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## 10. CULTURAL AND HISTORICAL RESOURCES

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This EIR chapter describes possible impacts of the proposed Project on cultural (archaeological and historical) resources. The chapter presents the findings of a Historic Resources Technical Report prepared by Carey & Co. Inc., the EIR cultural resources consultant. The text of the technical report is included as appendix 20.4 in this EIR. The technical report and the State of California Department of Parks and Recreation Inventory Forms (523A and 523B) for the surveyed properties are available for review at the San Francisco Redevelopment Agency, 1 South Van Ness Avenue, 5th Floor, San Francisco and at the San Francisco Planning Department, 1650 Mission Street, 4th Floor, San Francisco.

### 10.1 SETTING

The neighborhood of Visitacion Valley is in the southeastern quadrant of San Francisco, bounded by McLaren Park to the north and west, U.S. Highway 101 to the east, and the city/county boundary to the south. The neighborhood physically extends beyond San Francisco's southern boundary into Daly City and Brisbane.

Largely overlooked by the building boom of the 1990s, the neighborhood has fallen into a state of decline, partially due to the closure of the Schlage Lock Factory in 1999 and the resulting loss of a key source of employment for community residents.

Leland Avenue, the community's commercial core, is characterized by a variety of residential, retail, and service-related uses. The scale of buildings ranges from single-story commercial buildings to three-story, mixed commercial and residential structures. The street has a pattern of narrow lots, generally 25 feet in width. Buildings typically front on the sidewalk and lack significant setbacks.

Bayshore Boulevard, a major transit corridor between Arleta Avenue and the city/county line, contains a mix of industrial, residential, and commercial properties, most located along the west side of the street. The large industrial buildings of the former Schlage Lock Factory dominate the east side of Bayshore Boulevard. The southern extension of the recently completed Muni Third Street Light Rail System (Muni T line) runs down the center of Bayshore Boulevard here, ending just south of the San Francisco city/county line.

#### **10.1.1 Prehistoric Period**

The northern portion of the San Francisco Peninsula, an area that is now the City and County of San Francisco, was home to the Yelamu tribe of the Ohlone Indians. The Yelamu spoke Ramaytush, a dialect of Costanoan. Costanoan (Ohlone), a member of the Utian language family, was spoken on the San Francisco Peninsula and throughout Santa Clara Valley and much of the East Bay.

The Yelamu spent much of the year split into three distinguishable village groups. One group moved seasonally along Mission Creek, from the village of Sitlintac on the bay shore to the village of Chutchui further inland. The second group moved between Amuctac and Tubsinte villages in the Visitacion Valley area. A third group lived seasonally near the beach area facing the sea and the Golden Gate (Petlenuc).

The structures of the Yelamu consisted of domed, thatched houses, sweat-houses, and storage structures. Yelamu technology included woven items such as fishing nets, ground stone tools fashioned from sedimentary and metamorphic rocks, chipped stone tools of obsidian and chert, and bone, wooden and shell items. The Yelamu played a key role in regional trade, transporting obsidian and other goods from the north and east across the Bay and down the Peninsula, while bringing coastal shells to the East Bay.

### **10.1.2 Historic Period**

(a) Overview. This southeastern section of the city was “discovered” by a group of Spanish soldiers and Franciscan friars in 1777 when the party, having become lost in a thick fog, decided to camp overnight and in the morning found themselves in a picturesque valley. The date was July 2, also known in the Catholic Church as the Feast of the Visitacion of the Most Blessed Virgin to her cousin St. Elizabeth. Thus, the Catholic Church claimed the land, named it Visitacion Valley, and used the area for agricultural and grazing purposes. In 1834, the Mexican government seized these lands from the Church, and ownership was later granted to favored Californios.<sup>1</sup>

Some of the earliest non-native inhabitants of Visitacion Valley included Europeans hailing from countries such as France, Germany, Italy, and Malta, who began to cultivate the land with flower gardens, plant nurseries, and farms.<sup>2</sup> The Rossi family settled in Visitacion Valley after the end of the Civil War and became prominent land owners after purchasing a number of acres of rich farmland. They were followed by other Italian families.

Though the rural character of Visitacion Valley continued well into the twentieth century, there was a gradual shift in land use over the years to accommodate increasing industrial and residential development. By the late nineteenth century, a number of industries had begun to locate in Visitacion Valley. The Bodinson Manufacturing Company, which produced custom mining machinery and other industrial equipment, settled in the area in the early years of the twentieth century. They later sold property to the Schlage Lock Company. With the arrival of Southern Pacific Railway Company’s freight station in the early twentieth century, Visitacion Valley became established as a major crossroads in the burgeoning industrial center of the Southern Pacific.<sup>3</sup>

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<sup>1</sup>Cynthia Cox and others, eds., *Images of America: San Francisco’s Visitacion Valley*. (San Francisco: Arcadia Publishing, 2005), 7-11. Californios were Spanish-speaking inhabitants of New Spain’s, and later Mexico’s, Alta California, the area later annexed by the United States following the Mexican-American War in 1848. Californios included the descendants of European settlers from Spain and Mexico, as well as Mestizos and local Native Americans who adopted Spanish culture and converted to Catholicism.

<sup>2</sup>*Ibid.*, 7.

<sup>3</sup>*The Visitacion: Story of Visitacion Valley, San Francisco*. San Francisco: Committee on Press and Publicity for the Benefit of the Church of the Visitacion, 1907.

In the years following the 1906 San Francisco earthquake and fire, from which Visitacion Valley emerged relatively unscathed, the area experienced a steady population increase as refugees from the city's center stayed and settled in the community. Also at that time, the Southern Pacific Railway filled a portion of the bay in order to construct a roundhouse and extensive train yards that extended south of the county line.

Two streetcar lines in operation by 1910--one running northeast along Bayshore Boulevard from Wilde Street and connecting to Market Street via Third Street, the other running along Geneva Avenue from Bayshore Boulevard to Mission Street--provided further catalysts for the development of the Visitacion Valley community.<sup>1</sup> By 1913, Visitacion Valley started to appear on Sanborn Fire Insurance maps, though some development existed prior to that time along Leland Avenue and Bayshore Boulevard (then San Bruno Avenue). Over the next 15 years, Visitacion Valley continued to change as farmland gave way to residential development, roads were paved, and Leland Avenue became the valley's core commercial thoroughfare.

From 1940 through the mid-1960s, Visitacion Valley was the setting for various federal housing projects. Many of these projects were part of the San Francisco Housing Authority's effort to provide housing for the 35,000 service members, war workers, and their families who had come to San Francisco in the 1940s.

(b) Leland Avenue. On the 1913-1915 Sanborn map, Leland Avenue featured a mix of residential and commercial establishments. The surrounding residential neighborhoods were sparsely populated, with dwellings of one to two stories set back from the lot lines. The 1913-1915 map indicates that, between Rutland Street and San Bruno Avenue, Leland Avenue had a budding commercial district containing approximately ten one-story dwellings, a French laundry complete with a windmill and water tower, a drugstore, a Hay & Grain, storage facilities, a Feed and Fuel Hall, and the Bay Shore Hotel, in addition to roughly 20 assorted stores.

As indicated by the 1913 Sanborn map updated to 1950, the number of retail establishments and other commercial properties on Leland Avenue had nearly doubled by 1950. A number of mixed use retail and residential buildings had been constructed, and a bakery, the Visitacion Valley Post Office, an upholstering business, a furniture store, a branch library, a doctor's office, and a bank had all been added to the growing commercial core of Visitacion Valley. The Schlage Lock Factory on Bayshore Boulevard was in full operation at that time, and the residential neighborhoods surrounding the facility were becoming more densely populated.

Leland Avenue still provides the local community with its commercial core. Although today a mixed use neighborhood with deteriorating buildings and dwindling commercial activity, the Project Area retains elements of the valley's history dating from the early twentieth century.

(c) Bayshore Boulevard. By 1860, what is now Bayshore Boulevard (originally called the San Bruno Toll Road) was operating. The traffic at this time primarily consisted of dairy workers traveling in horse-drawn wagons to dairy farms in South San Francisco and Brisbane. By 1913, the road was called San Bruno Avenue and sometimes Bay Shore Boulevard. By 1925, the road name was officially changed from San Bruno Avenue to Bayshore Boulevard.

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<sup>1</sup>Mary A. Danforth, ed. "Schlage Lock and Key: Schlage's Home Country...Visitacion Valley." (San Francisco: Schlage Lock Company, January-March, 1967), 2.

According to the 1913-1915 Sanborn map, development along Bayshore Boulevard between Arleta Avenue and the county line to the south was sparse.

Sanborn maps dating to 1950 show that the 2400 block of Bayshore Boulevard, just south of the Bay Shore Hotel, was primarily comprised of a set of retail buildings as well as a theater that showed moving pictures. The Schlage Lock Factory was well-established by this time, with numerous industrial buildings lining the eastern side of Bayshore Boulevard.

(d) Schlage Lock Site. The history of the Schlage Lock site (i.e., Redevelopment Zone 1) is discussed below in two sections, as the site was formerly occupied by two major companies, the Schlage Lock Company and the Southern Pacific Railroad Company. The western portion of the site along Bayshore Boulevard belonged to the Schlage Lock Company since the mid-1920s, and the eastern portion of the site along Tunnel Avenue was owned by the Southern Pacific Railroad Company since the turn of the twentieth century. Although these were two distinct businesses, company operations were interdependent.

*(1) Schlage Lock Factory.* Walter Reinhold Schlage founded a shop south of Market Street at 229 Minna Street in 1920. He later moved to 461 Bush Street where his first lock, one comprised of a cylindrical shaft with a door knob and push-button locking device, was designed and created.<sup>1</sup> In conjunction with the cylindrical push-button lock, Schlage implemented an “interchangeably manufactured” design, as it came to be called, which meant that for the first time lock parts could be chosen at random and assembled without the need for custom fitting.<sup>2</sup>

Schlage’s company would make another move before realizing that more space was required to meet the great increase in staff and production volume. Schlage purchased a tract of 2.5 acres in the Visitacion Valley neighborhood in 1925. The new factory and administration buildings of Schlage Lock Company at 2601 Bayshore Boulevard were dedicated on Friday, June 25, 1926.

By the mid-1920s, overextension of company funds, in part due to the development of the new Bayshore facility, threatened the financial stability of the Schlage Lock Company. Local businessman and manufacturer Charles Kendrick responded to the company’s plea for support with sizeable investments in the company. Kendrick’s financial commitment to the company led to his appointment as Chief Executive of Schlage Lock Company in 1926 until his retirement in 1969. The Schlage-Kendrick partnership proved extremely successful and lasted until Schlage’s death in 1946. The Schlage Lock Company continued to thrive under Kendrick and later his son.

In 1964, Schlage gained international status when it supplied all the lock hardware for the Pan American Building in New York City, the largest commercial office structure in the world at the time.

After Kendrick’s retirement in 1969, the lock factory was acquired by the Ingersoll-Rand Company in 1974 and became part of the Ingersoll-Rand Door Hardware Group. The Schlage

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<sup>1</sup>Paul Van Slambrouck, *San Francisco Business*, March 1974: 29.

<sup>2</sup>“San Francisco Business”, March 1974, vertical file, Schlage Lock Factory folder, History Room, San Francisco Public Library.

Lock Company continued to thrive and expand under the new management, entering markets in New Zealand, Australia, Canada, and Asia, as well as Central and South America.<sup>1</sup>

For decades, Schlage was an economic stronghold of Visitacion Valley, employing thousands from the neighborhood.<sup>2</sup> In 1974, *San Francisco Business* reported that the Schlage Lock Company in San Francisco employed some 1,600 people, making it the city's largest manufacturing firm. The factory played a significant part in the economic and employment base of the Visitacion Valley community for over 70 years, providing jobs to people living in the surrounding neighborhoods.

(2) *Southern Pacific Railroad.* The former Southern Pacific Railroad Company rails form the eastern boundary of the Schlage Lock site. Many industrial sites benefited from a proximity to the Southern Pacific Railroad for the distribution of goods and the transportation of clients and employees to and from the factory site.<sup>3</sup> The presence of the Southern Pacific Railroad presumably influenced Walter Schlage's decision to locate his company's headquarters in the area.

At the turn of the twentieth century, the Southern Pacific Railroad Company had begun filling the bay and building a tunnel, now used by Caltrain, at the corner of Blanken and Tunnel avenues. Southern Pacific provided commuter service to Visitacion Valley on the line called the "Bayshore Cutoff." Its first track was laid in 1906, and the cutoff opened in 1907.<sup>4</sup>

Concurrent with Southern Pacific's filling of the bay and laying of the track was the erection of various buildings in order to serve its workers.<sup>5</sup> Wood and metal-framed worker accommodations and offices were built along the western perimeter of the tracks. Currently, these lots formerly belonging to Southern Pacific are owned by the Universal Paragon Corporation (UPC), and the buildings are now occupied by various small-scale commercial operations.

### **10.1.3 Cultural Resource Surveys**

For purposes of this EIR chapter, the Project Area includes, in part, the 20-acre Schlage Lock site<sup>6</sup> east of Bayshore Boulevard. The Project Area also includes other industrial and commercial properties along Bayshore Boulevard, as well as zero-lot-line commercial properties along the north and south sides of Leland Avenue, generally between Bayshore Boulevard and Rutland Street.

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<sup>1</sup> *San Francisco Business*, March 1974, 31.

<sup>2</sup> Ryan Blitstein, "Not for Sale by Owner," *SF Weekly* (8 March 2006).

<sup>3</sup> "SP Helps Develop the West," *Southern Pacific Bulletin*, December 1967, 20.

<sup>4</sup> John Signor, *Southern Pacific's Coast Line*. Wilton, California: Signature Press (1994).

<sup>5</sup> *Lock and Key*, January-March 1967, 11.

<sup>6</sup> Throughout this chapter, the terms "Schlage Lock Factory site" and "Schlage Lock Factory Historic Site" are meant to refer only to those buildings that were part of the Schlage Lock Factory. The "Schlage Lock site" and "Schlage Lock Historic Site," however, also include the adjacent buildings associated with the Southern Pacific Railroad.

Research on the properties within the Project Area was undertaken at the San Francisco Public Library, the Northwest Information Center at Sonoma State University, the San Francisco Office of the Assessor-Recorder, the San Francisco Planning Department, and the San Francisco Department of Building Inspection. Carey & Co. staff also met with local historians from the Visitacion Valley History Project during a site visit on October 20, 2006.

(a) Archaeological Survey. At the request of Carey & Co., a records search was conducted in September 2006 by the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) located at Sonoma State University, to compile information about recorded prehistoric and historic site locations in the Project Area.<sup>1</sup> The NWIC findings regarding archaeological resources are summarized in subsection 10.1.4(a) of this EIR chapter.

(b) Architectural Survey. Carey & Co. conducted two surveys of properties within the Project Area. Properties within the Project Area located on either side of Leland Avenue, as well as those along Bayshore Boulevard, were surveyed on October 20, 2006. The Schlage Lock site was surveyed on November 19, 2006. During these site visits, Carey & Co. staff took digital photographs and noted the existing conditions, historic features, and architectural significance of each of the surveyed properties.

Carey & Co. completed a building-by-building assessment of the Project Area and prepared (1) a historic context statement for the Project Area, including the Schlage Lock site; (2) existing setting narratives describing existing conditions and historical resources within the Project Area, including an assessment of the eligibility of the Schlage Lock site for state or federal listing as a historical resource; (3) State of California Department of Parks and Recreation (DPR) 523A Primary Record and 523B Building-Structure-Object Record forms for all identified potential historical resources in the Project Area; and (4) 523A forms for all other individual parcels in the Project Area containing structures over 40 years old. The text of the technical report is included as appendix 20.5 of this EIR. The technical report and the DPR 523A and 523B forms for the surveyed properties are available for review at the San Francisco Redevelopment Agency, 1 South Van Ness Avenue, 5th Floor, San Francisco and at the San Francisco Planning Department, 1650 Mission Street, 4th Floor, San Francisco.

#### **10.1.4 Summary of Findings**

This section summarizes the findings of the cultural resource surveys.

(a) Archaeological Resources. The Northwest Information Center (NWIC) record search resulted in the following findings regarding archaeological resources.

The Project Area contains or is immediately adjacent to one recorded Native American or historic-period archaeological resource, CA-SFR-35, a Native American habitation site. The NWIC has record of six archaeological studies that in total cover only a small portion of the Project Area.

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<sup>1</sup>Letter from Jillian E. Gulderbrein, Researcher I, California Historical Resources Information System (CHRIS) Northwest Information Center (NWIC), to Sarah Hahn, Carey & Co., re. "Record search results for the proposed Visitacion Valley Project Site," September 21, 2006.

There are two potential archaeological resources that would likely be affected by development of the Schlage Lock site (i.e., Redevelopment Zone 1): the Ralston Shellmound and remains associated with the Union Pacific Silk Manufacturing Company.

*Ralston Shellmound.* The “Ralston Shellmound” is an unrecorded prehistoric shellmound that is only known to be documented in a scholarly journal article that appeared in 1876.<sup>1</sup> The shellmound underlies at least a portion of a silk factory that occupied part of the Schlage Lock site in the mid-1870’s. It is likely that portions of the Ralston Shellmound are extant and that the prehistoric site would be potentially eligible for the California Register of Historical Resources (CRHR) for many reasons, among which would be its informational contribution to the study of San Francisco prehistory.

*Union Pacific Silk Manufacturing Company (c. 1875-1876).* William Ralston, a major San Francisco entrepreneur and adventure capitalist (e.g., Bank of California, Comstock Lode, Palace Hotel, Ralston Woolen Mills), established a silk-products factory, the Union Pacific Silk Manufacturing Company (UPSMC), on the Schlage Lock site.<sup>2</sup> The factory employed Chinese laborers. Architectural and foundational remains, industrial waste, domestic deposits (e.g., laborer barracks) in filled-in privies, wells, or trash pits associated with the silk factory or its labor force may provide significant archaeological information related to technological or labor practices. No documentary or archaeological research has been done on the UPSMC.

Beyond the Schlage Lock site (i.e., Redevelopment Zone 1), Native American cultural resources in this part of San Francisco have been found adjacent to the bay shore and creeks. The Project Area contains gently sloping terraces between two larger hills adjacent to the former bay shore. Given these environmental factors and the known site in or immediately adjacent to the Project Area, there is a high likelihood that unrecorded Native American cultural resources exist in the Project Area.

In addition, review of historical literature and maps indicated numerous historic-period buildings within the Project Area. There is therefore a high possibility of identifying associated historic-period archaeological resources (e.g., possibly buried under existing, newer buildings).

(b) Historical Architectural Resources. Carey & Co. identified the following structures and properties that appear to meet the CEQA definition of a “historical resource”. Figure 10.1 shows the locations of the potential historical resources in the Project Area.

*(1) Property Descriptions and Historical Resource Evaluations--Bayshore Boulevard and Leland Avenue.* For properties on Bayshore Boulevard and Leland Avenue other than the Schlage Lock site,<sup>3</sup> this subsection provides a brief description of each potential historical property and an overall assessment of other properties.

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<sup>1</sup> Deans, James. “Eating and Cooking Implements Found on the Shores of the San Francisco Bay.” *The Journal of the Anthropological Institute of Great Britain and Ireland*. Vol. 5. pp. 489-490. 1876.

<sup>2</sup> Henry G. Langley. *San Francisco Directory*. 1876; Humphreys, William. *Atlas of the City and County of San Francisco*. Plat 43. 1876; Mason, Franck. “The American Silk Industry and the Tariff,” *American Economic Association Quarterly*. 11(4). December 1910.

<sup>3</sup>The property at 2201 Bayshore Boulevard is evaluated in subsection 10.1.4(b)(2) below as part of the Schlage Lock site.

### Structures Built Before 1914

Four of the properties built during this period are found to be potential historical resources: 2400-2420 Bayshore Boulevard, 191 Leland Avenue, 196 Leland Avenue, and 198 Leland Avenue.

*2400-2420 Bayshore Boulevard (Bay Shore Hotel).* The two-story building at the southwest corner of Bayshore Boulevard and Leland Avenue was built in 1905, according to the San Francisco Office of the Assessor-Recorder. Changes to the building over the years included various interior alterations as well as exterior façade alterations and signage adjustments for the ever-changing commercial establishments. A number of the original windows have been replaced, and the building has been covered with a cladding of stucco. The Bay Shore Hotel is potentially historically significant for its association with the broad patterns of development of commercial uses along Bayshore Boulevard and Leland Avenue.

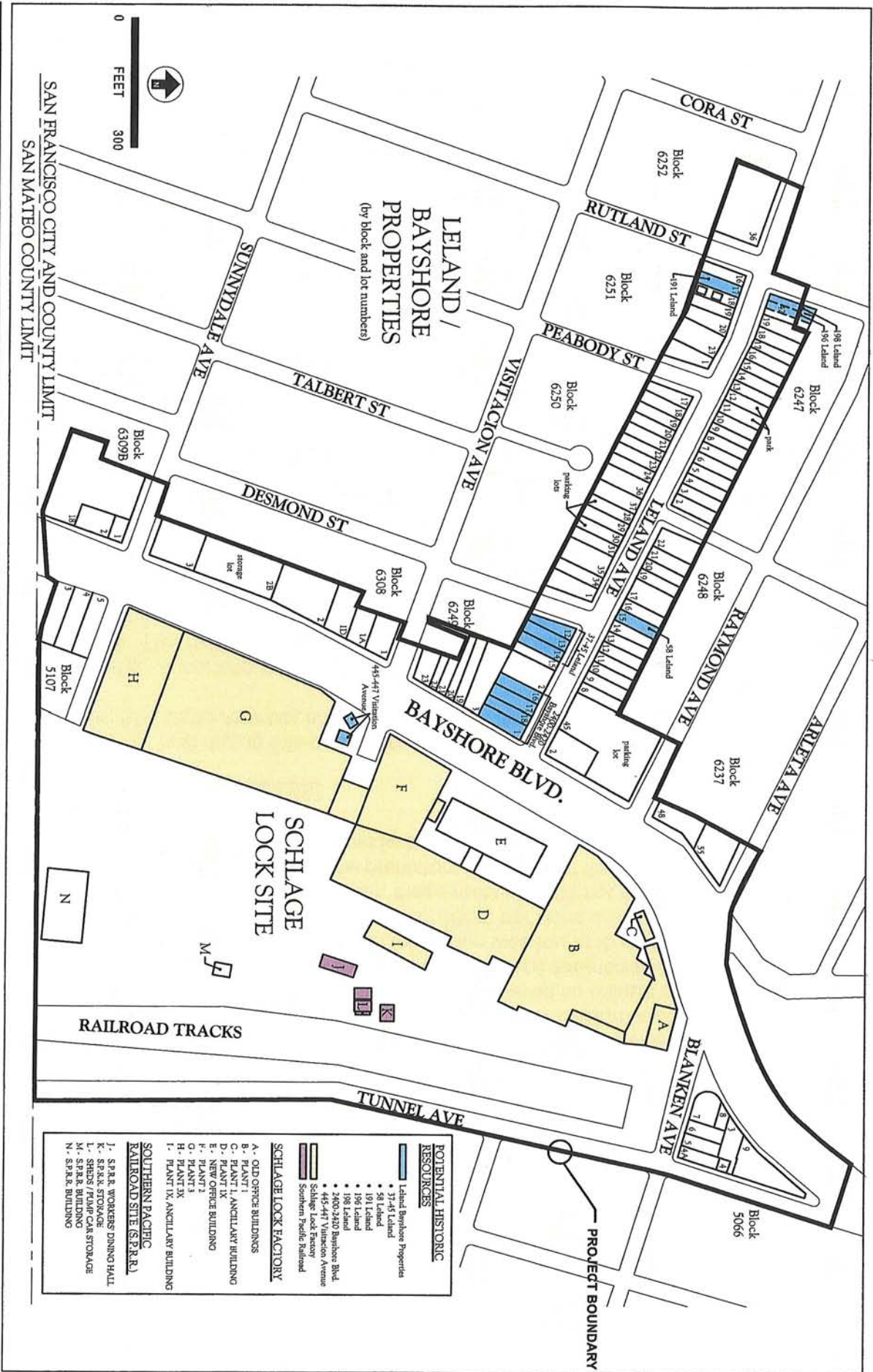
*191 Leland Avenue.* This one-story house with basement appears on the 1913-1915 Sanborn map and is located at the rear of the lot. In plan, the house remains much today as originally. This house is potentially historically significant for its association with the early development of Leland Avenue.

*196 Leland Avenue.* The modest Greek revival style cottage at 196 Leland Avenue is one of three buildings on Block 6247, Lot 042, and one of the older buildings on Leland Avenue. Generally square in plan and of frame construction, this building appears on the 1913-1915 Sanborn map as a dwelling with a bay window on the front elevation. Originally a residence, the building functioned as a store during the 1960s, according to Sanborn maps, and today appears vacant. The cottage is potentially historically significant for its association with the early development of Leland Avenue.

*198 Leland Avenue.* The building at 198 Leland Avenue is one of three structures on Block 6247, Lot 042, and one of the older buildings on Leland Avenue. Rectangular in plan and of frame construction, this building appears on the 1913-1915 Sanborn map as a one-story store with a poured concrete foundation. On the front elevation, new windows have been installed and commercial signage has been attached to the false front. Today the building houses a restaurant and bakery. The building is potentially historically significant for its association with the early development of Leland Avenue.

Apart from the four properties built during this period found to be historical resources (2400-2420 Bayshore Boulevard, 191 Leland Avenue, 196 Leland Avenue, and 198 Leland Avenue), the buildings constructed during this phase of development do not, in Carey & Co.'s professional opinion, qualify for listing as historical resources. The remaining properties, built between c.1900 and 1913, consist primarily of two-story, mixed use properties and include a grocery store and the Visitacion Valley Pharmacy. While these buildings meet the age requirement for listing on the California Register of Historical Resources (CRHR), none of these properties was found to be significant for their associations with events or persons important to local or regional history, or to the cultural heritage of California or the United States. The architectural features of the buildings may not be considered so unique as to warrant individual listing on the CRHR, and furthermore, many have had extensive alterations resulting in diminished integrity. Though some of these buildings were constructed early in the development of the valley's commercial core, many have been significantly altered as a result of years of changes in ownership and use. None of the buildings in this group was found to embody distinctive characteristics of a type, period, or method of construction, nor does any





SOURCE: Carey & Co., Inc.

Figure 10.1

# POTENTIAL HISTORICAL RESOURCES IN PROJECT AREA

represent the work of a master or possess high artistic values. Further, these resources do not appear to have the potential to yield information important to the prehistory or history of the local area, California, or the nation, and therefore they cannot be considered historical resources for CEQA purposes.

#### Structures Built Between 1914 and 1930

The properties built between 1914 and 1930 consist primarily of two-story, mixed retail and residential properties and include properties along Bayshore Boulevard related to the rise of the automobile in the 1920s. Though they meet the age requirement for listing on the CRHR, none of these properties was found to be significant for their associations with events or persons important to local or regional history, or to the cultural heritage of California or the United States. The architectural features of the buildings may not be considered so unique as to warrant individual listing on the CRHR, and furthermore, many have had extensive alterations resulting in diminished integrity. None of the buildings in this group was found to embody distinctive characteristics of a type, period, or method of construction, nor does any represent the work of a master or possess high artistic values. Further, these resources do not appear to have the potential to yield information important to the prehistory or history of the local area, California, or the nation, and therefore they cannot be considered historical resources for CEQA purposes.

#### Structures Built Between 1931 and 1950

Three of the properties built during this period are found to be potential historical resources: 37-45 Leland Avenue, 58 Leland Avenue, and 445-447 Visitacion Avenue.

*37-45 Leland Avenue.* According to the Office of the Assessor-Recorder, this building was constructed in 1933. The 1950 Sanborn map shows the San Francisco Public Library branch occupying 37 Leland Avenue, with 41 and 45 Leland operating as stores. Today, the Visitacion Valley branch of the San Francisco Public Library operates from 45 Leland Avenue, and retail establishments occupy the remaining two spaces. The building is potentially historically significant for its association with the commercial development of Leland Avenue.

*58 Leland Avenue.* The building at 58 Leland Avenue was given a summary ranking of 1 in the San Francisco Planning Department's 1976 Architectural Survey, indicating that the building was considered to have contextual importance.<sup>1</sup> The building is potentially historically significant for its association with the commercial development of Leland Avenue.

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<sup>1</sup>Between 1974 and 1976, the San Francisco Planning Department conducted a citywide inventory of architecturally significant buildings. An advisory review committee of architects and architectural historians assisted in the final determination of ratings for the approximately 10,000 buildings, which became an unpublished 60-volume inventory. Both contemporary and older buildings were surveyed, but historical associations were not considered. Typically, each building was numerically rated from a low level of importance of "-2" to a high rating of "5." The inventory assessed architectural significance, which included design features, the urban design context, and overall environmental significance. When completed, the 1976 Architectural Survey was believed to represent the top ten percent of the city's architecturally significant buildings. Buildings rated 3 or higher represent approximately the top 2 percent of all of San Francisco's buildings in terms of architectural importance. Summary ratings of 0 or 1 are generally interpreted to mean that the property has some contextual importance. Inclusion of the building at 58 Leland Avenue in the 1976 Architectural Survey makes it a "Category B" resource under the City's "CEQA Review Procedures for Historic Resources" (see subsection 10.3.2 in this EIR chapter), which is to say a property requiring further consultation and review to establish its possible status as a historical resource for purposes of CEQA.

*445-447 Visitacion Avenue.* Mrs. A. Walsh applied to the City in March 1933 to erect a two-story frame building at the southeast corner of Bayshore Boulevard and Visitacion Avenue. The building permit indicates that the building was to contain two flats with three rooms each. At that time there were no other buildings on the lot. Alterations over the recent years include a partial reroofing, in which some of the clay tile roofing was replaced with asphalt shingles, as well as infill of the gothic arched entryways on the east and north elevations. On the whole, however, this building retains a high degree of integrity. The building is potentially historically significant for its association with the development of commercial (specifically traveler- and automobile-related) uses along Bayshore Boulevard.

Apart from these three properties, the buildings constructed during this phase of development do not, in Carey & Co.'s professional opinion, qualify for listing as historical resources. The remaining properties, built between 1931 and 1950, consist primarily of one-story, retail and service-oriented buildings including a grocery store, post office, and bank. While these buildings meet the age requirement for listing on the CRHR, none of these properties was found to be significant for their associations with events or persons important to local or regional history, or to the cultural heritage of California or the United States. The architectural features of the buildings may not be considered so unique as to warrant individual listing on the CRHR, and furthermore, many have had extensive alterations resulting in diminished integrity. Though these buildings were constructed during a peak of commercial development along Leland Avenue and Bayshore Boulevard, the buildings were constructed in a range of architectural styles and many have been significantly altered as a result of years of changes in ownership and use. None of the buildings in this group was found to embody distinctive characteristics of a type, period, or method of construction, nor does any represent the work of a master or possess high artistic values. Further, these resources do not appear to have the potential to yield information important to the prehistory or history of the local area, California, or the nation, and therefore they cannot be considered historical resources for CEQA purposes.

#### *Structures Built Between 1951 and 1967*

Properties built between 1951 and 1967 consist primarily of one-story commercial properties. Though some of these properties may meet the age requirement for listing on the California Register of Historical Resources, none of these properties was found to be significant for their associations with events or persons important to local or regional history, or to the cultural heritage of California or the United States. These buildings are architecturally unremarkable; none of the buildings in this group was found to embody distinctive characteristics of a type, period, or method of construction, and certainly none represents the work of a master or possesses high artistic values. Further, these resources do not appear to have the potential to yield information important to the prehistory or history of the local area, California, or the nation, and therefore they cannot be considered historical resources for CEQA purposes.

#### *Structures Built Post-1967*

In general, buildings less than 40 years old can be considered historic resources only if they constitute an exceptional achievement in architecture or engineering, or are of otherwise exceptional importance. In Carey & Co.'s professional opinion, none of the buildings in the Project Area built since 1967 could be considered architecturally exceptional, and thus none can yet be considered a historical resource.

(2) *Property Descriptions and Historical Resource Evaluations--Schlage Lock Site.* This section provides a brief description of each potentially historic property and an overall assessment of the two sections that comprise the Schlage Lock site: the Schlage Lock Factory property and the former Southern Pacific Railroad Company property. As described below, Carey & Co. believes that both properties are eligible for listing in the National Register of Historic Places. Given their spatial continuity and common industrial history, Carey & Co. recommends that the two potentially historic sites be treated as a single potential Schlage Lock Historic Site.

### Schlage Lock Factory

The former Schlage Lock Factory is located on a site bounded by Arleta Avenue to the north, Tunnel Avenue to the east, the county line to the south, and Bayshore Boulevard to the west. The collection of industrial and administrative buildings, while still extant, has not functioned as a lock factory since the plant was vacated in 1999. The buildings have not been surveyed previously, except for the Old Office Building (Building A) which was recognized in the City's 1976 Architectural Quality Survey with a summary rating of 3.<sup>1</sup>

The Schlage Lock Factory property derives its overall significance from serving as the historic headquarters of the Schlage Lock Factory, nationally renowned for its revolutionary breakthroughs in lock-making.<sup>2</sup> As such, it appears to be eligible as a historic site at the local and national levels according to the criteria listed by the California Register of Historical Resources and the National Register of Historic Places. These define a historic site as "the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing structure." The potential Schlage Lock Factory Historic Site qualifies as a historic site because it fulfills Criterion A of the National Register of Historic Places as having made significant contributions to the broad patterns of history.

The Schlage Lock Factory property also qualifies under Criterion B of the National Register of Historic Places because of its association with inventor Walter Schlage (1882-1946). The earliest buildings, Buildings A and B, were commissioned by Schlage, after whom the Schlage Lock Company was named.

In addition to being the location of the potentially historic Schlage Lock Factory, the individual buildings on the site are also significant for their associations with some of San Francisco's most prominent twentieth century architects, fulfilling Criterion C of the National Register of

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<sup>1</sup>See footnote 1 on previous page regarding the San Francisco Planning Department inventory. Summary ratings of 3 or higher represent approximately the top 2 percent of all of San Francisco's buildings in terms of architectural importance.

<sup>2</sup>See subsection 10.1.2(d)(1) for additional detail on the history of the Schlage Lock Company.

Historic Places. These architects include William P. Day<sup>1</sup> and Alfred F. Roller.<sup>2</sup> Analysis of the company's history and the development of the site have established the Period of Significance for the site as beginning in 1926, when its first buildings were constructed, and continuing until 1950, when construction of factory facilities was considered "complete" under the Schlage Lock Company's ownership.

Schlage Lock Factory machinery remnants are located in Plant 1 and Plant 2. These rare pieces of industrial equipment qualify the site under Criterion D of the National Register of Historic Places, because of their ability to yield information important to industrial history.

There are a total of nine buildings on the potential Schlage Lock Factory Historic Site. Of the nine buildings, eight have construction dates within the Period of Significance and thus appear eligible as contributory resources to the site. The New Office Building is the only non-contributory resource to the site. The contributory buildings are briefly described below.

*Building A--Old Office Building (Contributing).* Building A, constructed in 1926, is a contributing resource to the potential Schlage Lock Factory Historic Site. As one of the first buildings to be constructed on the site commissioned by Walter Schlage, it housed the main administrative and executive functions of the business from 1926 to 1974. The Spanish Colonial Revival architectural styling was designed by prominent San Francisco architect and engineer William P. Day and associate architect H. M. Michelsen, and represents an important shift in Day's career from the ornate and eclectic designs of his earlier commercial and institutional buildings to a modernized and more simplistic design aesthetic intended for industrial functions. The building retains a high level of integrity with no significant alterations. The original clay tile roofing is one of the most notable features of the building. Other character-defining features on the interior include original wooden stair balustrades, wood flooring, and metal vaults.

*Building B--Plant 1 (Contributing).* Plant 1, which was constructed in 1926, was the first warehouse building to be built for the Schlage Lock Factory. According to Sanborn maps, the building is noted as a one-story, large warehouse with a series of rooms that included the shipping department, assembling department, machinery shop, finished products warehouse, and a die and tool division. This building was also designed by William P. Day and H. M. Michelsen. Like Building A, Plant 1 represents a shift in Day's style from the eclectic to the modern. One of the most distinctive characteristics of the building is its sawtooth roof. Though the interior is in poor condition, it retains its original redwood ceiling, skylights, and steel trusswork. The building retains a high level of integrity because of minimal alterations or additions.

*Building C--Plant 1, Ancillary Building (Contributing).* This one-story structure, built around 1947, is rectangular in plan and sits on a platform that is supported by concrete and steel columns. The only major alteration to the building was made to the stairs. The original set of stairs leading up to the main entrance leading up from the west was replaced by a new set of

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<sup>1</sup>William P. Day (1883-1966) was trained as an engineer at U.C. Berkeley. In 1916, Day joined Charles P. Weeks (1871-1928). The partnership of Weeks & Day architects became one of San Francisco's most successful architectural firms in the first half of the twentieth century. Although more well-known for their commercial projects, such as the Sir Francis Drake Hotel and the Mark Hopkins Intercontinental Hotel, the firm of Weeks & Day was also given important industrial projects around the city, such as the large warehouses along the Central Waterfront at Pier 70 in San Francisco.

<sup>2</sup>Alfred F. Roller (1891-1981) was a prominent San Francisco-based architect most notably known for his concrete commercial buildings and public projects throughout the Bay Area.



stairs with metal railing leading up from the east. Otherwise, the building retains a good level of integrity.

*Building D--Plant IX (Contributing).* This two-story concrete structure, built around 1950, is connected at its north elevation to the main production warehouse (Plant 1), and at its west elevation to Plant 2. The design of the warehouse most resembles the parts delivery warehouse (Plant 3X) with its concrete grid-patterned roof. The building has a number of interior additions, particularly office partitions installed in the 1960s, but its overall condition and integrity are good.

*Building F--Plant 2 (Contributing).* This one-story, steel-reinforced concrete structure, which was constructed around 1947, historically functioned as the varnishing and lacquering warehouse and later the plating shop. This building was also designed by William P. Day and H. M. Michelsen. From the exterior, the warehouse is distinguished by its curved corner at the corner of Visitacion Avenue and Bayshore Boulevard. There is no evidence of major alterations or additions, and the building retains a high level of integrity.

*Building G--Plant 3 (Contributing).* This one-story concrete structure, constructed in 1950, was designed by successful San Francisco architect Alfred F. Roller, with engineer H. J. Brunnier. According to 1964 Sanborn maps, the building historically functioned as the shipping and assembly department and was originally connected at its south end to Building H through openings in the partition wall.

*Building H--Plant 3X (Contributing).* This two-story concrete structure, rectangular in plan, was also constructed in 1950 and designed by architect Alfred F. Roller, with H. J. Brunnier. Remnants of railroad tracks leading into the building are visible near the south wall of the interior, as this building functioned as the main delivery dock, receiving freight from railroad trains. It also functioned as the main point of entry and exit into the Schlage Lock Factory. This part of the warehouse is in good condition with no major alterations or additions.

*Building I--Plant IX, Ancillary Building (Contributing).* This one-story freestanding structure, most likely contemporary with the shipping and receiving plant (Plant IX, c. 1950), historically functioned as a carpenters' workshop for the factory. Although it served ancillary functions to Schlage's primary production and manufacturing activities, it nonetheless was important to the factory's ongoing operation.

#### Southern Pacific Railroad Company

The former Southern Pacific Railroad Company property is adjacent to the eastern boundary of the Schlage Lock Factory. The Southern Pacific Railroad Company was one of the most powerful and prominent of American railroad companies in the nineteenth and twentieth centuries. Southern Pacific merged with the Central Pacific Railroad Company in 1870, expanding the reach of the western portion of the Transcontinental Railroad. In 1881, the western portion of the Southern Pacific Railroad Company merged with the Atchison Topeka and Santa Fe Railroad Company to become the second transcontinental railroad.<sup>1</sup> Southern

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<sup>1</sup>See subsection 10.1.2(d)(2) for additional detail on the history of the Southern Pacific Railroad Company.

Pacific provided commuter service to Visitacion Valley on the line called the "Bayshore Cutoff," which was known as the most important access route to the San Francisco Peninsula.<sup>1</sup>

The Southern Pacific Railroad Company property includes five buildings, three of which served the Southern Pacific Railroad Company since approximately 1906. These structures derive their significance from being associated with the historic railroad company. As they all shared a similar function in serving the Bayshore Cutoff line, they appear to be eligible as part of a historic site at the local and national levels according to Criterion 1 of the California Register of Historical Resources and Criterion A of the National Register of Historic Places. These define a historic site as "the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing structure." The Period of Significance for the site extends from 1906, when the first tracks were laid in the area, to 1920, when the 17-stall Bayshore roundhouse and supporting car repair and locomotive shops were completed for the freight yard that is located outside the Project Area to the south. As such, three of the five buildings are considered contributory resources to the potential Southern Pacific Railroad Historic Site. The metal buildings (Building M and Building N) at the site's south end are considered non-contributory resources to the historic site. The contributory buildings are briefly described below.

*Building J--Workers' Dining Hall (Contributing).* This one-story, wood-frame building is noted on Sanborn maps as an office building for the Southern Pacific Railroad Company. It is also known to have functioned historically as a dining hall for railroad workers. The building retains a high degree of integrity, with its original windows, siding, and interior redwood flooring.

*Building K--Storage (Contributing).* The construction of this wood-frame building suggests that it dates to c. 1906 when the Southern Pacific Railroad Company had begun laying tracks for the Bayshore Cutoff. Like the two smaller wood-frame buildings (see Building L below), Building K historically functioned as a storage building serving the Southern Pacific Railroad's maintenance workers.

*Building L--Sheds/Pump Car Storage (Contributing).* Two wood-frame buildings are partially encased at their west elevations within a single corrugated metal structure. These two small buildings were originally free-standing structures, noted on Sanborn maps as having been covered in metal cladding. This is not the same metal cladding as the current metal structure surrounding the buildings. Historically they functioned as storage spaces for the pump car vehicles that were used as transport in the maintenance of the railroad tracks. Because these structures are partly sheltered from the elements by metal siding, they retain a high level of integrity and are both in good condition.

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<sup>1</sup>Rufus Steele, "The Spread of San Francisco: The wonderful impetus to manufacturing on the Peninsula resulting from the making of Bayshore factory sites. Recent remarkable industrial development of California," in *Sunset Magazine*, Vol. XIX, No. 3, July 1907. 263-272. pg. 264.

## 10.2 REGULATORY FRAMEWORK

### 10.2.1 Existing San Francisco General Plan Policies

The San Francisco General Plan *Urban Design Element* contains the following policies relevant to the proposed Visitacion Valley redevelopment program and its relationship to historical resources:

- *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 2.4)*
- *Use care in remodeling of older buildings, in order to enhance rather than weaken the original character of such buildings. (Policy 2.5)*
- *Respect the character of older development nearby in the design of new buildings. (Policy 2.6)*
- *Recognize and protect outstanding and unique areas that contribute in an extraordinary degree to San Francisco's visual form and character. (Policy 2.7)*
- *Promote harmony in the visual relationships and transitions between new and older buildings. (Policy 3.1)*

In addition, the San Francisco General Plan *Community Safety Element* contains the following relevant policy:

- *Preserve, consistent with life safety considerations, the architectural character of buildings and structures important to the unique visual image of San Francisco, and increase the likelihood that architecturally and historically valuable structures will survive future earthquakes. (Policy 2.8)*

The San Francisco General Plan *Housing Element* contains the following policy related to historical resources:

- *Preserve landmark and historic residential buildings. (Policy 3.6)*

### 10.2.2 Draft San Francisco General Plan Preservation Element

The San Francisco Planning Department is in the process of preparing a draft San Francisco General Plan *Preservation Element* to bring before the Landmarks Board for endorsement and then to the Planning Commission and Board of Supervisors for adoption. Draft *Preservation Element* policies that may be relevant to the proposed Visitacion Valley redevelopment program include the following:<sup>1</sup>

- *Protect individually designated buildings and other historic resources. (Policy 2.1)*
- *Protect groupings of historic resources that are formally listed as historic or conservation districts. (Policy 2.2)*

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<sup>1</sup>[http://www.sfgov.org/site/uploadedfiles/planning/Draft\\_Preservation\\_Element\\_2007.pdf](http://www.sfgov.org/site/uploadedfiles/planning/Draft_Preservation_Element_2007.pdf).



- *Protect resources that, based on professional evaluation, appear eligible for formal designation individually or as part of a grouping. (Policy 2.3)*
- *Protect historic resources that are less than fifty years old. (Policy 2.4)*
- *Support efforts to pursue formal designation of properties determined eligible for listing as City Landmarks or City Historic Districts under Article 10 of the Planning Code. (Policy 2.5)*
- *Encourage the rehabilitation and adaptive use of historic buildings and other historical resources as an alternative to demolition. (Policy 2.6)*
- *Use enforcement powers to prevent demolition by neglect. (Policy 2.7)*
- *Apply the nationally established Secretary of the Interior's Standards for the Treatment of Historic Properties for all projects that affect known or potential historic resources. (Policy 4.1)*
- *Apply the Secretary of the Interior's Standards for the Treatment of Historic Properties for infill construction in known or potential Historic Districts or Conservation Districts to assure compatibility with the character of the districts. (Policy 4.2)*
- *During the planning process, evaluate the significance of resources that have the potential to be designated individually or as part of a grouping, per the guidelines set forth in Preservation Bulletin No. 16, CEQA Review Procedures for Historic Resources. (Policy 5.3)*
- *Ensure that historic resource surveys are an integral component of long-range planning and Area Plan efforts. (Policy 5.4)*
- *Encourage the use of grants, loans, tax mechanisms, or other funding sources for the preservation of historic resources. (Policy 6.1)*
- *Preserve, consistent with life safety considerations, the architectural character of buildings and structures important to the unique visual image of San Francisco, and increase the likelihood that architecturally and historically valuable structures will survive future earthquakes. (Policy 9.1)*
- *Ensure that historic resources are protected in the aftermath of a disaster. (Policy 9.2)*

## 10.3 IMPACTS AND MITIGATION MEASURES

### 10.3.1 Significance Criteria

Based on the CEQA Guidelines,<sup>1</sup> the proposed redevelopment program<sup>2</sup> would create a significant cultural or historical resource impact if its implementation would:

- (1) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines section 15064.5;
- (2) Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines section 15064.5;
- (3) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- (4) Disturb any human remains, including those interred outside of formal cemeteries.

When a proposed project may adversely affect a historical resource, CEQA requires a city or county to carefully consider the possible impacts before proceeding (Public Resources Code sections 21084 and 21084.1). CEQA equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment (section 21084.1). CEQA explicitly prohibits the use of a categorical exemption within the CEQA Guidelines for projects that may cause such a change (section 21084).

A “substantial adverse change” is defined as “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of [a] historical resource would be materially impaired.” Further, the significance of a historic resource is “materially impaired” when a project “demolishes or materially alters in an adverse manner those physical characteristics of [a] historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register of Historical Resources”; or “demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources...”; or “demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.” (CEQA Guidelines section 15064.5)

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<sup>1</sup>CEQA Guidelines, Appendix G, item V (a-d).

<sup>2</sup>The *Visitacion Valley Schlage Lock Strategic Concept Plan* was released in 2002, a product of community workshop and planning efforts to determine the future of the Schlage Lock Factory site. In July 2005, the Board of Supervisors designated the Schlage Lock site and surrounding parcels along portions of Leland Avenue and Bayshore Boulevard a “Survey Area” in order to promote further study and future redevelopment. The *Draft Visitacion Valley/Schlage Lock Design for Development* was released in early 2008 by the Planning Department with the intention of facilitating new development within the Leland/ Bayshore area. The Planning Department is currently in the process of developing changes to the Planning Code and has drafted streetscape improvements (*Leland Avenue Street Design Project*) to further the vision advanced by the 2002 Concept Plan.

CEQA Guidelines section 15064.5 states that the term “historical resources” shall include the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the California Register of Historical Resources (Public Resources Code SS5024.1, Title 14 CCR, section 4850 et seq.).
2. A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, may be considered to be a historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing in the California Register of Historical Resources (Public Resources Code section 5024.1, Title 14 CCR, section 4800.3) as follows:
  - A. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
  - B. Is associated with the lives of persons important in our past;
  - C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
  - D. Has yielded, or may be likely to yield, information important in prehistory or history.

Under CEQA Guidelines section 15064.5, “generally, a project that follows the Secretary of the Interior’s *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* or the Secretary of the Interior’s *Standards for Rehabilitation with Guidelines for Rehabilitating Historic Buildings* shall be considered as mitigated to a level of less than a significant impact on the historical resource.”

### **10.3.2 Program Effects**

San Francisco Preservation Bulletin 16, “CEQA Review Procedures for Historic Resources,” divides recognized and potential historical resources into two general groups, “Category A” and “Category B.” Category A resources are generally those listed on or formally determined eligible for the California Register, as well as those listed in formally adopted local surveys or registers. Category B resources are those that, based on their age or surveys not formally adopted by the San Francisco Planning Department or Board of Supervisors, appear to be of potential historic significance.

Preservation Bulletin 16 also identifies a third category--Category C--representing properties that have been determined not to be historical resources or properties for which the City has no information indicating that the property is a historical resource.

(a) Category A Resources. Category A resources are automatically considered historical resources for the purposes of CEQA. According to San Francisco Preservation Bulletin 16, for resources listed on or formally eligible for the California Register of Historical Resources, "only the removal of the property's status as listed in or determined to be eligible for listing in the California Register of Historical Resources by the California Historic Resources Commission will preclude evaluation of the property as [a] historical resource under CEQA."<sup>1</sup> For Category A buildings drawn from local registers and other historical resource surveys, "only a preponderance of the evidence demonstrating that the resource is not historically or culturally significant will preclude evaluation of the property as [a] historical resource."

There are no Category A resources within the Project Area. No building within the Project Area, and no district within or intersecting the Project Area, is currently listed on, nor has been formally determined eligible for listing on, the National Register of Historic Places or the California Register of Historical Resources.

(b) Category B Resources. Category B resources may, pending further research, be considered historical resources for purposes of CEQA. According to Preservation Bulletin 16, after further review, "those properties deemed significant pursuant to the criterion in Public Resources Code section 5024.1 will be evaluated as historical resources. MEA [the San Francisco Planning Department's Major Environmental Analysis section] will request that the Neighborhood Planning Team's Preservation Technical Specialists review each property in this category to determine if the property could be deemed significant pursuant to the criterion provided in Public Resources Code section 5024.1(c)."<sup>2</sup>

Among the buildings in the Project Area that, according to Preservation Bulletin 16, would fall into Category B, Carey & Co. has identified the following as potentially significant historical resources for purposes of CEQA:

*Previously Identified Potential Historical Resources*

- 58 Leland Avenue (1976 Citywide Survey)
- 2201 Bayshore Boulevard, Schlage Lock Factory Building A--Old Office Building (1976 Citywide Survey)

*Potential Individually Significant Historical Resources*

- 2400-2420 Bayshore Boulevard
- 445-447 Visitacion Avenue
- 37-45 Leland Avenue
- 58 Leland Avenue
- 191 Leland Avenue
- 196 Leland Avenue

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<sup>1</sup> San Francisco Preservation Bulletin 16, 7.

<sup>2</sup> Ibid., 8.

- 198 Leland Avenue
- 2201 Bayshore Boulevard, Schlage Lock Factory Building A--Old Office Building

Potential Schlage Lock Historic Site Contributors

*Associated with Schlage Lock Factory*

- 2201 Bayshore Boulevard (Building A--Old Office Building)
- 2201 Bayshore Boulevard (Building B--Plant 1)
- 2201 Bayshore Boulevard (Building C--Plant 1, ancillary building)
- 2201 Bayshore Boulevard (Building D--Plant 1X)
- 2201 Bayshore Boulevard (Building F--Plant 2)
- 2201 Bayshore Boulevard (Building G--Plant 3)
- 2201 Bayshore Boulevard (Building H--Plant 3X)
- 2201 Bayshore Boulevard (Building I--Plant 1X, ancillary building)

*Associated with Southern Pacific Railroad*

- 2201 Bayshore Boulevard (Building J--Workers' Dining Hall)
- 2201 Bayshore Boulevard (Building K--Storage)
- 2201 Bayshore Boulevard (Building L--Sheds/Pump Car Storage)

**10.3.3 Impacts and Mitigation Measures**

(a) Historical Resources. For the portion of the Project Area along Leland Avenue and the west side of Bayshore Boulevard (Redevelopment Zone 2), the provisions of the redevelopment program could encourage (1) building rehabilitation, (2) infill development, (3) replacement of dilapidated or underutilized uses with new development, and (4) street improvements. For the portion of the Project Area associated with the Schlage Lock site, including the Southern Pacific Railroad buildings (Redevelopment Zone 1), the redevelopment program includes proposals that may facilitate demolition of all existing buildings other than the Old Office Building.

It is reiterated in Preservation Bulletin 16 that "as a general rule, a significant impact is considered mitigated if the property follows the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* or the Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*."<sup>1</sup> Future development projects proposed for any of the historical resource sites that include measures to improve a historical resource in accordance with the Secretary of the Interior's Standards would result in less-than-significant effects on the historical resource (in accordance with CEQA Guidelines section 15126.4[b]). However, development projects that do not follow the Secretary of Interior's Standards could destroy or degrade historical resources.

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<sup>1</sup>Ibid., 10.

**Impact 10-1: Destruction or Degradation of Historical Resources.** The Visitacion Valley redevelopment program may cause substantial adverse changes in the significance of one or more identified potential historical resources if future individual development projects do not incorporate measures that ensure project-related changes to historical resources are in accordance with either of the following publications:

- Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*; or
- Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*.

Substantial adverse changes that may occur include demolition, destruction, relocation, or alteration of one or more resources, such that the resource is "materially impaired." The significance of a historical resource is considered to be "materially impaired" when a project demolishes or materially alters the physical characteristics that justify the determination of a historical resource's significance (CEQA Guidelines section 15064.5[b]). Such an adverse change to a CEQA-defined historical resource would constitute a **potentially significant impact** (see criterion 1 in subsection 10.3.1, "Significance Criteria," above).

**Mitigation 10-1.** The following mitigation measures should be considered if proposed changes to a historical resource are not in accordance with the Secretary of the Interior's standards.

(a) *Documentation.* In consultation with a Planning Department Preservation Technical Specialist, the individual project applicant shall have documentation of the affected historical resource and its setting prepared. Generally, this documentation shall be in accordance with one of three documentation levels associated with the Historic American Building Survey (HABS) or Historic American Engineering Record (HAER). The Specialist, possibly in consultation with the National Park Service Regional Office, can decide the most appropriate form of documentation, depending on the significance of the affected resource. The three documentation levels are:<sup>1</sup>

Documentation Level I

1. Drawings: a full set of measured drawings depicting existing or historic conditions.

**(continued)**

<sup>1</sup>These are drawn from Burns, John A. (ed.), *Recording Historic Structures*, Secretary of the Interior, National Park Service, Washington, D.C., 1989.

**Mitigation 10-1 (continued):**

2. Photographs: photographs with large-format negatives of exterior and interior views; photocopies with large format negatives of select existing drawings or historic views where available.
3. Written data: history and description in narrative or outline format.

**Documentation Level II**

1. Drawings: select existing drawings, where available, should be photographed with large-format negatives or photographically reproduced on Mylar.
2. Photographs: photographs with large-format negatives of exterior and interior views, or historic views, where available.
3. Written data: history and description in narrative or outline format.

**Documentation Level III**

1. Drawings: sketch plan.
2. Photographs: photographs with large-format negatives of exterior and interior views. (If large-format photography is not possible, 35mm photography may be deemed acceptable, if the negatives are processed according to HABS standards.)
3. Written data: one-page summary.

For all levels of documentation, material standards regarding reproducibility, durability, and size shall be met. The HABS/HAER standards are:

**Measured Drawings:**

Readily Reproducible: Ink on translucent material

Durable: Ink on archivally stable materials

Standard Sizes: Two sizes: 19" x 24" or 24" x 36"

**Large Format Photographs:**

Readily Reproducible: Prints shall accompany all negatives

Durable: Photography must be archivally processed and stored. Negatives are required on safety film only. Resin-coated paper is not accepted. Color photography is not acceptable.

Standard Sizes: Three sizes: 4" x 5", 5" x 7", or 8" x 10"

**Written History and Description:**

Readily Reproducible: Clean copy for Xeroxing.

Durable: Archival bond required.

Standard Sizes: 8 1/2" x 11"

**(continued)**

**Mitigation 10-1 (continued):**

Note: Photographic specifications tend to change with changing technologies. The HABS/HAER document *Photographic Specifications* provides useful guidelines for photographing historic buildings, including specifications regarding film and processing types.<sup>1</sup> The National Register of Historic Places recently began accepting digital photographs as official documentation, subject to its 75-year permanence standard.<sup>2</sup>

The agreed-upon documentation shall be filed with the San Francisco History Center at the Main Library, as well as with other local libraries and historical societies, as appropriate.

(b) *Oral Histories.* The individual project applicant shall undertake an oral history project that includes interviews of several long-time residents of Visitacion Valley and former employees of the Schlage Lock Factory. This program shall be conducted by a professional historian in conformance with the Oral History Association's *Principles and Standards* ([http://alpha.dickinson.edu/oha/pub\\_eq.html](http://alpha.dickinson.edu/oha/pub_eq.html)). In addition to transcripts of the interviews, the oral history project shall include a narrative project summary report containing an introduction to the project, a methodology description, and brief summaries of each conducted interview. Copies of the completed oral history project shall be submitted to the San Francisco History Room of the Main Library.

(c) *Relocation.* If preservation of the affected historical resource at the current site is determined to be impossible, the building shall, if feasible, be stabilized and relocated to another nearby site appropriate to its historic setting and general environment. A moved building or structure that is otherwise eligible may be listed in the California Register if it was moved to prevent its demolition at its former location and if the new location is compatible with the original character and use of the historical resource.<sup>3</sup> After relocation, the building's preservation, rehabilitation, and restoration, as appropriate, shall follow the Secretary of the Interior's standards to ensure that the building retains its integrity and historical significance.

**(continued)**

<sup>1</sup>National Park Service, *Photographic Specifications, Historic American Buildings Survey, Historic American Engineering Record*, San Francisco, CA: National Park Service, 1989.

<sup>2</sup>National Register of Historic Places and National Historic Landmarks Survey, "Photo Policy Expansion, March 2005," <http://www.cr.nps.gov/nr/policyexpansion.htm>.

<sup>3</sup>California Office of Historic Preservation, *California Register and National Register: A Comparison*, Technical Assistance Series 6, Sacramento, CA: California Department of Parks and Recreation, 2001.



**Mitigation 10-1 (continued):**

(d) *Salvage.* If the affected historical resource can neither be preserved at its current site nor moved to an alternative site and is to be demolished, the individual project applicant shall consult with a San Francisco Planning Department Preservation Technical Specialist and other local historical societies regarding salvage of materials from the affected historic resource for public information or reuse in other locations. Demolition may proceed only after any significant historic features or materials have been identified and their removal completed.

(e) *Commemoration.* If the affected historical resource can neither be preserved at its current site nor moved to an alternative site and is to be demolished, the individual project applicant shall, with the assistance of a Planning Department Preservation Technical Specialist or other professionals experienced in creating historical exhibits, incorporate a display featuring historic photos of the affected resource and a description of its historical significance into the publicly accessible portion of any subsequent development on the site. In addition, the factory machinery in Schlage Plants 1 and 2 should be cleaned and moved to a public space (such as a park or plaza on-site) for public viewing.

(f) *Contribution to a Historic Preservation Fund.* If an affected historical resource can neither be preserved at its current site nor moved to an alternative site and is demolished, the project applicant may be eligible to mitigate project-related impacts by contributing funds to the City to be applied to future historic preservation activities, including survey work, research and evaluation, and rehabilitation of historical resources within Visitacion Valley in accordance with the Secretary's Standards. Contribution to the preservation fund would be made only after the documentation, oral history, salvage, and commemoration mitigations specified above had been completed. The details of such an arrangement would be formulated on a case-by-case basis. As part of any such arrangement, the project applicant shall clearly demonstrate the economic infeasibility of other mitigation measures that would mitigate impacts to historical resources, including preservation, relocation, and project modification.

While implementation of these measures would reduce impacts on historical resources, the impact would remain ***significant and unavoidable***.

(NOTE: Relocation is a possible exception. If a historical resource were relocated to a site sufficiently in keeping with its original context, the impact on that resource may be deemed less-than-significant.)

(b) *Archaeological Resources.* As explained in subsection 10.1.4(a) above, one Native American habitation site (CA-SFR-35) has been recorded to be in or immediately adjacent to the Project Area. Given that the Project Area contains gently sloping terraces between two larger hills adjacent to the former bayshore, the area has a high likelihood of containing other,

as-yet unrecorded Native American cultural resources. Also, since there are numerous historic-period buildings in the Project Area, there is a high likelihood of identifying associated historic-period archaeological resources.

Also as explained in subsection 10.1.4(a), there are two potential archaeological resources that would be affected by development of the Schlage Lock site, including the Ralston Shellmound and remains associated with the Union Pacific Silk Manufacturing Company.

Due to the broad nature of the proposed redevelopment program and associated future development activities, as well as the lack of comprehensive archaeological field data for the Project Area, it is difficult to forecast the specific effects of future Project-facilitated development on archaeological resources. However, it is reasonable to expect that Project-facilitated construction activities, such as building demolition or site grading, would have a high probability of encountering archaeological sites in the Project Area. These construction activities could disturb or destroy archaeological resources (e.g., subsurface materials, historic articles).

**Impact 10-2: Disturbance of Known Archaeological Resources.** New development facilitated by the redevelopment program could disturb the one Native American habitation site (CA-SFR-35) recorded to be in or immediately adjacent to the Project Area. In addition, two other potential archaeological resources may be affected by development of the Schlage Lock site (i.e., Redevelopment Zone 1): the Ralston Shellmound and remains associated with the Union Pacific Silk Manufacturing Company. These possibilities represent a ***potentially significant impact*** (see criteria 2 and 4 in subsection 10.3.1, "Significance Criteria," above).

**Mitigation 10-2.** The project sponsor shall retain the services of a qualified archaeological consultant having expertise in California prehistoric and urban historical archeology. The archaeological consultant shall consult with the Major Environmental Analysis archaeologist at the San Francisco Planning Department to determine project locations and activities that may affect archaeological deposits/features associated with known archaeological resource sites. Project activities determined to potentially affect these resources shall be subject to an archaeological testing program as specified herein. In addition, the consultant shall be available to conduct an archaeological monitoring and/or data recovery program if required pursuant to this measure. The archaeological consultant's work shall be conducted in accordance with this measure at the direction of the City's Environmental Review Officer (ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archaeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less-than-significant level potential effects on a

**(continued)**

**Mitigation 10-2 (continued):**

significant archaeological resource as defined in CEQA Guidelines section 15064.5(a)(c).

*Archaeological Testing Program.* The archaeological consultant shall prepare and submit to the ERO for review and approval an archaeological testing plan (ATP). An archaeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archaeological resource(s) that potentially could be adversely affected by the project, the testing method to be used, and the locations recommended for testing. The purpose of the archaeological testing program will be to determine to the extent possible the presence or absence of archaeological resources and to identify and to evaluate whether any archaeological resource encountered on the site constitutes a historical resource under CEQA.

At the completion of the archaeological testing program, the archaeological consultant shall submit a written report of the findings to the ERO. If based on the archaeological testing program the archaeological consultant finds that significant archaeological resources may be present, the ERO in consultation with the archaeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archaeological testing, archaeological monitoring, and/or an archaeological data recovery program. If the ERO determines that a significant archaeological resource is present and that the resource could be adversely affected by the project, at the discretion of the project sponsor either:

- A) The project shall be re-designed so as to avoid any adverse effect on the significant archaeological resource; or
- B) A data recovery program shall be implemented, unless the ERO determines that the archaeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

*Archaeological Monitoring Program (AMP).* If the ERO in consultation with the archaeological consultant determines that an archaeological monitoring program (AMP) shall be implemented, the AMP shall minimally include the following provisions:

- The archaeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archaeological consultant shall determine what project activities shall be

**(continued)**

**Mitigation 10-2 (continued):**

archaeologically monitored. In most cases, any soils-disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archaeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context.

- The archaeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archaeological resource.
- The archaeological monitors shall be present on the project site according to a schedule agreed upon by the archaeological consultant and the ERO until the ERO has, in consultation with project archaeological consultant, determined that project construction activities could have no effects on significant archaeological deposits.
- The archaeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis.
- If an intact archaeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archaeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archaeological monitor has cause to believe that the pile driving activity may affect an archaeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archaeological consultant shall immediately notify the ERO of the encountered archaeological deposit. The archaeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archaeological resources are encountered, the archaeological consultant shall submit a written report of the Findings of the monitoring program to the ERO.

Archaeological Data Recovery Program (ADRP). The archaeological data recovery program shall be conducted in accord with an archaeological data recovery plan (ADRP). The archaeological consultant, project sponsor, and ERO

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**Mitigation 10-2 (continued):**

shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archaeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archaeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

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

*Human Remains and Associated or Unassociated Funerary Objects.* The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and, in the event of the Coroner's determination

**(continued)**

**Mitigation 10-2 (continued):**

that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC), who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code section 5097.98). The archaeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines section 15064.5[d]). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

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

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

Implementation of this measure would reduce the impact to a ***less-than-significant level***.

**Impact 10-3: Disturbance of Unknown Archaeological Resources.** New development facilitated by the redevelopment program in Redevelopment Zone 1 could disturb unrecorded archaeological resources. This possibility represents a ***potentially significant impact*** (see criteria 2 and 4 in subsection 10.3.1, "Significance Criteria," above).

**Mitigation 10-3.** The project applicant shall consult with the Major Environmental Analysis archaeologist at the San Francisco Planning Department prior to any development activity on the Schlage Lock site (i.e., Redevelopment Zone 1) and, at the direction of the Planning Department, shall undertake the following measures to avoid any potentially significant adverse impact on possible buried or submerged cultural resources.

The project sponsor shall retain the services of a qualified archaeological consultant having expertise in California prehistoric and urban historical archeology. The archaeological consultant shall undertake an archaeological monitoring program. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the City's Environmental Review Officer (ERO) for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archaeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of *construction* can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less-than-significant level potential effects on a significant archaeological resource as defined in CEQA Guidelines section 15064.5(a)(c).

*Archaeological Monitoring Program (AMP).* The archaeological monitoring program (AMP) shall minimally include the following provisions:

- The archaeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the project archeologist shall determine what project activities shall be archaeologically monitored. In most cases, any soils disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archaeological monitoring because of the potential risk these activities pose to archaeological resources and to their depositional context.
- The archaeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archaeological resource.
- The archaeological monitor shall be present on the project site according to a schedule agreed upon by the archaeological consultant and the ERO until the

**(continued)**

**Mitigation 10-3 (continued):**

ERO has, in consultation with the archaeological consultant, determined that project construction activities could have no effects on significant archaeological deposits.

- The archaeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis.
- If an intact archaeological deposit is encountered, all soils disturbing activities in the vicinity of the deposit shall cease. The archaeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction crews and heavy equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archaeological monitor has cause to believe that the pile driving activity may affect an archaeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archaeological consultant shall immediately notify the ERO of the encountered archaeological deposit. The archaeological consultant shall, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, present the findings of this assessment to the ERO.

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

- A) The project shall be re-designed so as to avoid any adverse effect on the significant archaeological resource; or
- B) An archaeological data recovery program shall be implemented, unless the ERO determines that the archaeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

*Archaeological Data Recovery Program (ADRP).* If an archaeological data recovery program is required by the ERO, the archaeological data recovery program shall be conducted in accord with an archaeological data recovery plan (ADRP). The project archaeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP. The archaeological consultant shall prepare a draft ADRP that shall be submitted to the ERO for review and approval. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archaeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are

**(continued)**



**Mitigation 10-3 (continued):**

applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

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

*Human Remains, Associated or Unassociated Funerary Objects.* The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and federal laws, including immediate notification of the Coroner of the City and County of San Francisco and, in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC), who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code section 5097.98). The archaeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop

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**Mitigation 10-3 (continued):**

an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines, section 15064.5[d]). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, curation, possession, and final disposition of the human remains and associated or unassociated funerary objects.

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

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

Implementation of this measure would reduce the impact to a ***less-than-significant level***.

**Impact 10-4: Accidental Discovery.** New development facilitated by the redevelopment program in Redevelopment Zone 2 could disturb unrecorded archaeological resources. This possibility represents a ***potentially significant impact*** (see criteria 2 and 4 in subsection 10.3.1, "Significance Criteria," above).

**Mitigation 10-4.** For individual development projects in Redevelopment Zone 2, the project applicant shall consult with the Major Environmental Analysis archaeologist at the San Francisco Planning Department prior to any development activity and, at the direction of the Planning Department, shall undertake the following measures to avoid any potentially significant adverse impact on possible buried or submerged cultural resources.

The project sponsor shall distribute the San Francisco Planning Department archaeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc., firms); and utilities firm involved in soils disturbing activities within the project site. Prior to any soils disturbing activities being undertaken each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel including, machine operators, field crew, pile drivers, supervisory personnel, etc. The project sponsor shall provide the City's Environmental Review Officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractors, and utilities firm) to the ERO confirming that all field personnel have received copies of the "ALERT" Sheet.

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

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

Measures might include: preservation in situ (in place) of the archaeological resource; an archaeological monitoring program; or an archaeological testing program. If an archaeological monitoring program or archaeological testing program is required, it shall be consistent with the City's Major Environmental Analysis (MEA) division guidelines for such programs. The ERO may also require that the project sponsor immediately implement a site security program if the archaeological resource is at risk from vandalism, looting, or other damaging actions.

(continued)

**Mitigation 10-4 (continued):**

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

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

Implementation of this measure would reduce the impact to a ***less-than-significant level***.

(c) Paleontological Resources. As noted in the Initial Study completed for the Notice of Preparation of this EIR (see appendix 20.2 of this EIR), the Project Area does not include any identified unique geological features. Although the potential for encountering paleontological resources in the Project Area would be considered low, Project-related earthmoving activities may encounter and destroy paleontological resources.

**Impact 10-5: Disturbance of Paleontological Resources.** Although the potential for encountering paleontological resources in the Project Area is considered low, any destruction of existing, unrecorded, unique paleontological resources during earthmoving activities would be a ***potentially significant impact*** (see criterion 3 in subsection 10.3.1, "Significance Criteria," above).

**Mitigation 10-5.** If any paleontological resources are encountered during site grading or other construction activities, all ground disturbances shall be halted until the services of a qualified paleontologist can be retained to identify and evaluate the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s), in accordance with standard professional practice. Implementation of this measure would reduce the impact to a ***less-than-significant level***.



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## 11. HAZARDS AND HAZARDOUS MATERIALS

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This EIR chapter describes known and potential hazards and hazardous materials conditions in the Project Area, related potentially significant adverse public health impacts anticipated as a result of the proposed Project, and associated requirements for minimizing those impacts.

### 11.1 SETTING

#### 11.1.1 General Concerns

For purposes of this EIR, "hazardous materials" are defined as substances with certain chemical and physical properties that could pose a substantial present or future hazard to human health or the environment if improperly handled, stored, disposed, remediated or otherwise managed. If improperly handled, hazardous materials can result in public health hazards through direct human contact, or through airborne releases in the form of vapors, fumes, or dust.

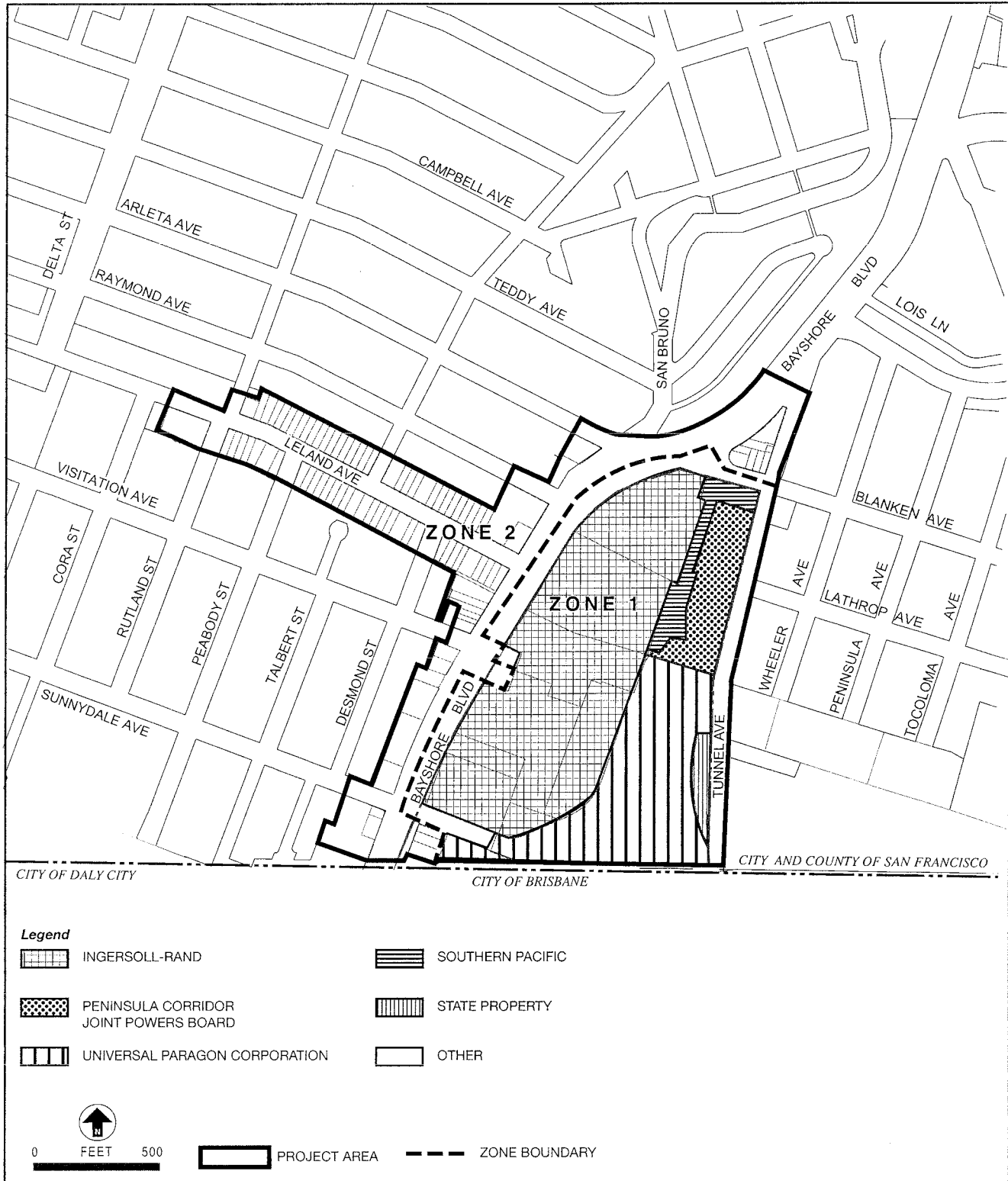
The potential for human contact with contaminated soils or groundwater or with associated air emissions is of particular concern in the Project Area. Construction workers typically have the greatest risk of exposure to contaminated soil or groundwater. If contamination at a site remains undetected, workers and the public may be at risk of exposure if precautions and monitoring are not taken during site development. Accidents or spills during transport of hazardous materials or wastes can also expose the general public and the environment to these substances.

#### 11.1.2 Historical Uses and Ongoing and Future Remediation Activities in Redevelopment Zone 1

The following information regarding the Ingersoll-Rand property portion of Redevelopment Zone 1 has been provided by the California Department of Toxic Substances Control (DTSC),<sup>1</sup> a division of the California Environmental Protection Agency (EPA). DTSC is also overseeing the environmental clean-up of the Universal Paragon Corporation (UPC) property portion of Zone 1, adjacent to the Ingersoll-Rand property on the east and south. DTSC is the designated lead agency for determination and oversight of soil and groundwater clean-up requirements and permissible types of new development on these two Project Area properties. In these cases, DTSC will review and approve a Remediation Action Plan (RAP) after providing for public review. The potential scope of the RAP is described further in subsection 11.1.2(d) of this chapter. Figure 11.1 (Project Area Ownership Boundaries) illustrates the various entities, including Ingersoll-Rand and UPC, that own sizeable portions of the Project Area. The DTSC

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<sup>1</sup>California Department of Toxic Substances Control (DTSC); *Schlage Lock Site: Fact Sheet, February 2002*; provided by Virginia Lasky, DTSC Project Manager, May 23, 2006. Much of the historical information on Schlage Lock has been taken from the DTSC Fact Sheet.



SOURCE: San Francisco Redevelopment Agency

Figure 11.1

## PROJECT AREA OWNERSHIP BOUNDARIES



environmental document website ([www.envirostor.dtsc.ca.gov](http://www.envirostor.dtsc.ca.gov), locations = "Schlage Lock" and "Brisbane") includes a library of public DTSC-reviewed documents pertaining to the Ingersoll-Rand property, the UPC property, and their ongoing environmental clean-up status. Due to the ongoing nature of the remediation process, some data described in this EIR chapter may have been updated since the chapter's publication. DTSC encourages those interested to review the most up-to-date information on its website.<sup>1</sup>

(a) Overview. Within the Project Area on the east side of Bayshore Boulevard (Redevelopment Zone 1), the former Schlage Lock property (now owned by Ingersoll-Rand) and adjacent former Southern Pacific property (now owned by the Universal Paragon Corporation--UPC) are currently undergoing an environmental clean-up (remediation) process. The process for the two properties, including remedial investigation and clean-up, has been ongoing since the mid-1990s and is continuing. The remedial investigation findings to date indicate that historic uses of the two properties have resulted in soil and groundwater contamination, primarily in the southern portion of Zone 1. The primary identified on-site soil and groundwater contaminants of concern on the two properties are volatile organic compounds (VOC) and metals. The ongoing clean-up process is not the result of the proposed Project (redevelopment program), but the implementation timing for Project-related development plans is dependent upon clean-up of these properties.

Because there is a commingling of groundwater between the two properties, the two current owners (Ingersoll-Rand and UPC) have been conducting required investigation and remedial actions jointly, under DTSC oversight. The proposed clean-up remedy for the two properties involves a combination of soil and groundwater remediation. The proposed remedy for contaminated soil is excavation, with either on-site treatment or off-site disposal, depending on the measured concentrations of VOCs. It is proposed that soils with high levels of VOCs will be transported off-site for disposal, and soils with low levels of VOCs will be excavated, treated off-site by aeration, and reused on-site.

The proposed remedy for contaminated groundwater is on-site treatment of VOCs by injection of a combination of oxidizing and reducing substrates. The substrates would be mixed with water and either directly injected into the groundwater, or applied through trenches constructed specifically for purposes of groundwater treatment.

It is anticipated that all remedial activities, whether for soil or groundwater, will continue to be conducted in accordance with applicable laws and regulations, and in conformance with a remedial design and associated work plans approved by DTSC.

A more detailed description is provided below of the environmental clean-up status of Redevelopment Zone 1, including historical uses of the area, ongoing remediation activities, recent remedial action orders, anticipated future soil and groundwater remediation activities,

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<sup>1</sup>Environmental reports on the DTSC website have identified and divided the "Bayshore Railyard property" into "Bayshore Railyard North area" (or Operable Unit 1 [OU-1]) and "Bayshore Railyard South area" (or OU-2). A segment of the Bayshore Railyard North area adjacent to the Ingersoll-Rand property on the east is included in the Project Area. For ease of understanding in this EIR chapter, this segment of land is identified as the "Universal Paragon Corporation (UPC) property" (after its owner). On the DTSC website, references to the "Bayshore Railyard North area (Brisbane)" and "Bayshore Railyard South area" indicate that property *outside the boundaries of the Visitacion Valley Redevelopment Program Project Area*.

building demolition procedures, anticipated soil and groundwater handling procedures, and sensitive nearby land uses.

(b) Historical Uses. Historical uses of the Ingersoll-Rand property and the UPC property are described below.

*Ingersoll-Rand (Former Schlage Lock) Property.* The Ingersoll-Rand property contains vacant buildings that were used for office and manufacturing purposes, as well as equipment yards and parking areas. From 1926 until 1999, the property was used primarily as the Schlage Lock hardware manufacturing plant, which included plating and machining operations. Chemicals used during these manufacturing processes included various metals and solvents that contain volatile organic compounds (VOCs: chemicals, including solvents, that readily evaporate at temperatures normally found at ground surface and at shallow depths).

Schlage Lock Company was acquired by Ingersoll-Rand in 1974, and the southern portion of the former Schlage Lock plant (2555 Bayshore Boulevard) was sold to Pacific Lithograph in 1980. Pacific Lithograph conducted printing and related operations there between 1980 and 1993. The Pacific Lithograph property has since been repurchased by Ingersoll-Rand. The Schlage Lock Company ceased all manufacturing on the property in 1999, and all equipment has been removed. The property is still commonly known as "Schlage Lock."

*Universal Paragon Corporation (UPC) Property.* In 1896, the Southern Pacific Transportation Company (SPTC) (then called the Southern Pacific Railroad Company) acquired the Brisbane Railyard (now Bayshore Railyard) property, which includes a seven-acre portion of the 20-acre Redevelopment Zone 1, as well as property south of the San Francisco city and county limit in Brisbane. From about 1914 until 1963, SPTC operated the Bayshore Railyard for major railcar rehabilitation and locomotive maintenance. The adjacent Schlage Lock factory used a portion of the property as a parking lot. UPC purchased the majority of the Bayshore Railyard property in December 1989, including the majority of the seven-acre Bayshore Railyard North area in Redevelopment Zone 1. A few commercial facilities still operate on the UPC property, in buildings remaining from past Bayshore Railyard activities.

(c) Ongoing Remediation Activities. The ongoing environmental clean-up (remediation) process described below is not the result of the proposed Visitacion Valley redevelopment program. Although future development plans for the Ingersoll-Rand and UPC properties are dependent on the clean-up of these properties, the DTSC-required remedial investigations have been ongoing since the mid-1990s and will continue even if a Visitacion Valley Redevelopment Plan is not adopted.

DTSC is the designated lead agency for determination of and overseeing soil and groundwater clean-up requirements and permissible types of new development on the Ingersoll-Rand and UPC portions of Redevelopment Zone 1. Acceptable clean-up levels on these properties will be determined by DTSC based on the designated future land uses and associated remediation feasibility. For example, if a location on these properties is proposed for residential use, and can feasibly be cleaned up to residential standards, then those particular clean-up levels would be specified; otherwise, the residential use would not be permitted.

In all areas of Redevelopment Zone 1, soil and groundwater clean-up levels will be subject to DTSC and Bay Area Air Quality Management District (BAAQMD) approval as regulated by DTSC and will be appropriate for the planned land uses. UPC and Ingersoll-Rand have agreed, and the proposed Redevelopment Plan requires, that clean-up meet residential standards (the

most stringent clean-up levels) for all areas where development is planned. If soil clean-up of such areas does not meet residential standards, then residential use will not be permitted in that area. Soil standards suitable for recreational/open space use will be met in areas planned for parks and open space, and under roadways. As an additional measure of protection, all parks and open space land will have three feet of soil that meets residential standards at the surface. Any soil with contaminant concentrations above those acceptable for open space/recreational use will be transported off-site for disposal at an appropriate facility. The groundwater clean-up goal for all areas of Redevelopment Zone 1 is the Maximum Contaminant Levels (MCLs) allowed by the California Department of Public Health for drinking water.

*Remedial Soil Investigations--Ingersoll-Rand Property.* The Schlage Lock property has completed the remedial soil investigation stage of the overall DTSC-required hazardous materials clean-up process. The purpose of the remedial soil investigation was to define the extent and type of soil contamination, and to collect data to support both a human health risk assessment (a study that evaluates the potential human health risks--e.g., cancer probabilities--posed by a site) and a soil remediation feasibility study, both of which would help identify any land use limitations for the property.

Conducted over a period of eight years, the remedial soil investigation included more than 100 soil borings and the collection and analysis of over 250 samples of soil and soil gas from various depths throughout the Ingersoll-Rand property. The remedial investigation results are summarized below:

- The primary soil contaminants of concern are VOCs and metals.
- Soil contamination is limited to the top five to ten feet of surface soils.
- VOC contamination in soil is concentrated primarily in the southern portion of the site, below Visitacion Avenue. A soil vapor extraction system is operating in this area.
- Metals--including cadmium and chromium--have been detected in soil at levels above residential (but not commercial) screening criteria directly beneath areas that housed metal plating operations.
- Arsenic and occasionally other metals have been detected in soil at low levels throughout the site, with no identifiable source except for historical fill material.

Detailed findings of the Ingersoll-Rand property remedial soil investigation are presented in the associated *Soil Operable Unit Remedial Investigation Report*, dated June 2001. This report is available for public review at: (1) the San Francisco Public Library, Visitacion Valley Branch (45 Leland Avenue, 415-337-4790); (2) the Visitacion Valley Community Center (50 Raymond Avenue, 415-467-6400); (3) the DTSC file room (700 Heinz Avenue, Berkeley, 510-540-3800); and (4) the DTSC environmental document website ([www.envirostor.dtsc.ca.gov](http://www.envirostor.dtsc.ca.gov), location = "Schlage Lock").

*Soil Remediation Status--Ingersoll-Rand Property.* Several previous actions have been taken to address soil remediation needs on the Ingersoll-Rand property. Soils were excavated and removed from the property in 1996. A soil vapor extraction and treatment system, which uses a vacuum to suck vapor from between soil particles and passes it through carbon for treatment, has operated on-site since 1999.

Soil vapor extraction (SVE) reports on the status of the soil remediation process for the Ingersoll-Rand property have been presented semiannually to DTSC since the extraction system began operating in 1999. The most recent report approved and released by DTSC is dated November 2, 2006.<sup>1</sup> During the six-month period covered by the report (January through June 2006), approximately 12 pounds of VOCs, primarily tetrachloroethene (PCE) and trichloroethene (TCE), were estimated to have been removed from soil on the Ingersoll-Rand property. Since the SVE system began on-site operation in 1999, about 3,704 pounds of VOCs have been removed.

Ingersoll-Rand most recently submitted a Draft Soil Remedial Action Plan (Draft RAP) for their property to DTSC in April 2003. DTSC issued comments on this Draft RAP in August 2003, but has not yet received a revised RAP.<sup>2</sup>

*Groundwater Investigation and Remediation Status--Ingersoll-Rand and UPC Properties.*

Several actions have also been taken to address identified and continuing groundwater contamination beneath both the Ingersoll-Rand and UPC properties. In 1985, DTSC listed the Bayshore Railyard property (including both the UPC and Brisbane areas) on its State Priority Ranking list. In 1988, DTSC issued a Remedial Action Order (RAO) to SPTC, requiring investigation and a Remedial Action Workplan (RAP) for the Bayshore Railyard property. In 1993, DTSC divided the Railyard property into Operable Unit 1 (OU-1, which includes the UPC property) and OU-2, and approved a final RAP for OU-1. DTSC continues to be the regulatory agency for OU-1. The San Francisco Regional Water Quality Control Board (RWQCB) is the regulatory agency for OU-2.<sup>3</sup>

Because there is a commingling of groundwater between the Ingersoll-Rand property and the UPC property, the two owners have agreed to address groundwater contamination jointly. Joint investigation and remedial action activities have been underway to define the nature and extent of, and to remediate, contamination. A groundwater remediation (treatment) system to address VOC contamination on the Ingersoll-Rand and UPC properties began operation in October 1994 and became fully operational in 1995. Across both properties, groundwater monitoring wells have been installed, and groundwater samples have been collected and analyzed regularly. Sampling results show that the highest groundwater VOC concentration is located south of Visitacion Avenue.

In 1994, UPC installed and began operating a groundwater pump and treatment system to address VOC-impacted groundwater under both the Ingersoll-Rand and UPC properties.<sup>4</sup> Ongoing quarterly reports have been submitted by UPC to the DTSC, the RWQCB, and the City of San Francisco Bureau of Environmental Regulation and Management (BERM), documenting

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<sup>1</sup>Treadwell & Rollo, Inc., Environmental & Geotechnical Consultants; *Revised Soil Vapor Extraction (SVE) System Semiannual Operation Report* (January through June 2006); November 2, 2006.

<sup>2</sup>State of California, California Environmental Protection Agency, Department of Toxic Substances Control; *Imminent and Substantial Endangerment and Determination Order and Remedial Action Order, Health and Safety Code Sections 25355.5(a)(1)(B), 25358.3(a), 58009, and 58010, Docket No. IS&E 06/07-002*; July 18, 2006.

<sup>3</sup>Universal Paragon Corporation, "Factual Background," May 4, 2007.

<sup>4</sup>DTSC; *Schlage Lock Site: Fact Sheet*.

operation and maintenance activities of the groundwater treatment system. The quarterly report most recently approved and released by DTSC (as the jurisdictional agency) at the time this EIR chapter was prepared covers the period from July through September 2006, and is summarized below:<sup>1</sup>

VOCs have impacted groundwater beneath the Ingersoll-Rand and UPC properties. These include trichloroethene (TCE) and tetrachloroethene (PCE). DTSC issued an *Imminent and Substantial Endangerment Determination and Order, and Remedial Action Order* (collectively referred to as one "Order") to UPC for installation of a groundwater extraction (GWE) and treatment system to remediate impacted groundwater. The current system has been in operation since October 1994 (as described above).

The groundwater treatment system consists of seven GWE wells--three of which are in the Project Area--equipped with electric pumps that pump water to the groundwater treatment system. A permit has been issued by BERM for discharge of the treated groundwater to the sanitary sewer. The effluent is monitored for TCE at least twice a week to ensure that the effluent VOC levels are within BERM discharge guidelines. If TCE is detected in the effluent from the primary adsorber, new carbon is installed to replace the exhausted carbon. The removed, spent carbon is transported within 90 days as a hazardous waste to a licensed regeneration facility.

Weekly visits are scheduled for general operation and maintenance of the system. The extraction wells are monitored monthly.

The most recent DTSC-reviewed and approved sampling was conducted on August 8, 2006. Samples were collected from two of the three GWE wells located in the Project Area (GWE-6 and GWE-8), and from the oil-water separator (OWS) influent port and effluent port. The samples were analyzed for VOCs, Total Petroleum Hydrocarbon (TPH)-diesel (D), -bunker oil (BO), -motor oil (MO), total oil and grease (O&G), metals, hexavalent chromium, suspended solids (SS), and chemical oxygen demand (COD).

Detectable concentrations of VOCs (TCE and PCE) were reported. TPH-D, TPH-BO, TPH-MO, and O&G were not detected in any sample. Low levels of metals were detected, including antimony, arsenic, barium, chromium (hexavalent and total), cobalt, copper, iron, lead, mercury, molybdenum, nickel, vanadium, and zinc. Neither SS nor COD were detected in any sample. Also, groundwater treatment system vapor exhaust measurements were taken periodically and found to be within the acceptable levels.

Approximately 1.9 million gallons of impacted groundwater were treated at OU-1 between July 1 and September 30, 2006. An estimated 114.3 pounds of TCE were removed during this period. The estimated quantity of PCE removed during the same period was 20.9 pounds. Weekly operation and maintenance activities will continue, as will quarterly sampling of the system ports and wells GWE-6 and GWE-8.

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<sup>1</sup>Weiss Associates; *Operation and Maintenance of the Ground Water Extraction and Treatment System, Quarterly Operation and Maintenance Report (July 1-September 30, 2006) for Former Bayshore Railyard, North Area, Brisbane, California*; October 27, 2006. This report is available at the DTSC website, [www.envirostor.dtsc.ca.gov](http://www.envirostor.dtsc.ca.gov) (location = "Brisbane").

Based on the data collected and the observations made during the third quarter of 2006, the GWE and treatment system at OU-1 appears to be operating within acceptable parameters.

(d) Recent Remedial Action Orders. As recently as July 18, 2006, DTSC issued an Imminent and Substantial Endangerment Determination and Order, and Remedial Action Order (collectively referred to as one "Order") for the Ingersoll-Rand property.<sup>1</sup> According to the Order, DTSC issued the Order to Ingersoll-Rand for the following reasons:

- DTSC has not received the revised Soil Remedial Action Plan, although a compliance deadline of January 3, 2005 was issued by DTSC to Ingersoll-Rand.
- Because there is a commingling of groundwater between the Ingersoll-Rand property and the UPC property, the two owners agreed to address groundwater contamination jointly. A Joint Groundwater Draft RAP was submitted to DTSC in July 2003. After DTSC commented on the Draft, a revised Draft RAP was submitted in January 2005.
- During 2004 and 2005, clean-up actions were put on hold pending negotiations between Ingersoll-Rand and potential buyers of their property. DTSC concluded that the clean-up plans for both soil and groundwater must be developed simultaneously. If the Ingersoll-Rand property is sold, DTSC will work with the new owner to modify the clean-up plans (if necessary). Due to the uncertainty of a potential sale, DTSC concluded that the clean-up should proceed independently of sales negotiations.

The stated purpose of the 2006 Remedial Action Order *"is to require for soil, soil gas and groundwater at the [s]ite: implementation of any appropriate removal actions, completion of a Feasibility Study (FS), preparation of a [revised Soil] Remedial Action Plan (RAP) or Removal Action Workplan (RAW), preparation of California Environmental Quality Act (CEQA) documents (by DTSC, for any of the activities identified in the Order that would constitute a "project" under CEQA), and Design and Implementation of the remedial actions approved in the RAP or RAW."*<sup>2</sup> The Order then details these requirements.

The DTSC-preferred RAPs or RAWs for soil and groundwater, along with the other options evaluated, will be summarized in plans that will be made available to the public for a 30-day comment period. At that time, a fact sheet(s) will be distributed to the community which describes recent site activities, details the recommended methods to address site soils and groundwater, and requests public comments. After all public comments are considered and responded to, DTSC will select final clean-up plans for the Ingersoll-Rand and UPC properties. DTSC will continue to work with the City of San Francisco in developing an appropriate clean-up plan for the property.

*Suspension of Remedial Action Order.* As of March 2007, DTSC temporarily suspended the required compliance deadline for the July 18, 2006 Order described above (January 3, 2005) until August 15, 2007. DTSC made this decision in order for the property owners (Ingersoll-Rand and UPC, respectively) to proceed with an agreement to: (1) allow UPC to solicit bids from environmental remediation contractors to evaluate whether it would be financially feasible

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<sup>1</sup>DTSC, July 18, 2006.

<sup>2</sup>DTSC, July 18, 2006; page 7.

for UPC to acquire the Ingersoll-Rand property (see [e] below); and (2) if so, proceed with remediation of the site under DTSC oversight until DTSC issues a "No Further Action" letter confirming completion of remediation work. This exploratory process does not commit UPC to either acquiring or remediating the Ingersoll-Rand property. If at any point the above exploratory process is terminated, then DTSC would cease suspension of the Order, and the Order would go back into effect.

(e) Anticipated Future Soil and Groundwater Remediation Activities. UPC received proposals from several environmental remediation contractors for remediation of the Ingersoll-Rand property, and has selected a remediation contractor that it anticipates it would work with in the event that UPC acquires the Ingersoll-Rand property. Before remediation activities on the property will be permitted to begin, a Remedial Action Plan (RAP) describing the proposed remedial strategy for the property must be submitted to and approved by DTSC, which will continue to serve as the lead environmental oversight agency for the property. Components proposed for the RAP include:

- Soil excavation and off-site disposal;
- Soil excavation and on-site re-use (any re-use of soils must first be approved by DTSC);
- In Situ (in place) Chemical Oxidation (ISCO). Oxidation chemically converts hazardous contaminants to non-hazardous or less toxic compounds that are more stable, less mobile, and/or inert. The oxidizing agents most commonly used are ozone, hydrogen peroxide, hypochlorites, chlorine, and chlorine dioxide. Hydrogen peroxide will be used in this process along with Fenton's Reagent as the catalyst. A catalyst is a chemical that increases the strength or speed of a process.
- Enhanced Reductive Dechlorination (ERD). Reductive Dechlorination is a biological process that involves the breakdown of VOCs in groundwater by naturally occurring bacteria. The breakdown of VOCs is enhanced by injecting sodium lactate into the groundwater. The bacteria consume sodium lactate and in the process breakdown the VOCs in the groundwater into less toxic substances.

Remediation planning will also include the preparation of a Health and Safety Plan to protect the workers during all remediation and construction activities. Following DTSC approval of the RAP, remediation and removal work would be conducted in accordance with applicable OSHA worker safety regulations. The handling, transport, and storage of any hazardous waste or potentially hazardous waste would be conducted in accordance with applicable laws and regulations.

(f) Anticipated Building Demolition Procedures. Most of the buildings on the Ingersoll-Rand property are proposed for demolition as part of the Project. Both DTSC and the company conducting the clean-up of the site believe there is source material under the building slabs that may be serving as a continuing source of contamination to groundwater. Previous soil removal activities have been limited by the presence of buildings, where further excavation would have compromised the building foundations. Therefore, the buildings where historical operations took place must be removed in order to complete the clean-up of soil at the property.

The debris generated from demolition activities would be crushed into base-rock and stockpiled on-site to be used for site backfill and development. It is estimated that approximately 55,000 tons of recycled concrete would be left on-site or recycled as construction material.

Salvageable metals extracted from demolished buildings would be transported to a metals recycling facility. Excavations would be back-filled with site soils and crushed demolition material, and the demolition areas would be rough graded.

Site control measures would be implemented during demolition activities to ensure public safety, including dust control, air monitoring, and sidewalk closure. Access to the property would be controlled by privacy/security fencing. On-site security services would be obtained to restrict access to the property during nights and weekends until demolition is completed.

Soils disturbed during demolition would be handled in accordance with a Soil Management Plan (SMP). The SMP would include procedures for excavation management, profiling for stockpiles, and procedures to identify soil for re-use or off-site disposal, as appropriate. The SMP would be updated as remediation progresses in accordance with the final RAP (see [e] above).

Based on an asbestos survey of the former Schlage Lock buildings, asbestos containing materials (ACM) would be encountered during demolition of the existing buildings and would require containment and disposal. Asbestos is regulated both as a hazardous air pollutant and as a potential worker safety hazard. Bay Area Air Quality Management District (BAAQMD) and California Division of Occupational Safety and Health (CalOSHA) regulations restrict asbestos emissions from building demolition and renovation activities, and specify safe work practices to minimize the potential for release of asbestos fibers (see subsection 11.2.5 below).

Lead-based paint could be separated from building materials during the demolition process. CalOSHA standards establish a maximum safe exposure level for types of construction work where lead exposure may occur, including demolition of structures where materials containing lead are present; removal or encapsulation of materials containing lead; and new construction, alteration, repair, or renovation of structures with materials containing lead. Inspection, testing, and removal of lead-containing building materials must be performed by state-certified contractors who comply with applicable health and safety and hazardous materials regulations (see subsection 11.2.5 below).

Subsection 11.1.3 below (Hazards and Hazardous Materials Conditions Database for Project Area and Surrounding Vicinity) describes the potential for other hazardous materials being located in the Project Area, including on the Ingersoll-Rand and UPC properties.

(g) Anticipated Soil and Groundwater Handling Procedures During Remediation, Demolition, and Construction. Contaminated soil may be generated at the Ingersoll-Rand property, either as part of excavation activities associated with demolition or construction or potentially as part of remediation activities. Soil that is potentially contaminated and generated by remediation or demolition/construction activities would be handled pursuant to the SMP (see [f] above), including being stockpiled on-site and sampled prior to re-use or disposal at an appropriate facility. Prior to off-site disposal, soils would be properly analyzed to confirm the classification of the soils for re-use or disposal at the appropriate facility.

Any groundwater generated during construction dewatering would be contained and transported off-site for disposal at an appropriate facility, or treated, if necessary, to levels consistent with applicable laws and regulations, prior to discharge into the sanitary sewer.

It is estimated that approximately 46,000 cubic yards (cyds) of soil will be excavated and handled on the Ingersoll-Rand property as part of the remediation of the site. During the remediation phase of the Project, all soil will be handled and managed in compliance with the



DTSC-approved SMP that will be a part of the RAP. Of the 46,000 cyds of soil, it is estimated that 6,000 cyds will be excavated from known and suspected source areas ("hot spots") where the concentration of contaminants is likely to be high, such as in areas of previous remedial activities and under building foundations. Soil from hot spots will be removed and transported off-site for disposal at an approved waste facility. Of the remaining 40,000 cyds, it is expected that approximately 17,000 cyds will have a modest amount of contamination and will require on-site treatment before being allowed to be re-used on-site. Treatment methodology is expected to be on-site aeration, conducted in a manner as allowed and approved by DTSC and the BAAQMD, with all appropriate air monitoring and controls. It is expected that the remaining 23,000 cyds of soil will be within residential clean-up standards or acceptable for use in open space and recreational areas without treatment. This soil will be handled in a manner typical for grading and construction projects and in compliance with the SMP.

(h) Sensitive Nearby Land Uses. Numerous preschools, elementary and middle schools, childcare centers, and senior centers are located within one mile of Redevelopment Zone 1.

### **11.1.3 Hazards and Hazardous Materials Conditions Database for Project Area and Surrounding Vicinity**

The term "Project Area" as used in this chapter and throughout this EIR is defined to mean both the approximately 46-acre area within which the overall "Project" under CEQA would occur, and the associated redevelopment project area to be established within the same boundary through Redevelopment Agency and Board of Supervisors adoption of the Redevelopment Plan. The Project Area boundary is delineated on upcoming Figure 11.1 in this chapter.

(a) Records Search. A summary listing of known recorded sites (i.e., listed in publicly available records) in the Project vicinity (i.e., in the Project Area or within an approximate 500-foot radius ["buffer zone"] of the Project Area) that are or have been contaminated with and/or generators of hazardous materials is provided in Table 11.1. Table 11.1 was developed from a search of jurisdictional agency database sources conducted for the EIR authors by Environmental Data Resources, Inc. (EDR), in order to provide a general indication of possible hazardous material sites and their remediation status on or near the proposed Project Area.<sup>1</sup> As indicated in Table 11.1 and described below, a number of sites in the Project Area and vicinity may contain hazardous materials and have the potential for related public health hazards, including possible soil or groundwater contamination, and hazards associated with other potentially toxic sources. The vast majority of recorded sites in the Project Area are on the Ingersoll-Rand property (in Redevelopment Zone 1); all recorded sites in the 500-foot buffer zone around the Project Area, except one, are on Tunnel Avenue across from the Project Area's eastern boundary.

The database summarized in Table 11.1 represents a broad listing of sites with varying potential for risk from the possible existence of hazardous materials. There are extensive overlaps (redundancies) among these various database listings. Each database listed in Table 11.1 is

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<sup>1</sup>The sites listed in Table 11.1 have also been mapped for use by City staff and the EIR authors in evaluating potential Project impacts. A copy of the complete EDR records search report, including the data map (Environmental Data Resources, Inc., EDR Data Map Area Study, Visitacion Valley Redevelopment Program, June 9, 2006), is available for public review at the offices of the San Francisco Redevelopment Agency, 1 South Van Ness Avenue, Fifth Floor, San Francisco; telephone: 415-749-2400.

Table 11.1  
**SUMMARY OF RECORDED SITES CONTAMINATED WITH AND/OR GENERATORS OF  
HAZARDOUS MATERIALS IN THE PROJECT AREA VICINITY**

Note: This table provides electronic database information that has been compiled by various jurisdictional agencies with responsibility for hazardous materials site management and control (see subsection 11.2.6 herein for a listing of these agencies). A more detailed description of each agency database summarized in this table is provided at the end of this chapter in section 11.4 (Regulatory Agency Database). The database information represents a general indicator of possible hazardous materials sites in the Project Area and vicinity (i.e., the area within an approximate 500-foot radius ["buffer zone"] of the Project Area). The vast majority of recorded sites in the Project Area are on the Ingersoll-Rand property. The list is intended for use as a general indicator of hazardous materials conditions and has not been verified in the field by the EIR authors. Also note that most of the listed sites are included on more than one database, resulting in numerous overlaps (redundancies) in the listing.

<u>Database</u>	<u>Description</u>	<u>Number of Sites in the Project Vicinity and inside the Project Area<sup>1</sup></u>	
California Hazardous Material Incident Report System (CHMIRS)	Reported hazardous material incidents (i.e., accidental releases or spills)	1	(0)
Emergency Response Notification System (ERNS)	Sites of reported releases of oil or hazardous substances	1	(1)
Cortese	Public drinking water wells with detectable levels of contamination; sites selected for remediation; sites with known toxic material; LUST sites; solid waste disposal facilities	10	(6)
Leaking Underground Storage Tanks (LUST)	Reported leaking underground storage tank incidents	13	(4)
Underground Storage Tanks (UST)	Registered underground storage tanks	2	(1)
Historical Underground Storage Tanks (HIST UST)	Historical listing of UST sites from State Water Resources Control Board (SWRCB)	4	(2)
Aboveground Storage Tank Database (AST)	Registered aboveground storage tanks	1	(0)
Facility Inventory Database (CA FID)	Active and inactive underground storage tank locations	7	(5)
Hazardous Waste Information System (HAZNET)	Data extracted from copies of hazardous waste manifests received by the California Department of Toxic Substances Control (DTSC)	19	(13)
Resource Conservation and Recovery Act Information System (RCRA Info)	Sites that generate, transport, store, treat, and/or dispose of hazardous waste; includes conditionally exempt small-, small-, and large-quantity generators and transporters	10	(6) <sup>2</sup>

<u>Database</u>	<u>Description</u>	<u>Number of Sites in the Project Vicinity and inside the Project Area<sup>1</sup></u>	
Facility Index System (FINDS)	Facility information and "pointers" to other sources of information that contain more detail (e.g., RCRA Info, CERCLIS)	11	(7)
Federal Toxics Tracking System (FTTS)	Pesticide enforcement actions and compliance activities	2	(2)
Department of Toxic Substances Control (DTSC) Annual Workplan (AWP)	Hazardous substance sites targeted for clean-up	1	(1)
Cal-Sites	Known and potential hazardous substance sites	1	(1)
Dry Cleaners	Dry cleaner facilities with EPA ID numbers	2	(2)
San Mateo County Hazardous Materials Business Plan	Operations with County-required Hazardous Materials Business Plans	7	(1)
Emissions Inventory Data (EMI)	Toxic and criteria pollutant emissions data collected by the Air Resources Board (ARB) and local pollution agencies	6	(4)
Statewide Environmental Evaluation and Planning System (SWEEPS)	UST listing from SWRCB--no longer maintained or updated	7	(5)
Solid Waste Facilities/Landfill Sites (SWF/LF)	Solid waste disposal facilities or landfills	1	(0)
Waste Management Unit Database System (WMUDS/SWAT)	Tracking and inventory of waste management units	1	(0)
Recycler Database (SWRCY)	Recycling facilities	1	(0)

SOURCE: Environmental Data Resources, Inc. EDR Data Map Area Study, Visitacion Valley Redevelopment Program (Inquiry number 01692330.1r). June 9, 2006.

<sup>1</sup> Some sites may be included on more than one database; i.e., there are numerous overlaps (redundancies) in the listing. The number in parentheses is that portion of the total that is located inside the boundaries of the Project Area (i.e., the remaining sites are located outside the Project Area, but within the 500-foot buffer zone).

<sup>2</sup> Includes seven small-quantity generators (SQG) (three in the Project Area) and three large-quantity generators (LQG); all LQGs are on the Ingersoll-Rand/Universal Paragon Corporation (UPC) properties (in Redevelopment Zone 1).

described in more detail in section 11.4 (Regulatory Agency Database) at the end of this chapter. The table information is intended for use as a general indicator of hazardous materials conditions in the Project Area and vicinity and has not been field checked to verify its accuracy.

The Project Area includes 61 listings on the various jurisdictional agency databases described above. Due to the numerous overlaps in the databases for listings in the Project Area (because different jurisdictional agencies monitor different environmental issues), these 61 listings comprise ten actual locations (street addresses or individual facilities). The vast majority of the recorded sites in the Project Area are on the Ingersoll-Rand property (in Redevelopment Zone 1). Within a 500-foot radius buffer zone of the Project Area, an additional 47 listings are identified at an additional eight locations. All recorded sites in the buffer zone, except one, are on Tunnel Avenue across from the Project Area's eastern boundary.

## 11.2 REGULATORY FRAMEWORK

### 11.2.1 San Francisco General Plan

The San Francisco General Plan *Community Safety Element* (adopted by the Board of Supervisors on August 15, 1997) contains the following policy relevant to the proposed Visitacion Valley redevelopment program and its relationship to hazardous materials conditions:

- *Enforce state and local codes that regulate the use, storage and transportation of hazardous materials in order to prevent, contain and effectively respond to accidental releases.* (Policy 2.12)

The San Francisco Planning Department is in the process of updating the *Community Safety Element*. As of the writing of this EIR chapter, the *Preliminary Draft Community Safety Element* (March 1, 2007), posted on the City's website ([www.sfgov.org](http://www.sfgov.org)), included the following policies relevant to the proposed redevelopment program and associated hazardous materials conditions, the first of which is identical to adopted Policy 2.12 above:

- *Enforce state and local codes that regulate the use, storage and transportation of hazardous materials in order to prevent, contain and effectively respond to accidental releases.* (Preliminary Draft Policy 1.20)
- *Educate the public about hazardous materials procedures, including transport, storage and disposal.* (Preliminary Draft Policy 1.21)

The proposed Project is being formulated and implemented by the Redevelopment Agency in a manner consistent with the above adopted and draft new policies.

### 11.2.2 City of San Francisco Hazardous Materials Regulations

Four *San Francisco Health Code* regulations and other requirements pertaining to hazardous materials and waste are relevant to development and redevelopment in the Project Area. These include Article 22A (Analyzing Soils for Hazardous Waste), Article 21 (Hazardous Materials), Article 21A (Risk Management Program), and Article 22 (Hazardous Waste Management). Also, Chapter 34, Section 3407 of the *San Francisco Building Code* specifies procedures for the safe implementation of lead-based paint abatement activities in San Francisco. The local Health and Building codes also incorporate, by reference, the California Health and Safety

Code, California Hazardous Waste Control Act, Uniform Building Code, and California Building Code. (In some cases, the local codes include stricter requirements; for example, the *San Francisco Building Code* has stricter requirements than the California Building Code.) These four relevant San Francisco Health Code articles are further described below:

(a) Article 22A--Analyzing Soils for Hazardous Waste. Article 22A applies automatically to construction bayward of the historic high tide line that would involve excavation of greater than 50 cubic yards of soil.<sup>1</sup> Before the 20<sup>th</sup> century, the road that is now Bayshore Boulevard generally followed the historic San Francisco Bay shoreline.<sup>2</sup> In 1904, the Southern Pacific Railroad Company began filling in land along the Bay and building the tunnel that still exists under the intersection of Tunnel and Blanken Avenues.<sup>3</sup> Therefore, Redevelopment Zone 1 (i.e., the area east of Bayshore Boulevard) is considered subject to Article 22A. Also, Article 22A, Section 1223 states, "[T]he Director [of the San Francisco Department of Public Health] has authority to require soil analysis pursuant to the provisions of this Article as part of any building permit application when the Director has reason to believe that hazardous wastes may be present in the soil at the property." Therefore, this discretionary authority might be applied in the future to other sites in the Project Area (i.e., Redevelopment Zone 2).

Article 22A requirements are summarized below. The requirements would be implemented through the building permit application (or equivalent process) for all applicable construction activities within the Project Area. Major requirements include:

- Preparation of a site history report to describe past site uses and identify whether the site is listed as a hazardous waste site pursuant to state or federal regulations;
- Implementation of a soil investigation to evaluate the potential presence of hazardous wastes in the soil;
- Preparation of a soil analysis report that evaluates the results of chemical analysis of the soil samples;
- If contamination is identified, preparation of a site mitigation report that assesses potential environmental and health and safety risks, recommends measures to mitigate the risks, identifies appropriate waste disposal and handling requirements, and presents criteria for on-site re-use of soil; and
- Preparation of a certification report stating that either (1) none of the hazardous wastes in the soil present a significant risk, and no mitigation measures are required, or (2) all mitigation measures recommended in the site mitigation report have been completed, as verified through follow-up soil sampling and analysis, if required.

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<sup>1</sup>The potential for hazardous waste at a site not located bayward of the historic high tide line would be evaluated by the completion of a site-specific Phase I environmental site assessment (Phase I ESA), and possibly a Phase II ESA, prior to site development. See subsection 11.2.3 herein for an explanation of ESA procedures.

<sup>2</sup>Universal Paragon Corporation and Wallace Roberts & Todd, LLC/Solomon E.T.C. Brisbane Baylands Phase I Specific Plan. February 21, 2006, p. 11.

<sup>3</sup>Carey & Co. Inc. Visitacion Valley Redevelopment EIR Historic Resources Technical Report. April 2008.

Article 22A requires that all required reports be prepared by knowledgeable, certified professionals and provide information on historic and current hazardous waste contamination on-site. If a soil analysis report is required, the report is submitted to the San Francisco Department of Public Health (SFDPH), DTSC, and the RWQCB. If a site mitigation report is required based on the results of the soil analysis report, the site mitigation report must: (1) assess potential environmental and health and safety risks; (2) recommend clean-up levels and mitigation measures, if any are necessary, that would protect workers and occupants of the property; (3) recommend measures to mitigate the identified risks; (4) identify appropriate waste disposal and handling requirements; and (5) present criteria for on-site re-use of soil. The recommended measures would be completed during project construction, and a certification report would be required upon completion of construction, stating that all mitigation measures recommended in the site mitigation report have been completed, as verified through follow-up soil sampling and analysis, if required.

If the approved site mitigation report includes leaving hazardous materials in the soil or groundwater with containment measures to prevent exposure, the SFDPH would require an associated Risk Management Plan, Health and Safety Plan, and possibly a Cap Maintenance Plan. These plans would specify procedures for preventing unsafe exposure to hazardous materials left in place, and safe procedures for handling hazardous materials should site disturbance be required. The SFDPH would require a deed notice, and the requirements of these plans would transfer to the new property owners if the property is sold.

If the soil analysis report does not indicate a potential risk to future on-site workers or occupants, then the certification report will state that hazardous materials in the soil do not present a significant risk and that no mitigation is required.

In summary, implementation of Article 22A protects the health and safety of the City's workers, residents, and occupants from risks associated with hazardous wastes in the soil by requiring a site assessment, and mitigation of risks identified, as a condition of project construction.

(b) Article 21--Hazardous Materials. Article 21 of the San Francisco Health Code provides for safe handling of *hazardous materials* in the City. The Article requires any person or business that handles, sells, stores, or otherwise uses hazardous materials in quantities exceeding specified thresholds, to obtain and keep a current hazardous materials certificate of registration and to implement a hazardous materials business plan (HMBP) submitted with the registration application. Also under Article 21, facilities with underground storage tanks (USTs) are required to obtain an operating permit, and unauthorized releases of hazardous materials are prohibited, with specific requirements for: (1) reporting any unauthorized release, (2) inspections after an unauthorized release, (3) addressing abandoned USTs or hazardous materials handling facilities, and (4) closure of hazardous materials handling facilities.

Article 21 helps protect the health and safety of the general public and of emergency response personnel such as fire fighters and paramedics. Data on hazardous materials use are stored in a citywide computer system made available to emergency responders. The database assists emergency responders to assess and resolve hazardous materials incidents quickly and safely. The City performs inspections of hazardous materials handling facilities every one to two years, or upon complaint.

Article 21 incorporates the following: (1) California Underground Storage Tank Regulations specified in the California Health and Safety Code, Chapters 6.7 and 6.75; (2) Hazardous Materials Release Response Plans and Inventory Regulations requiring preparation of an

HMBP, as specified in the California Health and Safety Code, Chapter 6.95, Article 1; (3) Aboveground Petroleum Storage Tank Regulations requiring preparation of a Spill Prevention, Control, and Countermeasure (SPCC) plan, as specified in the California Health and Safety Code, Section 25270.5; and (4) hazardous materials management provisions of the Uniform Fire Code requiring Hazardous Materials Inventories, as specified in Sections 8001.3.2(a) and 8001.3.3(a). Article 21 also provides for stricter local requirements.

(c) Article 21A--Risk Management Program. Article 21A of the *San Francisco Health Code* addresses the safe handling of *regulated substances* in the City.<sup>1</sup> In accordance with the Article, any business that handles, sells, stores, or otherwise uses regulated substances in quantities exceeding specified thresholds, is required to register with the SFDPH and prepare a risk management plan (RMP). Article 21A incorporates the requirements of the California Accidental Release Program, as specified in the California Health and Safety Code, Chapter 6.95, Article 2.

Article 21A helps protect the health and safety of the general public and of emergency response personnel such as fire fighters and paramedics, by requiring an RMP prepared interactively with the SFDPH. The RMP must include a hazard assessment to evaluate the potential effects of an accidental release, a program for preventing an accidental release, and a program for responding to an accidental release.

(d) Article 22--Hazardous Waste Management. Article 22 of the *San Francisco Health Code* addresses the safe handling of *hazardous wastes* in the City. The Article incorporates the state requirements for hazardous waste management specified in the California Health and Safety Code, Chapter 6.5, Article 2 (Hazardous Waste Control Act), and authorizes the SFDPH to implement the requirements of the Act as they apply to hazardous waste generators in San Francisco. In accordance with Article 22, the SFDPH has the authority to conduct inspections of any facility where hazardous wastes are stored, handled, processed, disposed of, or treated to recover resources. All of these facilities must maintain records to document compliance with the Hazardous Waste Control Act; hazardous wastes generated at a facility must be disclosed in the Hazardous Materials Certificate of registration and HMBP prepared pursuant to Article 21 of the *San Francisco Health Code* (see [b] above).

(e) San Francisco Building Code, Chapter 34, Section 3407. The use of lead-based paint is no longer allowed in the United States. Chapter 34, Section 3407 of the *San Francisco Building Code* includes requirements for projects that disturb existing lead-based paint on the exterior of buildings or steel structures. Implementation of the Building Code protects the health and safety of workers, residents, and occupants from risks associated with lead-based paint, by specifying requirements to control lead-based paint during demolition activities.

### **11.2.3 Environmental Site Assessment (ESA) Procedures**

If the presence of hazardous wastes is not suspected at a development site in the Project Area, Article 22A (described in section 11.2.2[a] above) would not apply. However, the Redevelopment Agency would require a *Phase I environmental site assessment* (Phase I ESA) prior to site development. A Phase I ESA is the initial investigation phase of a process

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<sup>1</sup>Regulated substances are (1) any chemicals designated as an extremely hazardous substance by the U.S. Environmental Protection Agency as part of its implementation of the Superfund Amendments and Reauthorization Act (SARA) Title III, or (2) any chemicals listed in Title 40 of the Federal Code of Regulations pursuant to the Clean Air Act.

established by the American Society for Testing and Materials Standards (ASTM),<sup>1</sup> sanctioned by U.S. courts, and underscored (cited) by the Superfund Clean-up Act of 1998, as adequate due diligence by new purchasers of properties or their lenders. The Redevelopment Agency would require a Phase I ESA under the Polanco Act, which is part of the Community Redevelopment Act.

The State of California has established a registration requirement and procedure for preparers of Phase I and Phase II ESAs. All ESAs in the state must be prepared by an associated Registered Environmental Assessor. Under this environmental assessment process, a Phase I ESA report prepared for a real estate holding would identify existing or potential environmental contamination liabilities. The Phase I ESA typically addresses both the underlying land as well as physical improvements to the property. The Phase I ESA site examination typically includes a jurisdictional agency file search for any reported issues, and may also include definition of any evident signs of possible asbestos- or lead-containing building materials or chemical residues in existing structures; identification of possible hazardous substances stored or used on-site; assessment of possible mold and mildew; and discussion of other relevant hazardous materials issues. Actual sampling of soil, air, groundwater, or building materials typically is not conducted during a Phase I ESA. The Phase I ESA generally is considered the first step in the environmental due diligence process.

When a Phase I ESA indicates evidence of site contamination, the Redevelopment Agency would require a *Phase II environmental site assessment* (Phase II ESA). The Phase II ESA includes collection of original samples of soil, groundwater, or building materials to measure and analyze quantities of various contaminants. The most frequent substances tested for are petroleum hydrocarbons, heavy metals, pesticides, solvents, asbestos, and mold. Appropriate clean-up levels for each contaminant, based on current and planned land use, would be determined in accordance with professional procedures adopted by the lead jurisdictional agency (e.g., DTSC, RWQCB, SFDPH). At sites near ecological receptors, such as sensitive plant or animal species, that could be exposed to hazardous materials, clean-up levels would be determined according to the lead agency's adopted standards.

Phase I and II ESAs are generally intended for properties where the presence of contamination is unknown or suspected. Due to the extensive history of site investigations on the Ingersoll-Rand and UPC properties--including sampling, analysis, and remedial actions for both soil and groundwater--Phase I and II ESAs of these properties were not completed. The currently detailed environmental information and investigation of environmental conditions for the Ingersoll-Rand and UPC properties (as evidenced in this EIR chapter) far exceed the typical scope of a Phase I or Phase II ESA.

#### **11.2.4 Polanco Redevelopment Act**

The Polanco Redevelopment Act (AB 3193, Chapter 1113, Statutes of 1990, Polanco), part of the Community Redevelopment Act, was enacted to assist redevelopment agencies in responding to brownfield properties (i.e., properties with real or perceived environmental contamination) in their redevelopment areas. It prescribes processes for redevelopment agencies to follow when cleaning up a hazardous substance release in a redevelopment project area. It also provides immunity from liability for redevelopment agencies and subsequent property purchasers for sites cleaned up under a clean-up plan approved by DTSC or a

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<sup>1</sup>ASTM Standard E1527-05



Regional Water Quality Control Board. The Polanco Redevelopment Act has become a widely used tool by redevelopment agencies to guide and pursue redevelopment of brownfields.<sup>1</sup>

### **11.2.5 Regulation of Hazardous Building Components**

Structural building components, particularly in older buildings, sometimes contain hazardous materials such as, among others, asbestos, polychlorinated biphenyls (PCBs), lead, and mercury. These materials are subject to various regulations.

*Asbestos.* Asbestos is regulated both as a hazardous air pollutant and as a potential worker safety hazard. Bay Area Air Quality Management District (BAAQMD) and California Division of Occupational Safety and Health (CalOSHA) regulations restrict asbestos emissions from building demolition and renovation activities, and specify safe work practices to minimize the potential for release of asbestos fibers. These regulations prohibit emissions of asbestos from asbestos-related manufacturing, demolition, and construction activities; require medical examinations and monitoring of employees engaged in activities that could disturb asbestos; specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos; and require notice to federal and local government agencies prior to beginning building demolition or renovation activity that could disturb asbestos.

*PCBs.* The California Department of Toxic Substances Control (DTSC) classifies PCBs as a hazardous waste when concentrations exceed 5 parts per million (ppm) in liquids or 50 ppm in non-liquids. PCBs, whose production in the United States was stopped in 1977, were used as coolants and lubricants in transformers, capacitors, and other electrical equipment. For example, televisions, refrigerators, and fluorescent light ballasts manufactured before January 1, 1978 may contain PCBs.<sup>2</sup> Such items (if manufactured before 1978) are regulated as hazardous waste and must be transported and disposed of as hazardous waste.

*Lead.* CalOSHA standards establish a maximum safe exposure level for types of construction work where lead exposure may occur, including demolition of structures where materials containing lead are present; removal or encapsulation of materials containing lead; and new construction, alteration, repair, or renovation of structures with materials containing lead. Inspection, testing, and removal of lead-containing building materials must be performed by state-certified contractors who comply with applicable health and safety and hazardous materials regulations. Typically, building materials with lead-based paint attached are not considered hazardous waste unless the paint is chemically or physically removed from the building debris. In addition, Chapter 34, Section 3407 of the *San Francisco Building Code*, described in section 11.2.2(e) above and cited in upcoming subsection 11.3.2 (Impacts and Mitigation Measures) under **Potential Impacts Due to Lead-Based Paint Exposure--Entire Project Area**, applies to the disturbance of existing lead-based paint on the exterior of buildings and steel structures.

*Mercury.* Spent fluorescent light tubes, thermostats, and other electrical equipment may contain heavy metals such as mercury that, if disposed of in landfills, can leach into soil or groundwater.

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<sup>1</sup>California Environmental Protection Agency, [www.calepa.ca.gov/Brownfields/PolancoAct.htm](http://www.calepa.ca.gov/Brownfields/PolancoAct.htm); accessed March 20, 2008.

<sup>2</sup>Department of Health and Human Services, Agency for Toxic Substances & Disease Registry; *ToxFAQs for Polychlorinated Biphenyls (PCBs)*; updated January 31, 2007, [www.atsdr.cdc.gov/tfacts17](http://www.atsdr.cdc.gov/tfacts17).

Lighting tubes typically contain concentrations of mercury that may exceed regulatory thresholds for hazardous waste and, as such, must be managed in accordance with hazardous waste regulations. Elemental mercury waste is considered hazardous. Mercury can also be present in traps in the plumbing of older buildings in which mercury-containing equipment has been used.

### **11.2.6 Other Regulatory Agencies**

The following federal and state agencies have regulatory authority for the handling and management of hazardous materials and wastes, and general public health and safety in San Francisco:

(a) U.S. Environmental Protection Agency. The U.S. Environmental Protection Agency (EPA), Region IX, regulates chemical and hazardous materials use, storage, treatment, handling, transport, and disposal practices; protects workers and the community (along with CalOSHA-- see below); and integrates the federal Clean Water Act and Clean Air Act into California legislation. The EPA (or one of its divisions, such as DTSC) maintains many of the database sources listed in Table 11.1 of this chapter.

(b) Federal Occupational Safety and Health Administration. The federal Occupational Health and Safety Administration (OSHA) establishes and enforces federal regulations related to health and safety of workers exposed to toxic and hazardous materials. In addition, OSHA sets health and safety guidelines for construction activities and manufacturing facility operations.

(c) California Occupational Safety and Health Administration. The California Occupational Safety and Health Administration (CalOSHA) is responsible for promulgating and enforcing state health and safety standards and implementing federal OSHA laws.

(d) State of California Regional Water Quality Control Board. As part of a statewide system, the Regional Water Quality Control Board (RWQCB), San Francisco Region, protects surface and groundwater quality from pollutants discharged or threatened to be discharged to the waters of the state. The RWQCB issues and enforces National Pollutant Discharge Elimination System (NPDES) permits and regulates leaking underground storage tanks and other sources of groundwater contamination.

(e) California Department of Toxic Substances Control. The California EPA, Department of Toxic Substances Control (DTSC), regulates hazardous substances and wastes, oversees remedial investigations, protects drinking water from toxic contamination, and warns public exposed to listed carcinogens. DTSC is the regulatory agency with oversight of the Ingersoll-Rand and UPC property remediation in the Project Area, as described in subsection 11.1.2 of this chapter.

(f) California Highway Patrol/Caltrans. The California Highway Patrol (CHP) and Caltrans have primary regulatory responsibility for the transportation of hazardous wastes and materials.

(g) Bay Area Air Quality Management District. The Bay Area Air Quality Management District (BAAQMD) is responsible for the permitting of industrial air emissions, and sets and enforces regional air quality standards. For example, the BAAQMD may impose specific requirements to protect air quality from dust, lead, hydrocarbon vapors, or other airborne contaminants during hazardous materials remediation.

## 11.3 IMPACTS AND MITIGATION MEASURES

### 11.3.1 Significance Criteria

Based on the CEQA Guidelines, the Visitacion Valley Redevelopment Program would be considered to have a significant impact related to hazards and hazardous materials if it would directly or indirectly:<sup>1</sup>

- (1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- (2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- (3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- (4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment; or
- (5) Impact implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

### 11.3.2 Impacts and Mitigation Measures

The discussion below often cites "local, state, and federal" and other applicable regulations; this citation refers to the hazard and hazardous materials regulations and associated regulatory agencies described in previous section 11.2 (Regulatory Framework) of this chapter.

**Potential Impacts Due to Exposure to Existing Soil or Groundwater Contamination-- Redevelopment Zone 1.** As described previously in subsection 11.1.2 (Historical Uses and Ongoing and Future Remediation Activities in Redevelopment Zone 1) of this EIR chapter, a comprehensive environmental clean-up (soil and groundwater remediation) process for the Ingersoll-Rand and UPC properties is underway. These two properties comprise the vast majority of Redevelopment Zone 1. Implementation of future Project-facilitated development plans for Redevelopment Zone 1 would be dependent on their clean-up according to DTSC protocols. DTSC-required remedial investigations and actions have been ongoing since the mid-1990s and will continue even if the proposed Project (redevelopment program) is not advanced. Project-facilitated future development activity within Zone 1 cannot proceed until the required remediation actions previously described in subsection 11.1.2 herein have been completed to DTSC satisfaction. The proposed remediation, under consideration by DTSC, includes measures to ensure the safe transport, use, treatment, and disposal of contaminated soil and groundwater. In addition, contractors will be required to comply with OSHA health and safety standards for all remediation work. Therefore, impacts related to creation of hazards to the workers and the public through transport, treatment, use, disposal, and risk of upset would be ***less-than-significant***.

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<sup>1</sup>CEQA Guidelines, Appendix G, items VII(a-e).

Pursuant to CEQA and the Significance Criteria listed above, these identified ongoing remediation needs do not constitute a direct or indirect environmental impact resulting from the proposed Project. Required compliance by future, individual, site-specific developments in Redevelopment Zone 1 with these regulations would adequately assure that associated potential health and safety impacts due to exposure to existing soil and groundwater contamination would be ***less-than-significant***.

**Mitigation.** No significant new Project-created adverse existing hazardous soil or groundwater contamination exposure impact in Redevelopment Zone 1 has been identified; no mitigation is required.

**Impact 11-1: Potential Impacts Due to Exposure to Existing Soil or Groundwater Contamination--Redevelopment Zone 2.** Redevelopment Zone 2 (west of East Bayshore Boulevard) does not have the history of hazardous materials use and related soil and groundwater contamination, investigation, and remediation activity associated with Redevelopment Zone 1. Nevertheless, there is a possibility that Project-facilitated demolition, renovation, and new construction activity in Zone 2 could encounter and expose workers to existing spilled, leaked, or otherwise discharged hazardous materials or wastes. This possibility represents a ***potentially significant impact*** (see criteria 2 through 4 in subsection 11.3.1, "Significance Criteria," above).

**Mitigation 11-1.** Each developer of a site in Redevelopment Zone 2 shall be required to comply with all applicable existing local-, state-, and federal-mandated site assessment, remediation, and disposal requirements for soil, surface water, and/or groundwater contamination. In particular, these include the requirements of the City and County of San Francisco, RWQCB, and DTSC. Previous subsections 11.2.2 (City of San Francisco Hazardous Materials Regulations) and 11.2.3 (Environmental Site Assessment Procedures) herein summarize these requirements. Compliance with these existing local-, state-, and federal-mandated site assessment, remediation, and disposal requirements would be accomplished through the following steps:

(a) **Soil Contamination.** In order to mitigate potential health hazards related to construction personnel or future occupant exposure to soil contamination, developers would complete the following steps for each site proposed for disturbance as part of a Project-facilitated construction activity in Redevelopment Zone 2:

Step 1. Investigate the site to determine whether it has a record of hazardous material discharge (Phase I environmental site assessment), and if so, characterize the site according to the nature and extent of soil contamination that is present (Phase 2) before development activities proceed at that site.

**(continued)**

**Mitigation 11-1 (continued):**

Step 2. Based on the proposed activities associated with the future project proposed, determine the need for further investigation and/or remediation of the soils conditions on the contaminated site. For example, if the location is slated for commercial land use, such as a retail center, the majority of the site will be paved and there will be little or no contact with contaminated soil. Industrial clean-up levels would likely be applicable. If the slated development activity could involve human contact with soils, such as may be the case with residential use, then Step 3 should be completed. If no human contact is anticipated, then no further mitigation is necessary.

Step 3. Should the Phase 2 investigation reveal high levels of hazardous materials in the site soils, mitigate health and safety risks according to City of San Francisco, RWQCB, and DTSC regulations. This would include site-specific health and safety plans prepared prior to undertaking any building or utility construction. Also, if buildings are situated over soils that are significantly contaminated, undertake measures to either remove the chemicals or prevent contaminants from entering and collecting within the building. If remediation of contaminated soil is infeasible, a deed restriction would be necessary to limit site use and eliminate unacceptable risks to health or the environment.

*(b) Surface or Groundwater Contamination.* In order to reduce potential health hazards due to construction personnel or future occupant exposure to surface water or groundwater contamination, developers would complete the following steps for each site proposed for disturbance as part of a Project-facilitated construction activity in Redevelopment Zone 2:

Step 1. Investigate the site to determine whether it has a record of hazardous material discharge into surface or groundwater, and if so, characterize the site according to the nature and extent of contamination that is present before development activities proceed at that site.

Step 2. Install drainage improvements in order to prevent transport and spreading of hazardous materials that may spill or accumulate on-site.

Step 3. If investigations indicate evidence of chemical/environmental hazards in site surface water and/or groundwater, then mitigation measures acceptable to the RWQCB and DTSC would be required to remediate the site prior to development activity.

**(continued)**

**Mitigation 11-1 (continued):**

Step 4. Inform construction personnel of the proximity to recognized contaminated sites and advise them of health and safety procedures to prevent exposure to hazardous chemicals in surface water/groundwater.

Compliance by future, individual, site-specific developments in Redevelopment Zone 2 with established regulations (accomplished through the steps outlined above) would adequately assure that associated potential health and safety impacts due to exposure to existing soil and groundwater contamination would be ***less-than-significant***.

For Redevelopment Zone 1, remediation requirements are described in previous subsection 11.1.2 (Historical Uses and Ongoing and Future Remediation Activities in Redevelopment Zone 1).

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**Potential Impacts Due to Discharge of Contaminated Groundwater--Entire Project Area.**

Where construction would require dewatering of contaminated groundwater, a release of hazardous materials could occur, potentially resulting in exposure to the public and the environment. If dewatering is required, the groundwater could be discharged to the City's combined storm and sanitary sewer system in accordance with the City's Industrial Waste Ordinance (*Public Works Code*, Article 4.1) and Order No. 158170 of the San Francisco Public Works Department. These regulations require a permit for discharge to the combined sewer, and establish discharge limitations and other criteria. Article 4.1 also prohibits discharge of hazardous wastes into the combined sewer system.

The discharged water would need to be sampled during dewatering to demonstrate that discharge standards in the Ordinance are met. If the groundwater does not meet the standards, either on-site pretreatment would be required before discharge to the combined system, or off-site disposal by a certified waste hauler would be required. Implementation of the regulatory process outlined above would result in a ***less-than-significant impact*** associated with the discharge of contaminated groundwater.<sup>1</sup>

**Mitigation.** No significant adverse impact related to the discharge of contaminated water has been identified; no mitigation is required.

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**Potential Impacts Due to Future On-Site Hazardous Materials Storage and Use--Entire Project Area.**

Hazardous substances may be stored, generated, and/or used in association with new residential, commercial, and cultural uses proposed or facilitated by the Project. Residents, employees, and visitors may be exposed to accidental spillage or leakage of hazardous materials stored in on-site locations. The City would require all new commercial and other uses in the Project Area to follow applicable regulations and guidelines regarding the storage and handling of hazardous waste. All hazardous materials are required to be stored and handled according to manufacturer's directions and local, state, and federal regulations.

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<sup>1</sup>For Redevelopment Zone 1, remediation requirements are described in previous subsection 11.1.2 (Historical Uses and Ongoing and Future Remediation Activities in Redevelopment Zone 1).

Some of these regulations may include posting of signs, Fire Department approval of occupants' hazardous materials plans, and specialized containment facilities. These established measures would be expected to ensure that the potentially significant health and safety effects associated with Project-related potential exposure to stored hazardous materials would remain a ***less-than-significant impact***.

**Mitigation.** No significant adverse hazardous materials storage or use impact has been identified; no mitigation is required.

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**Potential Impacts Due to Underground Storage Tanks--Entire Project Area.** The Project Area contains underground storage tanks (USTs) (see Table 11.1 in this chapter), one or more of which may require removal as part of Project-facilitated development. Article 21 of the *San Francisco Health Code* governs the removal of USTs. Requirements include:

1. Submitting a closure plan to the City for approval prior to UST removal;
2. Removing and properly disposing of any remaining hazardous materials in the tank, and having the tank removal supervised by the City;
3. Recycling or disposing of the discarded tank;
4. Sampling of soil, and possibly groundwater, within the tank excavation;
5. Submitting an Underground Tank Unauthorized Release (Leak)/Contamination Site Report to the San Francisco Department of Public Health (SFDPH) if a chemical release were indicated on the basis of visual observation or sampling within the tank excavation;
6. Filing a final report with the City documenting tank removal activities and any residual contamination left in place. Upon approval of this report, the City will issue a Certificate of Completion; and
7. If a hazardous materials release is indicated, the site owner would be required to submit a corrective action plan, including a community health and safety plan, to the SFDPH and RWQCB. Remediation of the site would be required in accordance with applicable federal, state, and local regulations.

Alternatively, if tank removal were considered infeasible by the City, the tank could be retained and closed in place, with appropriate safeguards if necessary (e.g., sealing) implemented under City supervision.

Implementation of the regulations outlined above would result in a ***less-than-significant impact*** associated with the closure of underground storage tanks.

**Mitigation.** No significant adverse impact related to the closure of underground storage tanks has been identified; no mitigation is required.

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**Potential Impacts Due to Asbestos and PCB Exposure--Entire Project Area.** Removal or disturbance of asbestos-containing material (ACM) and/or transformers during Project-facilitated alteration, renovation, or demolition of existing structures in the Project Area could expose

construction workers and the general public to friable asbestos and/or PCBs. Therefore, as a condition of Project-facilitated alteration, renovation, or demolition permit approval for buildings within the Project Area, the City would routinely require the project applicant to coordinate with the Bay Area Air Quality Management District (BAAQMD) to determine if asbestos or PCBs are present.

Ensuring proper identification and removal of ACM and/or PCBs requires each future, individual, site-specific project applicant within the Project Area to complete the following steps:

- Step 1. Thoroughly survey the project site and existing structures for the presence of asbestos-containing material. The survey shall be performed by a person who is properly certified by OSHA and has taken and passed an EPA-approved building inspector course.<sup>1</sup>
- Step 2. If building elements containing any amount of asbestos are present, prepare a written *Asbestos Abatement Plan* describing activities and procedures for removal, handling, and disposal of these building elements using the most appropriate procedures, work practices, and engineering controls.
- Step 3. Provide the asbestos survey findings, the written *Asbestos Abatement Plan* (if necessary), and notification of intent to demolish to the City of San Francisco Department of Public Health at least ten days prior to commencement of demolition.
- Step 4. Remove any on-site transformers prior to demolition of non-residential buildings.

These required measures under existing regulations would be expected to reduce the potentially significant health and safety impacts associated with asbestos removal and PCBs to a ***less-than-significant level***.

**Mitigation.** No significant adverse asbestos or PCB exposure impact has been identified; no mitigation is required.

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**Potential Impacts Due to Lead-Based Paint Exposure--Entire Project Area.** Lead is a heavy, toxic metal. Lead-based paint was commonly used prior to 1960 and is assumed to be present in many older buildings in the Project Area, including the Schlage Lock buildings. If lead-based paint is present and has delaminated (split into thin layers) or chipped from surfaces, airborne lead particles could be released.

Demolition and renovation activities must comply with Chapter 34, Section 3407 of the *San Francisco Building Code* (Work Practices for Exterior Lead-Based Paint), which includes requirements for projects that disturb ten square feet or more of lead-based paint on building exteriors or steel structures constructed prior to 1979 (when lead-based paint was banned). Section 3407 protects the health and safety of workers, residents, and occupants from risks associated with lead-based paint by requiring specific notification and performance standards. Section 3407 requires the property owner or contractor to:

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<sup>1</sup>This step has been completed for the Ingersoll-Rand/Schlage Lock buildings in Redevelopment Zone 1.



- Notify the Department of Building Inspection (DBI) prior to starting work, describing the nature, location, and schedule of the work;
- Post a sign at all work locations where containment is required, stating that lead abatement is in progress and public access is prohibited;
- Notify the tenant(s) when the lead abatement work will be performed on a residential property occupied by one or more tenants; and
- The contractor shall notify the property owner when work on a residential project will disturb lead-based paint.

Section 3407 requires lead-based paint containment barriers as effective at protecting human health and the environment as the performance standards in the most recent *Guidelines for Evaluation and Control of Lead-Based Paint Hazards* (U.S. Department of Housing and Urban Development). Accordingly, HEPA vacuums may be required for abrasive blasting, water blasting, scraping, or sanding; and burning, torching, and similar activities are prohibited. Following completion of lead-based paint abatement, all visible lead-based paint particles must be removed from the site.

The DBI may inspect lead-based paint abatement activities at any time during construction to confirm that work is being conducted in accordance with Section 3407. The DBI is also responsible for addressing citizen complaints related to lead-based paint abatement activities and may issue a Notice of Violation, a Stop Work order, or a fine for work in violation of Section 3407.

Implementation of the regulations outlined above would result in a ***less-than-significant impact*** associated with lead-based paint exposure.

**Mitigation.** No significant adverse impact related to potential lead-based paint exposure has been identified; no mitigation is required.

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**Potential Impacts Due to Accidental Release of Hazardous Materials or Wastes During Normal Transport Operations--Entire Project Area.** The proposed Project could result in the use and disposal of hazardous materials in the Project Area, which in turn could increase the potential for transportation-related accidents along the routes where these hazardous materials are transported. Transporters of hazardous materials and wastes are subject to local, state, and federal regulations, which would minimize the risk; however, the potential would always remain for an accidental release of hazardous materials or wastes, which could then result in a potential impact on public health or the environment. As described earlier, DTSC will require a RAP describing clean-up procedures in these circumstances.

In Redevelopment Zone 1, the proposed remediation design plan would include a Transportation Plan that would address accidental release of contaminated soil. Soils disturbed during demolition would be handled in accordance with a Soil Management Plan (SMP). The SMP would include procedures for excavation management, profiling for stockpiles, and procedures to identify soil for re-use or off-site disposal, as appropriate. The SMP would be updated as remediation progresses in accordance with the final RAP (see 11.1.2[e] above).

Truck routes are designated across San Francisco and beyond to facilitate truck traffic between industrial and commercial locations and the freeway system. The California Highway Patrol (CHP) and the California Department of Transportation (Caltrans) are the primary state agencies that enforce federal and state regulations pertaining to hazardous materials transport in California. The U.S. Department of Transportation regulates the transport of chemicals and hazardous materials by truck between states. These agencies regulate container types, packaging requirements, licensing, and training for truck operations, chemical handling, and hazardous waste hauling. Clean-up of hazardous transport spills are typically the responsibility of the CHP (if on a state highway) or local emergency response agencies. For example, the San Francisco Fire Department includes over 60 specially trained Hazardous Materials Specialists and a Hazardous Materials Response Unit that is outfitted with equipment for hazardous materials identification, assessment, protection, control and containment, and decontamination.<sup>1</sup>

Because compliance with existing regulations for transport of hazardous materials would minimize the risk of accidental release during normal transport operations, this impact would be **less-than-significant**.

**Mitigation.** No significant adverse impact related to the transport of hazardous materials and wastes has been identified; no mitigation is required.

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**Potential Interference with Emergency Response and Evacuation Plans--Entire Project Area.** Project implementation would encourage new construction in the Project Area that could result in traffic congestion in the event of an emergency evacuation. San Francisco ensures fire safety primarily through the *San Francisco Building Code* and *San Francisco Fire Code*. Existing buildings are required to meet these codes, and new residential building plans (for two or more units) are reviewed by the Department of Building Inspection (DBI) and the Fire Department to ensure conformance. Depending on building type, an individual site emergency procedure manual and exit drill plan may also be required in consultation with the Mayor's Office of Emergency Services.

Compliance with the above codes would result in a **less-than-significant impact** associated with potential interference with emergency response and evacuation plans.

**Mitigation.** No significant adverse impact related to potential interference with emergency response and evacuation plans has been identified; no mitigation is required.

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**Construction-Related Air Quality Impacts.** Demolition or construction activities permitted and/or facilitated by the proposed remediation and redevelopment program may generate remediation and construction period exhaust emissions and fugitive dust that could temporarily but noticeably affect local air quality. This issue is discussed in chapter 9 (Air Quality), subsection 9.3.2 (Remediation and Construction Period Air Quality Impacts), of this EIR. This potentially significant impact would be reduced to a **less-than-significant level** with implementation of the measures described in subsection 9.3.2 under *Mitigation 9-1*.

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<sup>1</sup>San Francisco Fire Department; *Fire Facts*; [www.sfgov.org/site/fire](http://www.sfgov.org/site/fire), accessed May 25, 2007.

## 11.4 REGULATORY AGENCY DATABASE

Subsection 11.1.3 (Hazards and Hazardous Materials Conditions Database for Project Area and Surrounding Vicinity) includes a summary listing of known recorded sites (i.e., listed in publicly available records) in the Project vicinity (i.e., the Project Area or within a 500-foot radius of the Project Area) that have been contaminated with and/or are generators of hazardous materials (Table 11.1). Each jurisdictional agency database summarized in Table 11.1 is described below.

(1) *CHMIRS Data.* The California Hazardous Material Incident Report System (CHMIRS) contains information on reported hazardous materials incidents (i.e., accidental releases or spills). The source of this information is the California Office of Emergency Services. There is one CHMIRS site in the Project vicinity, on Tunnel Avenue outside the Project Area.

(2) *ERNS Sites.* The Emergency Response Notification System (ERNS) records and stores information on reported releases of oil and hazardous substances. The source of this database is the U.S. EPA. One ERNS site is located in the Project vicinity, on the Ingersoll-Rand property (in Redevelopment Zone 1).

(3) *Cortese Database.* The Cortese database identifies hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with underground storage tanks (USTs) having a reportable release, all solid waste disposal facilities from which there is known hazardous substance migration, and public drinking water wells with detectable levels of contamination. The source of this database is the California Environmental Protection Agency (CAL-EPA). Ten sites in the Project vicinity, including six within the Project Area, are listed on the Cortese database.

(4) *LUST Reports.* The Leaking Underground Storage Tank (LUST) Incident Reports contain an inventory of reported leaking underground storage tank incidents. This information comes from the State Water Resources Control Board Leaking Underground Storage Tank Information System. There are 13 sites in the Project vicinity, including four within the Project Area, that are on the LUST list.

(5) *UST Database.* The Underground Storage Tank (UST) database lists registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The UST information comes from the State Water Resources Control Board's Hazardous Substance Storage Container Database. There are two UST sites listed in the Project vicinity, one of which is on the Ingersoll-Rand property (in Redevelopment Zone 1).

(6) *HIST UST Sites.* The Hazardous Substance Storage Container Database is a historical listing of UST sites. The data source is the State Water Resources Control Board. There are four HIST UST sites in the Project vicinity, two of which are within the Project Area.

(7) *AST Database.* The Aboveground Storage Tank (AST) database lists registered ASTs. The AST information comes from the State Water Resources Control Board's Hazardous Substance Storage Container Database. There is one AST site listed in the Project vicinity, outside the Project Area.

(8) *CA FID Information.* The Facility Inventory Database (CA FID) lists active and inactive underground storage tank locations. This database is maintained by the State Water

Resources Control Board. There are seven CA FID sites listed in the Project vicinity, five of which are within the Project Area.

(9) *HAZNET Database.* The Hazardous Waste Information System (HAZNET) includes data extracted from the copies of hazardous waste manifests each year by the State Department of Toxic Substances Control (DTSC). There are 19 HAZNET sites listed in the Project vicinity, 13 of which are within the Project Area.

(10) *RCRA Info Database.* The Resource Conservation and Recovery Act Information System (RCRA Info) database includes selected information regarding sites that generate, store, treat, or dispose of hazardous waste as defined by the RCRA. The source of this database is the U.S. Environmental Protection Agency (EPA). RCRA Info includes conditionally exempt small-, small-, and large-quantity generators (SQGs and LQGs). Conditionally exempt SQGs generate less than 100 kilograms of hazardous waste per month. SQGs generate 100 to 1,000 kilograms of hazardous waste per month, and LQGs generate more than 1,000 kilograms per month. Three RCRA Info LQG sites, all on the Ingersoll-Rand/UPC properties, and seven RCRA Info SQG sites, including three in the Project Area, are listed in the Project vicinity.

(11) *FINDS Data.* The Facility Index System (FINDS) contains both facility information and "pointers" to other sources of information that contain more detail (e.g., RCRA Info, Permit Compliance System [PCS], Aerometric Information Retrieval System [AIRS]). The source of this information is the U.S. EPA. There are 11 FINDS sites listed in the Project vicinity, seven of which are within the Project Area.

(12) *FTTS Database.* The Federal Toxics Tracking System (FTTS) tracks administrative cases and pesticide enforcement actions/compliance activities related to the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA), Toxic Substances Control Act (TSCA), and Emergency Planning and Community Right-to-Know Act (EPCRA). The source of this data is the Environmental Protection Agency (EPA) Office of Prevention, Pesticides, and Toxic Substances. There are two FTTS sites listed in the Project vicinity, both on the Ingersoll-Rand property (in Redevelopment Zone 1).

(13) *DTSC AWP (currently known as State Response Site).* The California Department of Toxic Substances Control (DTSC) Annual Workplan (AWP) identifies known hazardous substance sites targeted for clean-up. In the Project vicinity, the Ingersoll-Rand property (in Redevelopment Zone 1) is listed in the AWP.

(14) *Cal-Sites Database (currently known as EnviroStore).* This database, maintained by the Department of Toxic Substances Control (DTSC), contains both known and potential hazardous substance sites. In the Project vicinity, the Ingersoll-Rand property (in Redevelopment Zone 1) is listed as a Cal-Site.

(15) *Dry Cleaners Information.* This list, comprised of dry cleaner facilities that have EPA ID numbers, typically includes uses involving family and commercial power laundries, garment pressing and cleaner's agents, linen supply, coin-operated laundries, dry cleaning plants, carpet and upholstery cleaning, and industrial launderers. The list is maintained by the Department of Toxic Substances Control (DTSC). There are two dry cleaners listed in the Project vicinity, both within the Project Area.

(16) *San Mateo County Hazardous Materials Business Plan Inventory.* This inventory, maintained by the San Mateo County Environmental Health Services Division, includes

operations with Hazardous Materials Business Plans (as required by the County), hazardous waste generators, and underground storage tanks. There are seven such sites listed in the Project vicinity, one of which is partially within the Project Area.

(17) *EMI Data.* Emissions Inventory Data (EMI) is comprised of toxics and criteria pollutant emissions data collected by the state Air Resources Board and local pollution agencies. There are six EMI sites listed in the project vicinity, four of which are within the Project Area.

(18) *SWEEPS Records.* The Statewide Environmental Evaluation and Planning System (SWEEPS) UST list, which is no longer maintained or updated, was under the purview of the State Water Resources Control Board. Other agencies (e.g., as identified above) now maintain UST records. There are seven SWEEPS sites listed in the Project vicinity, including five within the Project Area, all of which are included in other databases identified above.

(19) *SWF/LF Records.* The Solid Waste Facilities/Landfill Sites (SWF/LS) records typically contain an inventory of active, closed, and inactive solid waste disposal facilities and landfills. The data source is the Integrated Waste Management Board's Solid Waste Information System (SWIS) database. There is one SWF/LF site in the Project vicinity, located on Tunnel Avenue outside the Project Area.

(20) *WMUDS/SWAT Information.* The Waste Management Unit Database System (WMUDS/SWAT) is used for program tracking and inventory of waste management units. The data source is the State Water Resources Control Board. There is one WMUDS/SWAT site in the Project vicinity, located on Tunnel Avenue outside the Project Area.

(21) *SWRCY Database.* The Recycler (SWRCY) database lists recycling facilities in California. The information source is the State Department of Conservation. There is one SWRCY site located in the Project vicinity, located on Tunnel Avenue outside the Project Area.



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## 12. HYDROLOGY AND WATER QUALITY

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This chapter describes (1) existing hydrology (i.e., storm drainage and flood control) and water quality characteristics in the Project Area, (2) the potential impacts of anticipated Project-facilitated development and improvement activities on these conditions, and (3) measures necessary to mitigate identified significant impacts. The chapter also describes current water quality regulations and how they would apply to the proposed Project. The technical analyses and research for this chapter were conducted by the EIR hydrology and utilities consultant, Andrew Leahy, P.E.

### 12.1 SETTING

#### 12.1.1 Local Topography and Drainage

The approximately 46-acre Project Area consists of the approximately 20-acre Redevelopment Zone 1 lying east of Bayshore Boulevard, bounded on the east by Tunnel Avenue and on the south by the City/County line, and Redevelopment Zone 2, the approximately 26-acre subarea on the west side of Bayshore Boulevard. Zone 1 includes the former Schlage Lock property and other underutilized industrial lands (approximately 16.3 acres) and the Caltrain/Union Pacific Railroad (UPRR) system rights-of-way along the eastern edge (approximately 3.7 acres). Zone 2 is comprised primarily of general commercial, light industrial, residential, and mixed use (commercial-residential) properties fronting on the west side of Bayshore Avenue (approximately 2.8 acres); neighborhood commercial, residential, and mixed use properties fronting on to the sides of Leland Avenue (approximately 4.2 acres)<sup>1</sup>; and paved public street right-of-way (approximately 19 acres), including Bayshore Boulevard, Sunnydale Avenue, Visitacion Avenue, Desmond Street, Peabody Street, Rutland Street, Leland Avenue, Alpha Street, Raymond Avenue, and Arleta Avenue. Existing open space is found along a portion of the SPRR tracks adjacent to Tunnel Avenue, within small rear yards along Leland Avenue, in a pocket park (Hans Schiller Plaza) on Leland Avenue, and in a currently undeveloped lot on the south side of Sunnydale Avenue.

The Project Area is located near the east end of Visitacion Valley, a broad bowl that lies between the McLaren Park ridge on the north and San Bruno Mountain on the south, straddling the border between San Francisco and Brisbane. The valley historically ended at San Francisco Bay, in the vicinity of Bayshore Boulevard, but fill placement over the last 150 years has extended the edge of the Bay to the east side of U.S. 101. As a result, the topography of the Project Area is generally flat, with a gentle upward gradient towards the west. This natural upward gradient ranges between 4 and 5 percent in Zone 2, extends into the north end of Zone 1, and then gradually transitions into the nearly flat area toward the south end of Zone 1, encompassing the Caltrain/UPRR properties and the dead end portion of Sunnydale Avenue.

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<sup>1</sup> Acreage estimates are based on measurements made on a San Francisco Redevelopment Agency map titled "Visitacion Valley Redevelopment Survey Area," dated July 10, 2006.

It is likely that one or more small stream channels historically flowed down from the McLaren Park ridge, probably emptying into the Bay in northern Brisbane, just south of the City/County boundary. All traces of these channels have since been erased by development. Within San Francisco, the channels have been replaced by the City's combined sewer/storm drain system, which collects both sanitary wastewater and stormwater runoff for conveyance to the Southeast Water Pollution Control Plant (SEWPCP).

The boundary of the local, topographically defined drainage basin begins in the residential areas located south of Geneva Avenue and east of South Hill Boulevard, extending north through McLaren Park and east along the south side of Mansell Street to U.S. 101. The freeway and Bayshore Boulevard form the drainage basin's easterly, downstream boundary, while the City/County line roughly defines the basin's southerly boundary. The City's Department of Public Works (SFDPW) refers to this approximately 717-acre local drainage area as the Sunnydale Basin.

Ground surface elevations in the Project Area range from a low of approximately 23 feet above mean sea level (23 feet MSL) at the south end of Zone 1, to 80 feet MSL at the westerly portion of Leland Avenue in Zone 2. Elevations within the boundaries of the Sunnydale Basin continue climbing north and west of the Project Area, topping out at approximately 360 feet MSL on Ankeny Street near Mansell Street, 525 feet MSL in McLaren Park, and 420 feet MSL on the south side of Geneva Avenue at the City limit line.

Wastewater and stormwater runoff generated within the Sunnydale Basin are funneled into a series of gradually larger pipes and box culverts that converge at the intersection of Bayshore Boulevard and Sunnydale Avenue. From this point, a single 78-inch diameter tunnel drains the entire upstream basin. This tunnel (the "Sunnydale sewer tunnel") runs east along the Sunnydale Avenue, crosses into Brisbane, passes under a corner of the Sunset Scavenger Transfer Station, and then under U.S. 101. East of the freeway, the tunnel discharges to the Harney Way storage culvert that runs north, back into San Francisco, along the shore of San Francisco Bay. (The downstream conveyance system that carries runoff from this culvert to the SEWPCP is described in section 15.2, Wastewater Service, of this EIR.)

Development patterns vary significantly within the Sunnydale Basin, including (from west to east) the open spaces of McLaren Park, hillside residential developments, the high-density residential development of Visitacion Valley, and the now vacant Schlage Lock and other industrial properties east of Bayshore Boulevard. East of the Caltrain/UPRR tracks and Tunnel Avenue (i.e., east of Zone 1), approximately five acres of the Sunset Scavenger Waste Transfer Facility are included in the Sunnydale Basin, while the remainder of the transfer facility, as well as the residential area to the north between Tunnel Avenue and the freeway, drains to the Harney Way storage culvert through a separate pipe that crosses U.S. 101 at Blanken Avenue.

### **12.1.2 Rainfall and Runoff**

(a) Rainfall Data. Average annual rainfall in the Project Area vicinity is approximately 21 inches. Nearly 95 percent of this precipitation falls during the winter rainy season, October through April, with the heaviest rainfall typically occurring in December, January, and February. Total rainfall during a six-hour duration, 100-year-recurrence-interval storm (i.e., the most severe storm expected to occur in any 100-year period) is estimated at approximately 2.88



inches, while during the more frequent 5-year storm (i.e., the most severe storm expected to occur within any five-year period), total rainfall would equal about 1.78 inches.<sup>1</sup>

Stormwater runoff is that portion of rainfall that is not absorbed into the ground, taken up by plants, or lost through evaporation. Coarse-grained, permeable soils and heavy vegetative cover reduce runoff, while steep slopes, fine-grained soils, and impervious surfaces (buildings and pavement) increase runoff. The duration, frequency, and total amount of rainfall also affect the volume of runoff; frequent or heavy rains saturate the soil and reduce infiltration, so that the percentage of rain that runs off the land increases with the severity of a storm.

(b) Basin-Wide Drainage Conditions. A hydrology report prepared for the SFDPW divided the Sunnydale Basin into four subbasins, in which the amount of impervious surface generally increases from east to west.<sup>2</sup> At the east end, the 128-acre Old Basin subbasin, which includes the entire Project Area, was determined to be 67 percent impervious, while the 327-acre Right of Way subbasin, which extends west out Geneva Avenue and includes a large part of McLaren Park, is 39 percent impervious. Based on this information, approximately 50 percent of the overall Sunnydale Basin is covered by impervious surfaces, which typically have a runoff coefficient of 0.90 (indicating that approximately 90 percent of rainfall would be expected to run off into the local sewer system). By contrast, it is estimated the remaining open space or landscaped portions of the basin have a runoff coefficient of 0.50, resulting in an average runoff coefficient for the entire basin of 0.70.<sup>3</sup> This means, for example, that the 1.78 inches of rain expected to fall on the 717-acre Sunnydale Basin during a six-hour, 5-year storm would send approximately 74 acre-feet (24.2 million gallons) of runoff to local sewers for conveyance to the SEWPCP. Runoff from storms of this magnitude, when combined with daily wastewater flows, normally exceeds the capacity of the Harney Way storage culvert, which would fill as flows back up from the treatment plant, causing the direct discharges into San Francisco Bay described in section 15.2 (Wastewater Service) of this EIR.

According to the SFDPW, the Sunnydale Basin's existing combined sewer system has sufficient capacity to accommodate both wastewater and stormwater flows during the design, 5-year storm event, except in the southeast corner of the drainage basin (outside the Project Area). In this location, sewer overflows usually occur several times each year on a number of streets that run south from Sunnydale Avenue toward the City limits, when upstream flows exceed the capacity of the trunk line that runs through this area.<sup>4</sup>

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<sup>1</sup>City of San Francisco, Consolidated Annual Precipitation Records, revised July 30, 1990. The SFDPW uses a 5-year storm for hydraulic design of its combined sewer system.

<sup>2</sup>Hydroconsult Engineers, *Sunnydale Sewer Improvements--Phase I: Conceptual Hydraulic Designs*, August 18, 1997.

<sup>3</sup>Runoff coefficients are typically used in conjunction with the Rational Method, a widely used means of estimating maximum rates of stormwater runoff from both undeveloped and developed watersheds. For each subarea within a watershed, the runoff coefficient is multiplied by the number of acres within the contributing drainage area and by the expected peak rainfall intensity (expressed in inches per hour) to calculate the peak rate of stormwater runoff (expressed as cubic feet per second). A runoff coefficient of 0.50 for landscaped areas is typical, although it would have to be confirmed by on-site soils analyses.

<sup>4</sup>Beth Goldstein, Hydroconsult Engineers, hydrology consultants to the San Francisco Department of Public Works on the Sunnydale tunnel project; personal communication, November 30, 2007.

To address these existing sewer overflows, the SFDPW is currently designing a combined sewer system improvement project for the Sunnydale Basin. Phase I of this project entails construction of a second sewer tunnel to connect the basin to the Harney Way storage culvert, plus the construction of additional conveyance capacity along the lower Sunnydale Avenue corridor, up to either Tomaso Court or Melra Court.<sup>1</sup> As now proposed, the existing system will continue to carry all dry weather flows, but when water levels rise during rainstorms, excess runoff and wastewater will be diverted into the new facilities. This additional conveyance capacity is expected to prevent overflows under most rainfall conditions, while also significantly increasing the total storage capacity now provided for the drainage basin by the Harney Way culvert. The size and route of the new tunnel and the new trunk sewers have not been finalized, but the SFDPW expects that construction will be completed by late 2008 or early 2009.<sup>2</sup> Phase II of the project has not been designed, but it would address the need for additional capacity improvements upstream of Phase I.

No sources of flooding have been formally identified, and no flood boundaries have been established, for San Francisco by the Federal Emergency Management Agency (FEMA) because FEMA has not mapped San Francisco. Because all of Visitacion Valley's historic natural streams have been covered and enclosed in the combined sewer system, the only significant flooding source in the vicinity is San Francisco Bay. For comparison, the FEMA Flood Insurance Rate Map (FIRM) for the City of South San Francisco indicates the 100-year-flood San Francisco Bay water surface elevation in the Oyster Point vicinity would be 7.0 feet MSL.<sup>3</sup> Since ground elevations in the redevelopment Project Area are no lower than 20.0 MSL, it can be concluded there is no risk of catastrophic flooding in the Project Area.

(c) On-Site Drainage Conditions. For drainage purposes, the existing Project Area can be divided into Redevelopment Zone 1 east of Bayshore Boulevard and the remaining Redevelopment Zone 2, containing blocks of existing development proposed for moderate infill. The Zone 2 blocks have an estimated existing runoff coefficient of 0.65, slightly lower than the Sunnydale Basin average of 0.70, while Zone 1 has a coefficient of approximately 0.88,<sup>4</sup> significantly higher than average because it is covered almost entirely by pavement and large buildings. The City's sewer maps do not show any storm drain lines within the former Schlage Lock grounds, but it is assumed that virtually all surface runoff is collected into one or more on-site storm drains that discharge into a 2-foot by 3-foot box culvert on Bayshore Boulevard, upstream of the Sunnydale sewer tunnel, or directly to the tunnel where it passes by the south end of the property. Runoff from Zone 2 along Leland Avenue is picked up by in-street sewers that discharge to the Bayshore Boulevard box culvert or to a parallel trunk line on Rutland Avenue.

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<sup>1</sup>Hydroconsult Engineers, August 18, 1997.

<sup>2</sup>Beth Goldstein, personal communication, November 30, 2007; and Lewis Douglas, San Francisco Department of Public Works, personal communication, November 16, 2007.

<sup>3</sup>Federal Emergency Management Agency, Flood Insurance Map for City of South San Francisco, San Mateo County, California; Community Panel Number 065062 0002 B; Effective Date September 2, 1981.

<sup>4</sup>If it is assumed 95 percent of the site is covered by impervious surfaces with a runoff coefficient of 0.90, and the remaining 5 percent has a runoff coefficient of 0.50 (no information is available on the percolation rate of the area's native soils, but 0.50 is a typical, conservative value), then the composite runoff coefficient is:  $(95\% \times 0.90) + (5\% \times 0.50) = 0.88$ .

No reports of flooding or sewer overflows in the Project Area have been identified; therefore, it is assumed the Project Area's existing catch basins and sewer lines can accommodate the runoff from events more severe than the 5-year storm. There is no information concerning the extent or the adequacy of the former Schlage Lock property's existing storm drain facilities, but (1) the former factory operations here would have needed a functioning storm drain network, (2) there are no reports of flooding, and (3) the property is located immediately adjacent to the Sunnydale sewer tunnel. As a result, it can also be assumed that stormwater runoff from the former Schlage Lock property is routed directly into the City sewer system, although it appears that a very small portion of the site in the southeast corner may now drain overland to the vacant land located south of the Sunnydale Avenue right of way, outside the City limits.<sup>1</sup>

### **12.1.3 Water Quality**

(a) Existing Water Quality Conditions. Redevelopment Zone 1 is almost completely covered by impervious surfaces, while the remainder of the Project Area (Redevelopment Zone 2) has a mix of residential and commercial land uses. When the Zone 1 factory operations were active, plant operations, truck traffic, and employee parking likely generated a typical range of urban pollutants, such as litter, packaging materials, heavy metals, oil and gas residues, tire fragments, and debris, in addition to metals and solvents used in the facility's plating and machining processes. Use of Zone 1 now appears to be limited to truck storage and material transfer operations in the southeast corner. This reduction in active use should have lowered the overall generation of pollutants, since there should be considerably less vehicular traffic than when factory operations were active, although it is possible the current ore limited operations generate substantial quantities of waste from earth and debris, as well as from large vehicle maintenance and storage. In addition, materials that accumulated on the site during its active factory years, which are now being remediated as described in chapter 13 (Hazards and Hazardous Materials) of this EIR, could still be mobilized by stormwater runoff whenever it rains.

Within Zone 2, it is expected that the range of pollutants is similar to those currently generated within Zone 1, although there may also be some fertilizer and pesticide runoff from the neighborhood's many small back yards. Also, there are probably more vehicle wastes (e.g., oil and gas residues, tire fragments), particularly on Bayshore Boulevard, since the deposition of these materials is directly related to the volume of traffic.

Pollutants generated in the Project Area are picked up by rainfall as it runs off impervious surfaces and into the combined sewer system. Upon reaching the SEWPCP, many of these pollutants are removed prior to final discharge into San Francisco Bay. San Francisco is unlike every other part of the Bay Area, where these "non-point source" pollutants are discharged directly into local streams or the Bay as a normal component of stormwater runoff. The harm caused by such pollutants to the Bay ecosystem is well-documented. The City's stormwater treatment therefore provides a very real, although unquantified, environmental benefit. The negative environmental aspect of the City's combined sewer systems is that larger storms can overwhelm both the treatment plant and the collection facilities, resulting in the direct discharge of a wastewater/stormwater combination that has received only primary treatment (as described in section 15.2, Wastewater Service, of this EIR). In the Project Area, such combined discharges occur when the Harney Way box culvert overflows into Candlestick Cove; however,

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<sup>1</sup>Site inspection by Andrew Leahy, P.E., EIR hydrology and utilities consultant; November 30, 2007.

the Harney Way box culvert was designed with sufficient storage so that direct discharges are expected to occur, on average, no more than once per year.<sup>1</sup>

#### **12.1.4 Groundwater**

Groundwater resources are severely limited throughout the eastern half of San Francisco (including the Project Area) because the often thin water-bearing soil formations consist of low-permeability dune sand, Bay mud, and clay. In addition, groundwater has been contaminated by nitrates and other pollutants in many areas. The only known local uses of groundwater are through a few private wells for non-consumptive purposes such as commercial laundries. Groundwater is more plentiful in the western half of San Francisco--i.e., the "Westside aquifer," where the City has a long history of using it for park irrigation, although well levels have fallen in recent years due to overuse throughout the northern Peninsula. The Eastside aquifer that underlies the Project Area has no direct connection to the more productive Westside aquifer.<sup>2</sup>

### **12.2 REGULATORY FRAMEWORK**

#### **12.2.1 San Francisco General Plan**

The adopted San Francisco General Plan *Environmental Protection Element* contains the following policy and objectives relevant to water quality in the Project Area:

- *Maintain and improve the quality of the bay, ocean, and shoreline areas.* (Objective 3)
- *Cooperate with and otherwise support regulatory programs of existing regional, state, and federal agencies dealing with the bay, ocean, and shorelines.* (Policy 3.1)
- *Implement plans to improve sewage treatment and halt pollution of the bay and ocean.* (Policy 3.3)

#### **12.2.2 Federal and State Water Quality Regulations**

In California, the discharge of pollutants to water bodies from point and non-point sources is regulated at the federal level by the U.S. Environmental Protection Agency's National Pollution Discharge Elimination System (NPDES), under the auspices of sections 401 and 402 of the Clean Water Act, and at the state level by the Porter-Cologne Water Quality Control Act, Water Code section 13260. In the Bay Area, the NPDES program and the Porter-Cologne Act are administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB), a division of the State Water Resources Control Board (SWRCB).

(a) Combined Sewer Systems. For communities with combined sewer systems (like San Francisco), the EPA adopted a Combined Sewer Overflow (CSO) Control Policy in 1994, establishing a two-phase control program. Under this two-phase program, permittees are

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<sup>1</sup>Bayview Hunters Point Redevelopment Projects and Rezoning Draft EIR. San Francisco Redevelopment Agency and San Francisco Planning Department; October 19, 2004; p. III.M-6.

<sup>2</sup>San Francisco Public Utilities Commission. 2005 Urban Water Management Plan for the City and County of San Francisco. February 2001; p. 11. Also see section 15.1 (Water Service) of this EIR.

required to first implement a series of nine technology-based controls that have been designed to reduce the frequency of CSOs and limit their effects on receiving waters (San Francisco Bay). These controls focus on the pretreatment of both wastewater and stormwater runoff to remove pollutants before they reach the sewer, the elimination of CSOs during dry weather, the use of storage to minimize wet weather CSOs, the control of floatables and settleable solids within CSO discharges, and notification of the public when CSOs occur. In the second phase, permittees must also ensure there will be an average of no more than four CSO events per year; **or** provide primary treatment (the removal of floatables and settleable solids) for at least 85 percent of total discharges (including CSOs); **or** remove a sufficient quantity of pollutants before they enter the sewer system to prevent degradation of receiving waters.

Completion in 1997 of the improvements identified in the City's *Wastewater Master Plan* has brought San Francisco into compliance with the CSO Control Policy. These improvements mainly entailed construction of the previously described storage culverts and the installation of discharge weirs (e.g., screens) and skimmers at all CSO outlets. The storage reduces the frequency of CSOs, while the discharge facilities allow the City to provide a minimum of primary treatment for 100 percent of its storm and wastewater discharges (most flows are still routed through either the Southeast or the Westside Water Pollution Control Plants, where they receive a higher level of treatment). As a result, although the City averages more than four CSOs each year, it is currently in compliance with the federal CSO Control Policy due to the removal of solids and the primary treatment of CSOs.

The SFPUC anticipates that the EPA may gradually tighten the CSO requirements, mainly because it has been urging other CSO communities to completely separate their storm and wastewater collection systems in an effort to completely eliminate the discharge of untreated wastewater. In most of these communities, the combined sewers represent a relatively small portion of the entire system, so separation is often economically feasible. Because this is not the case in San Francisco, the SFPUC is considering the adoption of new regulations (as discussed in subsection 12.2.3, City of San Francisco Stormwater Quality Control Requirements, below) to further reduce the average number of CSOs and increase the removal of contaminants contained in surface runoff.

(b) Separate Stormwater Systems. Federal regulations issued in November 1990 and revised in 2003 expanded the original scope of the NPDES to include permitting of stormwater discharges from construction sites that disturb areas of one or more acres. In 1994, the RWQCB issued recommendations for *New and Redevelopment Controls for Stormwater Programs* to define the local regulatory framework and to provide guidelines designed to help construction permittees comply with the terms of the General Permit (as described below). These recommendations, which have been updated on several occasions and are scheduled to be revised again in mid-2008, include policies that establish watershed protection goals; define the minimum area of impervious surface subject to regulation; set forth minimum non-point source pollutant control requirements for site planning, construction, and post-construction activities; and establish criteria for ongoing reporting of water quality control activities. The RWQCB watershed protection goals are based on policies identified in the Board's San Francisco Bay Basin Water Quality Control Plan (Basin Plan),<sup>1</sup> and the entire program relies on the implementation of "best management practices" (BMPs) to limit pollutant contact with stormwater runoff at its source and to remove pollutants before they are discharged into

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<sup>1</sup>California Regional Water Quality Control Board. San Francisco Bay Basin Water Quality Control Plan, 1995.

receiving waters. The California Stormwater Quality Task Force<sup>1</sup> has published a series of BMP handbooks that can be used to identify the most effective ways to achieve the water quality objectives identified by the Basin Plan for the beneficial uses of surface waters, groundwaters, wetlands, and marshes.

The Basin Plan's water quality objectives specify that the presence or concentration of listed, potentially deleterious constituents of surface water runoff shall not be permitted to cause a nuisance or adversely affect beneficial uses. A partial list of these constituents includes floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, pH, dissolved oxygen, bacteria, and toxic substances that are lethal to or that produce other detrimental responses in aquatic organisms. Many, if not all, of these constituents are found in stormwater runoff in urban and suburban areas.

For stormwater discharges associated with construction activities, federal regulations allow two permitting options, Individual Permits and General Permits. The SWRCB (who administers the NPDES program in California) utilizes a single statewide General Permit for construction-related stormwater discharges. This General Permit requires dischargers where construction activity disturbs one acre or more, or where a project will create a minimum of 10,000 square feet of new impervious surface,<sup>2</sup> to:

- (1) Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies BMPs to be employed (1) on the construction site to prevent all construction materials that may be sources of pollution from contacting stormwater and to prevent all products of erosion from moving off-site into receiving waters, and (2) on the developed site throughout the life of the project to minimize the discharge of urban pollutants into receiving waters;
- (2) Incorporate *low-impact* development techniques into the design of new and redeveloped project sites to reduce the volume and rate of stormwater runoff and to minimize the discharge of pollutants from the site;
- (3) Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation, utilizing Source Control Measures approved by the City;
- (4) Install permanent treatment control devices; and
- (5) Enter into an agreement with the City to maintain and perform inspections of all permanent stormwater pollution prevention devices.

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<sup>1</sup>The State Stormwater Quality Task Force is a committee of the California Chapter of the American Public Works Association.

<sup>2</sup>According to a tentative order issued by the RWQCB, the 10,000 square foot minimum threshold is scheduled to drop to 5,000 square feet, with some exceptions, in July 2008. It is noted that San Francisco is not specifically listed as one of the communities regulated by this order because virtually all of its runoff is handled by a combined sewer system. However, it is expected that these provisions will eventually be applied to direct stormwater discharges from lands within both the City and the Port of San Francisco.

### **12.2.3 City of San Francisco Stormwater Quality Control Requirements**

Section 4.1 (Industrial Waste) of the San Francisco Public Works Code regulates the discharge of pollutants to the City combined sewer system. In general, section 4.1 seeks to control the discharge of pollutants to the sewer system that could potentially obstruct sewer conveyance facilities, upset the treatment process, or contribute to a violation of the City's regulatory discharge requirements. To comply with the provisions of this section, industrial dischargers must pretreat their wastes to reduce the concentration of listed pollutants to acceptable levels. In addition, section 4.1 prohibits the discharge of anything but stormwater runoff to the sewer system except through approved sewer connections.

In accordance with NPDES requirements, the SFPUC has developed a *Stormwater Management Plan 2003-2004* to address the discharge of stormwater runoff within the few areas not served by the City's combined sewer system.<sup>1</sup> The plan focuses on (1) identification of pollutant sources, (2) control of pollutant discharges from new development and redevelopment sites during construction, (3) incorporation of BMPs into new development and significant redevelopment projects to provide long-term water quality protection and reduction of runoff volumes, (4) management of municipal operations to capture and remove pollutants from runoff, and (5) the education and involvement of the public. The areas covered by this plan are located within parks that drain to lakes in the western half of San Francisco, and so would not apply directly to the proposed Visitacion Valley redevelopment program. It is noted, though, that the *Stormwater Management Plan* recognized the importance of coordinating its programs for protecting water quality within both the combined and the separate storm drain systems. As a result, it is expected that many of the provisions included in the *Stormwater Management Plan*, in particular the construction period requirements and the long-term use of BMPs to protect water quality (which are largely based on SWRCB design criteria and Stormwater Task Force guidelines) will provide the basis for the SFPUC's current efforts to increase the capture and removal of pollutants from runoff before they enter the combined sewer system.

The SFPUC is also attempting to reduce the number and volume of City-generated direct discharges into the Bay by limiting the volume of stormwater runoff that reaches the combined sewer system. As of the writing of this EIR chapter, the SFPUC expects to put forward a new stormwater ordinance, whose performance measures would apply to all development projects of over 5,000 square feet in land area. Performance measures for developments served by separate sewer systems would require the capture and treatment of: (1) the flow of stormwater runoff resulting from a rain event equal to at least 0.2 inches per hour intensity, **or** (2) 80 percent or more of the volume of annual runoff, based on design rainfall capture curves for San Francisco. Performance measures for developments served by combined sewer systems would require: (1) the capture and detention of 80 percent or more of the volume of annual runoff, based on design rainfall capture curves for San Francisco; **and** (2) a minimum of 25 percent of the surface of setbacks to be pervious; **and** (3) stormwater to be used on-site to the extent feasible. Also, the SFPUC and the Port of San Francisco expects to publish the San Francisco Stormwater Design Guidelines to assist all development project applicants with project sites in either the combined or separate sewer systems (including the Project Area) to comply with the

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<sup>1</sup>San Francisco Public Utilities Commission (SFPUC), *Stormwater Management Plan 2003-2004*, January 2004.

new stormwater performance measures. A draft version of the guidelines is expected by summer 2008.<sup>1</sup>

A significant portion of the 80 percent capture or detention requirement could be achieved through infiltration, but, since the SFPUC also hopes to increase stormwater harvesting and re-use, projects also would be encouraged to install on-site stormwater storage facilities. Runoff that is not held on-site and re-used would have to be treated to remove urban pollutants, in accordance with Regional Water Quality Control Board (RWQCB) guidelines, prior to discharge.<sup>2</sup>

## **12.3 IMPACTS AND MITIGATION MEASURES**

### **12.3.1 Significance Criteria**

Based on the current CEQA Guidelines,<sup>3</sup> the Project (redevelopment program) would create a significant hydrology or water quality impact if it would:

- (1) Violate any water quality standards or waste discharge requirements;
- (2) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- (3) Substantially alter the existing drainage pattern of the Project Area or vicinity, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- (4) Substantially alter the existing drainage pattern of the Project Area or vicinity, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff, in a manner which would result in flooding on- or off-site;
- (5) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- (6) Otherwise substantially degrade water quality;
- (7) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;

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<sup>1</sup>Sarah Minick, Stormwater Management and Planning, San Francisco Public Utilities Commission (SFPUC); written communication, March 5, 2008.

<sup>2</sup>Arleen Navarret, Manager, SFPUC Wastewater Planning and Regulatory Compliance Division, written communication, November 14, 2007; and email, November, 28, 2007.

<sup>3</sup>CEQA Guidelines, Appendix G, items VIII(a-j) and IX(b).



- (8) Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- (9) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam;
- (10) Inundation by seiche, tsunami, or mudflow; or
- (11) Conflict with any applicable land use plan, policy, or regulation adopted by the City and County of San Francisco or the Regional Water Quality Control Board for the purpose of avoiding or mitigating an adverse effect on hydrology or water quality.

Regarding significance criteria 2, 3, 7, 8, 9, and 10 above, the Initial Study (appendix 20.1 of this EIR) determined that the proposed Project would have no impact or a less-than-significant impact. Regarding criterion 11, the proposed Visitacion Valley redevelopment program would be subject to the hydrology and water quality regulations and policies described in section 12.2 (Regulatory Framework) above and subsection 12.3.2 (Impacts and Mitigation Measures) below.

### **12.3.2 Impacts and Mitigation Measures**

**Potential Flooding Impact Due to Increased Stormwater Runoff.** As noted in section 3.1 (Setting) above, minor street flooding now occurs on several streets south of Sunnydale Avenue (outside the Project Area). As a result, any Project-facilitated increase in runoff could incrementally increase either the extent or the duration of this existing flooding by utilizing additional conveyance and storage capacity in downstream sewer lines.

As now proposed, the approximately 16.3-acre former Schlage Lock property within Redevelopment Zone 1 would be cleared and completely rebuilt with a mix of residential, commercial, and cultural uses. Based on diagrams in the 2008 Design for Development, an estimated 3.0 acres would be landscaped open space, or 18.4 percent of Zone 1. This would represent a substantial increase in pervious surface over existing conditions, in which virtually the entire property is covered by impervious buildings and pavement. Based on the calculations presented in subsection 12.1.2 (Rainfall and Runoff) of this chapter, these changes would lower the site's existing runoff coefficient by approximately six percent, from 0.88 to 0.83, resulting in an equivalent reduction in both peak runoff rates and the total volume of runoff as compared with existing conditions. Because there would be less stormwater runoff from Zone 1 under Project conditions, the Project would be expected to result in an incremental improvement in existing neighborhood drainage and flooding conditions.

Within the remaining Project Area (i.e., Redevelopment Zone 2, primarily along the west side of Bayshore Boulevard and along Leland Avenue) there are few vacant lots, and it appears most developed properties are already built-out to the limit of their setbacks. As a result, anticipated moderate levels of infill development facilitated by the redevelopment program would not be expected to significantly change existing runoff conditions. Some *benefit* may be achieved through the proposed replacement of some existing pavement and concrete in public right of ways with landscaping (e.g., street landscaping and sidewalk improvements). Such "green street" improvement actions are a recognized mechanism for reducing runoff rates and capturing pollutants within urban areas, although the amount of benefit cannot be quantified until all of the anticipated improvements have been identified and designed. It is reasonable to

assume that enough reduction in areawide runoff rates would be achieved to offset the minor increases that might result from future infill development on specific properties.

Because the proposed redevelopment program would not be expected to increase, and may actually decrease, existing runoff rates, the impact of the redevelopment program on stormwater runoff and on associated drainage and flooding conditions would be **less-than-significant** (see criterion 4 in subsection 12.3.1, "Significance Criteria," above).

The above significance determination is based on some uncertainties, such as the amount of new impervious surface that would result from infill development, the amount of existing runoff from Zone 1 that currently enters the sewer system,<sup>1</sup> and the estimated infiltration rate of added landscaped areas in Zone 2. However, it is reasonable to assume that any additional sewer system capacity demand associated with these potential small increases in existing runoff rates would be more than met by the planned construction of the new Sunnydale sewer tunnel (see section 12.1, Setting, above).

**Mitigation.** No significant Project impact associated with flooding potential has been identified; no mitigation is required.

**Impact 12-1: Potential Water Quality Impact Due to Increased Stormwater Runoff.** Runoff resulting from redevelopment program-facilitated development would contribute to existing combined sewer overflows from the City's sewer system, particularly into Candlestick Cove from the Harney Way box culvert. Although the City is currently in compliance with the NPDES CSO Control Policy, these overflows have the potential to degrade water quality within San Francisco Bay. In addition, since the redevelopment program would result in more traffic in the Project Area and vicinity, the deposition of vehicle-generated urban pollutants that could be washed into storm drains and eventually the Bay would likely increase. These potential adverse water quality effects represent a **potentially significant impact** (see criteria 1, 5, 6, and 11 in subsection 12.3.1, "Significance Criteria," above).

As noted above, total runoff in the Project Area would not be expected to increase substantially, and additional conveyance and storage capacity should be available within the local sewer system prior to redevelopment program-facilitated construction. As a result, the Project would not be expected to increase the existing frequency or total volume of CSOs, either at the SEWPCP or at the Harney Way storage culvert discharge to Candlestick Cove. In addition, as part of its effort to further reduce the frequency of CSOs in anticipation of more restrictive federal requirements, the SFPUC plans to impose revised stormwater design requirements on all developments above a minimum size (see subsection 12.2.3 above).

Based on diagrams in the 2008 Design for Development, approximately 18.4 percent of Zone 1 would be reserved for landscaped open space. Calculations presented above (i.e., a reduction in runoff coefficient from 0.88 to 0.83) indicate that this would reduce the runoff coefficient by approximately 9 percent, plus it is recognized that landscape features, tree

<sup>1</sup>More of this runoff than assumed could now be lost as overland flow to the south of Sunnydale Avenue, so total post-redevelopment flow to the sewer could rise if this overland flow is all captured by new on-site storm drains.

wells, and rain gardens not shown in the Design for Development would lower the runoff coefficient (by increasing the amount of pervious surface) by an undetermined amount. In addition, further reductions could be achieved by using permeable pavers or similar materials that permit infiltration on interior roads, public plazas, and other normally “hardscaped” areas.<sup>1</sup> Sample calculations indicate that an increase of approximately 3.9 acres in the Zone 1 total pervious area would be needed to reach a hypothetical 25 percent reduction target.<sup>2</sup> If residual soil contamination or inadequate infiltration rates eliminate the feasibility of on-site infiltration, the SFPUC would work with the Zone 1 project applicant(s) to implement other BMPs to meet stormwater management goals.<sup>3</sup>

It has yet to be determined how the Zone 1 buildout characteristics would meet the proposed SFPUC requirement to retain on-site or temporarily detain at least 80 percent of total annual runoff. A retention-only system would require a large amount of storage capacity,<sup>4</sup> so most runoff from Zone 1 would probably have to be detained and routed through on-site treatment facilities, then discharged to the combined sewer system.

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<sup>1</sup>It is noted that the remediation plan described in chapter 11 (Hazards and Hazardous Materials) of this EIR would have to be completed before construction of any improvements designed to infiltrate rainfall into the ground because the additional water could spread the existing plume of contaminated groundwater.

<sup>2</sup>A hypothetical 25 percent reduction in the runoff coefficient was presented by SFPUC staff to the EIR hydrology consultant to demonstrate how stormwater management performance measures could be applied to Zone 1 development. It is emphasized here that the 25 percent reduction is not a currently mandated or proposed SFPUC performance measure, but an example used for illustrative purposes only. The SFPUC continues to review and refine its performance measures prior to finalizing its new stormwater ordinance (see subsection 12.2.3 of this EIR chapter).

The use of permeable pavers can be more effective than landscaping in lowering a site’s runoff coefficient, since they can be expected to infiltrate as much as 90 percent of total rainfall except during very severe rainfall events (such as a 10-year storm). Using this assumption, the area of permeable pavers that might be needed in Zone 1 development to reduce the existing runoff coefficient of 0.88 by 25 percent can be estimated as follows:

$$\frac{\{(3.0 \text{ ac. Indscp.} \times 0.5) + (\text{Paver area} \times 0.2) + [(13.3 \text{ ac. impervious} - \text{Paver area}) \times 0.9]\}}{16.3 \text{ ac. site} = (0.88 \times 75\%)}$$

Req’d. permeable paver area = 3.9 acres.

<sup>3</sup>Minick.

<sup>4</sup>In order to achieve 80 percent capture and retention in Zone 1, storage areas would have to accommodate the runoff from all storms smaller than about 0.8 inches of total rain (from Landscape Architecture Technical Information Series and the *New and Redevelopment Handbook for Best Management Practices*, both by the California Stormwater Quality Association). If the site has a net runoff coefficient of 0.66, the minimum storage requirement during this design storm event would be approximately 265,000 gallons:

$$(16.3 \text{ acres} \times 0.66) \times (0.8" \text{ rain}) = 0.717 \text{ acre-feet} = 31,240 \text{ cubic feet} = 233,675 \text{ gallons.}$$

This water would then have to either be used on-site or infiltrate into the ground to free up capacity for the next storm, since the 0.8-inch design storm represents only about four percent of total annual rainfall. Irrigation demands are normally very low during the rainy season, so extensive infiltration beds would probably be needed if the development is to meet more than a small percentage of the proposed 80 percent annual capture requirement through the use of retention facilities.

In Zone 2, it appears that only a limited number of parcels larger than 5,000 square feet are located along the west side of Bayshore Boulevard, and none along Leland Avenue, so application of proposed SFPUC requirements (see subsection 12.2.3 of this chapter) would be limited. Since there are no actual development proposals as yet for these infill properties, it is unknown how any required retention/detention facilities would be incorporated into future changes in use. The imposition of increased setbacks or installation of some type of permeable pavers, however, would be a straightforward means of reducing each site's runoff coefficient.

**Mitigation 12-1A.** To comply with anticipated SFPUC regulations regarding stormwater runoff from Redevelopment Zone 1, the developer(s) shall refine the individual development design(s) for Zone 1 as necessary to: (1) provide retention storage facilities and/or detention treatment facilities as needed to ensure that at least 80 percent of total annual runoff either remains on-site or receives an approved level of water quality treatment before discharge into the combined sewer system; and (2) provide a minimum of 25 percent of the surface of setbacks to be pervious. Implementation of these measures would reduce the water quality impact associated with future development of Zone 1 to a ***less-than-significant level***.

It is expected the SFPUC will require qualifying individual developments to utilize long-term source control and/or pre-discharge treatment measures for non-point source pollutants similar to those set forth in its 2003-2004 *Stormwater Management Plan*, which was developed for properties that do not drain to the combined sewer system (see section 12.2.3 herein). Source control measures typically include painting "Drains to the Bay" labels on storm drains, enforcing strict prohibitions on the use or disposal of contaminants, prohibiting the use of non-biodegradable fertilizers and pesticides, restricting vehicle maintenance and washing to areas not directly connected to the storm drain system, and regular cleaning and maintenance of all streets and parking areas, particularly at the onset of the rainy season, to reduce the build-up of the urban pollutants and debris that are normally washed into storm drains. Permeable pavement and infiltration basins also qualify as source controls, since they reduce the total amount of stormwater runoff.

For Redevelopment Zone 1, the SFPUC has noted that many creative options would exist for complying with stormwater performance standards, especially since the Zone 1 proposed development program has been accepted into the LEED-Neighborhood Developments Pilot Program for "green" projects (see EIR chapter 3, Project Description). Such options could include eco-roofs (e.g., roofs with grass), flow-through planters, rain screens (on exterior walls), and urban forestry,<sup>1</sup> all of which are consistent with guidelines in the *Visitacion Valley/Schlage Lock Design for Development*.

Pre-discharge treatment measures can also be put in place to remove stormwater pollutants that bypass source controls. Such measures are typically designed in accordance with best management practices (BMPs), and can be further categorized as either *active* or *passive*. The *active* category typically refers to either straight media filtration or to media filtration combined with hydrodynamic separators for removal of oil and grease, sediment, and debris. Simple filters can be installed in individual catch basins, while the much larger filter/separators are installed as "end of the line" structures that treat the runoff collected by

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<sup>1</sup>Minick.

many catch basins before it is discharged off-site. Both types of treatment measures require regular inspection, cleaning, and disposal of trapped pollutants, which generally makes them more effective on commercial or high-density residential sites, where a single owner or a homeowners' association is responsible for areawide maintenance.

*Passive* pre-discharge treatment methods generally utilize either small ponds or gently sloping swales to achieve pollutant removal through sedimentation and/or filtration. Ponds (or, in some applications, subsurface infiltration galleries) provide an opportunity for sediments to settle out and for a significant proportion of the total runoff to seep into the soil before off-site discharge, while grass-lined swales (biofilters or, more commonly, bioswales) pick up pollutants as the water slowly filters through the surface vegetation. Pollutants trapped in the sediment or adhering to the grass in both ponds and bioswales are then removed by regular maintenance.

*Approval Process.* The design of all long-term water quality protection measures to be incorporated into individual developments within Zone 1 as retention storage and/or detention treatment would be the responsibility of the development sponsors, subject to approval by the SFPUC and the SFDPW. The specific design of stormwater treatment and storage measures would be key elements of future Infrastructure, Streetscape, and Open Space Plans to be developed collaboratively between the Redevelopment Agency, City departments, and developer(s). Selection of the appropriate source control and pre-discharge treatment measures, as well as establishment of a long-term maintenance and operation program through the life of the development, would need to be closely coordinated with both the SFPUC and the SFDPW to confirm that the program conforms with current state and federal clean water regulations and with local goals for protection of water quality in San Francisco Bay.

Because the design of these measures must also conform with SFPUC regulations that have not been finalized or adopted, it is unknown what form they might take or the degree to which they would alter existing runoff patterns. However, it is expected the increase in pervious cover would help reduce total sewer system flows to the Harney Way box culvert and the SEWPCP, thereby reducing the frequency of combined sewer overflows. In addition, to the extent the proposed 80 percent capture requirement is met through retention and/or detention storage that holds runoff on-site until capacity becomes available within downstream sewer facilities, the frequency of combined sewer overflows would be further reduced. Finally, the removal of pollutants from urban runoff before discharge to the combined sewer system would help the City remain in compliance with the EPA Combined Sewer Overflow (CSO) Control Policy by providing pre-treatment and contaminant reduction for urban runoff directed to the sewer system.

Sponsors of the proposed Zone 1 development program have had discussions with the City of Brisbane regarding the possibility of routing the property's stormwater runoff across the City/County line into a stream-creation project that is currently being considered on the adjoining Baylands Specific Plan properties to the south, between Bayshore Boulevard and the railroad.<sup>1</sup> If the stream project comes to fruition, it is assumed that runoff from Zone 1 would require treatment in accordance with standard NPDES requirements for discharges to separate storm drain systems before it is released to a new stream channel. Application of these requirements, which would most likely be imposed by the City of Brisbane in cooperation with the SFPUC and the SFDPW, would be expected to reduce the water quality

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<sup>1</sup> John Swiecki, Principal Planner, City of Brisbane; personal communication, December 10, 2007.

impacts associated with the proposed Zone 1 development to a less-than-significant level. In addition, diverting this runoff away from the City's combined sewer system would substantially reduce wet weather flows generated by the Visitacion Valley redevelopment program, and so help the SFPUC achieve its goal of further reducing future combined sewer overflows.

**Mitigation 12-1B.** Stormwater design requirements similar to those described above for the Zone 1 development shall also be applied to individual infill developments in Zone 2 that meet the proposed SFPUC minimum size criteria. Implementation of these measures would reduce the water quality impact associated with future development of these parcels to a ***less-than-significant level***.

Implementation of runoff reduction, retention storage, and detention treatment measures may be difficult to achieve on parcels as small as 5,000 square feet. As a result, it is expected the SFPUC will provide extensive design guidance for on-site measures, as well as identify potential opportunities for off-site, compensatory stormwater mitigation to assist those property owners for whom on-site mitigation might be infeasible.

**Impact 12-2: Increased Risk of Soil Erosion and Contaminant Spills During Project Remediation and Construction.** Excavation required for remediation and construction in the Project Area would create a potential for individual on-site soil erosion, which could lead to increased sediment accumulation in downstream sewer lines and, in the event of a combined discharge (CSO), potentially higher turbidity levels in San Francisco Bay. In addition, remediation and construction activities would introduce the potential for fuel or hazardous material spills. If these materials are washed into the sewer system, they could upset the treatment process at the SEWPCP and, if they are part of a CSO, contribute to pollution in the Bay. This increased risk of soil erosion and contaminant spills represents a ***potentially significant impact*** (see criteria 1, 5, 6, and 11 in subsection 12.3.1, "Significance Criteria," above).

Following the completion of individual project construction and the establishment of new vegetation, the likelihood of continuing on-site erosion in the Project Area would be largely eliminated, because most disturbed ground would be stabilized underneath buildings, pavement, and landscaping. Although there are no estimates of either the total volume of excavation or the amount of offhaul and/or imported fill that may be needed to complete all Project-facilitated construction in the Project Area, it is estimated that approximately 46,000 cubic yards of soil will be excavated and handled on the Schlage Lock/Ingersoll-Rand property as part of the environmental clean-up (remediation) process (see EIR chapter 11--Hazards and Hazardous Materials, subsection 11.1.2--Historical Uses and Ongoing and Future Remediation Activities in Redevelopment Zone 1). Without proper controls, these activities would expose loose soils to both wind and water erosion. In addition, spilled or improperly used construction materials--such as fuel, paint, cement, or solvents--could seep into underlying groundwater or be washed into the sewer system through local catch basins.

As a condition of grading or building permit issuance, and in accordance with National Pollution Discharge Elimination System (NPDES) regulations (see previous section 12.2, Regulatory Framework), sponsors of development within Redevelopment Zone 1 would prepare a Storm Water Pollution Prevention Plan (SWPPP) for implementation throughout construction to control on-site erosion and to prevent the off-site discharge of stormwater pollutants, subject to approval by the SFPUC and the SFDPW. (Additional mandatory requirements for hazardous materials remediation are described in EIR chapter 11, Hazards and Hazardous Materials).

Because the Project Area does not drain to a municipal storm drain system that discharges directly to surface waters, individual proposed developments would not be required under federal law to obtain an NPDES General Construction Permit from the State Water Resources Control Board (SWRCB). However, sponsors of development within Zone 1 would be required to prepare a SWPPP as described in the SWRCB General Permit to ensure there would be no Project-generated increase in sedimentation, turbidity, or hazardous material concentrations in downstream receiving waters. It does not appear that any parcels in Zone 2 would meet the NPDES minimum disturbance limit of one acre, so it can be assumed their individual water quality impacts would be less-than-significant. It is recognized, though, that the SFPUC may also elect to extend construction-period pollution controls to individual developments as small as the 5,000-square-foot minimum now proposed by the SFPUC for runoff reduction and treatment controls.

**Mitigation 12-2.** For future development within Zone 1, design requirements and implementation measures for minimizing Project-generated erosion and for controlling fuel/hazardous material spills would be set forth in the Zone 1 SWPPP, in accordance with SWRCB and RWQCB design standards. During construction, the SFDPW would monitor implementation of the approved SWPPP. This plan shall include, at a minimum, the following or similar actions:

- Following demolition of existing improvements, stabilize areas not scheduled for immediate construction with planted vegetation or erosion control blankets;
- Collect stormwater runoff into stable drainage channels from small drainage basins, to prevent the buildup of large, potentially erosive stormwater flows;
- Direct runoff away from all areas disturbed by construction;
- Use sediment ponds or siltation basins to trap eroded soils before runoff is discharged into on-site channels or the combined sewer system;
- To the extent possible, schedule major site development work involving excavation and earthmoving activities during the dry season (May through September);

**(continued)**

**Mitigation 12-2 (continued):**

- Develop and implement a program for the handling, storage, use, and disposal of fuels and hazardous materials. The program should also include a contingency plan covering accidental hazardous material spills;
- Restrict vehicle cleaning, fueling, and maintenance to designated areas for containment and treatment of runoff; and
- After construction is completed, inspect all on-site drainage facilities for accumulated sediment, and clear these facilities of debris and sediment as necessary.

Implementation of these measures would reduce the risk of soil erosion and contaminant spills during Project remediation and construction to a ***less-than-significant level***.

It has been demonstrated that the measures in *Mitigation 12-2*, when properly designed and implemented, can reduce effects on the quality of stormwater runoff from construction sites to less-than-significant levels. However, it is further recommended that individual development sponsors consider the use of additional measures, as described in the *Construction Handbook of Best Management Practices*,<sup>1</sup> to address conditions specific to each development site.

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<sup>1</sup>Camp Dresser & McKee, Larry Walker Associates, Uribe & Associates, and Resources Planning Associates, for the State Stormwater Quality Task Force (a municipal agency advisory body); *California Storm Water Best Management Practice Handbooks: Construction Activity*, March 1993.