: PRESERVE THE EXISTING RENT-CONTROLLED HOUSING STOCK

Policy 3.5.1: Continue to control the demolition or conversion of sound rent-controlled units.

Policy 4.2.4: Discourage units consisting by opening one to three short-term units, outside established residential and consistent residential parking permits if necessary in residential areas.

Policy 4.2.5: Discourage construction of new public parking facilities.

Policy 4.2.6: Prohibit parking as a principal use.

OBJECTIVE 4.3: SUPPORT THE CIRCULATION NEEDS OF EXISTING PDR USES IN THE MISSION

Policy 4.3.1: Provide an adequate amount of short-term, on-street outside freight loading spaces in PDR areas in the Mission.

Policy 4.3.2: Require off-street facilities for freight loading at PDR facilities in any new major market related developments.

Policy 4.3.3: Where appropriate, enhance access for vehicles serving PDR activities, giving them priority over other users.

OBJECTIVE 4.4: PROMOTE BICYCLE USE AS AN ALTERNATIVE TO THE AUTOMOBILE

Policy 4.4.1: Improve and expand neighborhood bicycle routes within the Mission, as well as connections with the citywide bicycle network, to create a comprehensive system of safe, convenient and attractive routes.

Policy 4.4.2: Improve the 16th Street corridor within the Mission and its connections to the Castan and Sloop/Spine Square.

Policy 4.4.3: Explore bicycle improvements on Fishburn and Powers Streets to create a north-south bicycle route to serve the Mission and that connects to SOMA.

OBJECTIVE 5.5: ENSURE THAT EXISTING PARKS AND PARK FACILITIES ARE WELL MAINTAINED

Policy 5.5.1: Maintain existing park facilities.

Policy 5.5.2: Renovate existing park facilities to provide high quality, safe and sustainable resources.

Policy 5.5.3: Encourage a sense of ownership of public parks and park facilities by organizing regular "Neighborhood Park Appreciation" days.

Policy 5.5.4: Explore opportunities to use existing recreation and open space resources and facilities more efficiently.

Policy 6.2.1: Require high quality design of street-facing building entrances.

Policy 6.2.2: Ground floor retail and PDR uses should be encouraged in new developments and a minimum clear ceiling height of 12 feet and a small facade visually permeable facade in order to permit a view towards the street to the activities within. The facade should be at least 75-percent transparent and the windows should not be tinted.

Policy 6.2.3: In use, design and entry, orient buildings towards corners where appropriate. Promote architectural features such as towers, bays and porches on corner buildings to help define and convey these buildings' visual and programmatic significance to the public realm. Major entrances should be located at corners, if at all possible.

Policy 6.2.4: Along east-west streets, buildings must preserve a 50-degree sun access plane along the south side of the right of way, measured from the curb-line. Along north/south streets, buildings must preserve a 52-degree sun access plane, measured from the curb-line.

Policy 6.2.5: Minimize the visual impact of parking infrastructure.

Policy 6.2.6: The prevailing setback and step-up along the Mission's residential streets should be respected in all new construction.

OBJECTIVE 6.3: DEVELOP A COMPREHENSIVE PUBLIC REALM PLAN FOR THE MISSION THAT PRIORITIZES THE NEEDS OF STREETS BASED UPON THEIR PREDOMINANT LAND USE, ROLE IN THE TRANSPORTATION NETWORK, AND BUILDING SCALE.

Policy 6.3.1: Apply locally appropriate guidelines and standards for the Streetscape Master Plan (SMP) throughout the plan area.

Policy 6.3.2: The intersection of major streets should be designed as prominent public spaces. The design and construction of new buildings should reflect the significance of these intersections while providing the necessary improvements to create vibrant and sustainable public spaces.

Policy 6.3.3: Developments that occupy a significant portion of a block, that abut historical alley or rail right of way, or that include logical alley extensions of existing alleys, should provide easements that would allow for future alley networks to be built.

Policy 6.3.4: Public art, or its equivalent for public art, should be required of all major infrastructure improvements.

Policy 8.1.1: Encourage new building design that respects the character of nearby older development.

Policy 8.1.2: Promote preservation incentives that encourage reusing older buildings in the Mission plan area.

Policy 8.1.3: Apply the "Secretary of the Interior's Standards for the Treatment of Historic Properties" for all projects that impact historic resources in the plan area.

Policy 8.1.4: Apply the Secretary of the Interior's Standards for the Treatment of Historic Properties for infill construction in Historic Districts and Conservation Districts (designated at the local, state, or national level) to assure compatibility with the character of districts.

Policy 8.1.5: Preserve the cultural and socio-economic diversity of the plan area through preservation of historic resources.

Policy 8.1.6: To maintain the City's supply of affordable housing, historic rehabilitation projects may need to accommodate other considerations in determining the level of restoration.

Policy 8.1.7: Until the completion of the historic survey, all proposed demolition cases for properties in the plan area for buildings constructed prior to 1961 will be referred to the Landmarks Preservation Advisory Board.

Policy 8.1.8: Until the completion of the historic survey, Mandatory Discretionary Review (DR) will be required for all proposed new construction over 50 feet within the entire Plan Area.

Land Use	HOUSING	Transportation	Open Space	Community Facilities	Historic Preservation	
	<p>Policy 3.5.2. Work to ensure that low income families, seniors, and other protected tenants who are evicted, are adequately subsidized and offered comparable housing in the area.</p> <p>Policy 3.5.3. Explore ways to conserve and upgrade the existing low and moderate income rental housing stock.</p> <p>Policy 3.5.4. Where feasible, legalize illegal rental units and bring them up to code while ensuring that these units remain under the purview of the rent-control ordinance.</p> <p>OBJECTIVE 3.6: ENCOURAGE, RETAIN AND ENHANCE SINGLE AND MULTIFAMILY HOTELS AND RESIDENCES AS AFFORDABLE HOUSING RESOURCES FOR LOW-INCOME SINGLEPERSON AND INDEPENDENT ELDERLY HOUSEHOLDS</p> <p>Policy 3.6.1. Encourage new supportive housing, including single residential occupancy hotels (SROs) and efficiency units suitable for single-person and independent elderly households.</p> <p>Policy 3.6.2. Require new SROs and efficiency units to be affordable.</p> <p>Policy 3.6.3. Support the rehabilitation of existing SROs.</p> <p>Policy 3.6.4. Increase access to supportive housing services such as drug counseling, job training and employment referrals for residents of existing SROs.</p> <p>OBJECTIVE 3.7: ENCOURAGE THE OBJECTION OF EXISTING LOWER COST AND DESIGNATED AFFORDABLE HOUSING THAT IS SOUND</p> <p>Policy 3.7.1. Continue existing city policy controlling the conversion of apartment buildings into condominiums and, to increase future affordability, explore the feasibility of converting units into limited-equity cooperatives.</p> <p>Policy 3.7.2. Explore providing subsidies to low-income homeowners for the repair of code violations and target such subsidies to low income households, especially families and seniors.</p> <p>Policy 3.7.3. Coordinate efforts to conserve the existing supply of federally subsidized lower income housing, including buildings that are privately owned and subsidized using public funds.</p> <p>OBJECTIVE 3.8: IMPROVE ACCESS TO AFFORDABLE HOUSING</p> <p>Policy 3.8.1. Ensure access to affordable housing resources by working with other city agencies and departments to improve the centralization and publication of information, announcements, and waiting lists.</p> <p>Policy 3.8.2. Ensure that all information and resources about affordable rental housing opportunities are accessible to Spanish, Chinese, and other non-English speakers.</p>	<p>Policy 4.4.5. Provide quality bicycle parking, particularly at transit, recreation, office, and near concentrations of employment.</p> <p>OBJECTIVE 4.6: ENCOURAGE ALTERNATIVES TO CAR USE AND OWNERSHIP</p> <p>Policy 4.5.1. Continue to explore car-sharing arrangements for use residents and commercial developments, as well as any parking garage.</p> <p>Policy 4.5.2. Provide space for car sharing vehicles in convenient, visible locations.</p> <p>Policy 4.5.3. Require large retail uses to provide free or discounted shuttle and delivery services to customers.</p> <p>Policy 4.5.4. Require major institutions to create "transportation demand management" programs, to encourage students, staff and faculty to use alternative transportation modes.</p>		<p>Policy 6.4.1. Require new development to meet minimum standards for on-site landscaping that include mature trees and fruiting shrubs through the site's architectural and programming elements. Provide strong incentives for existing development to meet these standards.</p> <p>Policy 6.4.2. Although strongly discouraged, surface parking lots should be designed to minimize negative impacts on stormwater and stormwater infiltration. The City's Stormwater Management plan, upon completion, shall guide how best to adhere to these guidelines.</p> <p>Policy 6.4.3. The City shall explore providing strong incentives to encourage the retrofit of existing parking and other paved areas to meet the guidelines in Policy 6.4.2.</p> <p>Policy 6.4.4. Enhance the connection between building form and ecological sustainability by mandating that new energy-efficient buildings include green roofs, walls, and other means. Compliance with Leadership in Energy and Environmental Design (LEED) certification standards and/or other evolving environmental efficiency standards is strongly encouraged.</p>	<p>OBJECTIVE 6.4: IMPROVED ECOLOGICAL FUNCTIONING PROMOTE THE ENVIRONMENTAL SUSTAINABILITY, ECOLOGICAL FUNCTIONING, AND OVERALL QUALITY OF THE NATURAL ENVIRONMENT IN THE PLAN AREA.</p>	

	Transportation	Open Space	Urban Design	Community Facilities	Historic Preservation
<p>HOUSING</p> <p>Policy 3.8.3: Working with other city agencies, explore ways to strengthen first-time homebuyer education and counseling programs.</p> <p>Policy 3.8.4: Work with the Mayor's Office of Housing to promote and expand second mortgage loan-down payment assistance programs and ensure that first-time homebuyers receive an equitable share of mortgage assistance funds.</p> <p>OBJECTIVE 3.9: PROMOTE HEALTH THROUGH HOUSING POLICY</p> <p>Policy 3.9.1: Support efforts to improve lead reduction programs to reduce lead exposure.</p> <p>Policy 3.9.2: Ensure that new housing development be designed to meet the physical, mental and psychological needs of families with children.</p>					

Eastern Neighborhoods Policy Matrix: Showplace Square/Potrero Hill

Land Use	Housing	Transportation	Open Space	Urban Design	Community Facilities	Historic Preservation
<p>OBJECTIVE 1.1: BUILD ON THE EXISTING CHARACTER OF SHOWPLACE SQUARE - POTRERO AND STABILIZE IT AS A PLACE FOR LIVING AND WORKING</p> <p>Policy 1.1.1: Establish land use districts that foster Showplace Square-Potrero's unique character.</p> <p>Policy 1.1.2: Generally retain existing heights while allowing for some change where appropriate.</p> <p>OBJECTIVE 1.2: RETAIN SHOWPLACE SQUARE'S ROLE AS AN IMPORTANT PLACE FOR PDR ACTIVITIES</p> <p>Policy 1.2.1: Designate new land use districts that protect and promote PDR activities by prohibiting construction of new housing in PDR districts and limiting the amount of other uses, especially office, which can be introduced.</p> <p>Policy 1.2.2: Help businesses to thrive and expand.</p> <p>Policy 1.2.3: Support Showplace Square's function as a center for design and PDR businesses by restricting, production, and future wholesaling, production, and repair.</p> <p>Policy 1.2.4: In areas designated for PDR, protect the stock of existing buildings used by, or appropriate for, PDR businesses by restricting conversions of industrial buildings to other building types and discouraging the demolition of sound PDR buildings.</p> <p>Policy 1.2.5: Promote redevelopment or infill of PDR uses at underutilized sites in PDR district.</p>	<p>OBJECTIVE 2.1: ENCOURAGE HOUSING PRODUCTION IN APPROPRIATE AREAS</p> <p>Policy 2.1.1: Revise zoning controls to allow in-fill housing development in areas where it is appropriate for uses in transition to predominantly mixed-use neighborhoods.</p> <p>Policy 2.1.2: Encourage housing development over commercial or PDR use in new construction or substantial expansion of existing buildings.</p> <p>OBJECTIVE 2.2: ENCOURAGE INNOVATIVE PROGRAMS THAT IMPROVE HOUSING RENTAL AND OWNERSHIP OPPORTUNITIES AND AFFORDABILITY.</p> <p>Policy 2.2.1: Where additional by-right development potential has been conferred by new zoning, require a higher percentage of affordable housing units in developments.</p> <p>Policy 2.2.2: Encourage innovative programs that improve housing rental and ownership opportunities and affordability.</p> <p>Policy 2.2.3: Identify appropriate parcels for the development of permanently affordable housing in Showplace Square.</p> <p>OBJECTIVE 2.3: LOWER THE COST OF HOUSING</p>	<p>Policy 3.1.1: Improve and expand public transit lines linking Showplace to the rest of the city and Downtown, including cross-town connections.</p> <p>Policy 3.1.2: The Municipal Transportation Agency (MTA) should explore improvements to 16th Street as a priority transit corridor, connecting the Mission district, Showplace Square/Lower Potrero, and Mission Bay with accompanying pedestrian and landscaping improvements.</p> <p>Policy 3.1.3: The MTA should consider north-south transit improvements to better serve the Showplace Square area and mid-SOMA with transit and link them to Market Street, Civic Center, Van Ness and Geary transit corridors.</p> <p>Policy 3.1.4: Caltrain and the MTA should pursue grade-separation of Caltrain tracks where they cross 16th Street.</p> <p>Policy 3.1.5: Reduce or eliminate curb cuts and vehicular conflicts with transit on Transit Preferential Streets, such as 16th Street.</p> <p>Policy 3.1.6: Establish a fee for residential and commercial developments to fund transit, pedestrian and bicycle improvements in Showplace.</p> <p>Policy 3.1.7: Support innovative transit solutions that improve service, reliability and overall quality of the transit rider's experience.</p> <p>OBJECTIVE 2.2: REDUCE TRAFFIC CONGESTION BY ESTABLISHING PARKING POLICIES THAT ENCOURAGE TRAVEL BY PUBLIC TRANSIT OR OTHER ALTERNATIVE TRANSPORTATION MODES</p>	<p>OBJECTIVE 4.1: IDENTIFY OPPORTUNITIES TO CREATE NEW PUBLIC OPEN SPACES, SUCH AS BY ACQUIRING LAND FOR NEW PARKS OR CONVERTING PARTS OF STREETS WITH SURPLUS RIGHTS-OF-WAY TO LINEAR RECREATIONAL SPACES.</p> <p>Policy 4.1.1: Identify opportunities to create new public open spaces, such as by acquiring land for new parks or converting parts of streets with surplus rights-of-way to linear recreational spaces.</p> <p>Policy 4.1.2: The areas surrounding Townsend Circle and the intersection of 16th, Wisconsin and Irwin Streets offer significant opportunities to increase the neighborhood's public open space network and should receive immediate design attention.</p> <p>OBJECTIVE 4.2: NEW DEVELOPMENT SHOULD CONTRIBUTE TO THE PROVISION OF HIGH QUALITY PRIVATE AND/OR PUBLIC OPEN SPACE, EITHER BY PROVIDING SPACE ON SITE OR BY PAYING AN IN-LIEU FEE</p> <p>Policy 4.2.1: Require new residential and mixed-use residential buildings to provide on-site private open space, with a minimum of 80 square feet per unit.</p> <p>Policy 4.2.2: On-site private open spaces should be designed according to the needs of the anticipated populations, as defined by the types of units in the development.</p> <p>Policy 4.2.3: Require new non-residential and non-PDR development to contribute to the neighborhood's open space system either by building new publicly accessible open spaces on site, or by paying an in-lieu fee to be used for the purchase of new public space in the plan area.</p> <p>OBJECTIVE 4.3: THE PUBLIC OPEN SPACE SYSTEM SHOULD BOTH BEAUTIFY THE NEIGHBORHOOD AND STRENGTHEN THE ENVIRONMENT</p> <p>Policy 4.3.1: Increase the environmental sustainability of Showplace Square's system of public and private open spaces by improving the ecological functioning of all open space.</p>	<p>OBJECTIVE 5.1: INFILL DEVELOPMENT SHOULD HARMONIZE THE VISUAL RELATIONSHIP AND TRANSITION BETWEEN NEW AND OLDER BUILDINGS BY RESPECTING THE HEIGHTS, MASSING AND MATERIALS OF THE OLDER, SURROUNDING BUILDINGS, WHILE REFLECTING HIGH QUALITY, INNOVATIVE DESIGN.</p> <p>Policy 5.1.1: Infill development should harmonize the visual relationship and transition between new and older buildings by respecting the heights, massing and materials of the older, surrounding buildings, while reflecting high quality, innovative design.</p> <p>Policy 5.1.2: Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development.</p> <p>Policy 5.1.3: Heights should reflect the importance of primary streets and transit priority streets (TPS) in the City's overall urban pattern, while transitioning to the lower scale residential development at the base of Potrero Hill. Heights should respect natural topography.</p> <p>Policy 5.1.4: Respect public view corridors. Of particular interest are the east-west views to the bay or hills, and several north-south views towards downtown and Potrero Hill.</p> <p>Policy 5.1.5: Adapt firm bulk controls to protect view corridors.</p> <p>Policy 5.1.6: Attractively screen rooftop HVAC systems and other building utilities from view.</p> <p>Policy 5.1.7: For blocks with an established mid-block open space, rear yard setbacks should respect prevailing conditions.</p> <p>Policy 5.1.8: Discourage the consolidation of lots to preserve a diverse and fine grain development pattern.</p>	<p>Policy 6.1.1: Encourage appropriate location and expansion of essential neighborhood-serving community and human services activities throughout Showplace Square-Potrero.</p> <p>Policy 6.1.2: Encourage community recreation, arts and educational facilities as part of major rehabilitation projects or planned unit developments.</p> <p>Policy 6.1.3: Ensure childcare services are located to serve neighborhood workers and residents.</p> <p>Policy 6.1.4: Ensure adequate maintenance of existing community facilities.</p>	<p>Policy 7.1.1: Undertake a historic survey for the Showplace Square-Potrero Hill area in a timely manner.</p> <p>Policy 7.1.2: Until the survey is completed, project proposals should be carefully evaluated for their historic character.</p> <p>Policy 7.1.3: Until the completion of the historic survey, all proposed demolition cases for properties within the Plan Area for buildings constructed prior to 1961 will be forwarded to the Landmarks Preservation Advisory Board.</p> <p>Policy 7.1.4: Until the completion of the historic survey, Mandatory Discretionary Review (DR) will be required for all proposed new construction over 50 feet within the entire Plan Area.</p> <p>Policy 7.1.5: Review and, if necessary, revise policies in this plan to reflect the results of currently underway and future surveys.</p> <p>Policy 7.1.6: Preserve landmark and other buildings of historic value as invaluable neighborhood assets.</p> <p>Policy 7.1.7: Encourage preservation, rehabilitation, and adaptive reuse of historic buildings and resources.</p> <p>Policy 7.1.8: Protect and preserve groupings of historic resources that have integrity, and that convey a period of significance.</p>

Eastern Neighborhoods Policy Matrix: Showplace Square/Potrero Hill

Land Use	Housing	Transportation	Open Space	Urban Design	Community Facilities	Historic Preservation
<p>Policy 1.2.6: Encourage development of flexible buildings with high floor-to-ceiling heights, large floor plates, and other features that will allow the structure to support various businesses</p> <p>OBJECTIVE 1.3: STRENGTHEN AND EXPAND SHOWPLACE/POTRERO AS A RESIDENTIAL, MIXED-USE NEIGHBORHOOD</p> <p>Policy 1.3.1: Encourage new development on industrial land no longer needed for PDR activities.</p> <p>Policy 1.3.2: Delineate areas to be rezoned from industrial to other uses so that the potential for new development is optimized and displacement of existing businesses and jobs is minimized.</p> <p>Policy 1.3.3: Where appropriate, increase Showplace Square/Potrero's capacity for new housing development.</p> <p>Policy 1.3.4: Establish flexible zoning districts that allow for a wide range of new housing development.</p> <p>Policy 1.3.5: Establish mixed use districts that require new development to provide space for PDR activities.</p> <p>Policy 1.3.6: Delineate a special neighborhood commercial overlay district along 16th and 17th Streets that is compatible with existing PDR uses in the area.</p> <p>Policy 1.3.7: Protect the character of existing neighborhood commercial areas on 18th and 20th Streets on Potrero Hill by retaining the existing NC-1 zoning designations.</p> <p>Policy 1.3.8: Where appropriate, encourage a mix of arts related activities in Showplace Square.</p>	<p>Policy 2.1: Eliminate minimum off-street parking requirements and establish parking caps for new residential and commercial developments in mixed-use areas and areas adjacent to significant transit services.</p> <p>Policy 2.2: Make the cost of parking visible to users. Require parking to be rented, leased or sold separately from residential and commercial space for tenants or owners in all new major development.</p> <p>OBJECTIVE 2.4: ENSURE A MIX OF INCOME, UNIT SIZE AND TENURE IN MAJOR NEW HOUSING DEVELOPMENTS TO SATISFY AN ARRAY OF HOUSING NEEDS</p> <p>Policy 2.4.1: For all developments of 10 units or more, require that 40 percent of all units in new development have two or more bedrooms and that at least 10 percent of all units in new development have three or more bedrooms.</p> <p>Policy 2.4.2: Encourage rental housing, particularly affordable.</p> <p>Policy 2.4.3: Require that off-site inclusionary housing be built within the Showplace Square plan boundaries and increase the incentive for inclusionary housing to be built on-site.</p> <p>Policy 2.4.4: Promote the development of housing for seniors, the disabled, and other special needs groups within the plan boundaries.</p> <p>OBJECTIVE 2.5: ENCOURAGE THE RETENTION OF HOUSING</p> <p>Policy 2.5.1: Retain and enhance the existing housing stock.</p>	<p>Policy 3.2.1: Encourage, or require where appropriate, innovative parking arrangements that make efficient use of space and that discourage the use of autos for everyday use.</p> <p>Policy 3.2.2: Discourage auto commuting by requiring rates to favor short-term users, installing parking meters on all streets outside established residential areas and considering residential parking permits if necessary in residential areas.</p> <p>Policy 3.2.3: Discourage construction of new public parking facilities.</p> <p>Policy 3.2.4: Prohibit parking as a principal use.</p> <p>OBJECTIVE 3.3: DESIGN STREETS AND ENHANCE THE STREET NETWORK TO ENCOURAGE WALKING AND ENSURE PEDESTRIAN SAFETY</p> <p>Policy 3.3.1: Create safe and pleasant pedestrian networks that link Showplace Square to adjacent neighborhoods.</p> <p>Policy 3.3.2: Improve streets for pedestrian access and safety.</p> <p>Policy 3.3.3: Introduce traffic-calming measures and other improvements where appropriate.</p>	<p>Policy 4.3.2: Enhance the pedestrian environment by planting street trees along sidewalks.</p> <p>Policy 4.3.3: Require minimum ecological standards for urban landscaping for all new development and provide incentives for existing development to meet these standards.</p> <p>OBJECTIVE 4.4: THE PUBLIC OPEN SPACE NETWORK SHOULD STRENGTHEN THE CONNECTION TO SAN FRANCISCO BAY</p> <p>Policy 4.4.1: 16th Street should be heavily landscaped with trees and other greenery to make a strong visual connection from Showplace Square to the Bay.</p> <p>Policy 4.4.2: The opportunity to highlight Mission Creek's historic channel through Showplace Square should be explored, possibly by creating a new public open space based on daylighting some element of the historic streambed.</p>	<p>Policy 5.2: Ground floor retail and PDR uses should be as tall and roomy as possible, with a minimum clear ceiling height of 12 feet, and should include visually permeable facades in order to permit a view inward from the street. The facade should be at least 75-percent transparent at the ground level.</p> <p>Policy 5.2.3: In use, design and entry, orient buildings towards centers where appropriate. Promote architectural features such as awnings, bays and canopies on corner buildings to help define and convey these buildings' visual and programmatic significance to the public realm. Major entrances should be located at centers, if at all possible.</p> <p>Policy 5.2.4: Along east/west streets, buildings must preserve a 50-degree sun access plane to the north side of the right of way. Along north/south streets, buildings must preserve a 50-degree sun access plane to the east side of the right of way. Along all alleyways and mid-block passageways, enforce sunlight access guidelines to maintain adequate light and air to sidewalks and ground floor uses.</p> <p>Policy 5.2.5: Minimize the visual impact of parking infrastructure.</p> <p>OBJECTIVE 5.3: IMPROVE NEIGHBORHOOD WALKABILITY BY CREATING A CIRCULATION NETWORK THROUGH INTERIOR BLOCKS AND BY DEFINING A STREET SCALE AND CHARACTER COMPARABLE TO THOSE IN EXISTING MIXED-USE AREAS ELSEWHERE IN THE CITY</p> <p>Policy 5.3.1: Apply locally appropriate guidelines and street typologies from the Streetscape Master Plan (SMP) throughout the plan area.</p> <p>Policy 5.3.2: The intersection of major streets should be designed as prominent public spaces. The design, scale, massing, and orientation of buildings should reflect the significance of these intersections while providing the necessary improvements to create vibrant and sustainable public spaces.</p> <p>Policy 5.3.3: Pedestrian friendly living streets should be designed as primary pedestrian connectors between 16th and 17th streets at Wisconsin, Arkansas, and Connecticut Streets, and on King, Berry, Hooper, Irwin, and Hubbell Streets.</p>	<p>OBJECTIVE 5.4: PROMOTE AN URBAN FORM AND ARCHITECTURAL CHARACTER THAT SUPPORTS WALKING AND SUSTAINS A DIVERSE, ACTIVE, AND SAFE PUBLIC REALM</p> <p>Policy 5.4.1: Require high quality design of street-facing building exteriors.</p> <p>Policy 5.4.2: Ground floor retail and PDR uses should be as tall and roomy as possible, with a minimum clear ceiling height of 12 feet, and should include visually permeable facades in order to permit a view inward from the street. The facade should be at least 75-percent transparent at the ground level.</p> <p>Policy 5.4.3: In use, design and entry, orient buildings towards centers where appropriate. Promote architectural features such as awnings, bays and canopies on corner buildings to help define and convey these buildings' visual and programmatic significance to the public realm. Major entrances should be located at centers, if at all possible.</p> <p>Policy 5.4.4: Along east/west streets, buildings must preserve a 50-degree sun access plane to the north side of the right of way. Along north/south streets, buildings must preserve a 50-degree sun access plane to the east side of the right of way. Along all alleyways and mid-block passageways, enforce sunlight access guidelines to maintain adequate light and air to sidewalks and ground floor uses.</p> <p>Policy 5.4.5: Minimize the visual impact of parking infrastructure.</p> <p>OBJECTIVE 5.5: IMPROVE NEIGHBORHOOD WALKABILITY BY CREATING A CIRCULATION NETWORK THROUGH INTERIOR BLOCKS AND BY DEFINING A STREET SCALE AND CHARACTER COMPARABLE TO THOSE IN EXISTING MIXED-USE AREAS ELSEWHERE IN THE CITY</p> <p>Policy 5.5.1: Apply locally appropriate guidelines and street typologies from the Streetscape Master Plan (SMP) throughout the plan area.</p> <p>Policy 5.5.2: The intersection of major streets should be designed as prominent public spaces. The design, scale, massing, and orientation of buildings should reflect the significance of these intersections while providing the necessary improvements to create vibrant and sustainable public spaces.</p> <p>Policy 5.5.3: Pedestrian friendly living streets should be designed as primary pedestrian connectors between 16th and 17th streets at Wisconsin, Arkansas, and Connecticut Streets, and on King, Berry, Hooper, Irwin, and Hubbell Streets.</p>	<p>Policy 7.1.9: Preserve resources in existing and future historic districts identified through survey.</p> <p>Policy 7.1.10: Support future preservation efforts, including the designation of historic landmarks and districts where they exist, throughout the plan area.</p> <p>Policy 7.1.11: Ensure that changes in the built environment respect the historic character and cultural heritage of the area, and that resource sustainability is supported.</p> <p>Policy 7.1.12: Encourage sustainability of historic resources in the plan area consistent with the goals and objectives of the Sustainability Plan for the City and County of San Francisco.</p> <p>Policy 7.1.13: Encourage new building design that respects the character of nearby older development.</p> <p>Policy 7.1.14: Promote preservation incentives that encourage retaining older buildings in the Showplace Square-Potrero Hill plan area.</p> <p>Policy 7.1.15: Apply the "Secretary of the Interior's Standards for the Treatment of Historic Properties" for all projects that impact historic resources in the plan area.</p> <p>Policy 7.1.16: Apply the Secretary of the Interior's Standards for the Treatment of Historic Properties for infill construction in Historic Districts and Conservation Districts (designated at the local, state, or national level) to assure compatibility with the character of districts.</p> <p>Policy 7.1.17: Preserve the cultural and socio-economic diversity of the plan area through preservation of historic resources.</p> <p>Policy 7.1.18: To maintain the City's supply of affordable housing, historic rehabilitation projects may need to accommodate other considerations in determining the level of restoration.</p>

Eastern Neighborhoods Policy Matrix: Showplace Square/Potrero Hill

Land Use	Housing	Transportation	Open Space	Urban Design	Community Facilities	Historic Preservation
<p>OBJECTIVE 1.4: ENCOURAGE NEW DEVELOPMENT TO BE ORIENTED TO TRANSIT, PEDESTRIANS, AND BICYCLES</p> <p>Policy 1.4.1: Encourage active uses, especially neighborhood-serving uses, on the first floor of new development particularly along 17th Street adjacent to Jackson Playground.</p> <p>Policy 1.4.2: Require new development to incorporate design features that support pedestrians, bicyclists, and transit users.</p>	<p>Policy 2.1.1: Promote access to affordable housing resources and information.</p> <p>Policy 2.6.2: Where possible, promote and expand second mortgage loan down payment assistance programs.</p> <p>OBJECTIVE 2.7: PROMOTE HEALTH THROUGH HOUSING POLICY</p> <p>Policy 2.7.1: Holistically consider health impacts in the production of new housing.</p>	<p>Policy 3.3.4: Require private developers to include alleys that break up the scale of large-scale projects and to facilitate service access to buildings away from key transit or pedestrian streets.</p> <p>Policy 3.3.5: Require private developers to contribute to the creation and maintenance of improved streetscapes through in-kind contribution, a community facilities district and/or developer fees.</p> <p>Policy 3.3.6: Pursue additional street or pedestrian connections to Mission Bay between 16th Street and Coronas Street.</p> <p>OBJECTIVE 3.4: SUPPORT THE CIRCULATION NEEDS OF EXISTING PDR USES IN SHOWPLACE SQUARE</p> <p>Policy 3.4.1: Provide an adequate amount of short-term, onstreet curbside freight loading spaces throughout Showplace Square.</p> <p>Policy 3.4.2: Require off-street facilities for freight loading and service vehicles in any new major non-residential developments.</p> <p>Policy 3.4.3: Where appropriate, enhance access for vehicles serving PDR activities, giving them priority over other motorized users.</p> <p>OBJECTIVE 3.5: DESIGN STREETS WITH OPEN SPACE AND ECOLOGICAL CONSIDERATION TO ENHANCE NEIGHBORHOOD LIVABILITY AND HEALTH</p> <p>Policy 3.5.1: Convert portions of rights-of-way into usable open space and explore "Living Street" design for streets in Showplace Square that have excess capacity and are not connective with the major street grid.</p> <p>Policy 3.5.2: Reduce paved portions of right-of-ways with landscaping and permeable surfaces where possible to slow or capture stormwater runoff.</p> <p>Policy 3.5.3: Do not vacate or sell any portions of right-of-ways not needed for traffic, particularly to accommodate or increase the size of private property or a particular development.</p> <p>OBJECTIVE 3.6: PROMOTE BICYCLE USE AS AN ALTERNATIVE TO THE AUTOMOBILE</p>	<p>Policy 3.3.4: Require private developers to include alleys that break up the scale of large-scale projects and to facilitate service access to buildings away from key transit or pedestrian streets.</p> <p>Policy 3.3.5: Require private developers to contribute to the creation and maintenance of improved streetscapes through in-kind contribution, a community facilities district and/or developer fees.</p> <p>Policy 3.3.6: Pursue additional street or pedestrian connections to Mission Bay between 16th Street and Coronas Street.</p> <p>OBJECTIVE 3.4: SUPPORT THE CIRCULATION NEEDS OF EXISTING PDR USES IN SHOWPLACE SQUARE</p> <p>Policy 3.4.1: Provide an adequate amount of short-term, onstreet curbside freight loading spaces throughout Showplace Square.</p> <p>Policy 3.4.2: Require off-street facilities for freight loading and service vehicles in any new major non-residential developments.</p> <p>Policy 3.4.3: Where appropriate, enhance access for vehicles serving PDR activities, giving them priority over other motorized users.</p> <p>OBJECTIVE 3.5: DESIGN STREETS WITH OPEN SPACE AND ECOLOGICAL CONSIDERATION TO ENHANCE NEIGHBORHOOD LIVABILITY AND HEALTH</p> <p>Policy 3.5.1: Convert portions of rights-of-way into usable open space and explore "Living Street" design for streets in Showplace Square that have excess capacity and are not connective with the major street grid.</p> <p>Policy 3.5.2: Reduce paved portions of right-of-ways with landscaping and permeable surfaces where possible to slow or capture stormwater runoff.</p> <p>Policy 3.5.3: Do not vacate or sell any portions of right-of-ways not needed for traffic, particularly to accommodate or increase the size of private property or a particular development.</p> <p>OBJECTIVE 3.6: PROMOTE BICYCLE USE AS AN ALTERNATIVE TO THE AUTOMOBILE</p>	<p>Policy 5.3.4: Developments that occupy a significant portion of a block should provide publicly accessible alleys or passageways.</p> <p>Policy 5.3.5: Available portions of freeway and rail rights-of-way should be transformed into landscape designs that foster both qualities of place and visual and pedestrian interest. Areas underneath freeway overpasses should be designed to soften the otherwise unwelcoming character of these areas and to promote neighborhood walkability.</p> <p>Policy 5.3.6: An at-grade pedestrian connection between Showplace Square and Mission Bay should be enhanced by tunneling the Caltrain right-of-way.</p> <p>Policy 5.3.7: Public art, or an in-lieu fee for public art, is required of all major infrastructure improvements.</p> <p>OBJECTIVE 5.4: PROMOTE THE ENVIRONMENTAL SUSTAINABILITY, ECOLOGICAL FUNCTIONING AND OVERALL QUALITY OF THE NATURAL ENVIRONMENT IN THE PLAN AREA</p> <p>Policy 5.4.1: Require new development to meet minimum standards for on-site landscaping that incorporates rainwater retention and filtration through the use of permeable surfaces, green roofs, and other architectural and programmatic elements. Provide strong incentives for existing development to meet these standards.</p> <p>Policy 5.4.2: Surface parking lots should be designed to minimize negative impacts on microclimate and stormwater infiltration. The City's Stormwater Management plan, upon completion, shall guide how best to adhere to these guidelines.</p> <p>Policy 5.4.3: The City shall explore providing strong incentives to encourage the retrofit of existing parking and other paved areas to meet the guidelines in Policy 1.4.2.</p> <p>Policy 5.4.4: Enhance the connection between building form and ecological sustainability by promoting use of renewable energy, energy-efficient building envelopes, passive heating and cooling, and sustainable materials in addition to landscaping elements such as green roofs, green walls, and other means. Compliance with Leadership in Energy and Environmental Design (LEED) certification standards and/or other evolving environmental efficiency standards is strongly encouraged.</p>	<p>Policy 5.3.4: Developments that occupy a significant portion of a block should provide publicly accessible alleys or passageways.</p> <p>Policy 5.3.5: Available portions of freeway and rail rights-of-way should be transformed into landscape designs that foster both qualities of place and visual and pedestrian interest. 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Eastern Neighborhoods Policy Matrix: Showplace Square/Potrero Hill

Land Use	Housing	Open Space	Urban Design	Community Facilities	Historic Preservation
Transportation					
<p>Policy 3.6.1: Improve and expand neighborhood bicycle routes within the area and connections with the citywide bicycle network to ensure a comprehensive system of safe, convenient and attractive routes.</p> <p>Policy 3.6.2: Improve the 16th/17th Street corridor within the area and its connections to the Mission District and Mission Bay.</p> <p>Policy 3.6.3: The MTA should explore bicycle improvements on Henry Adams or Rhode Island Streets to create a north-south bicycle route to serve the heart of Showplace Square and that connects to 8th Street.</p> <p>Policy 3.6.4: The MTA should consider improving bicycle connections to Mission Bay and support the Mission Creek Bikeway project.</p> <p>Policy 3.6.5: Provide quality bicycle parking, particularly at transit stops, outside stores, and near concentrations of employment.</p>					
OBJECTIVE 3.7: ENCOURAGE ALTERNATIVES TO CAR USE AND OWNERSHIP					
<p>Policy 3.7.1: Continue to require car-sharing arrangements in new residential and commercial developments, as well as any parking garages.</p> <p>Policy 3.7.2: Provide space for car sharing vehicles in convenient, visible locations.</p> <p>Policy 3.7.3: Require large retail uses, particularly supermarkets, to provide free or discounted shuttle and delivery services to customers.</p> <p>Policy 3.7.4: Require major institutions to create "transportation demand management" programs to encourage students, staff and faculty to use alternative transportation modes.</p>					

Eastern Neighborhoods Policy Matrix: Central Waterfront

Land Use	Parks and Open Space	Moving About	Urban Design*	Historic Preservation
<p>OBJECTIVE 1: REINFORCE THE CENTRAL WATERFRONT'S CHARACTER AS A PLACE FOR LIVING AND WORKING</p> <p>Policy 1.1: Establish land use districts that foster the Central Waterfront's mixed use character.</p> <p>OBJECTIVE 2: STRENGTHEN AND EXPAND THE CENTRAL WATERFRONT AS A RESIDENTIAL, MIXED USE NEIGHBORHOOD</p> <p>Policy 2.1: Designate areas for new housing and maximize the opportunities for new residential in-fill, especially affordable housing.</p> <p>Policy 2.2: Encourage compatible uses and activities to mix in areas not designated for PDR or Heavy PDR uses.</p> <p>Policy 2.3: In the Central Waterfront Mixed Use Residential District, discourage the continuation of PDR activities that are incompatible with housing.</p> <p>Policy 2.4: Discourage the demolition of existing housing.</p> <p>Policy 2.5: Eliminate dwelling-unit density maximums.</p> <p>Policy 2.6: Produce housing for a variety of household sizes and income levels, and for a mix of ownership and rental housing.</p> <p>Policy 2.7: Require or encourage that parking costs be separated from housing prices or rents in new residential development.</p> <p>Policy 2.8: Establish programs, such as location-efficient mortgage lending, to lower the cost of housing built in the plan area.</p> <p>Policy 2.9: Commensurate with the goals of this plan, ensure that development of the Port's Pier 70 Mixed Use Opportunity Site will support the Port's goals and that it will be complementary to the maritime and industrial nature of the area.</p>	<p>OBJECTIVE 1: CREATE A LINKED SYSTEM OF NEW AND IMPROVED OPEN SPACES WITHIN THE NEIGHBORHOOD AND ALONG THE SHORELINE. CONNECT THIS SYSTEM TO TRANSIT STOPS OR OTHER MAJOR IMPORTANT DESTINATIONS THROUGH A NETWORK OF PATHWAYS AND IMPROVED PUBLIC RIGHT-OF-WAYS</p> <p>Policy 1.1: Ensure that open spaces are linked by the public street system and that the street system serves as an extension of the open space system.</p> <p>Policy 1.2: Establish and improve publicly accessible parks at waterfront destinations.</p> <p>Policy 1.3: Enhance public access to the waterfront through the use of pedestrian and bicycle paths.</p> <p>Policy 1.4: Clearly mark the Bay Trail where it passes through the Central Waterfront, and move it closer to the Bay as opportunities become available.</p> <p>Policy 1.5: Work with the Port of San Francisco and PG&E to preserve Irish Hill and convert it into a neighborhood open space and natural historic monument.</p> <p>Policy 1.6: Work with private landowners to convert abandoned rail alignments into public open space and access.</p> <p>Policy 1.7: Pursue acquisition or conversion of the Tubbs Cordage Factory alignment to public access. Should it be infeasible to purchase the necessary property, future development should include the improvements outlined below.</p> <p>Policy 1.8: Develop a continuous loop of public open space along Islais Creek.</p> <p>Policy 1.9: Convert the area behind the I. M. Scott School into public open space.</p>	<p>OBJECTIVE 1: IMPROVE PUBLIC CONNECTIONS WITHIN AND TO THE NEIGHBORHOOD</p> <p>Policy 1.1: Extend and rebuild the street grid, especially in the direction of the Bay.</p> <p>Policy 1.2: Connect Potrero Hill to San Francisco Bay through physical linkages.</p> <p>Policy 1.3: Reclaim public rights-of-way that have been vacated or incorporated into private parcels.</p> <p>OBJECTIVE 2: DESIGN STREETS THAT REFLECT THEIR ROLE AS AN IMPORTANT PART OF CIVIC SPACE AND FOR MULTIPLE USERS AND MEANS OF TRAVEL</p> <p>Policy 2.1: Treat streets as an important part of the public open space system.</p> <p>Policy 2.2: Design streets for a variety of users.</p> <p>Policy 2.3: Ensure provisions for safe and enjoyable pedestrian travel throughout the neighborhood by employing innovative street design.</p> <p>Policy 2.4: Support pedestrians by encouraging the development of an active streetfront.</p> <p>Policy 2.5: Clearly mark the Bay Trail where it passes through the Central Waterfront and move it closer to the Bay as opportunities become available.</p> <p>Policy 2.6: Encourage CalTrans to improve the 18th and 20th Street bridges over I-280 for better pedestrian access between the Potrero Hill neighborhood and the Central Waterfront.</p> <p>Policy 2.7: Encourage pedestrian activity by creating a better physical environment for walking.</p>	<p>OBJECTIVE 1: CONNECT THE CENTRAL WATERFRONT TO THE BAY AND SURROUNDING NEIGHBORHOODS THROUGH VISUAL LINKAGES AND SIGHT LINES</p> <p>OBJECTIVE 2: EMPHASIZE NODES AND TRANSIT CORRIDORS</p> <p>OBJECTIVE 3: RESPECT THE FINE GRAIN OF THE DOGPATCH AREA AND BUILD WITH RESPECT TO ITS CHARACTER</p> <p>OBJECTIVE 4: ENSURE A RICH AND ACTIVE PEDESTRIAN REALM, ESPECIALLY ALONG NEIGHBORHOOD COMMERCIAL STREETS</p> <p>OBJECTIVE 5: RESPECT AND BUILD FROM THE SUCCESSFUL ESTABLISHED PATTERNS AND TRADITIONS OF BUILDING MASSING, ARTICULATION, AND ARCHITECTURAL CHARACTER OF THE AREA AND THE CITY</p> <p>OBJECTIVE 6: FOSTER A MORE PEDESTRIAN-SUPPORTIVE PUBLIC REALM IN INDUSTRIAL AREAS ALONG EAST-WEST STREETS</p> <p>OBJECTIVE 7: ENCOURAGE AN ACTIVE PUBLIC WATERFRONT</p> <p>*see plan for extensive discussion of policies.</p>	<p>OBJECTIVE 1: PRESERVE NOTABLE LANDMARKS IN THE CENTRAL WATERFRONT OF HISTORIC, ARCHITECTURAL OR AESTHETIC VALUE, AND PROMOTE THE PRESERVATION OF OTHER BUILDINGS AND FEATURES THAT PROVIDE CONTINUITY WITH THE PAST</p> <p>Policy 1.1: Encourage preservation and rehabilitation of historic buildings and resources.</p> <p>Policy 1.2: Provide resources for the maintenance and periodic update of the Central Waterfront Cultural Resource Survey.</p> <p>Policy 1.3: Protect groupings of cultural resources that have integrity, convey a period of significance, and are recognized through the creation of historic or conservation districts.</p> <p>Policy 1.4: Preserve historic elements of the Maritime and Industrial Area east of Illinois Street.</p> <p>Policy 1.5: Consider designating resources, both individually and through historic districts, in the Central Waterfront and Pier 70 to local, state, or national historic registers.</p> <p>Policy 1.6: Obtain designation for the Dogpatch Historic District and other important historic resources.</p> <p>Policy 1.7: Protect important examples of engineering achievements such as bridges and tunnels and, as appropriate, designate as city landmarks or as contributors to historic districts.</p> <p>Policy 1.8: Promote preservation incentives that encourage reusing older buildings in the Central Waterfront area.</p> <p>Policy 1.9: Encourage sustainability of cultural resources in the Central Waterfront consistent with the goals and objectives of the Sustainability Plan for the City and County of San Francisco.</p> <p>OBJECTIVE 2: USE CARE IN REHABILITATING OLDER BUILDINGS TO ENHANCE RATHER THAN WEAKEN THEIR ORIGINAL CHARACTER</p> <p>Policy 2.1: In general, new buildings should be designed to respect the character of nearby older development.</p>

Eastern Neighborhoods Policy Matrix: Central Waterfront

Land Use Parks and Open Space

Policy 2.10: Should the site of the Muni Woods facility become available for other uses in the future, it should become a high-density, mixed use residential development.

Policy 2.11: Discourage residential development adjacent to I-280 and prohibit it adjacent to the power plant.

OBJECTIVE 3: REINFORCE THE CENTRAL WATERFRONT'S ROLE AS AN IMPORTANT AREA FOR PRODUCTION, DISTRIBUTION, AND REPAIR ACTIVITIES

Policy 3.3: Promote redevelopment or infill of PDR uses at underutilized sites in PDR and Heavy PDR districts.

Policy 3.4: Encourage development of flexible buildings with high floor-to-ceiling heights, large floor plates, and other features that allow adaptability to changes in use.

Policy 3.5: Prohibit construction of new housing and office in PDR and Heavy PDR districts.

Policy 3.6: Enhance the infrastructure and working environment within areas designated for PDR and Heavy PDR to serve business and industry.

OBJECTIVE 4: PROTECT MARITIME AND MARITIME-RELATED ACTIVITIES IN THE CENTRAL WATERFRONT

Policy 4.1: Support the continued operation of the dry dock facility at Pier 70.

Policy 4.2: Support the continued operation of the Pier 80 container facility.

Policy 4.3: To better serve businesses and industry, enhance the infrastructure and working environment within areas designated for maritime uses.

OBJECTIVE 5: ENCOURAGE THE PRESENCE OF SHOPS AND SERVICES THAT WILL SERVE RESIDENTS, WORKERS, AND VISITORS

Policy 5.1: Require ground-floor retail in places along 22nd Street between Third and Minnesota Streets.

Policy 5.2: Encourage retail development as part of any development proposed for the Pier 70 Opportunity Site.

Policy 5.3: Encourage limited retail and entertainment attractions at the eastern terminus of Mariposa Street.

Moving About

OBJECTIVE 3: KNIT ACCESS TO PUBLIC TRANSIT INTO THE FABRIC OF THE NEIGHBORHOOD BY ENSURING THAT NEW AND EXISTING RAIL TRANSIT SERVICES ARE USED TO THEIR FULL POTENTIAL AND BY STRENGTHENING OTHER TRANSIT CONNECTIONS TO THE CENTRAL WATERFRONT.

Policy 3.1: Efficiently and effectively link the residents and workers of the Central Waterfront to Third Street Light Rail.

Policy 3.2: Better integrate the Caltrain Station at 22nd Street into the Central Waterfront through good design.

Policy 3.3: Improve personal safety at the Caltrain Station, particularly through providing natural surveillance of the platform.

Policy 3.4: Create better cross-town Muni connections.

OBJECTIVE 4: PROMOTE TRAVEL BY BICYCLE BY PROVIDING A SAFE, CONVENIENT, AND ATTRACTIVE NETWORK OF ROUTES

Policy 4.1: Extend and rebuild the street grid.

Policy 4.2: Provide quality bicycle parking, particularly at transit stops, outside stores, near concentrations of employment, and in new housing developments.

Policy 4.3: Complete the pieces of the San Francisco bicycle network that are within the Central Waterfront. The primary goal is to create a safe, attractive north-south bicycle route from the Bayview/Hunters Point to downtown San Francisco.

Policy 4.4: Complete connections to the bicycle network north and south of the Central Waterfront.

Policy 4.5: Pursue construction of a bicycle and pedestrian bridge over Islais Creek.

OBJECTIVE 5: SUPPORT THE TRANSPORTATION NEEDS OF THE PDR AND MARITIME USERS OF THE AREA

Policy 5.1: Give freight rail and truck traffic priority over other users on Illinois Street.

Policy 5.2: Enhance functionality of streets for service-vehicle access along north-south streets.

Policy 5.3: Improve east-west streets (24th, 25th, and 26th Streets) for pedestrian access and safety.

Urban Design*

Historic Preservation

Policy 2.2: Apply the Secretary of the Interior's Standards for the Treatment of Historic Properties for all projects that affect individually designated buildings at the local, state, or national level.

Policy 2.3: Apply the Secretary of the Interior's Standards for the Treatment of Historic Properties for infill construction in Historic Districts and Conservation Districts (designated at the local, state, or national level) to assure compatibility with the character of districts.

Policy 2.4: Consider extending the compliance period for local, state, or nationally designated UMB (Unreinforced Masonry Buildings) found in the Central Waterfront and Pier 70 area.

APPENDIX C

Public Health Effects Related to Air Quality²³⁶

In general, economic growth and land use development can affect population health effects of air quality in two related ways. First, growth and development may result in new sources of air pollution through new industrial uses, new transportation facilities, greater personal vehicle use, or increased demand for energy. Second, growth and development can bring a population in proximity to a pre-existing source of air pollution, increasing exposure and hazard.

A comprehensive examination of air quality health effects should consider both issues with regards to the particular range of air pollutants with known human health effects in a particular area. Comprehensive health effects analysis involves (1) identifying sensitive (receptors) populations, (2) estimating exposure, and (3) applying concentration response functions linking exposure to health outcomes. However, as exposure to a hazardous air pollutant may be considered tantamount to a health hazard, environmental health assessment and regulation may choose to focus on the measurement and control of exposure. Regardless of whether hazard assessment is based on exposure or a health-effects analysis, prevention occurs through source reduction or substitution, emission controls, or exposure control.

Primary Questions for Land Use Air Quality Health Impact Assessment

- | | |
|--|---|
| <ul style="list-style-type: none"> • Will Development Result in New Sources of Air Pollution? <ul style="list-style-type: none"> • New Industries • Increased Demand for Electrical Generation • New Transportation Facilities • Demolition and Construction | <ul style="list-style-type: none"> • Will Development bring people in proximity to a hazardous source of air pollution? <ul style="list-style-type: none"> • Sensitive land use near busy roadways • Sensitive land use near hazardous industrial or commercial emissions |
|--|---|

²³⁶ SOURCE: San Francisco Department of Public Health

Air Pollutants of Concern to Health The sections above describe air pollutants relevant to health. The USEPA has identified six criteria air pollutants that impact human health; these include Ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead. The Clean Air Act requires the EPA to develop specific public health- and welfare-based exposure standards for the six criteria air pollutants and directing States to develop plans to achieve these standards. Nationally, a network of air quality monitors provides information on ambient concentrations of criteria air pollutants.

Particulate matter is particularly important to health effects assessment in an urban area because air quality epidemiology has not established a “no effects” thresholds and because of within city variation in exposure.²³⁷ According to a cost-benefit analysis recently done by the USEPA, reducing the NAAQS for fine particulate matter by 1 microgram per cubic meter from 15 to 14 would result in 1900 fewer premature deaths, 3700 fewer non-fatal heart attacks, and 2000 fewer emergency room visits for asthma each year.²³⁸ The 2002 State of California Air Resources Board Air Quality Standards Staff Report for Particulate Matter estimated that significant health effects benefits would accrue from reducing ambient PM 2.5 from current levels to natural background concentrations for every county in California.²³⁹ Recent epidemiologic studies in California have also found that significant fine particulate matter is causing health effects at levels below national standards.²⁴⁰

Health Benefits of Reducing Ambient PM to Background Levels for San Francisco County

• Health Outcome	• Estimated Benefits of Exposure Reduction
• Mortality in people over 30	• 203 premature deaths/year
• Chronic Bronchitis	• 265 cases/year
• COPD Hospitalizations	• 31 hospitalizations/year
• Pneumonia Hospitalizations	• 44 hospitalizations/year
• Cardiovascular Hospitalizations	• 78 hospitalizations/year

²³⁷ Health Aspects of Air Pollution with Particulate Matter, Ozone and Nitrogen Dioxide Report on a WHO Working Group Bonn, Germany 13–15 January 2003. Copenhagen: World Health Organization, 2003

²³⁸ Regulatory Impact Assessment. 2006 National Ambient Air Quality Standards for Particle Pollution. US EPA. 2006

²³⁹ California Air Resources Board. Particulate Matter Staff Report. 2002

²⁴⁰ Ostro B, Broadwin R, Green S, Fang WY, Lipsett M. Fine Particulate Air Pollution in Nine California Counties: Results from CALFINE. Environmental Health Perspectives. 2006; 114: 29-33.

- Asthma Hospitalizations
- 17 hospitalizations/year

Toxic air contaminants (TACs) are also important as they are not regulated under Federal Criteria air pollution rules. Diesel exhaust particulate matter (DPM) is currently the most important air related toxic air contaminant and results from combustion of diesel fuel in heavy duty trucks and heavy equipment.

The table below briefly reviews selected hazardous criteria and non-criteria air pollutants, their exposure sources, and their effects on human health.

Sensitive Populations Air quality does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects. Population subgroups sensitive to the health effects of air pollutants include the elderly and the young, population subgroups with higher rates of respiratory disease such as asthma and COPD, populations with other environmental or occupational health exposures (e.g. indoor air quality) that impact cardiovascular or respiratory diseases.

- Ozone
 - Troposphere ozone is formed in the atmosphere from chemical transformation of certain air pollutants in the presence of sunlight. Ozone precursors include vehicles, other combustion processes and the evaporation of solvents, paints, and fuels
 - Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> • <i>Carbon Monoxide (CO)</i> • | <ul style="list-style-type: none"> • Produced due to the incomplete combustion of fuels, particularly by motor vehicles | <ul style="list-style-type: none"> • Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood resulting in fatigue, impaired central nervous system function, and induced angina. |
| <ul style="list-style-type: none"> • <i>Particulate Matter (PM₁₀ and PM_{2.5})</i> • | <ul style="list-style-type: none"> • Diverse sources including motor vehicles (tailpipe emissions as well as brake pad and tire wear, fireplaces and stoves, industrial facilities, and ground-disturbing activities | <ul style="list-style-type: none"> • Impaired lung function, exacerbation of acute and chronic respiratory ailments, including bronchitis and asthma, excess emergency room visits and hospital admissions, premature arteriosclerosis, and premature death. |
| <ul style="list-style-type: none"> • <i>Nitrogen Dioxide (NO₂)</i> • | <ul style="list-style-type: none"> • Combustion processes in vehicles and industrial operations | <ul style="list-style-type: none"> • Increase the risk of acute and chronic respiratory disease and reduce visibility |
| <ul style="list-style-type: none"> • <i>Sulfur Dioxide (SO₂)</i> • | <ul style="list-style-type: none"> • Combustion of sulfur-containing fuels such as oil, coal, and diesel | <ul style="list-style-type: none"> • Increased risk of acute and chronic respiratory |
| <ul style="list-style-type: none"> • <i>Lead</i> • | <ul style="list-style-type: none"> • Leaded gasoline (historically), lead paint (on older houses, cars), smelters (metal refineries), and lead storage batteries | <ul style="list-style-type: none"> • Neurotoxic health effects in children |
| <ul style="list-style-type: none"> • <i>Diesel Particulate Matter</i> | <ul style="list-style-type: none"> • Emissions from diesel engines | <ul style="list-style-type: none"> • Cause of lung cancer |

Asthma is one of the most common chronic respiratory disorders in the United States and disease considered to confer sensitivity to the health effects of poor air quality. In 2001, the CHIS found that California’s lifetime asthma prevalence, at 11.5 percent of the population, is higher than the national lifetime asthma prevalence of 10.1 percent.²⁴¹ Asthma symptom prevalence by region ranged from 10.4 to 13.8 percent for all ages. The highest rates occurred in Northern California, Sierra, and Sacramento area counties (13.8 percent). The Bay Area region had a rate of 12.2 percent. However, these regional statistics mask the fact that asthma rates are higher among African-Americans (16.2 percent) than among the rest of the population (7.0 to 13.1 percent), suggesting there may be asthma “hot spots” in some communities that are not well-characterized by regional averages.

Avoidable asthma is particular concern of San Francisco residents. In 2001, the Board of Supervisors created an Asthma Task force to address how to prevent asthma incidence as well as morbidity. Asthma morbidity trends in San Francisco suggest recent success in addressing environmental and clinical factors responsible for asthma hospitalizations. At the same time, residents of the south eastern quadrant of San

²⁴¹ “Lifetime asthma prevalence” includes people diagnosed with asthma at some point in their lives, while “asthma symptom prevalence” includes those who experience asthma symptoms at least once per year.

Francisco along with residents of the Tenderloin and Western Addition appear to suffer a disproportionate number of asthma hospitalizations.

**Age-Adjusted Asthma Hospitalization Rates per 10,000 persons
Trends in California and San Francisco**

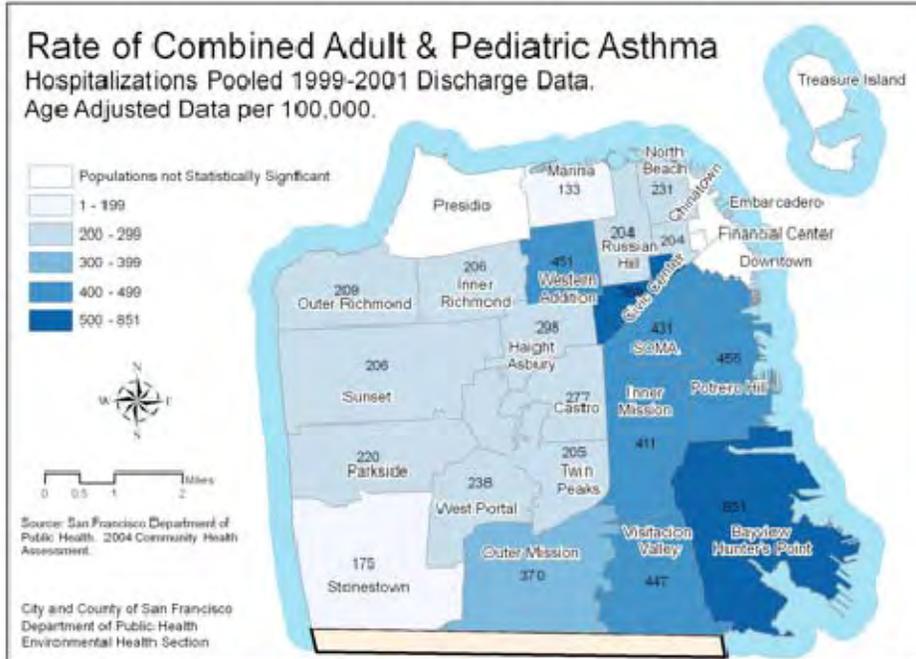
Source of Data	DHS	DHS	DHS
Period of Analysis	1995-1997	1998-2000	2003
Population for Age-Adjustment	1990 California	2000 US	2000 US
California	12.0 (11.9-12.0)	11.11 (11.0-11.2)	11.27 (11.16-11.38)
San Francisco	16.0 (15.4-16.5)	12.17 (11.4-13.0)	9.66 (8.94-10.41)

Health Effects Due to Within Area Variations in Exposure Sources The assessment of air pollution using community wide monitoring data does not provide estimates of actual population exposure within a city. Within an area or place, exposure typically varies spatially with higher levels of exposure in proximity to sources of pollution. Two particular sources of with area variation in air pollution hazards are industrial sources and roadways. In addition on toxicological and epidemiological research, fine and ultrafine particulate matter and particulate matter associated with vehicle traffic appears to be more closely related to health effects.²⁴²

The factors responsible for variation in exposure are also often similar to factors associated with greater susceptibility to air quality health effects. For example, poorer residents may be more likely to live in crowded substandard housing and be more likely to live near industrial or roadway sources of air pollution. Because of the above factors, the misclassification, inherent in much of air pollution research, may be resulting in a significant underestimation of health effects. For example, a recent study of mortality and air pollution in Los Angeles found that concentration response functions based on within city estimate was 2-3 times that based on studies comparing communities.²⁴³

²⁴² Schlesinger RB, Kunzli N, Hidy GM, Gotschi T, Jerrett M. The Health Relevance of Ambient Particulate Matter Characteristics: Coherence of Toxicological and Epidemiological Inferences. *Inhalational Toxicology*. 2006; 18:95-125.

²⁴³ Jerrett M et al. Spatial Analysis of Air Pollution and Mortality in Los Angeles. *Epidemiology*. 2005; 16: 727-736



Health Effects Due to Proximity to Industrial Sources of Air Pollution A number of industrial processes create potential exposure sources of TACs. The California Air Resource Board, Air Quality and Land Use Handbook: A Community Health Perspective (2005) recommends not locating sensitive land uses, including residential developments, within specific distances of certain known sources of toxic air contaminants.²⁴⁴ Specific CARB recommendations for the location of residential uses relative to air pollution sources are listed in the table below.

Roadway Related Health Effects Motor vehicles are responsible for a large share of air pollution especially in California. Consistent with the theory that proximity to air pollution sources is likely to increase both relative exposure and hazards. Epidemiologic studies have consistently demonstrated that children and adults living in proximity to freeways or busy roadways have poorer health outcomes. Health outcomes associated with roadway related health effects (RRHE) include asthma, respiratory infections, pulmonary function, and lung development in children.^{245,246,247,248} In a recent study using California Health Interview Survey (CHIS) asthma data and Caltrans traffic data, researchers determined

²⁴⁴ California Environmental Protection Agency Air Resources Board Air Quality and Land Use Handbook: A Community Health Perspective (Draft approved for publication) February 17th, 2005. Available at: <http://www.arb.ca.gov/ch/landuse.htm>

²⁴⁵ Brauer M, Hoek G, Van Vliet P, Meliefste K, Fischer PH, Wijga A, Koopman LP, Neijens HJ, Gerritsen J, Kerkhof M, Heinrich J, Bellander T, Brunekreef B. Air pollution from traffic and the development of respiratory infections and asthmatic and allergic symptoms in children. *American Journal of Respiratory and Critical Care Medicine*. 2002;166:1092-1098.

²⁴⁶ Mikkelsen J. Effect of vehicular particulate matter on the lung function of asthmatic children in Fresno CA. Unpublished Manuscript.

²⁴⁷ McConnell, R. B., K. Yao, L. Jerrett, M. Lurmann, F. Gilliland, F. Kunzli, N. Gauderman, J. Avol, E. Thomas, D. Peter, J. (2006). "Traffic, susceptibility, and Childhood Asthma." *Environmental Health Perspectives* 114(5): 766-772.

Land Use Source of Air Pollution	Air Resource's Board Recommendations
Distribution Centers	<p>Avoid siting sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating TRUs per day, or where TRU unit operations exceed 300 hours per week).</p> <p>Take into account the configuration of existing distribution centers and avoid locating residences and other sensitive land uses near entry and exit points.</p>
Rail Yards	<p>Avoid siting sensitive land uses within 1,000 feet of a major service and maintenance rail yard.</p> <p>Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.</p>
Ports	<p>Consider limitations on the siting of sensitive land uses immediately downwind of ports in the most heavily impacted zones.</p> <p>Consult with local air districts for the latest available data on health risks associated with port emissions.</p>
Refineries	<p>Avoid siting sensitive land uses immediately downwind of petroleum refineries.</p> <p>Work with local air districts to determine an appropriate separation.</p>
Chrome Platers	<p>Avoid siting sensitive land uses within 1,000 feet of a chrome plater.</p>
Dry Cleaners Using Perchloro-ethylene	<p>Avoid siting sensitive land uses within 300 feet of any dry cleaning operation. For large operations with two or more machines, provide 500 feet.</p> <p>Do not site sensitive land uses in the same building with perc dry cleaning operations.</p>
Gasoline Dispensing Facilities	<p>Avoid siting sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas stations.</p>

that children and adults who suffer from asthma and live near heavy vehicular traffic are nearly three times more likely to visit the emergency room or be hospitalized for their condition than those who live near low traffic density.²⁴⁹ Other examples of specific research findings supporting roadway related health effects include:

- Reduced lung function in children associated with traffic density, especially trucks, within 1,000 feet and the association was strongest within 300 feet.²⁵⁰
- Increased asthma hospitalizations associated with living within 650 feet of heavy traffic and heavy truck volume.²⁵¹

²⁴⁸ Gauderman WJ, Avol E, Gilliland F, Vora H, Thomas D, Berhane K, McConnell R, Kuenzli N, Lurmann F, Rappaport E, Margolis H, Bates D, Peters J. The effect of air pollution on lung development from 10 to 18 years of age. *N Engl J Med*. 2004 Sep 9;351(11):1057-67. Erratum in: *N Engl J Med*. 2005 Mar 24;352(12):1276.

²⁴⁹ Meng, Ying-Ying, R.P. Rull, M. Wilhelm, B. Ritz, P. English, H. Yu, S. Nathan, M. Kuruvilla, E. Brown, UCLA Center for Health Policy Research Brief, Living Near Heavy Traffic Increases Asthma Severity. August 2006. In this study, traffic density was categorized into three levels based on residential traffic-density values, measured as Vehicle Miles Traveled (VMT) per square mile. High traffic exposure = 200,001 daily VMT/square mile; medium traffic exposure = 20,000 to 200,000 VMT/square mile; low traffic exposure = <20,000 VMT/square mile.

²⁵⁰ Brunekreef, B. et al. "Air pollution from truck traffic and lung function in children living near motorways." *Epidemiology*. 1997; 8:298-303.

²⁵¹ Lin, S. et al. "Childhood asthma hospitalization and residential exposure to state route traffic." *Environ Res*. 2002;88:73-81.

- Increased asthma symptoms with proximity to roadways with the greatest risk within 300 feet.²⁵²
- Asthma and bronchitis symptoms in children associated with high traffic in a San Francisco Bay Area community with good overall regional air quality²⁵³
- Increased medical visits in children living within 550 feet of heavy traffic in San Diego.²⁵⁴

Air pollution monitoring done in conjunction with epidemiological studies has confirmed that roadway related health effects vary with modeled exposure to particulate matter and nitrogen dioxide. However, at this time, it is not possible at this time to attribute roadway related health effects to a single type of roadway, vehicle, or type of fuel. Vehicle tailpipe emissions contain diverse forms of particulate matter as well as well as ozone precursor compounds such as nitrogen oxides (NO_x) and volatile organic compounds (VOC). Vehicles also contribute to particulates by generating road dust and through tire wear.

Because of the robust evidence relating proximity to roadways and a range of non-cancer health effects, the California Air Resource Board includes guidance on locating sensitive land use in proximity their *Air Quality and Land Use Handbook: A Community Health Perspective* (2005). CARB recommends not locating sensitive land uses, including residential developments, within 500 feet of a highway with more than 100,000 vehicles per day.²⁵⁵ Given that many infill opportunity sites in urban areas are in proximity to busy roadways and other industrial sources, implementing location-efficient development will need to address air quality related health effects in the course of site selection, design, and development.

Exposure Estimation for the Assessment of Land Use—Air Quality Health Conflicts

In general, a health protective approach to pre-development assessment in areas potentially near hazardous air pollutions sources, such as busy roadways, requires air quality modeling or monitoring and, if necessary, a health effects assessment. Development at a site where exposure levels are substantially higher than background should either be avoided, or, where alternative locations are not feasible, design and development should include sufficient verifiable mitigations to protect future residents from higher rates of morbidity and mortality.

Significant variation in air quality occurs within cities, and established NAAQS monitoring stations do not permit assessment of exposure at specific development sites. Developing a robust system of within city monitoring is possible but would be costly and require a strong state-level or local commitment. Several additional techniques may be employed to help estimate exposure at a particular point with a cities or regions. The application of these techniques with regards to roadway related health effects research has been recently reviewed by Michael Jerrett and colleagues.²⁵⁶

²⁵² Venn, et al. "Living near a main road and the risk of wheezing illness in children." *American Journal of Respiratory and Critical Care Medicine*. 2001; Vol.164, pp. 2177-2180.

²⁵³ Kim, J. et al. "Traffic-related air pollution and respiratory health: East Bay Children's Respiratory Health Study." *American Journal of Respiratory and Critical Care Medicine* 2004; Vol. 170. pp. 520-526.

²⁵⁴ English P., Neutra R., Scalf R. Sullivan M. Waller L. Zhu L. "Examining Associations Between Childhood Asthma and Traffic Flow Using a Geographic Information System." (1999) *Environmental Health Perspectives* 107(9): 761-767.

²⁵⁵ California Environmental Protection Agency Air Resources Board *Air Quality and Land Use Handbook: A Community Health Perspective* (Draft approved for publication) February 17th, 2005. Available at: <http://www.arb.ca.gov/ch/landuse.htm>

²⁵⁶ Jerrett M, et al. A review and evaluation of intraurban air pollution exposure models.

Most simply, distance or proximity to a pollution source can be used as a proxy for exposure. For example, with regards to roadway related health effects, California Department of Health Services maintains a GIS based web tool that provides total daily vehicle volume within any specified distance at any point in California. This web tool utilizes the California Environmental Health Tracking Program's (CEHTP) spatial linkage web service, computing traffic-related metrics on CalTrans Highway Performance Monitoring System (HPMS) 2004 data in California. (The URL for this tool is: http://www.ehib.org/traffic_tool.jsp)

Second, exposure levels can be interpolated based on existing monitoring stations if there is a sufficient distribution of such stations. However, it is unclear that the distribution of monitoring stations in the region will permit such interpolation for San Francisco County.

Third, regression techniques can be used to create a model of exposure based on land use and transportation characteristics. Researchers have created land use regression models for Alameda, San Diego, and Los Angeles based on simultaneous measurements of nitrogen dioxide. The application of this technique to development in San Francisco would require a public or private agency to implement a land use regression model.

Fourth, exposure can be estimated using Gaussian dispersion models based on physical characteristics of emissions, meteorology, and topography. Dispersion models have been used in the roadway related health effects research to establish relationship between exposure and adverse health outcomes. The CAL3QHC, CAL3QHCR, and CALINE4 Line Source Dispersion Models are examples of a dispersion models that can be used to make a straightforward calculation of exposure to an air pollutant at a development site due to roadway vehicle traffic.

Finally, it is possible to create a microscale exposure model for a pollutant based on traffic counts and other related land use characteristics. The San Francisco Health Department has developed a microscale exposure model for PM10 which is based upon local MTA and CTA traffic counts, vehicle type distribution by neighborhood from orthophoto analysis, EMFAC 2007 emissions, and the STREET-SRI Canyon Model developed by Johnson et al (1973).^{257,258} The model is currently undergoing testing and will undergo validation.

Health Effects Estimation Often exposure assessment is sufficient to make informed and health protective development and design decisions. In other cases, a health effects assessment is necessary to evaluate trade-offs. It is possible to quantify the human health effects due to either roadway or industrial sources using well established health risk assessment methodologies. In general, the approach to effects estimation requires (1) a concentration-response function, (2) estimates of exposure to air pollutants, (3) estimates of the number of people exposed and their age distribution, and (4) baseline incidences of health effects. Concentration-response functions are equations that relate a change in the incidence of an adverse health outcome to the change in an ambient concentration of a pollutant. Typically, air quality health

²⁵⁷ Vardoulakis et al, Modeling air quality in street canyons: a review, Atmospheric Environment, 37, p 155-182, 2003.

²⁵⁸ Berkowicz, R, Hertel, O., Modeling traffic pollution in streets, 1977, http://www2.dmu.dk/1_viden/2_Miljoe-tilstand/3_luft/4_spredningsmodeller/5_ospm/5_description/ModellingTrafficPollution_report.pdf

impact analysis uses C-R functions based on regression analyses from epidemiological studies.²⁵⁹ Using this method, Ostro has estimated the benefits of federal standards for Particulate Matter and Kunzli has estimated the total health burden of particulate matter in three European Countries.²⁶⁰ Quantitative assessments using similar methods have been conducted in other countries and contexts.²⁶¹

Using this methodology, in 2002, the State of California Air Resources Board Air Quality Standards Staff Report for Particulate Matter estimated that a reduction in ambient PM 2.5 from current levels to 12 ug/cubic meter in California would result in approximately 6500 fewer deaths and 3100 fewer hospitalizations.²⁶²

A similar approach can be used to estimate excess Cancer Risk Estimation Due to Diesel Particulate Matter. This approach applies an estimates of diesel PM 10 exposure to an inhalation cancer risk unit risk factor (URF) in order to estimate additional lifetime cancer probability. The EPA risk factor (URF) for diesel exhaust in cancer deaths per person exposed in a lifetime to 1 microgram/cubic meter is 1.7×10^{-5} .²⁶³

²⁵⁹ Quantification of the Health Effects of Exposure to Air Pollution Report of a WHO Working Group, Bilthoven, Netherlands 20-22 November 2000 European Centre for Environment and Health, 2001

²⁶⁰ Kunzli et al. Public health impact of outdoor and traffic related air pollution: a European Assessment, *The Lancet* 356 (2000) p 795.

²⁶¹ Levy J, Spengler JD "Estimated Public Health Impacts of Criteria Pollutant Air Emissions from the Salem Harbor and Brayton Point Power Plants," Harvard School of Public Health. 2000.

²⁶² California Air Resources Board. Particulate Matter Staff Report. 2002

²⁶³ Biber, B. B., JP. (1999). "Vehicle emission unit risk factors for transportation risk assessments." *Risk Analysis* 19(6): 1157-1171.

● CHAPTER X

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