Draft Environmental Impact Report

Wood Street Project



City of Oakland

September 21, 2004

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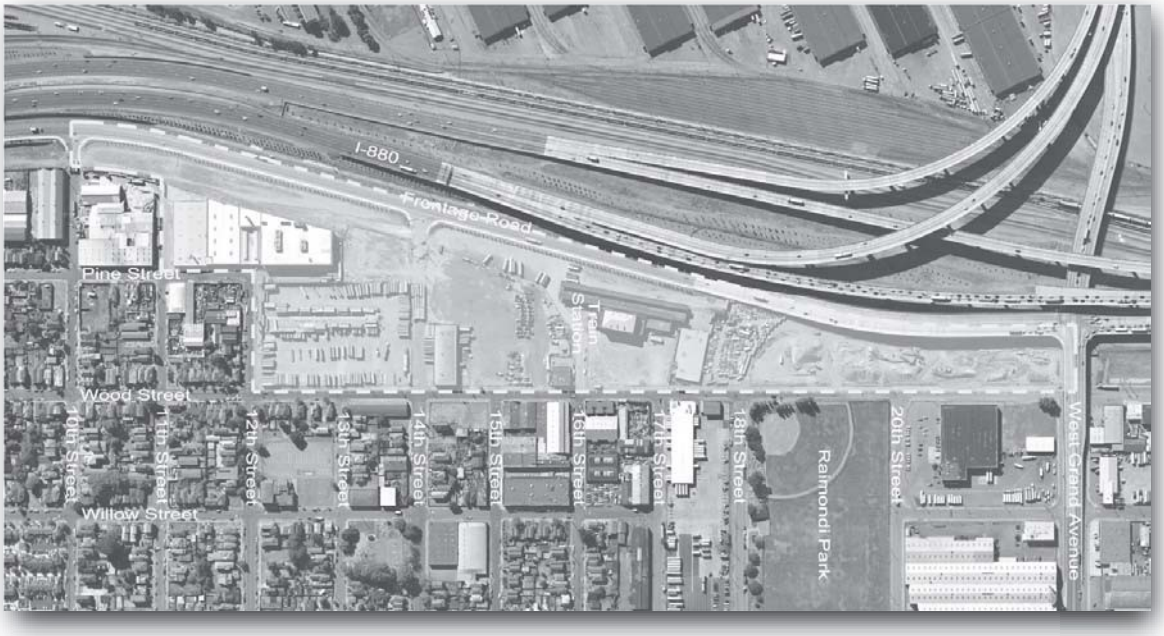

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September 21, 2004

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Section 1
Introduction

1.1 Purpose of the Environmental Impact Report (EIR)

An EIR is an informational document, prepared in conformance with the California Environmental Quality Act (CEQA), and written for the purpose of making the public and decision-makers aware of the environmental consequences of a project. For any consequence, or project impact, that is considered "significant," the EIR identifies mitigation measures, where feasible, to reduce or avoid the significant impact. An EIR must also consider the objectives of a project and identify whether there might be alternative ways of accomplishing those objectives while substantially reducing the project's impacts. The lead public agency must ultimately certify that it has reviewed and considered the information in the EIR and that the EIR has been completed in conformity with the requirements of CEQA, before any action is taken to approve the project.

1.2 Project Overview

The Wood Street Project (the Project) proposes pedestrian-oriented, mixed-use, residential, live/work and commercial developments on approximately 29.2 acres of underutilized industrial and vacant lands centered around the historic 16th Street Train Station. The Project Area is generally bounded by 10th Street, Wood Street, West Grand Avenue, and the 7th Street – West Grand Avenue frontage road (parallel to Interstate 880) in West Oakland (the Project Area). BUILD West Oakland, LLC; Central Station Land, LLC; PCL Associates LLC; and HFH Central Station Village, LLC (collectively, the Project Sponsors) each own one or more distinct development areas that make up the Project Area. Each Project Sponsor would construct individual developments within the Project Area on independent timelines in accordance with a proposed Wood Street Zoning District to be created for the Project Area. The proposed Wood Street Zoning District, which requires approval by the City, proposes zoning standards, design guidelines, and other regulations for the development and use of property within the Project Area, which are collectively referred to as the proposed Wood Street Zoning Regulations. Given the geographic proximity of these developments and the comprehensive planning proposed, these developments will be evaluated in a single project-level EIR for purposes of environmental review under CEQA.

The Project is designed to facilitate the revitalization effort envisioned by the *Oakland Army Base Area Redevelopment Plan*. The Project Area lies within the Redevelopment Plan's 16th/Wood sub-district. Implementation of the Project would result in:

- The construction of over 1,000 townhouses, apartments, and live/work lofts;
- The provision of office and retail space;

- The restoration of the vacant historic 16th Street Train Station Main Hall formerly owned and operated by the Southern Pacific Railroad;
- The creation of a public plaza that could be used for community events, public gatherings, and/or farmers' markets, as well as additional open space;
- Streetscape, landscape, open space, and infrastructure improvements in the Project Area; and
- The environmental clean-up of existing hazardous materials contamination.

This EIR is intended to provide CEQA clearance for all approvals or permits required for implementation of the Project. This EIR may be used for the following discretionary actions including but not limited to:

- General Plan Amendment
- Zoning Code Amendment and Rezoning
- Redevelopment Plan Amendment
- San Francisco Bay Conservation Development Commission Bay Plan and Seaport Plan Amendments
- Accommodation of port priority use designation elsewhere
- Vesting Tentative Parcel Maps
- Final Design Review
- Preliminary and Final Development Plans
- Tree Removal Permits

1.3 THE ENVIRONMENTAL REVIEW PROCESS

Scoping the EIR

As the principal public agency responsible for approving the Project, the City of Oakland is the "lead agency" in overseeing and administering the CEQA review process. Given the size, scale, and potential impacts resulting from the Project, the City of Oakland determined that an EIR should be prepared for the Project. The City distributed an initial Notice of Preparation on December 2, 2003, and a revised version on January 21, 2004, announcing its intent to prepare and distribute an EIR on the Project. The Notices of Preparation were distributed to interested organizations and groups, as well as other public agencies that may have a role in the review or issuance of permits for the Project. These other public agencies are known as "responsible agencies." Pursuant to CEQA, recipients of a Notice of Preparation have 30 days to respond to the lead agency with information that may be useful

in preparing the EIR or with potential issues that should be explored in the EIR. Appendix A contains a copy of both Notices of Preparation and copies of all letters received in response to the Notices.

After issuance of the initial Notice of Preparation, the City conducted a public scoping meeting before the Planning Commission on December 17, 2003. The purpose of the scoping meeting was to provide the community with an opportunity to ask questions about the Project and to voice concerns or identify issues that should be discussed in the EIR. Concerns that relate to such changes in the physical environment, such as increased traffic congestion, degradation of air quality, and loss of significant cultural resources, are suitable topics for inclusion in an EIR (see further discussion in Section 1.4, Organization and Emphasis, of this EIR).

Draft EIR

This Draft EIR assesses the potentially significant effects of implementing the Project. This includes an evaluation of the development proposed for the Project Area overall, as well as an analysis of the proposed development within specific areas in the Project Area. This EIR is considered a draft under CEQA since it must be reviewed and commented upon by public agencies, organizations, and individuals.

Public Review

This Draft EIR is being distributed for a 45-day public review and comment period to responsible agencies and interested organizations and community members. Readers are invited to submit written comments on the adequacy of the document, i.e., whether this Draft EIR identifies and analyzes accurately the full range of possible environmental impacts and recommends feasible mitigation measures. Comments are most helpful when they include specific suggestions to correct, clarify, or expand the EIR analysis.

Written comments should be submitted to:

City of Oakland
Community and Economic Development Agency
Attn: Margaret Stanzione
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612
mstanzione@oaklandnet.com

In accordance with the City of Oakland Zoning Code requirements, a public hearing will be held before the City Planning Commission to consider the EIR and obtain additional comments from the decision-makers and members of the public. The hearing will be duly noticed in local newspapers, and hearing notices will be mailed to responsible agencies and interested parties.

Final EIR

Following the close of the public review and comment period, responses will be prepared to address all substantive written and oral comments received on the Draft EIR. The Final EIR will consist of this Draft EIR, comments received during the public review period and responses to those comments, and any revisions to the Draft EIR as a result of public agency and public comments.

Project Review and Approval

Before a lead agency can take action on a project, it must make written findings that the environmental effects of the project have been represented in an EIR and that it has considered these effects in its decision-making process. If the Final EIR identifies significant physical effects that cannot be mitigated to a less-than-significant level, the lead agency may still approve the project so long as the agency finds substantial evidence in the record to support project approval based on the Final EIR and/or other information in the record. This finding is known as a "Statement of Overriding Considerations," which seeks to document a balancing of the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve the project. This statement must be included in the administrative record of the project approval.

1.4 Organization and Emphasis of this EIR

Organization

This Introduction provides an overview to the environmental review process and the City of Oakland's responsibilities in administering CEQA for the Project. Section 2 provides a detailed description of the Project, the Project Sponsors' objectives, and the various entitlements and actions that must be taken by the City and other public agencies for the Project to be implemented.

Section 3 describes the existing environmental conditions surrounding the Project Area and presents the analyses of the environmental consequences of the Project, highlighting significant impacts and proposing mitigation measures to avoid or reduce those effects. The EIR covers land use, visual quality, transportation, noise, air quality, cultural resources, hazardous materials, geology, hydrology, biological resources, population/housing/employment, utilities, and public services.

Section 4 presents other CEQA-required topics including a summary of significant and unavoidable, growth-inducing, and cumulative impacts.

Section 5 explores and evaluates project alternatives that could feasibly achieve the Project Sponsors' objectives while substantially reducing significant impacts.

Emphasis of the EIR

Section 15382 of the State CEQA Guidelines states that the purpose of an EIR is to address changes in the physical environment. The topics covered in Section 3 of this EIR are those that define the physical environment. Section 15131 of the CEQA Guidelines specifies that economic or social effects of a project shall not be treated as significant effects on the environment. However, an EIR may trace a chain of cause and effect suggesting that economic and social factors contribute to a physical change that would be significant. These intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes. Accordingly, this EIR concentrates on physical changes that would be caused through implementing the Project and its development components.

In presenting this information, the EIR shall focus on the significant physical effects on the environment that occur as a result of the Project. The significant effects should be discussed with emphasis in proportion to their severity and probability of occurrence (CEQA Guidelines Section 15143). The point of declaring this emphasis is to recognize that the EIR should be used to help decision-makers arrive at informed opinions about the project. The EIR must provide a sufficient degree of analysis to ensure that when the lead agency acts on the project, it has an understanding of the potential environmental consequences. The certification of an EIR does not mean that the lead agency approves the project; rather, it means that the lead agency has complied with the CEQA review process. The EIR is only one source of information that the lead agency may consider with respect to the merits of the project.

Section 2
Project Description

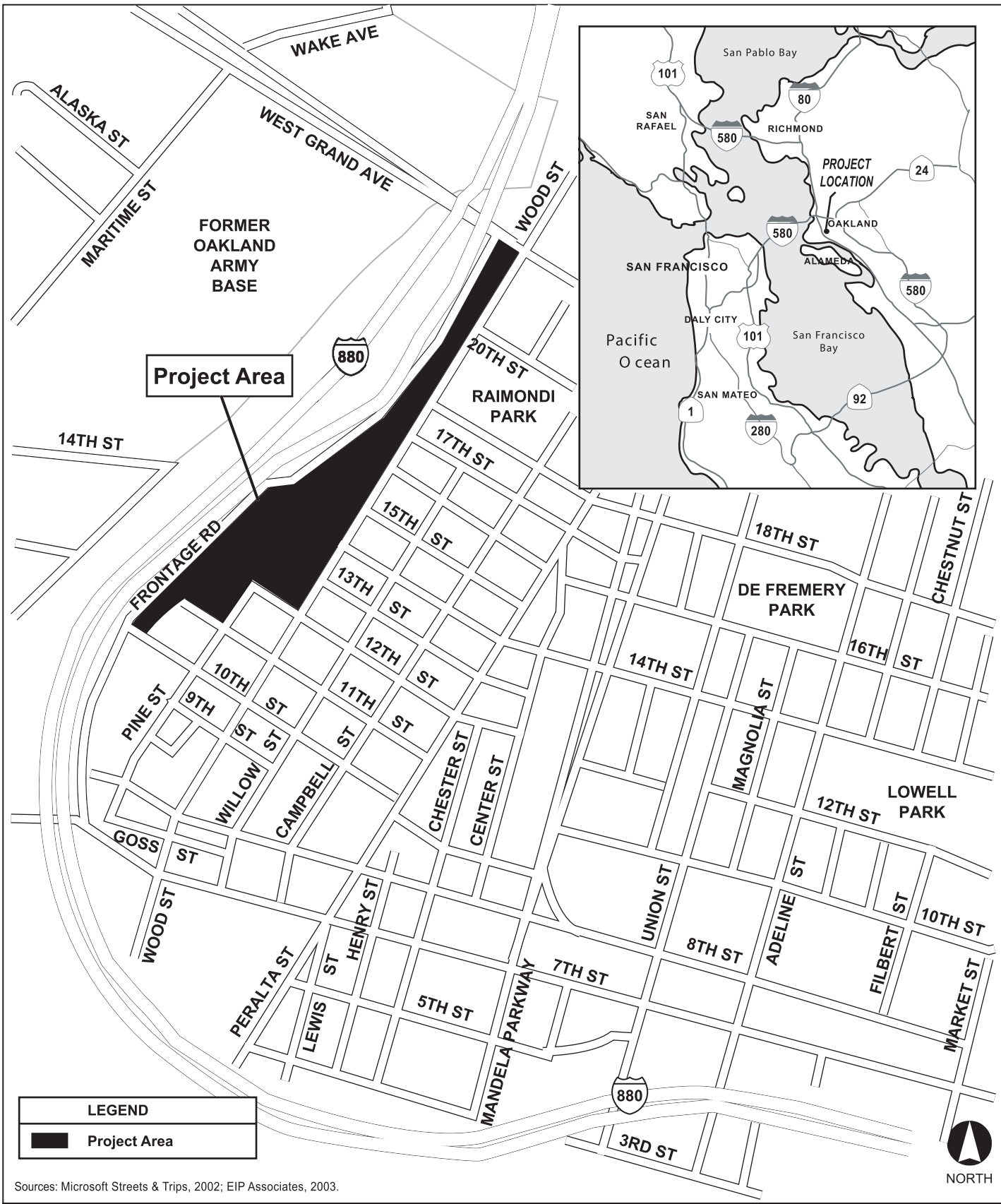
2.1 PROJECT OVERVIEW

In response to the increasing demand for flexible residential uses in the urban area near downtown Oakland and within reach of major transit facilities, a project is proposed to redevelop the underutilized industrial land around the historic 16th Street Train Station into pedestrian-oriented, mixed-use, residential, live/work and commercial developments. The combination of proposed developments are collectively referred to as the Wood Street Project (Project). The Project Sponsors for this Project in West Oakland are BUILD West Oakland, LLC; Central Station Land, LLC; PCL Associates, LLC; and HFH Central Station Village LLC. Each Project Sponsor owns portions of land within the 29.2-acre Project Area and each proposes to construct separate developments within the Project Area on individual time lines. Individual developments would be visually and functionally integrated through the application of a proposed Wood Street Zoning District for which the Project Sponsors are requesting City approval. The zoning standards, design guidelines, regulations, and other requirements for the development and use of property within the Wood Street Zoning District are attached as Appendix H and referred to herein as the Wood Street Zoning Regulations. Individual Project Sponsors would have flexibility in developing individual properties; however, each property would be developed in accordance with these regulations and other requirements established for the entire Project Area.

For purposes of this EIR, the Project Area has been divided into nine development areas proposing in aggregate over 1,000 residential units, retail and office space, rehabilitation of the interior and exterior of the historic 16th Street Train Station Main Hall and nearby 16th Street Signal Tower, and preservation of a portion of the elevated tracks. To encourage public access to the restored 16th Street Train Station, the Project also proposes to create an approximate 0.75-acre public plaza in front of the station. Other public and private open space is proposed as well.

2.2 PROJECT LOCATION AND SETTING

The Project Area is located in West Oakland and consists of approximately 29.2 acres. Generally bounded by 10th Street, Wood Street, West Grand Avenue and the frontage road and I-880 (see Figure 2-1), the Project Area lies within the 16th/Wood sub-district of the Oakland Army Base Redevelopment Project Area. (A discussion of the *Oakland Army Base (OARB) Area Redevelopment Plan* as it relates to the Project Area is presented later in Section 2.4, Project's Relationship to the Oakland Army Base Redevelopment Plan.) The Project Area slopes gently from the southern corner to the north, but is relatively flat, contains little vegetation, and lies at an elevation of approximately ten feet above mean sea level. Currently zoned for industrial uses, the Project Area, in terms of acreage,



Sources: Microsoft Streets & Trips, 2002; EIP Associates, 2003.

EIP ASSOCIATES

FIGURE 2-1
Project Location

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Wood Street Project Draft EIR

is largely undeveloped with the exception of a commercial building at 16th and Wood Streets (Bea's Hotel), several warehouses (at Pine Street between 11th and 13th Streets, 14th and Wood Streets, and 17th and Wood Streets), and the 16th Street Train Station Main Hall and associated structures, along with railroad spurs, and truck and empty rail car storage. Table 2-1 describes existing parcel and ownership information for each of the proposed development areas.

Table 2-1
Development Area Ownership and Parcel Data

Development Area	Owner	Existing Assessor Parcel Number(s)	Acreage	Existing Developed Space (square feet)
One	BUILD West Oakland, LLC	0-315-6	2.89	0
Two	PCL Associates LLC	6-29-2	3.67	220,779
Three	BUILD West Oakland, LLC	6-29-1 0-315-6	5.59	0
Four	HFH Central Station Village, LLC	0-310-12, 0-310-13. 7-556-7-1, 7-556-7-2	6.33*	25,756*
Five	BUILD West Oakland, LLC	0-310-13	0.52	15,427
Six	BUILD West Oakland, LLC	0-310-13	3.04	27,472
Seven	Central Station Land, LLC	0-310-14, 0-310-7-7	2.65	0
Eight	Central Station Land, LLC	0-310-3-8, 0-310-3-9. 0-310-3-10, 0-310-3-11	2.01	0
Nine	BUILD West Oakland, LLC	0-310-13	0.75	0
			27.45	289,434
		Acreage Proposed for Dedication	1.75	
		Total Project Area Acreage	29.20	

Source: Project Sponsors, July 2004.

Note:

* Bea's Hotel is within this development area but is not owned by HFH Central Station Village, LLC. The Project intends to include Bea's Hotel, and the assessment in this EIR evaluates impacts as if it were part of the Project. If Bea's Hotel does not become part of the Project, the environmental impacts are addressed as a Project alternative in Section 5, Alternatives.

The half-mile vicinity surrounding the Project Area contains a wide range of land uses, with light to heavy industrial/commercial uses and residential uses predominating. The area northwest of the Project Area includes the frontage road and I-880 and is primarily industrial, consisting of transportation-related uses, largely associated with the former Oakland Army Base. Land to the east of the Project Area consists of predominantly industrial uses, along with a public park and single-family residential development. To the south, the majority of the area is occupied by single-family residential uses, as well as a church on 13th Street, a few vacant buildings, and a recycling facility. To the west across I-880 are transportation-related and other industrial uses associated with the Port of Oakland and the former Oakland Army Base.

2.3 PROJECT SPONSORS' OBJECTIVES

In pursuit of redevelopment of the Project Area, specific objectives of the Project Sponsors include:

- Developing market-rate residential units at urban densities, which provide rental and ownership opportunities with a variety of housing types (including live/work units) and unit sizes that would be available to a range of market-rate household income levels;
- Expanding West Oakland's market-rate occupied housing stock to encourage local-serving retail development and to attract private construction and mortgage lenders to this sub-market;
- Developing urban infill housing with convenient transportation access near the center of the Bay Area, which would serve to divert housing from outlying areas and reduce long-distance commute traffic and related pollution;
- Redeveloping and revitalizing underutilized or vacant land within the Oakland Army Base Redevelopment Project Area to create vibrant pedestrian-oriented, mixed-use, residential and commercial developments while providing for flexible land uses;
- Protecting and enhancing, in an economically viable manner, the historically, culturally and architecturally significant elements of the 16th Street Train Station through their restoration, rehabilitation and reuse;
- Creating publicly accessible open space directly in front of the 16th Street Train Station in the form of a plaza to facilitate the community's enjoyment of the Station as an important historic asset;
- Providing additional open space throughout the Project Area in order to give a sense of visual and spatial relief to the residents and the community;
- Providing for the undergrounding of utilities and also providing extensive off-site improvements to existing, old infrastructure with respect to the streetscape, sidewalks, lighting and parking; and
- Constructing financially feasible developments with sufficient flexibility to adjust to market needs and provide reasonable returns on investments so as to secure construction and long-term financing.

2.4 PROJECT'S RELATIONSHIP TO THE OAKLAND ARMY BASE AREA REDEVELOPMENT PLAN

In July 2000, the City of Oakland approved for the *Oakland Army Base Area Redevelopment Plan*, establishing a redevelopment project area and a program of redevelopment, rehabilitation and revitalization for this area. The redevelopment project area is approximately 1,800 acres and is divided into three sub-districts: (1) the approximate 470-acre Oakland Army Base sub-district (OARB sub-district), (2) the approximate 1,290 acre Port of Oakland industrial maritime area (Maritime sub-

district), and (3) an approximate 41-acre area south of West Grand Avenue between I-880 and Wood Street in West Oakland (16th/Wood sub-district) (collectively, OARB Redevelopment Project Area). The 29.2-acre Project Area is contained within the 16th/Wood sub-district of the OARB Redevelopment Project Area. The Project Sponsors are proposing mixed use, commercial and residential development of the Project Area with an emphasis on creating more housing in West Oakland. These uses vary from those presented in the *OARB Area Redevelopment Plan*, which provides the adopted policy basis and direction for the revitalization of this area and designates the area for more non-residential uses. However, the Project advances fundamental goals of the *OARB Area Redevelopment Plan*, by helping to eliminate blight and blighting influences in the area and restoring the 16th Street Train Station.

The Redevelopment Plan recognizes that industrial lands and maritime-related activities should be focused west of I-880. The Redevelopment Plan's goals also include:

- the elimination of physical and economic blighting influences;
- the subdivision of land into parcels suitable for modern, integrated development with improved pedestrian and vehicular circulation; and
- the replanning, redesign, and development of portions … which are improperly utilized.

In keeping with these goals, the Redevelopment Plan redirects the land use focus for the 16th/Wood sub-district from the existing warehousing and distribution uses to office, research and development, light industry, and live/work uses. The Project supports the vision of office and live/work uses, but would still require an amendment to the *OARB Area Redevelopment Plan* to allow for the residential uses proposed.

The EIR for the *OARB Area Redevelopment Plan* identifies potential impacts associated with redevelopment of the OARB Redevelopment Project Area. Mitigation measures for significant impacts were adopted by the Port of Oakland and the City and some are directly relevant to the Project that is the subject of this EIR. The complete Mitigation Monitoring and Reporting Program for the *OARB Area Redevelopment Plan* is reproduced in this EIR as Appendix I and allows readers to conveniently review the mitigation measures adopted for the Redevelopment Plan.

2.5 PROJECT AREA AND DEVELOPMENT AREA LAND USE

To implement the Project Sponsors' objectives and revitalization vision for the Project Area, the Project Area must be rezoned from its current General Industrial Zone (M-30), Light Industrial Zone (M-20), and Industrial-Residential Transition Combining Zone (S-16) to a new zoning district, the Wood Street Zoning District, proposed by the Project Sponsors. This zoning district provides a framework for comprehensive and integrated planning for each of the development areas comprising the Project Area. As part of the proposed Wood Street Zoning District, the proposed Wood Street Zoning Regulations were prepared and encompass all regulations, development standards, design guidelines, and other requirements that would apply to the Project Area. The overall land use, circulation, and design concepts and standards are presented here, followed by specific proposals and

details for each development area. The Draft Wood Street Zoning Regulations are included in their entirety in Appendix H.

Project Area

Land Use Designations

All lands within the Project Area would be classified into three land use designations: Development Areas, Public Open Space, or Public Streets:

- Development Areas are privately owned lots that are intended for development. Nine distinct areas are identified, each permitting a different range of land uses in accordance with the proposed Wood Street Zoning Regulations specific to each area (see Figure 2-2).
- Public Open Space is land where buildings would not be permitted and Public Open Space improvements would be made. Public Open Space Areas in the Project Area is proposed to be developed as pocket parks and plazas for the enjoyment by Project Area residents and the general public.
- Public Streets are lands intended for vehicular, pedestrian, and bicycle access between Wood Street and the frontage road, generally as extensions of 14th, 16th, and 18th Streets. The Project Sponsors will make an irrevocable offer for dedication of these areas to the City. Through vehicular access would not be permitted but the Public Streets would permit through emergency vehicle, bicycle, and pedestrian access.

An Illustrative Concept Plan (Figure 2-3) shows a conceptual arrangement of land uses, open space, and circulation. The largely vacant and underutilized industrial Project Area would be redeveloped with residential uses at densities reflecting the Urban Residential land use designation in the *City of Oakland General Plan* Land Use and Transportation Element, a public plaza in front of the 16th Street Train Station (16th Street Plaza), extensive landscaping and other public improvements along the Project Area perimeter, and pocket parks dispersed throughout the Project Area. Commercial/retail uses would be encouraged on the north and south sides of the 16th Street Plaza, and at other locations in accordance with the proposed Wood Street Zoning Regulations.

Overlay Zones

The proposed Wood Street Zoning Regulations would define three overlay zones that would modify or replace otherwise applicable regulations in portions of the Project Area (see Figure 2-2). The overlay zones would not be stand-alone zones; rather, they would provide further refinement and modification for the underlying development area regulations in response to specific adjoining conditions, such as compatibility with existing neighborhood development. The three overlay zones are:

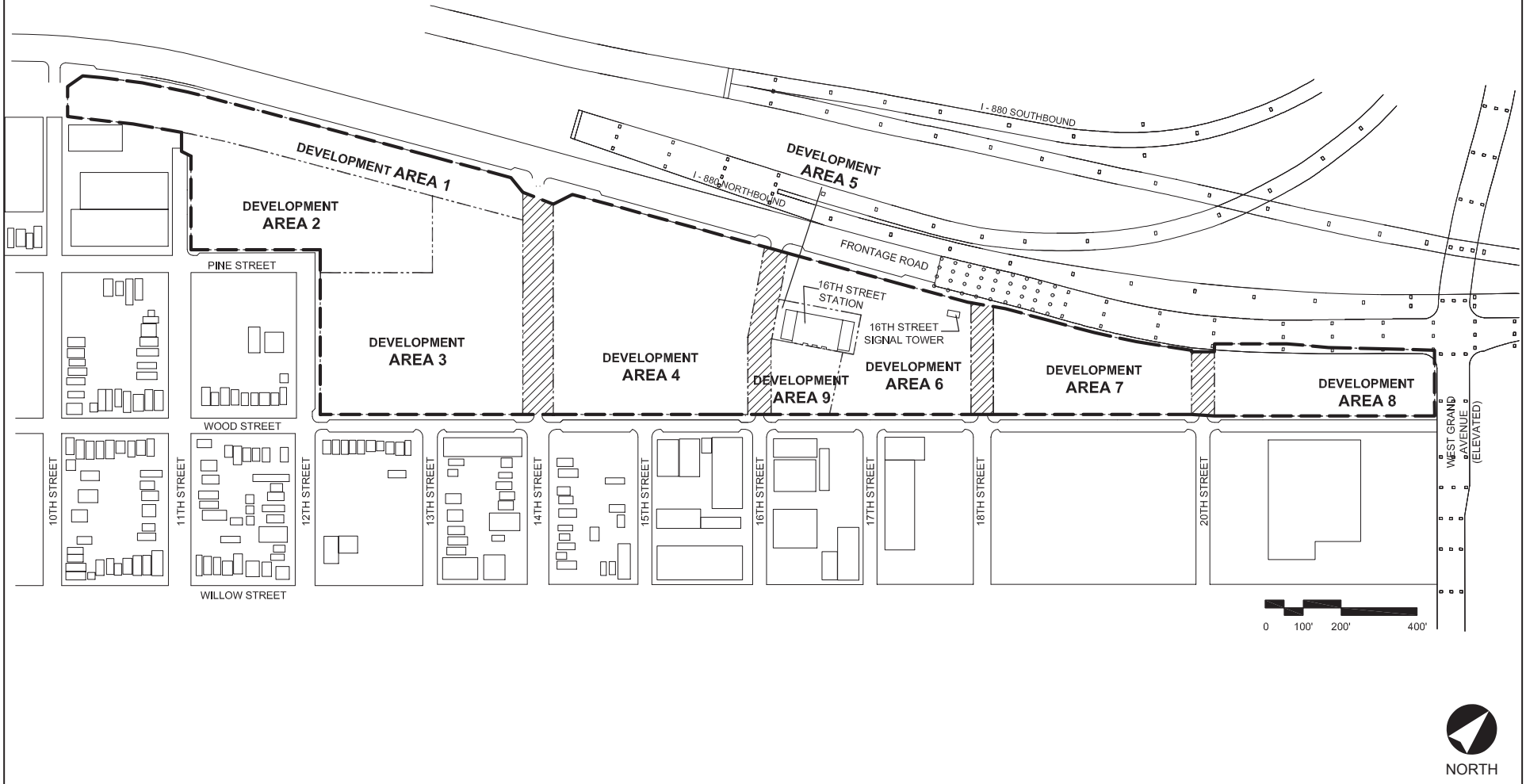

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FIGURE 2-2
Proposed Development Areas

- *Wood Street Overlay Zone* would be established to assure that there is a transition in scale from the existing neighborhood east of Wood Street to the proposed mixed-use development within the Project Area, and to promote an active and pedestrian-scaled street frontage along Wood Street. The Wood Street Overlay Zone would encompass an approximate 30-foot-wide band along Wood Street between 12th and 20th Streets.

- *Plaza Overlay Zone* would be established to encourage new development around the 16th Street Plaza to (1) create a well-defined urban space fronting the 16th Street Train Station; (2) ensure that the scale and heights of new buildings are complimentary to those of the 16th Street Train Station; and (3) provide for ground-floor commercial uses fronting the 16th Street Plaza to the north and south.

- *Frontage Road Overlay Zone* would be established to allow greater flexibility for development facing the frontage road that runs along the Project Area's western boundary. The Frontage Road Overlay Zone would encompass an approximate 20-foot-wide band along the frontage road between 10th Street and the extension of 16th Street.

Wood Street Zoning Regulations

The proposed Wood Street Zoning Regulations set forth the zoning standards, guidelines, regulations, and other requirements governing the development and use of property within the Project Area. Table 2-2 identifies proposed regulations with respect to maximum and minimum density, floor area ratio (FAR), minimum street setbacks, minimum interior setbacks, and maximum heights for each development area. The proposed Wood Street Zoning Regulations are attached in their entirety to this EIR as Appendix H.

Table 2-2
Development Standards by Development Area

Development Area	Max FAR	Min. Density (dwelling units per acre)	Max. Density (dwelling units per acre)	Min. Setbacks		Max. Heights
				Street-edge[a]	Interior	
One	NA	22	28.4	10	5	65
Two	1.38:1	22	51.5	0	5	65
Three	NA	22	35.8	10	10	65
Four	2.02:1	44	71.1	10	5	65
Five	0.640:1	NA	NA	10	5	35
Six	2.02:1	44	70.7	10	5	65
Seven	NA	44	64.2	10	0	90
Eight	2.947:1	44	125	10	0	90
Nine	NA	NA	0	0	NA	NA

Source: Wood Street Zoning Regulations, August 2004.

Note:

a. Existing structures exempt.



Source: Pyatok Architects, Inc., 2004.

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FIGURE 2-3
Illustrative Concept Plan

Project Area Development Program and Proposed Uses

Based on the defined development areas and the proposed Wood Street Zoning Regulations, the Project Sponsors have developed specific proposals for their respective properties within the Project Area. The aggregate residential, commercial, and open space development proposed is presented in Table 2-3. Specific land uses for some of the development areas would remain flexible in order to respond to future market conditions. As a result, three development areas are proposed with the potential for increased commercial uses rather than residential uses. For purposes of this EIR, open space consists of two categories: Public Open Space and Private Open Space. Public Open Space consists of uses accessible to the general public, which would include the 16th Street Plaza in Development Area Nine and the pocket parks (Public Open Space). Private Open Space consists of areas that serve the needs of Project Area residents. This includes both group usable open space and private usable open space, as defined in the Oakland Planning Code (Private Open Space). Private Open Space would be provided within each of the development areas, and because its design, configuration, and location would be determined with each individual development project, it is not mapped as is the case for Public Open Space.

The various developments proposed within the Project Area would consist primarily of residential development, totaling 1,570 dwelling units, 186 of which would be live/work units; this would result in an increase in the residential population at the Project Area by 3,414 residents by buildout. Commercial space would include 13,000 square feet (sf) of neighborhood-serving commercial uses plus 14,847 sf associated with the 16th Street Train Station. The Main Hall of the Station between 16th and 17th Streets and the 16th Street Signal Tower (as further described below) would be restored. Public Open Space, consisting of the 16th Street Plaza and the five pocket parks shown in Figure 2-3, would total 1.39 acres (60,670 sf); Private Open Space accessible to Project Area residents only would total 2.82 acres (122,925 sf). This land use program, which emphasizes residential development, is referred to in this EIR as the "Maximum Residential Scenario."

As discussed above, three development areas (Development Area Two, Development Area Four, and Development Area Eight) may increase commercial rather than residential uses. For the purpose of analyzing impacts, this EIR examines the possibility that all three development areas develop with the increased commercial uses, resulting in a "Maximum Commercial Scenario." Under this scenario, the Project would consist of 1,084 dwelling units, 142 of which would be live/work units; this would result in an increase in the residential population at the Project Area by 2,759 residents by buildout. Commercial space would include a total of 539,626 sf. Public Open Space would be the same as for the Maximum Residential Scenario (60,670 sf), but Private Open Space accessible to Project Area residents would be less at 88,350 sf. The remaining development areas would not change uses from the Maximum Residential Scenario.

Table 2-3
Project Area Land Use and Development Program by Development Area

Development Area	Owner	Size (acres)	Existing Use (sf)	Maximum Residential Scenario			Maximum Commercial Scenario		
				Proposed Residential (units)	Proposed Commercial (sf)	Proposed Private Open Space[b] (sf)	Proposed Residential (units)	Proposed Commercial (sf)	Proposed Private Open Space[b] (sf)
One	BUILD West Oakland, LLC	2.89	0	82	0	8,200	82	0	8,200
Two	PCL Associates LLC	3.67	220,779 commercial	189	0	18,900	0	220,779	0
Three	BUILD West Oakland, LLC	5.59	0	200	0	20,000	200	0	20,000
Four[c]	HFH Central Station Village, LLC	6.33	25,756 commercial	450	7,000	33,750	417	40,000	31,275
Five	BUILD West Oakland, LLC	0.52	15,427 train station	0	14,847	0	0	14,847	0
Six	BUILD West Oakland, LLC	3.04	27,472 train station, commercial	215	6,000	16,125	215	6,000	16,125
Seven	Central Station Land, LLC	2.65	0	170	0	12,750	170	0	12,750
Eight	Central Station Land, LLC	2.01	0	264[d]	0	13,200	0	258,000	0
Nine	BUILD West Oakland, LLC	0.75	0	0	0	0	0	0	0
TOTAL		**27.45[e]**	**289,434**	**1,570**	**27,847**	**122,925**	**1,084**	**539,626**	**88,350**

Source: Project Sponsors, August 2004.

Notes:

sf = square feet

a. As noted in the text, three of the development areas include optional land uses (Development Areas Two, Four, and Eight), which emphasize commercial uses rather than residential uses. If all three development areas were to be developed with the optional commercial uses, the resulting land use program would define the maximum commercial development potential for the entire Project Area. This combination of land use options is referred to as the Maximum Commercial Scenario.

b. The open space figures do not include Public Open Space. The addition of the 16th Street Plaza and the five pocket parks (totaling 60,670 sf) to the Private Open Space figures reported in this table yields a total of 183,595 sf of open space for the Maximum Residential Scenario and 149,020 sf of open space for the Maximum Commercial Scenario. See Table 2-4.

c. The existing commercial floor area includes 7,519 sf associated with the Bea's Hotel on a parcel not owned by HFH Central Station Village, LLC. The Project proposes to include the parcel and redevelop the land to achieve the land development program indicated in this table. This EIR evaluates the impacts of the Project assuming the desired incorporation of the Bea's Hotel parcel. An alternative is presented in Section 5 to consider the event that the parcel remains separate.

d. The actual number of units to be constructed in Development Area Eight is 251 units based on the proposed maximum density. The analyses in this EIR are based on 264 units for the development area and 1,570 units for the entire Project Area, which reflect an earlier assumption about the potential density for this development area. The difference in residential units of 13 dwellings does not materially affect the impact assessment; in fact, the analyses based on 264 units in Development Area Eight are conservative (greater impacts would result), since the actual number of units would be less than assumed in the analyses.

e. In addition to the acreage reported here, there are 1.75 acres proposed for dedication to the City. Thus, the total Project Area acreage is 29.2 acres.

Development Area One (BUILD West Oakland, LLC)

This development area consists of a long, narrow area along the frontage road between 10th Street to the south, the frontage road to the west, 14th Street to the north, and Development Area Two to the east.

Existing Conditions. This 2.89-acre development area is vacant. The development area is over 1,200 feet long and 100 feet wide. East of this development area are California Waste Solutions, a recycling facility, which is outside the Project Area, and Bayport Warehouse Distribution, which is in Development Area Two.

Proposed Uses. This development area is proposed to be developed for 82 live/work units in three-story townhouses or podium buildings depending upon the preferred type of construction. Approximately 8,200 sf of Private Open Space would be provided.

Development Standards. Development Area One would have a maximum density of 28.4 dwelling units per acre. Construction would be subject to the regulations and guidelines of the Frontage Road Overlay Zone, where a certain amount of occupied building frontage at the street line (a lot line dividing a lot from a public street), or street setback line would be designed to create an active, well-defined street environment appropriate to its location next to the I-880 freeway. Buildings would be restricted to 65 feet in height.

Development Area Two (PCL Associates LLC)

Development Area Two is located along Pine and 11th Streets at the southwestern end of the Project Area. It also is adjacent to Development Area One to the west and Development Area Three to the north.

Existing Conditions. This 3.67-acre development area contains four existing industrial buildings with an aggregate of 220,779 sf of floor area. At the south end of the area is the 87,996 sf cast-in-place concrete Bayport Warehouse Distribution facility (also known as the "Ice House" building), facing 11th and Pine Streets, which covers 29,332 sf of land; in the middle of the area are two concrete tilt-up one-story buildings (the southerly of the two is 27,373 sf, and the northerly is 10,931 sf); at the north end of the area is the cast-in-place concrete Pacific Cannery Building, with 94,479 sf of floor area, covering 46,500 sf of land and dating from the early twentieth century. The Pacific Cannery Building is part of a cannery complex that has undergone numerous alterations. The City recognizes that the building is historically important, but because of the loss of integrity, it does not constitute a historical resource for CEQA purposes (see further discussion of the building's historical merit in Section 3.7, Cultural Resources, of this EIR). Across Pine Street to the east is a recycled auto parts business, and across 11th Street to the south is the California Waste Solutions recycling facility.

Proposed Uses. The Pacific Cannery Building would be seismically upgraded and improved as residential lofts; the two smaller tilt-up buildings would be demolished for slab on-grade construction. The floor area of the Pacific Cannery Building would increase from its current 94,479 sf to a maximum of 145,092 sf with the addition of interior mezzanines and a possible penthouse, but the current building footprint would not change. The proposed land use program for Development Area Two consists of 189 residential units and 18,900 sf of Private Open Space. The residential buildings would be up to four stories, with a maximum height of 65 feet. All units would be constructed as live/work units, townhouses, or flats.

Under the Maximum Commercial Scenario, Development Area Two would use existing buildings for commercial uses. Under this scenario, this development area would contain 220,779 sf of commercial uses, predominantly storage space; no residential units or Private Open Space would be developed.

Development Standards. The maximum density for residential development in Development Area Two would be 51.5 dwelling units per acre. Under the Maximum Commercial Scenario, the maximum floor area ratio (FAR) would be 1.38:1. A certain amount of occupied building frontage at the street line or street setback line would be designed as an active, well-defined street environment, and the development proposal would include street-oriented pedestrian entries. Buildings would be restricted to 65 feet in height. This development area is not subject to any of the proposed overlay zones.

Development Area Three (BUILD West Oakland, LLC)

This development area is located northeast of Development Areas One and Two and is bounded by 12th, 14th, and Wood Streets.

Existing Conditions. This 5.59-acre area contains no existing structures but is used as a truck storage and transfer yard. A recycled auto parts business exists to the south across 12th Street and residences and artists' studios are to the east across Wood Street.

Proposed Uses. BUILD West Oakland proposes 200 residential units constructed as for-sale townhouses or stacked flats. The units would be housed in buildings that would be up to 40 feet in height along Wood Street and 12th Street, up to approximately 30 feet west of Wood Street, and then stepping up to 50 feet and then 65 feet within the remainder of the development area. This development area would also contain 20,000 sf of Private Open Space. No commercial uses would be permitted in Development Area Three.

Development Standards. The maximum density for residential development in Development Area Three would be 35.8 dwelling units per acre. Portions of the development would be subject to the Wood Street Overlay Zone. Since a residential and mixed-use neighborhood exists to the east across Wood Street, development in this area would be designed to ensure compatibility with the existing neighborhood, in accordance with the proposed Wood Street Zoning Regulations. Ten-foot setbacks would be required along Wood Street, and development would need to include street-oriented pedestrian entries along Wood Street. In addition, since Development Area Three contains the corner of 12th Street and Wood Street, the proposed Wood Street Zoning Regulations require a certain amount

of occupied building frontage at the corner location to be designed to define and activate the street frontage. Building heights within the proposed Wood Street Overlay Zone would be restricted to 40 feet, then stepping up to 50 feet to a line 230 feet from and parallel to Wood Street, and then stepping up to 65 feet for the rest of the development area.

Development Area Four (HFH Central Station Village, LLC)

This development area is located south of the 16th Street Train Station, between Wood Street and the frontage road, and between 14th and 16th Streets.

Existing Conditions. This 6.33-acre area contains a warehouse and a commercial building, known as Bea's Hotel. The warehouse is associated with a truck storage and transfer yard and occupies a building of approximately 18,200 sf.

Bea's Hotel, located on the corner of 16th and Wood Streets, contains a catering kitchen and other small commercial activities on the ground floor and an 18- to 22-room hotel upstairs. The building is about 7,500 sf. The Bea's Hotel parcel is not currently owned by HFH Central Station Village, LLC. The Project proposes to include the parcel and redevelop it. The building, surveyed for historic significance by the City Planning Department in 1988, was given a historic status designation of "D" ("minor importance"), with a contingent historic status designation of "C" ("secondary importance"). It is also located in a Historic District of "secondary importance." As a structure of secondary importance, Bea's Hotel does not constitute a historical resource for CEQA purposes (see further discussion of the building's historical merit in Section 3.7, Cultural Resources, of this EIR). Industrial buildings lie to the east across Wood Street.

Proposed Uses. This development area would include residential and commercial uses. The residential component would consist of 450 condominium units or live/work units, although the property may operate as rental units for a significant period of time. Assuming the Project Sponsor obtains rights to develop the Bea's Hotel site, the commercial component would replace the existing businesses with 7,000 sf of local-serving and other commercial businesses that would face onto the 16th Street Plaza to the north. Approximately 33,750 sf of Private Open Space would be provided. If the Project Sponsor does not obtain the rights to develop the Bea's Hotel site, the residential component would be developed around the existing Bea's Hotel building, and the commercial uses would be reconfigured. This latter scenario is assessed as the "No Redevelopment of Bea's Hotel Alternative" in Section 5, Alternatives.

Under the Maximum Commercial Scenario, Development Area Four could be developed, in its entirety, or some dwellings could be converted, to provide 417 residential units, 40,000 sf of commercial/retail uses, and 31,275 sf of Private Open Space.

Development Standards. The maximum density for residential development in Development Area Four would be 71.1 dwelling units per acre. Under the Maximum Commercial Scenario, the maximum FAR would be 2.02:1. Development Area Four is subject to the proposed Wood Street, Frontage Road, and Plaza Overlay Zones. Per the proposed Wood Street Zoning Regulations, this

development area would include a certain amount of occupied building frontage at the street line or street setback line designed to create an active, well-defined street environment and to include street-oriented pedestrian entries. A ten-foot setback would be required along Wood Street. Development would be restricted to a maximum of 65 feet in height for most of this development area, with further height restrictions of 40 feet along Wood Street (to a depth of 30 feet) and 50 feet adjacent to that portion of 16th Street facing the 16th Street Plaza.

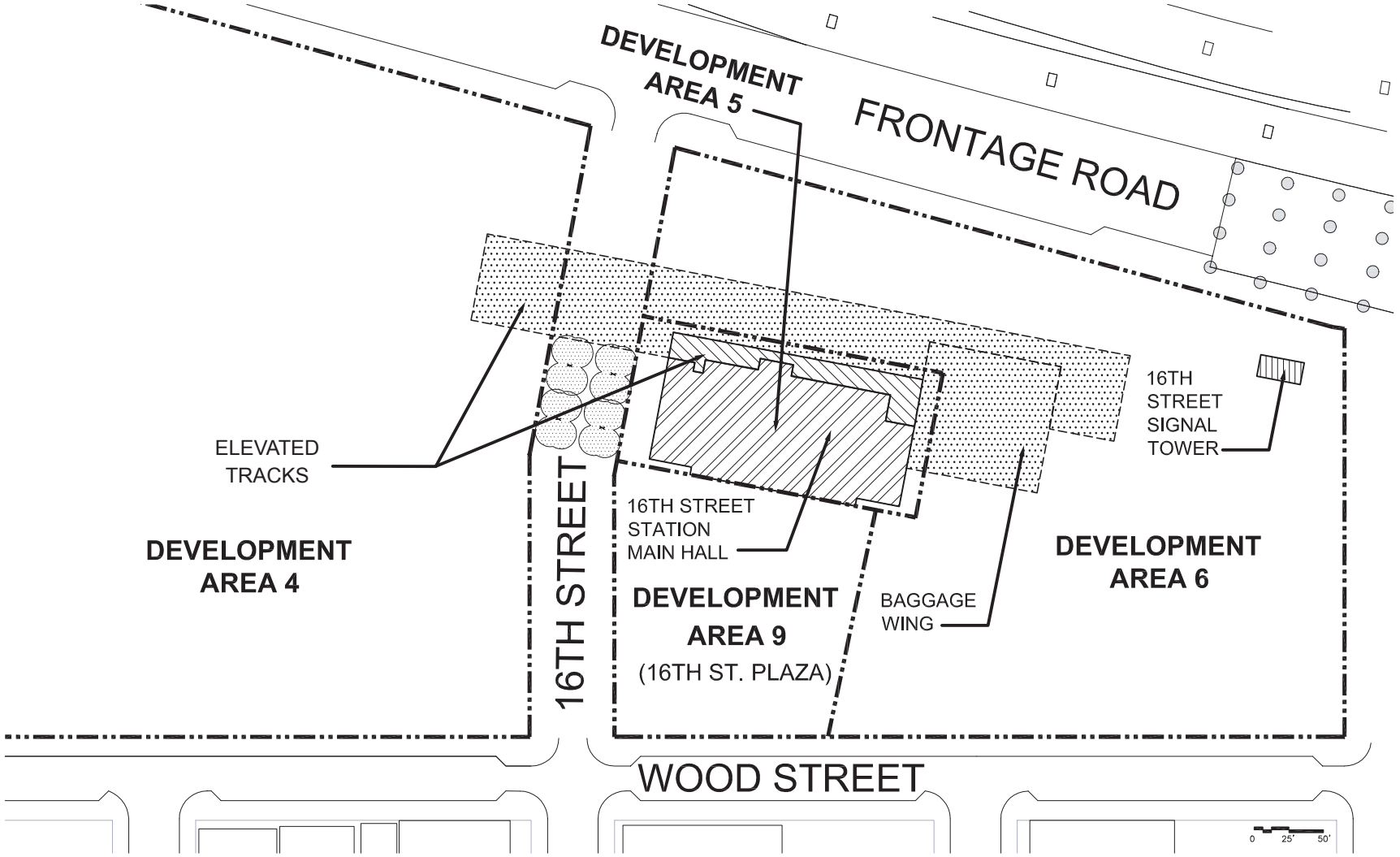
Development Area Five (BUILD West Oakland, LLC)

Development Area Five encompasses the historic 16th Street Train Station and is surrounded by Development Area Six to the west and north, Development Area Nine to the east, and Development Area Four to the south.

Existing Conditions. This 0.52-acre area lies at the geographic center of the Project Area. The historic 16th Street Train Station, which was designated City of Oakland Landmark No. 81 (City of Oakland Ordinance No. 10434) in 1984, is located in this development area, although components of the 16th Street Train Station are also located in Development Areas Four and Six. In 1988, the Oakland Cultural Heritage Survey reevaluated the 16th Street Train Station and assigned it a status of 3, which means that it "appears to be eligible for inclusion in the National Register." As described in Section 3.7, Cultural Resources, the Station appears eligible under two of the criteria identified by the National Historic Preservation Act for listing in the National Register.

As shown in Figure 2-4, the 16th Street Train Station consists of: (1) a central, approximately 15,000-sf main section (Main Hall) about 50 feet tall, flanked by symmetrical, lower side wings to the north and south clad in terra cotta; (2) a large L-shaped baggage wing extending to the north and west of the north wing (Baggage Wing); (3) an elevated track running along the entire west side of the station, extending beyond the station to the north and south (Elevated Tracks); and (4) a rectangular, three-story signal tower about 150 feet to the north of the station, along the line of the original tracks (16th Street Signal Tower). The Main Hall is located in Development Area Five. A small portion of the Baggage Wing is located in Development Area Five (580 sf), although most of this structure lies in Development Area Six. The Elevated Tracks extend from Development Area Five into Development Areas Four and Six. The 16th Street Signal Tower is located in Development Area Six.

The Main Hall building, constructed in 1911 as the terminus of the Transcontinental Railroad, is a classic balanced Beaux Arts edifice. It is currently in a state of decay. Further, although the building now has a new roof, it remains in jeopardy of further decay and vandalism. In the period between the Loma Prieta earthquake in 1989, when the station was closed to the public, and its purchase by one of the Project Sponsors, considerable vandalism and damage occurred; interior finishes, ornaments and fixtures were stripped and removed, and indoor fires were set. Currently, interior walls of the Main Hall are missing, with the exception of a small corner of the south wall. Most doors are missing, as are the original clocks, the decorative light fixtures, and the restroom partitions and fixtures.



Source: Pyatok Associates, Inc., 2004.

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FIGURE 2-4
16th Street Train Station

Proposed Uses. BUILD West Oakland intends to use tax increment funds created by surrounding development to rehabilitate, seismically stabilize, and renovate the Main Hall and the 16th Street Signal Tower. Reuse of the Main Hall would incorporate exhibit space commemorating the site as the end of the Trans-continental Railroad and the gateway arrival point in the West, and its historical significance to the organization of the Brotherhood of Sleeping Car Porters, the first Black workers' union in the United States. The exhibit space could also serve as a venue for private and public events. The Project proposes to demolish the Baggage Wing and the majority of the Elevated Tracks to provide sufficient space to access residential development constructed elsewhere within the Project Area and to minimize the use of public funds required for rehabilitation. The Project proposes no new construction in this development area and focuses on the renovation of the Main Hall. As set forth in the proposed Wood Street Zoning Regulations, renovation of the 16th Street Train Station would conform with standards set forth in Section 17.102.030 of the Oakland Planning Code concerning construction regulations for designated City landmarks, and the Secretary of the Interior's Standards for Rehabilitation of Historic Structures. This development area is not subject to any of the proposed overlay zones.

Development Area Six (BUILD West Oakland, LLC)

This development area is located to the northeast of the existing 16th Street Train Station (Development Area Five), and fronts 18th Street to the north, Wood Street to the east, Development Area Nine to the south, and an elevated portion of the frontage road to the west.

Existing Conditions. This 3.04-acre area is predominantly used as a storage area, but encompasses several facilities associated with the 16th Street Train Station, including (1) the 828 sf historic 16th Street Signal Tower north of the Main Hall; (2) portions of the Elevated Tracks, west of the Main Hall; (3) most of the one-story Baggage Wing building; and (4) a one-story industrial building. All of these facilities are currently in a deteriorated condition.[1] A truck dock warehouse is located to the east across Wood Street.

Proposed Uses. The Project proposes to demolish the Baggage Wing attached to the Main Hall and the majority of the Elevated Tracks. The one-story industrial building would also be demolished. The 16th Street Signal Tower would be restored in recognition of the Project Area's historical association with the railroads and would be a feature of the Project Area's open space and streetscape amenities; reuse may be possible and will relate to the potential commercial/public reuse of the Main Hall. As set forth in the proposed Wood Street Zoning Regulations, renovation of the Signal Tower and the portion of the Elevated Tracks that would be preserved (see Figure 2-4) would conform with standards set forth in Section 17.102.030 of the Oakland Planning Code concerning construction regulations for designated City landmarks, and the Secretary of the Interior's Standards for Rehabilitation of Historic Structures. With removal of the existing structures (except the 16th Street Signal Tower), Development

[1] Historic Evaluation of the 16th Street Train Station by Alan Dreyfuss, AIA, April 22, 2004 (see Appendix D of this EIR).

Area Six would be redeveloped with generally higher density residential development to the north of the 16th Street Train Station. Any future proposed accessory buildings west of the Station, which is currently occupied by the Elevated Tracks, would be restricted to a maximum height of 35 feet. Proposed development would include 215 residential units and 6,000 sf of commercial/retail space, which would be constructed in buildings of up to 65 feet in height, except along Wood Street and adjacent to Development Area Nine, where building heights would be restricted to 50 feet. All residential units would be constructed as live/work units, for-sale townhouses, or stacked flats. The ground-level portion of the new building, including the 6,000 sf of commercial/retail space, would face the 16th Street Plaza. Development Area Six would contain 16,125 sf of Private Open Space.

Development Standards. The maximum density for residential development in Development Area Six would be 70.7 dwelling units per acre. Construction in Development Area Six would be subject to the proposed Wood Street and Plaza Overlay Zones. In accordance with the proposed Wood Street Zoning Regulations, development would be designed to include street-oriented pedestrian entries and a portion of occupied building frontage at the street line or street setback line to provide an active, well-defined street environment. A ten-foot setback would be required along Wood Street. Development would be restricted to a maximum of 65 feet in height for most of this development area, with further height restrictions of 50 feet along Wood Street (to a depth of 30 feet) and 50 feet adjacent to that portion of 16th Street facing the 16th Street Plaza.

Development Area Seven (Central Station Land, LLC)

This development area is bounded by 18th Street to the south, the elevated frontage road structure to the west, 20th Street to the north, and Wood Street to the east.

Existing Conditions. This 2.65-acre development area contains no existing structures. A railroad spur crosses this vacant lot. Raimondi Park, a community park with ball fields, is located to the east of Development Area Seven across Wood Street.

Proposed Uses. Development Area Seven would be developed with 170 residential units and 12,750 sf of Private Open Space. The residential structures would be up to 90 feet in height, with a maximum height of up to 50 feet along Wood Street. All proposed residential units would be constructed as live/work units, for-sale townhouses, or stacked flats. No commercial uses would be permitted in this development area.

Development Standards. The maximum density for residential development in Development Area Seven would be 64.2 dwellings per acre. Construction in Development Area Seven would be subject to the Wood Street Overlay Zone. In accordance with the proposed Wood Street Zoning Regulations, development would need to provide street-oriented pedestrian entries and a certain amount of occupied building frontage at the street line or street setback line designed to create an active, well-defined street environment. Ten-foot setback controls from property line to building frontage would be enforced along Wood Street. Development would be restricted to a maximum of 90 feet in height for most of this development area, with further height restrictions of 50 feet along Wood Street (to a depth of 30 feet).

Development Area Eight (Central Station Land, LLC)

This development area is located at the northern end of the Project Area and is bounded by the elevated portions of the frontage road and West Grand Avenue to the west and north, respectively, Wood Street to the east, and 20th Street to the south.

Existing Conditions. This 2.01-acre area contains no existing structures. The Horizon Beverage Company, a beer distributor, is located to the east across Wood Street.

Proposed Uses. Development Area Eight would contain 264 residential units and 13,200 sf of Private Open Space. All residential units would be constructed as live/work units, for-sale townhouses, or stacked flats.[2]

Under the Maximum Commercial Scenario, this development area could be developed with 258,000 sf of office uses with mixed commercial space on the ground floor. This scenario would not include any residential uses or any Private Open Space.

Development Standards. The maximum density for residential development in Development Area Eight would be 125 dwelling units per acre. Under the Maximum Commercial Scenario, the maximum FAR would be 2.947:1. Because this development area adjoins two elevated roadways (West Grand Avenue and frontage road) and is located adjacent to industrial uses, the applicable development standards for this development area allow the most intensive development within the Project Area. A 90-foot height limit, except for a 50-foot height limit within 15 feet of the street setback line, would apply to new construction. A certain amount of occupied building frontage at the street line or street setback line would need to be designed to create an active, well-defined street environment and to provide street-oriented pedestrian entries. A ten-foot setback would be required along Wood Street. This development area is not subject to any of the proposed overlay zones.

Development Area Nine (BUILD West Oakland, LLC)

This development area is bounded by the 16th Street Train Station (Development Area Five) to the west, 17th Street and Development Area Six to the north, Wood Street to the east, and 16th Street and Development Area Four to the south.

Existing Conditions. This 0.75-acre area is vacant and occupies the area directly in front of (east) the 16th Street Train Station. A residential building is located to the east across Wood Street.

Proposed Uses. Development Area Nine would be developed as the 16th Street Plaza, which would provide a Public Open Space facing onto Wood Street, bordered by the retail uses at the ground level of adjacent development areas, and providing a visual focus and view corridor to the historic 16th Street

[2] As noted in Table 2-1, the actual numbers of dwellings that could be constructed would be 251 units. The EIR analysis is based on an earlier estimate of 264 units. The EIR thus considers a development potential slightly greater than what could actually be built under the Maximum Residential Scenario.

Train Station. BUILD West Oakland would create a 32,670-sf publicly accessible plaza suitable for gatherings and outdoor events, such as farmers markets, with large canopy trees to provide visual appeal and summer shade. All improvements would be completed with private financing by the Project Sponsors; no public funds would be requested with respect to the plaza.

Development Standards. This area would be designated Public Open Space and would not allow development of any building structure. The 16th Street Plaza would be designed as an active multi-use open space. Trees and street lighting would be selected to create an inviting urban space while preserving views of the historic 16th Street Train Station. The Plaza Overlay Zone does not apply to Development Area Nine but to the adjoining Development Areas Four and Six and is intended to ensure that new development fronting the plaza creates a well-defined urban space, includes active ground-floor uses, and promotes new development that is complimentary in scale to the 16th Street Train Station. New buildings within the Plaza Overlay Zone are restricted to 50 feet and at least 90 percent of the street line or street setback line must be developed with occupied building frontage. Development Area Nine is not subject to any of the proposed overlay zones.

2.6 PROJECT AREA AND DEVELOPMENT AREA CIRCULATION, ACCESS, AND PARKING

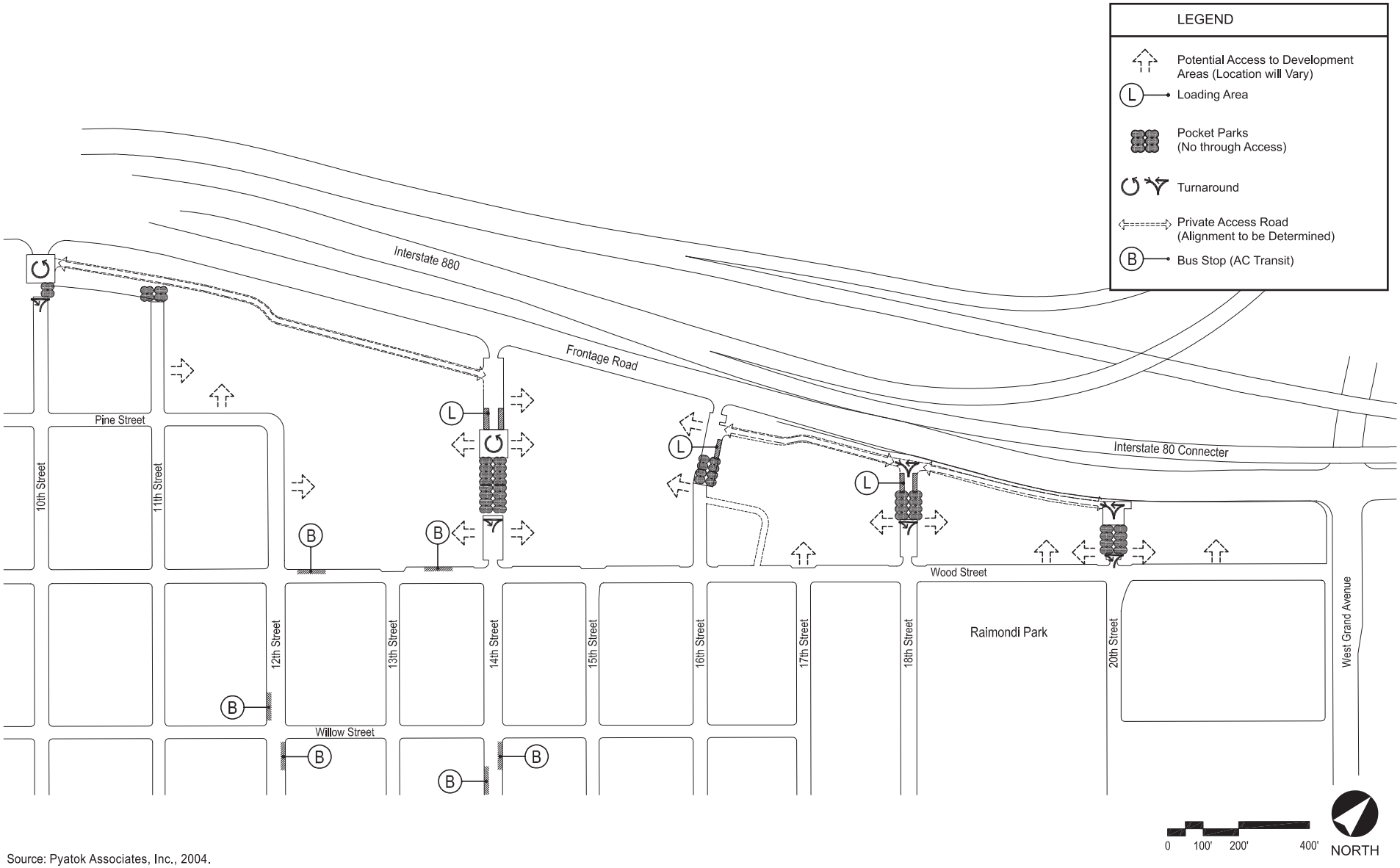
Existing Circulation and Access

The Project Area currently has vehicular access from Wood Street and a frontage road that is owned and controlled by Caltrans. The frontage road is a service road linking two half interchanges of the I-880 freeway system. The Project Area is also currently accessible from surrounding neighborhood streets including 10th through 20th Streets (running east-west) and Pine Street (also running north-south). Although the Project Area is bounded by West Grand Avenue, there is no direct access to the Project Area from this street, since West Grand Avenue is elevated and runs along the edge of the Project Area.

Proposed Improvements

Vehicular Circulation

The Project proposes to improve Wood Street between 12th Street and West Grand Avenue, as well as 12th Street between Wood and Pine Streets, and Pine Street between 12th and 11th Streets. Improvements would include roadway resurfacing, new curbs and gutters (as necessary), new sidewalks, street trees, and lighting along the edge of the Project Area. The concept plan for proposed vehicular circulation and access for the Project Area is illustrated in Figure 2-5. The existing streets that currently serve the Project Area would continue to be the principal means of accessing the site. Private access roads are proposed parallel to the frontage road to offer access to some of the development areas and for emergency access purposes.



Source: Pyatok Associates, Inc., 2004.

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FIGURE 2-5

Project Area Vehicular Circulation Concept Plan

To further improve access to each of the various development areas, several of the east-west streets (14th, 16th, 18th and 20th Streets) that currently terminate at Wood Street or just west of Wood Street would be extended farther into the Project Area, as described below. These street extensions would be designed such that through traffic for automobiles and trucks from Wood Street to the frontage road would be prohibited. Through access would be restricted to pedestrians, bicycles, and emergency vehicles. Following the completion of the proposed improvements to these streets, the Project Sponsors will make an irrevocable offer for dedication of these areas to the City of Oakland. Therefore, the improvements would be designed to current City standards.

14th Street. Currently, 14th Street is an 80-foot-wide public street extending approximately 350 feet west of Wood Street. The City of Oakland has an easement for the extension of 14th Street to the frontage road. A curb return at frontage road already exists to accommodate the intersection of this proposed 80-foot-wide extension. The Project proposes to improve the roadway and landscape the existing portion of 14th Street. The Project also proposes to extend 14th Street from the end of the existing public street to the frontage road. The street extension would allow pedestrian and bicycle access through the Project Area but prohibit vehicular through traffic except for emergency vehicles. At the end of the existing street, the proposed 14th Street extension would be improved with a grove of trees planted in a raised median, creating a pocket park between Wood Street and the frontage road. The pocket park would provide sufficient clearance between the tree branches to allow for emergency vehicle access, and vehicular turnarounds are proposed at either side of the pocket park.

16th Street. Currently, 16th Street is a 60-foot-wide public street extending approximately 200 feet west of Wood Street. The Project proposes to improve the roadway and landscape the existing portion of 16th Street. The Project also proposes to extend 16th Street from the end of the existing public street (which would form the southerly edge of the new 16th Street Plaza) to the frontage road. A proposed curb return at the frontage road is also proposed as part of the Project. The street extension would allow pedestrian and bicycle access through the Project Area but prohibit vehicular through traffic except for emergency vehicles. At the end of the existing street, 16th Street would be improved with a grove of trees planted in a raised median, creating another pocket park between Wood Street and the frontage road. The pocket park would provide sufficient clearance between the tree branches to allow for emergency vehicle access. There are opportunities for vehicles to back out at either side of the pocket park. The Project proposes to provide a stop sign at 16th Street and the frontage road.

18th Street. Currently, 18th Street is a 70-foot-wide public street that ends at Wood Street. The Project proposes to extend 18th Street west of Wood Street to the western boundary of the Project Area to allow for pedestrian and bicycle access through the Project Area but prohibit vehicular through traffic except for emergency vehicles. The improvements on the 18th Street extension would include roadway, curb and gutter, sidewalks, landscaping, and lighting. The 18th Street extension would also contain a grove of trees planted in a raised median, creating another pocket park between Wood Street and the frontage road. The pocket park would provide sufficient clearance between the tree branches to allow for emergency vehicle access. Vehicular turnarounds are proposed at either side of the pocket park.

20th Street. Currently, 20th Street is a 60-foot-wide public street that ends at Wood Street. The City of Oakland has an easement (along the northerly 30 feet) and owns right-of-way (along the southerly 30 feet) for the extension of 20th Street to the frontage road. The Project proposes to extend 20th Street west of Wood Street to the western boundary of the Project Area to allow pedestrian and bicycle access through the Project Area but prohibit vehicular through traffic except for emergency vehicles. The 20th Street extension would also contain a grove of trees planted in a raised median, creating another pocket park between Wood Street and frontage road. The pocket park would provide sufficient clearance between the tree branches to allow for emergency vehicle access, and vehicular turnarounds are proposed at either side of the pocket park.

Pedestrian and Bicycle Circulation. A conceptual pedestrian circulation plan for the Project Area is shown in Figure 2-6. In order to improve the pedestrian access, the Project proposes to minimize the number of driveways on Wood Street. Pedestrian and bicycle circulation would be provided along all public streets. Pedestrian access through the Project Area would occur along all east-west streets and along the public streets bordering the Project Area. Bicycle traffic would share the public streets in the Project Area. Roadway, curb and gutter, sidewalks, landscaping, and lighting would be improved on these streets.

Emergency Access. Emergency access would be provided at street frontages along all public streets, and emergency vehicles would be the only vehicles that would have through access on streets throughout the Project Area.

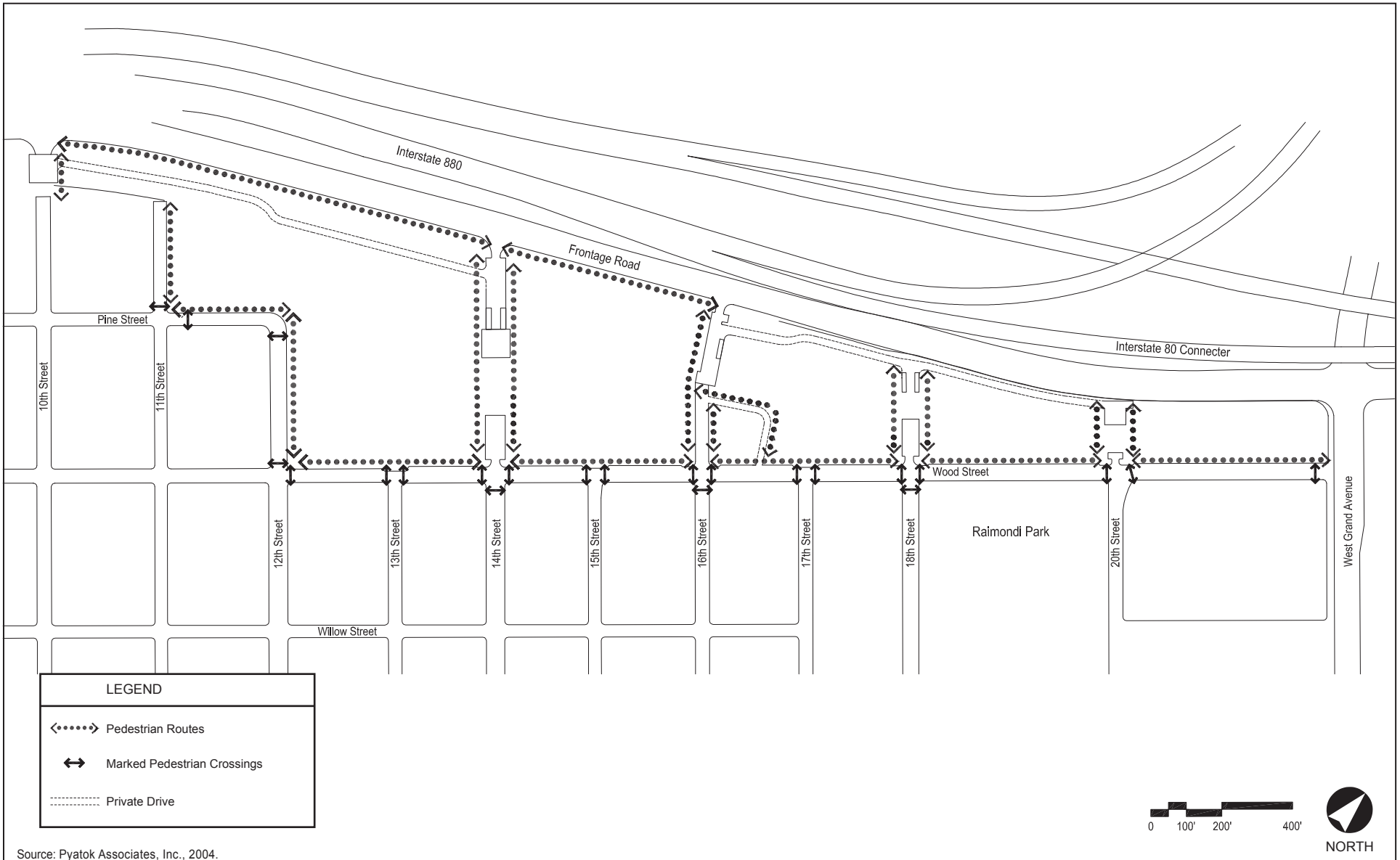
Development Area Access and Parking

Access to the development areas is conceptually shown in Figure 2-5 and the location of off-street parking is conceptually shown in Figure 2-3.

Development Area One

Access. Development Area One would be accessed from the frontage road at the existing curb return at 10th Street and at the existing curb return at 14th Street. A private access road within the development area would connect these two intersections (10th and 14th Streets) as well as provide access to Pine Street through an access easement across Development Area Two. A turnaround and pocket park at the 10th Street intersection would limit vehicular traffic from the frontage road through the Project Area to Pine or Wood Streets. A turnaround and pocket park towards the middle of the extension of 14th Street would limit vehicular traffic from the frontage road through the Project Area to Wood Street, while still allowing emergency vehicle access. There would be no other driveways or vehicular access from the frontage road into Development Area One.

Parking. Development Area One would include 87 parking spaces serving the proposed 82 dwelling units.



Source: Pyatok Associates, Inc., 2004.

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FIGURE 2-6

Project Area Pedestrian Circulation Concept Plan

Development Area Two

Access. Development Area Two would be primarily accessed from 11th, Pine, and 12th Streets. A private access easement across Development Area One would provide access to the frontage road through a private access road.

Parking. Development Area Two would include 189 parking spaces to serve 189 units under the Maximum Residential Scenario. Under the Maximum Commercial Scenario, the storage space facility would provide six parking spaces, per the requirements of the Oakland Municipal Code.

Development Area Three

Access. Development Area Three would be accessed from Wood Street through potential driveways at 12th Street and via the new extension of 14th Street. As proposed in the Wood Street Zoning Regulations, limited driveway access would be allowed directly from Wood Street. In addition, Development Area Three would be accessed from the frontage road via 14th Street. A turnaround and pocket park towards the middle of the extension of 14th Street would prevent vehicular traffic from the frontage road through the Project Area to Wood Street, while still allowing emergency vehicle access.

Parking. Development Area Three would include 345 parking spaces serving the proposed 200 units.

Development Area Four

Access. Development Area Four would be accessed from Wood Street through driveways proposed at the new extensions of 14th and 16th Streets. As proposed in the Wood Street Zoning Regulations, limited driveway access would be allowed directly from Wood Street. In addition, Development Area Four would be accessed from the frontage road via 14th Street. A turnaround and pocket park towards the middle of the extensions of 14th and 16th Streets would prevent vehicular traffic from the frontage road through the Project Area to Wood Street, while still allowing emergency vehicle access.

Parking. Parking at Development Area Four would be provided at a minimum of one parking space per dwelling unit and for commercial and other uses, in accordance with the City's C-51 zoning district. A total of 813 spaces are proposed on this development area to serve 450 units and 7,000 sf of commercial space under the Maximum Residential Scenario or 417 units and 40,000 sf of commercial space under the Maximum Commercial Scenario.

Development Area Five

Access. The historic 16th Street Train Station would be accessed from Wood Street via the extension of 16th Street, and from a new roadway along the edge of the 16th Street Plaza that would allow front door access to the Main Hall. The Main Hall would also be accessed from the frontage road through the extension of 16th Street, via the new intersection with the frontage road. A turnaround and pocket park towards the middle of the extension of 16th Street would prevent vehicular traffic from the frontage

road through the Project Area to Wood Street, while still providing emergency vehicle access. There would be no other driveway access to Development Area Five from the frontage road.

Parking. Since Development Area Five consists of the 16th Street Train Station Main Hall, and since the specific type of reuse of the 16th Street Train Station is not known, adequate parking would be provided in compliance with the applicable City zoning standards when the reuse plans and types of events are more specifically defined. If necessary, options exist to provide off-street parking on the adjoining development areas.

Development Area Six

Access. Development Area Six would be directly accessed from Wood Street and from the new extension of 18th Street. Limited driveway access would be allowed directly from Wood Street. In addition, Development Area Six would be accessed from the frontage road via the new intersection at 16th Street and a private access road. A turnaround and pocket park, towards the middle of the extension of 18th Street, would prevent vehicular traffic from the frontage road through the Project Area to Wood Street, while still providing emergency vehicle access. There would be no other driveway access to Development Area Six from the frontage road.

Parking. Development Area Six would include 260 parking spaces to serve the 215 dwelling units and 6,000 sf of commercial space.

Development Area Seven

Access. Development Area Seven would be directly accessed from Wood Street and from the new extension of 18th and 20th Streets. Limited driveway access would be allowed directly from Wood Street. In addition, Development Area Seven would be accessed from the frontage road via the new intersection at 16th Street and a private access road and easement across Development Area Six. A turnaround and pocket park towards the middle of the extension of 18th and 20th Streets would prevent vehicular traffic from the frontage road through the Project Area to Wood Street, while still providing emergency vehicle access. The frontage road is elevated along Development Area Seven and would, therefore, be inaccessible directly from Development Area Seven.

Parking. For the anticipated 170 dwelling units in Development Area Seven, 205 parking spaces are proposed.

Development Area Eight

Access. Development Area Eight would be accessed directly from Wood Street and from the new extension of 20th Street. Limited driveway access would be allowed directly from Wood Street. In addition, Development Area Eight would be accessed from the frontage road through the new intersection at 16th Street and a private access road and easement across Development Areas Six and Seven. A turnaround and pocket park towards the middle of the extension of 20th Street would prevent vehicular traffic from the frontage road through the Project Area to Wood Street, while still providing

emergency vehicle access. Both the frontage road and West Grand Avenue are elevated along Development Area Eight and would, therefore, be inaccessible directly from Development Area Eight.

Parking. To serve the proposed 264 dwelling units (under the Maximum Residential Scenario) or the 258,000 sf of commercial space (under the Maximum Commercial Scenario), 323 parking spaces would be provided.

Development Area Nine

Access. Development Area Nine is defined as Public Open Space in the proposed Wood Street Zoning Regulations. The Plaza would be designed to allow access to the front door of the Main Hall; future design-level plans for circulation would incorporate this requirement. Figure 2-6 illustrates the concept for pedestrian circulation around the Plaza.

Parking. The development area is entirely dedicated to the publicly accessible plaza. Parking may or may not be provided, depending on the design-level plans for the Plaza, which have not yet been developed. If necessary, parking can be incorporated into the design of the Plaza or into the adjoining development areas.

2.7 DESIGN FEATURES AND AMENITIES

Design Guidelines

The proposed Wood Street Zoning Regulations, which include the three overlay zones, set forth detailed design guidelines, establish the qualitative design parameters for the Project Area, and address aspects of building and site design not otherwise regulated by the proposed development standards summarized earlier in Section 2.5, Project Area and Development Area Land Use. The design guidelines seek to create a cohesive architectural character for the Project Area. This character would be accomplished by requiring each development's use of massing, articulation, materials and detail to establish a coherent and integrated set of architectural elements that is consistent throughout the Project Area. All built aspects of each development would contribute to the architectural character of the development, including, but not limited to, site structures and furnishings, exterior lighting, paving, and signage. Buildings in the Project Area would not be restricted to any specific architectural style. Instead, within the overall scope of the proposed Wood Street Zoning Regulations (attached to this EIR as Appendix H), a variety of architectural styles would be encouraged as a means of enhancing the mixed urban character of the Project Area. Each project within a development area would be evaluated in terms of how it satisfies the design guidelines, in accordance with provisions in the proposed Wood Street Zoning Regulations governing Final Development Plans and Final Design Review.

Specifically, the design guidelines recommend that each development:

- Create patterns of ground-level pedestrian connections.
- Promote visibility for pedestrians and residents from adjoining street areas.
- Encourage building massing that is consistent with a neighborhood-oriented mixed-use character.
- Encourage building articulation that is consistent with a neighborhood-oriented mixed-use character.
- Discourage parking garage facades that are utilitarian in character, allow extensive views of parked cars, or do not relate to the architectural character of the occupied space served.
- Promote the design of balconies, where provided, which are consistent with the architectural character of each development and do not result in a cluttered appearance.
- Encourage use of awnings and canopies, where provided, which are consistent with the development's architectural character.
- Encourage selection and design of windows that enhance the development's architectural character and assist in establishing compatible scale and quality of construction.
- Ensure that vehicular entries to parking garages do not detract from the street front pedestrian environment or the development's architectural character.
- Ensure that service access floors and gates do not detract from the development's architectural character.
- Encourage the design of all construction to incorporate mechanical equipment and extensions as part of the overall design and architectural character.
- Ensure that exterior mechanical equipment is located and/or screened to avoid detracting from the development's architectural character.
- Ensure that waste handling areas are located and designed to provide adequate capacity, secure and convenient access for residents, and to avoid adverse impacts on the street frontage, common areas and the surrounding neighborhood.
- Promote the selection of high-quality exterior materials that enhance the development's architectural character.
- Promote the selection of exterior colors that enhance the development's architectural character.
- Ensure that exterior lighting provides for adequate visibility and security at all paths of travel, and enhances the development's architectural character.
- Ensure that exterior signage is integrated with the development's architectural character.

- Promote planting that enhances the livability and neighborhood-oriented character of the development.

Open Space

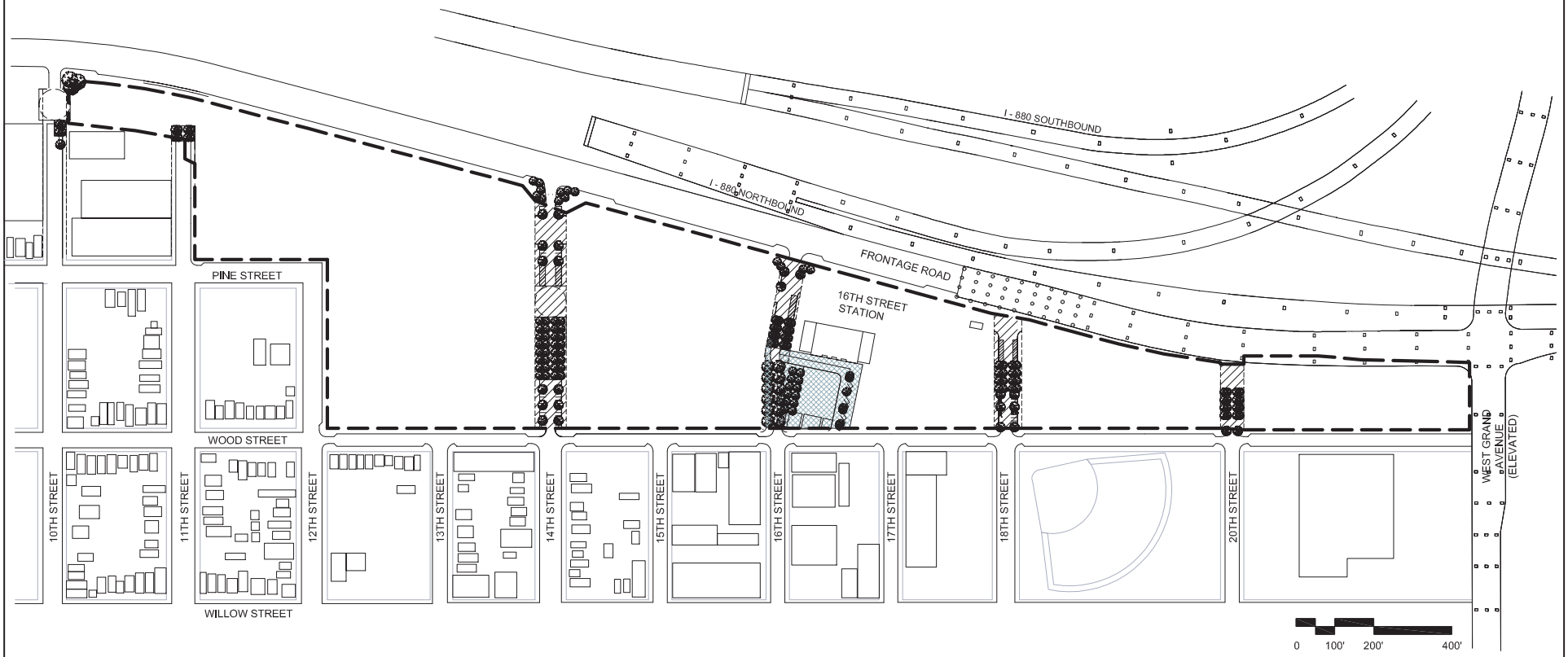
Open space would include the creation of the 16th Street Plaza and additional Public Open Space, developed as pocket parks, along with private courtyards or group areas for Project residents. Publicly accessible open space (i.e., the Plaza and pocket parks) would total 60,670 sf (Public Open Space), and would be distributed as shown in Figure 2-7. Private courtyards and other Private Open Space areas for Project residents would total 122,925 sf under the Maximum Residential Scenario and 88,350 sf under the Maximum Commercial Scenario.[3] Table 2-4 shows the distribution of Private Open Space by development area for each scenario.

Table 2-4
Public and Private Open Space by Development Area

Development Area	Maximum Residential Scenario (sf)	Maximum Commercial Scenario (sf)
Private Open Space		
One	8,200	8,200
Two	18,900	0
Three	20,000	20,000
Four	33,750	31,275
Five	0	0
Six	16,125	16,125
Seven	12,750	12,750
Eight	13,200	0
Nine	0	0
Subtotal	**122,925**	**88,350**
Public Open Space (see Figure 2-7)		
Pocket Parks on 11th, 14th, 16th, 18th, and 20th Streets	28,000	28,000
16th Street Plaza (in Development Area Nine)	32,670	32,670
Subtotal	**60,670**	**60,670**
Total Public And Private Open Space	**183,595**	**149,020**

Source: Project Sponsors, 2004.

[3] Consistent with the approach taken in the Open Space, Conservation, and Recreation Element of the *City of Oakland General Plan*, which broadly defines the term "open space," the Revised NOP (dated January 16, 2004) reflected 346,000 sf of open space, based on a definition of open space that included all common areas. This EIR uses a more conservative definition of open space, which results in a figure of 88,350 to 122,925 sf. This difference in square footage merely reflects definitional differences and does not alter the Project in terms of development footprint or otherwise.



Source: Pyatok Associates, Inc., 2004.

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FIGURE 2-7

Public Open Space Concept Plan

Landscaping

Landscaping, which would be distributed throughout the Project Area, would include ground cover, shrubs, trees, and five landscaped areas or pocket parks where only emergency vehicles, pedestrians, and bicycle traffic would have access. New street trees would be planted along Wood Street and the frontage road, as well as the Project Area boundaries along 11th, 12th, and Pine Streets in accordance with the proposed Wood Street Zoning Regulations. Medium-sized trees approximately 20 feet in width and 35 to 40 feet tall would be planted along Wood Street to complement the scale of the buildings. Pocket park trees would be small (width about 15 feet and height about 15 feet), deciduous flowering trees in a formal grid to relate to and denote a pedestrian-dominated space. Trees along Pine and 11th Street would be evergreens to provide green massing against the buildings and to reduce the southern sun exposure and glare. Columnar-shaped trees, about 20 feet in width and 40 feet in height, would be appropriate for the narrow right-of-way at the street. The tree types suitable for 12th Street would be similar to those for Pine and 11th Streets. However, the larger planting space would allow a rounder, spreading evergreen species that could mature to 25 feet in width and 35 feet in height. A mixture of alternating large deciduous and small flowering trees planted among the existing redwoods is proposed along the frontage road to screen development from the vehicular activity on this roadway.

2.8 PROPOSED SCHEDULE

The proposed developments that make up the Project are expected to be constructed on independent schedules over an approximate ten-year period. Construction is anticipated to occur in the following phases:

- Phase One (2005-2006): Development Areas One, Two, Three, Four, and Nine, generally the portion of the Project Area south of the 16th Street Train Station, plus the 16th Street Plaza, are expected to be commenced and completed during this period.
- Phase Two (2006-2007): Residential and commercial portions of Development Area Six are expected to be commenced and completed during this period.
- Phase Three (2008-2013): Restoration work on the 16th Street Train Station (Development Area Five) is anticipated to begin as soon as the necessary funding in the form of tax increment is available, likely in 2008. Completion is expected to take several years.
- Phase Four (2008-2015): Development Areas Seven and Eight are planned for implementation during this time.

The proposed Wood Street Zoning Regulations include a master phasing plan. This EIR assumes that the sequencing of development projects would follow this phasing plan.

2.9 LAND USE AND OTHER ACTIONS FOR WHICH THIS EIR MAY APPLY

This EIR is intended to provide CEQA clearance for approvals or permits that may be required for the Project. This EIR may be used for the discretionary actions described below, along with any other discretionary approvals required for the Project.

General Plan Amendment. To implement the Project, a General Plan Amendment would be required in order to allow residential uses on land that is presently designated for industrial uses. The Project Area is currently designated for Business Mix. The proposed General Plan Amendment would apply Urban Residential to the entire Project Area. A General Plan Amendment requires review and recommendation by the Planning Commission with final approval by the City Council.

Zoning Code Amendment and Rezoning. Zoning Code Amendments would be required in order to establish the Wood Street Zoning District, and to rezone of the Project Area as described in this section of the EIR. The proposed Wood Street Zoning District would require review and recommendation by the Planning Commission with final approval by the City Council.

Redevelopment Plan Amendment. The Project Sponsors are requesting an amendment to the *OARB Area Redevelopment Plan* in order to allow the proposed mix of residential and commercial uses on land that is currently designated in the *OARB Area Redevelopment Plan* for industrial, office, and live/work uses. A Redevelopment Plan Amendment would require approval by the Oakland Army Base Redevelopment Agency (ORA). This EIR may be applied to this action and any other action by the ORA that may be required to implement the Project.

San Francisco Bay Conservation and Development Commission Bay Plan and Seaport Plan Amendments. The *OARB Area Redevelopment Plan EIR* identified that future redevelopment activities in the 16th/Wood sub-district, which encompasses the Project Area, would potentially conflict with the port priority land use designation. As stated in the *OARB Area Redevelopment Plan EIR*, the Bay Plan and Seaport Plan would need to be amended to remove the port priority use designation. These amendments would be required prior to Project implementation on Development Areas Six, Seven, and Eight, and would require approval by BCDC. In addition, the City may consider whether the port priority use designation should be accommodated in the remainder of the OARB Area Redevelopment Area or other appropriate sites.

Vesting Tentative Parcel Maps. The Project Sponsors are requesting the approval of five vesting tentative parcel maps (including condominium maps), which would be prepared by a registered civil engineer or land surveyor in compliance with the Subdivision Map Act and the Land Surveyor Act. Such maps would require approval by the Planning Commission.

Final Design Review. The Project Area would be subject to Final Development Plan/Final Design Review, as set forth in Section 2.50 of the proposed Wood Street Zoning Regulations, which would require approval by the Planning Commission.

Preliminary and Final Development Plans. Preliminary and final development plans would be required to develop any portion of a development area within the Project Area as set forth in Section 2 of the proposed Wood Street Zoning Regulations, requiring approval by the Planning Commission.

Tree Removal Permits. Prior to the removal of any protected trees (as defined in OMC 13.36.0200) for development of any portion of a development area, the affected Project Sponsor would be required to obtain a tree removal permit in accordance with the City of Oakland's Tree Preservation Ordinance. Such permit(s) require approval from the City of Oakland Office of Parks and Recreation.

Section 3
Environmental Analysis

3.1 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

Organization of this Section

This section of the EIR presents an analysis of environmental conditions that may be affected by the Project. The environmental analysis has been prepared in accordance with CEQA, as amended (Public Resources Code Section 21000, et seq.), and the State CEQA Guidelines. For each environmental issue presented in this section, the following information is presented:

- Setting—describes existing baseline conditions, including the environmental context and regulatory background.
- Impact Assessment—identifies standards of significance and evaluates how the Project would affect the baseline conditions. If the change to the baseline conditions would exceed the significance thresholds, a significant impact is declared, and mitigation measures to reduce, eliminate, or avoid the significant impacts are suggested.

Classification of Impacts

In accordance with Section 15022(a) of the CEQA Guidelines, the City of Oakland has drafted its own significance criteria consistent with CEQA and the State CEQA Guidelines, which are used to evaluate project impacts throughout this document. City standards are augmented by state and federal regulations and the CEQA Guidelines. For each impact, a level of significance is determined using the following classifications:

- Significant (S) impacts include effects that exceed established or defined thresholds. For example, a violation of the Bay Area Air Quality Management District's quantitative air quality standards would be considered a significant adverse impact.
- Potentially significant (PS) impacts include those cases where it is not precisely clear whether a significant effect would occur; the analysis in these instances conservatively assesses the credible worst-case conditions, but the discussion acknowledges that there is some uncertainty regarding the credible extent of the impact, given that certain final design-level details of a project cannot be known at this stage.
- Less-than-significant (LTS) impacts include effects that are noticeable but do not exceed established or defined thresholds. For example, new development may be taller or be of greater scale than surrounding structures, but would not substantially degrade the existing visual character of the area. Therefore, the visual effect would not be considered significant.

- No impact (NI) includes situations where there is no adverse effect on the environment.

Enumeration of Impacts and Mitigation

Each impact presented in this section of the EIR is defined using an alpha-numerical system that identifies the environmental issue. For example, *NO-1* denotes the first impact discussion in the Noise subsection. The two-letter codes used to identify the environmental issues discussed in this section are:

- LU – Land Use, Plans, and Policies
- VQ – Visual Quality
- TR – Transportation, Circulation, and Parking
- NO – Noise
- AQ – Air Quality
- CR – Cultural Resources
- HM – Hazardous Materials
- GE – Soils, Geology, and Seismicity
- HY – Hydrology and Water Quality
- BR – Biological Resources
- PH – Population, Employment, and Housing
- UT – Utilities
- PS – Public Services

Mitigation measures are numbered to correspond to the impacts they address; e.g., Mitigation Measure TR-3.1 refers to the first mitigation for Impact 3 in the Transportation, Circulation, and Parking subsection. A brief title is included to easily identify the mitigation measure.

Environmental Approach to Addressing Development Variations for the Project Area

The proposed Wood Street Zoning Regulations set forth land use regulations, development standards, design guidelines, and other requirements that would apply to the development and use of all property within the Project Area to ensure that individual areas are developed in a cohesive fashion. Within these development parameters, the future use of each development area is intended to be somewhat flexible to respond to market demands. To provide CEQA clearance for all potential uses anticipated, and to ensure that the full range of impacts of the cumulative development of the Project Area at the individual development areas is disclosed, this EIR evaluates the environmental impacts of the proposed variations of individual development areas with respect to Development Areas Two, Four, and Eight, where alternative land uses are proposed. Three scenarios have been identified that reflect the different combinations of land use (see Table 3.1-1):

- Maximum Residential
- Maximum Commercial
- Maximum Trips

The Maximum Residential Scenario represents the combination of land uses from each development area that yields the greatest number of residents in the Project Area. As such, impacts that are based on the number of residents, such as demand for public services and sensitivity to noise, air, and hazardous materials, would be greatest under this scenario.

Table 3.1-1
Project Area Development Scenarios

	Maximum Residential			Maximum Commercial			Maximum Trips		
Development Area	**Residential Units**	**Commercial Floor Area (sf)**	**Private Open Space (sf)**	**Residential Units**	**Commercial Floor Area (sf)**	**Private Open Space (sf)**	**Residential Units**	**Commercial Floor Area (sf)**	**Private Open Space (sf)**
One	82	0	8,200	82	0	8,200	82	0	8,200
Two	189	0	18,900	0	220,779	0	189	0	18,900
Three	200	0	20,000	200	0	20,000	200	0	20,000
Four	450	7,000	33,750	417	40,000	31,275	417	40,000	31,275
Five	0	14,847	0	0	14,847	0	0	14,847	0
Six	215	6,000	16,125	215	6,000	16,125	215	6,000	16,125
Seven	170	0	12,750	170	0	12,750	170	0	12,750
Eight	264	0	13,200	0	258,000	0	0	258,000	0
Nine	0	0	0	0	0	0	0	0	0
TOTAL	**1,570**	**27,847**	**122,925** [a]	**1,084**	**539,626**	**88,350** [a]	**1,273**	**318,847**	**107,250** [a]

Source: EIP Associates, 2004.

Note:

a. Common to each of these development scenarios is the provision of Public Open Space, totaling 60,670 sf, which would be in addition to the Private Open Space indicated in this table.

The Maximum Commercial Scenario would result in the greatest amount of commercial floor area and business development opportunities. New residential development and open space provision would be the smallest under this scenario.

The Maximum Trips Scenario represents the combination of land uses in each development area that yields the greatest number of vehicular trips. This scenario would result in the most significant traffic, air, and noise impacts on the surrounding West Oakland community. Coincidentally, the Maximum Trips Scenario also represents the combination of uses that yields the greatest number of Project Area employees and is thus appropriate for evaluating those impacts that are linked to jobs. Ordinarily the Maximum Commercial Scenario would be expected to generate the greatest number of jobs and the greatest number of trips; however, the Maximum Trips Scenario yields slightly more employees and trips than the Maximum Commercial Scenario. Therefore, all three scenarios have been evaluated in this EIR.

Environmental Approach to Addressing Specific Development Areas

The combined impacts of the proposed development in each of the nine development areas constitute the Project Area impacts, since it is the collective combination of impacts from each individual development that make up the Project Area impacts. Accordingly, if impacts for the Project Area, as defined by either the Maximum Residential, Maximum Commercial, or Maximum Trips Scenarios, are less than significant, then impacts relating to a specific development area would also be less than significant. For example, if development of the entire Project Area would not exceed the Bay Area Air Quality Management District's quantitative air emission standards, then implementation of one of the individual development area proposals by itself would not exceed those standards. This approach of examining the aggregate impacts of the Project Area first and then focusing on individual development areas is applied throughout this EIR.

Environmental Approach to Addressing Cumulative Impacts

In addition to the evaluation of project-specific impacts, CEQA also requires an evaluation of cumulative impacts. In accordance with CEQA, the discussion of cumulative impacts must reflect the severity of the impacts and the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. According to Section 15355 of the CEQA Guidelines:

> "Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.
>
> (a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Section 15130(a) of the CEQA Guidelines requires that EIRs discuss the cumulative impacts of a project when the project's incremental effect is cumulatively considerable. As further clarified by Section 15065(c) of the CEQA Guidelines, "cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. If the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, CEQA requires a brief discussion in the EIR of why the cumulative impact is not significant. CEQA also requires analyses in the EIR if a determination is made that a project's contribution to a significant cumulative impact is rendered less than cumulatively considerable and, therefore, is not significant. The fact that a cumulative impact is significant on the whole does not necessarily mean that the project-related contribution to that cumulative impact is significant as well. If, however, the project's contribution to a significant cumulative impact is cumulatively considerable and, therefore, determined to be significant, a detailed analysis must be provided to support and explain this conclusion.

CEQA also requires that the geographic scope of the cumulative impact analysis be identified and described in the EIR. The geographic scope of the cumulative impact analysis varies depending upon the specific environmental issue area being analyzed. For example, the scope of the cumulative impact analysis for visual quality includes the area that comprises the streets and surroundings of the proposed project, whereas the scope of the cumulative impact analysis for hydrology and water quality, for example, includes a much more extensive area comprising the Oakland Sub-Area of the East Bay Plain of the San Francisco Bay Basin. In some cases, such as geology and soils, impacts are inherently site specific, whether the impacts being analyzed are cumulative or site specific.

In addition to describing the geographic scope of analysis, CEQA also requires EIRs to identify the cumulative context of the analysis, which relates to the amount and type of growth that is anticipated to occur. The cumulative context can include a list of past, present, and probable future projects that collectively represent "related projects," as described by CEQA, and/or a summary of growth projections.

A detailed cumulative analysis was conducted using a growth forecast developed for the City. This approach updates Association of Bay Area Governments' (ABAG) regional forecasts with recent and anticipated future development projects in Oakland, as well as other changes in employment and population. Development projects and other changes in Oakland were based on input from City of Oakland staff, the General Plan buildout, Port of Oakland staff, and analysis of economic and real estate market data and trends. Hausrath Economics Group (HEG) has compiled the approved, proposed, and reasonably foreseeable potential development projects expected to be completed by the year 2025, plus growth projected for the Project Area, and developed future employment and

population forecasts, which are described in detail in Appendix C. Other future developments in West Oakland that would affect the cumulative analysis are also listed in Appendix C.

The 2025 forecasts developed by HEG represent more recent data than the Alameda Countywide Travel Model data, and include more updated and comprehensive projections regarding cumulative projects for the City of Oakland. Therefore, the higher employment and population growth numbers from HEG were used in place of the ABAG 2025 land use data set that was originally provided for use in the Alameda Countywide Travel Model to analyze cumulative conditions through the year 2025.

3.2 LAND USE, PLANS, AND POLICIES

Introduction

The Project Area is located in West Oakland, consisting of approximately 29.2 acres, and generally bounded by 10th Street, Wood Street, West Grand Avenue, and the frontage road/I-880. The Land Use and Transportation Element (LUTE) of the *City of Oakland General Plan* classifies the Project Area as "Business Mix." The Project Area is zoned M-30 (General Industrial) or M-20 (Light Industrial), with portions zoned S-16 (Industrial-Residential Transition Combining Zone).

The Project would alter existing land use patterns from primarily industrial to primarily urban residential, commercial, mixed-use and live/work uses. Under the Maximum Residential Scenario, these developments would consist primarily of residential construction, totaling 1,570 dwelling units (including 186 live/work units), and 27,847 sf of commercial development. Under the Maximum Commercial Scenario, residential uses would be reduced and the commercial uses would be increased in Development Areas Two, Four, and Eight, for a total of 1,084 dwelling units (including 142 live/work units), and 539,626 sf of commercial uses (such as commercial storage, office and other retail uses).

This section describes the regulatory framework guiding development of the Project Area, and evaluates proposed land use changes against this framework, including an analysis of the applicable regulations and policies set forth in the City's General Plan and the *Oakland Army Base (OARB) Area Redevelopment Plan*, as well as other relevant planning documents that address development and redevelopment within West Oakland. The description of the existing land use pattern and surrounding uses is based on a land use survey conducted by EIP Associates in August 2003. The focus of this section is the potential for the Project to result in land use conflicts with adjacent uses or to be inconsistent with applicable plans and policies. Land use conflicts occur when a new use by virtue of its intensity, activities, and operational characteristics causes the existing uses to substantially change in terms of their operations or to suffer a substantial change in the use and character of the area. In many respects, these changes occur because of changes in traffic levels, noise, air emissions, light and glare, and public health and safety that are associated with the new use. These particular aspects of land use conflicts are addressed in greater detail in other sections.

For land use, plans, and policies impacts, the Maximum Residential Scenario and Maximum Commercial Scenario were evaluated. These scenarios were selected because they represent the maximum amount of residential and maximum commercial uses that could be created by the Project, respectively, and thus would encompass the greatest potential impacts due to change in Project Area land uses.

Existing Land Uses in Project Area and Vicinity

The Project Area is generally underdeveloped, except for some transportation and warehousing operations and small hotel uses. Specifically, there is a commercial building, several scattered warehouses, a small hotel and catering business, railroad spurs, truck and empty railcar storage, and structures associated with the historic 16th Street Train Station, as shown in Figure 3.2-1.

There is a wide range of land uses adjacent to the Project Area. Light to heavy industrial and commercial uses and residential uses predominate. The area west of the frontage road and I-880 is primarily industrial, consisting of transportation-related uses, largely associated with the former Oakland Army Base and the Port of Oakland. Land to the east also consists of predominantly industrial uses, along with a community park and single-family residential development. To the south, there are primarily single-family residential uses as well as a church and a few vacant buildings.

The Project Area consists of nine development areas (see Figure 2-2). The existing land uses in each development area, as well as adjacent uses, are described further below.

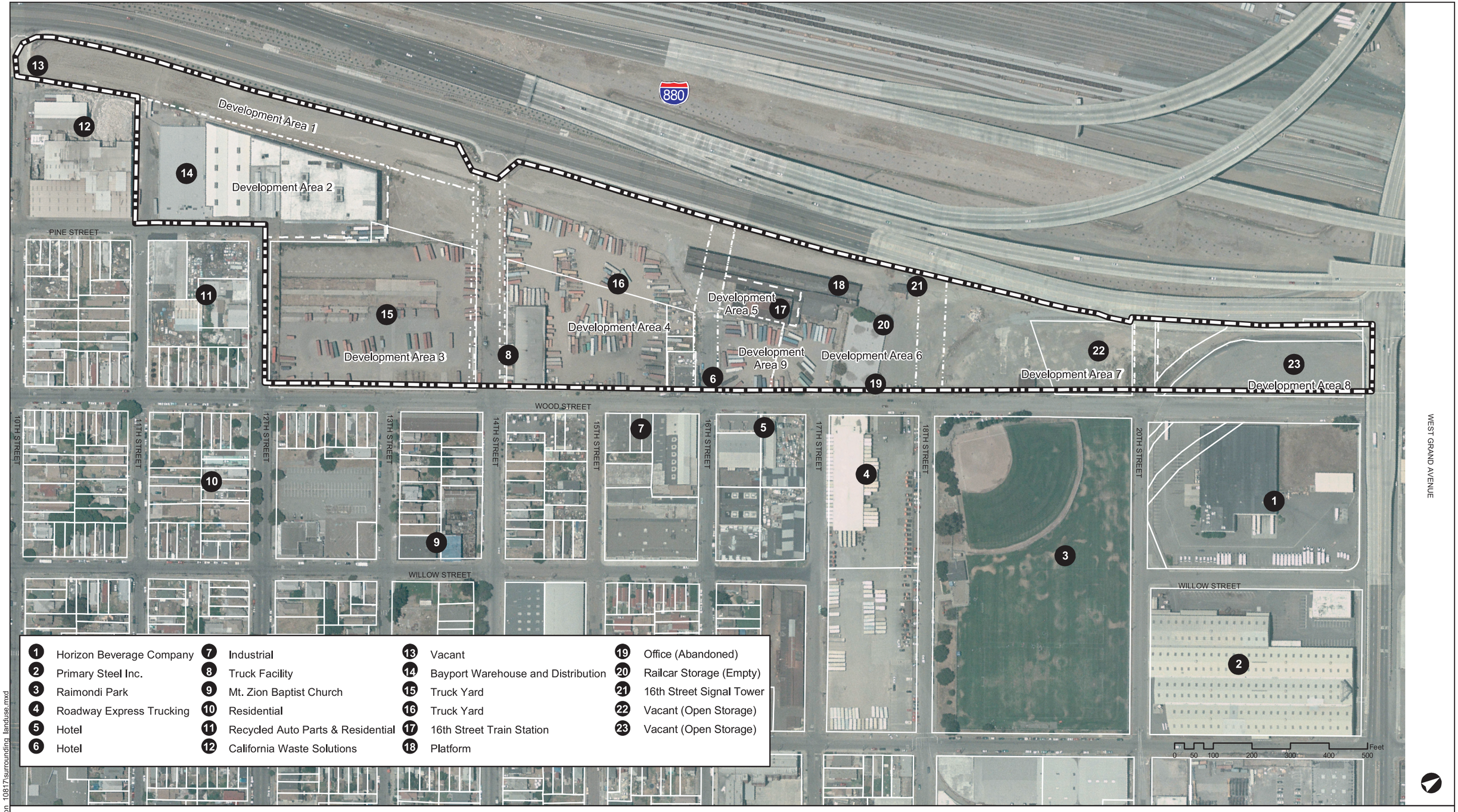
Development Area One is a long, narrow vacant lot located at the western end of the Project Area. Adjacent land uses include a recycling facility (California Waste Solutions) and warehouse operations (Bayport Warehouse Distribution).

Development Area Two contains Bayport Warehouse Distribution, along with additional vacant warehousing space in the former Pacific Cannery building. Adjacent land uses include a recycled auto parts facility, the California Waste Solutions facility, and vacant land.

Development Area Three is currently used as a truck storage and transfer yard. Adjacent land uses include a recycled auto parts facility, artists' studios, single-family detached homes, and a truck facility.

Development Area Four also is currently occupied by a truck storage and transfer yard, a small hotel and catering business (Bea's Hotel), and portions of the Elevated Tracks of the 16th Street Train Station. Adjacent land uses include another truck storage facility and industrial buildings.

Development Area Five contains structures associated with the historic 16th Street Train Station. The Station, which was vacated in 1989, is a state and local historic landmark (Landmark No. 81, pursuant to City of Oakland Ordinance Number 10434). As shown in Figure 2-4, the 16th Street Train Station consists of the following structures: the Main Hall, the Baggage Wing, the Elevated Tracks, and the 16th Street Signal Tower. Development Area Five contains some of these structures, as follows: (1) the Main Hall is wholly located here; (2) the Baggage Wing is partially located in this development area and partially in Development Area Six; and (3) the Elevated Tracks extend from Development Area Five into Development Areas Six and Four. Adjacent land uses include Bea's Hotel.



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EIP ASSOCIATES

FIGURE 3.2-1

Project and Surrounding Land Use

Source: EIP Associates, March 2004

Development Area Six is used as a container storage area and also contains a vacant office building. This development area also contains structures associated with the 16th Street Train Station, as follows: (1) the 16th Street Signal Tower is wholly located here; (2) the Baggage Wing is partially located in this development area as well as in Development Area Five; and (3) portions of the Elevated Tracks are in this development area and extend to Development Areas Four and Five. Adjacent land uses include other portions of structures associated with the station and a truck dock warehouse facility.

Development Area Seven is a vacant lot with elevated frontage road and I-880 on its west. An abandoned railroad spur crosses this development area. Adjacent uses include portions of structures associated with the 16th Street Train Station and a community park (Raimondi Park) with ballfields.

Development Area Eight is a vacant lot adjacent to elevated sections of the frontage road, I-880, and West Grand Avenue to its west and north. Adjacent land uses include a beer distributor (Horizon Beverage Company) that is located to the east across Wood Street.

Development Area Nine is a vacant lot. Adjacent land uses include the structures associated with the 16th Street Train Station, a truck storage and transfer yard, and Bea's Hotel.

Existing Land Use Activities

As noted in the LUTE and its associated EIR, "as a result of historic zoning patterns, many blocks in West Oakland contain a mix of residential, industrial and commercial uses." This statement applies to portions of the Project Area, which currently contain industrial and commercial land uses that are in conflict with adjacent or nearby residential uses. Examples of such existing incompatibilities include:[1]

- Housing units that are exposed to noise and air pollution associated with industrial-related traffic on adjacent roadways;
- Nuisances such as odors and noise arising from existing commercial businesses operating in close proximity to residences;
- Existing heavy industrial uses that are subject to complaints from neighboring uses regarding noise, dust, odor, visual quality, hours of operations, truck traffic, and various other industrial processes and operations;
- Exposure of residences to on-going industrial activities; and
- Manufacturing, wholesale and business uses that are located in close proximity to existing residential uses, exposing existing residents to incompatible land use.

Businesses that define existing land use conditions in the Project Area vicinity include a recycling facility and transportation-related industrial uses located adjacent to Development Areas One, Two, and Six. These business operations generate noise, traffic activity, emissions of air pollutants, and odors

[1] City of Oakland, *Land Use and Transportation Element EIR*, June 1998, pp. III.A-24 through III.A–27.

that could collectively disrupt or interfere with the character, use, and overall enjoyment of the area for proposed residential uses. For example, the California Waste Solutions facility at 11th and Pine Streets emits a noticeable odor, observed upon a site visit conducted by EIP Associates on August 27, 2003. Thus, future Project Area residents under the Maximum Residential Scenario in Development Areas One and Two could be exposed to odors given the current configuration and operational characteristics of California Waste Solutions. Based on prevailing winds in the area, the portion of Development Area One that is adjacent to the California Waste Solutions facility would be located upwind and exposed to odors only occasionally. While odors may still be a nuisance, this potential exposure to existing odors does not represent a physical change in the environment as a result of the Project for purposes of CEQA. Further, future Project residents that would potentially be affected by these odors would receive special disclosure notices to inform them of this issue prior to occupation. Notices would explain that such businesses may involve trucking activity, recycling, and loading and unloading that could generate occasional noise and odors.

General Plan Land Use Classifications and Zoning

Land Use Classifications. The LUTE designates the Project Area for Business Mix (see Figure 3.2-2).[2] Table 3.2-1 summarizes the existing General Plan land use classifications for each development area.

The Business Mix classification is intended to create, preserve and enhance areas of the City that are appropriate for a wide variety of business and related commercial and industrial establishments. It is designed for flexible economic development that strives to accommodate older industries and anticipates newer technologies, including both commercial and industrial operations. High impact industrial uses, including those that have hazardous materials on site, may be allowed provided that they are adequately buffered from residential uses.[3] High impact or large-scale commercial retail uses should be limited to sites with direct access to the Regional Transportation System. The maximum floor area ratio (FAR) for this classification is 4.0.

The Project Sponsors are seeking a General Plan Amendment to change the current land use classification from Business Mix to Urban Residential. The Urban Residential classification is intended to create, maintain, and enhance areas of the City that are appropriate for multi-unit, mid-rise or high-rise residential structures in locations with good access to transportation and other services. The primary future use in this classification is residential. Mixed-use buildings that house ground-floor commercial uses and public facilities of compatible character are also encouraged as part of redevelopment in West Oakland.[4] The maximum allowable density in these areas is 125 units per acre.

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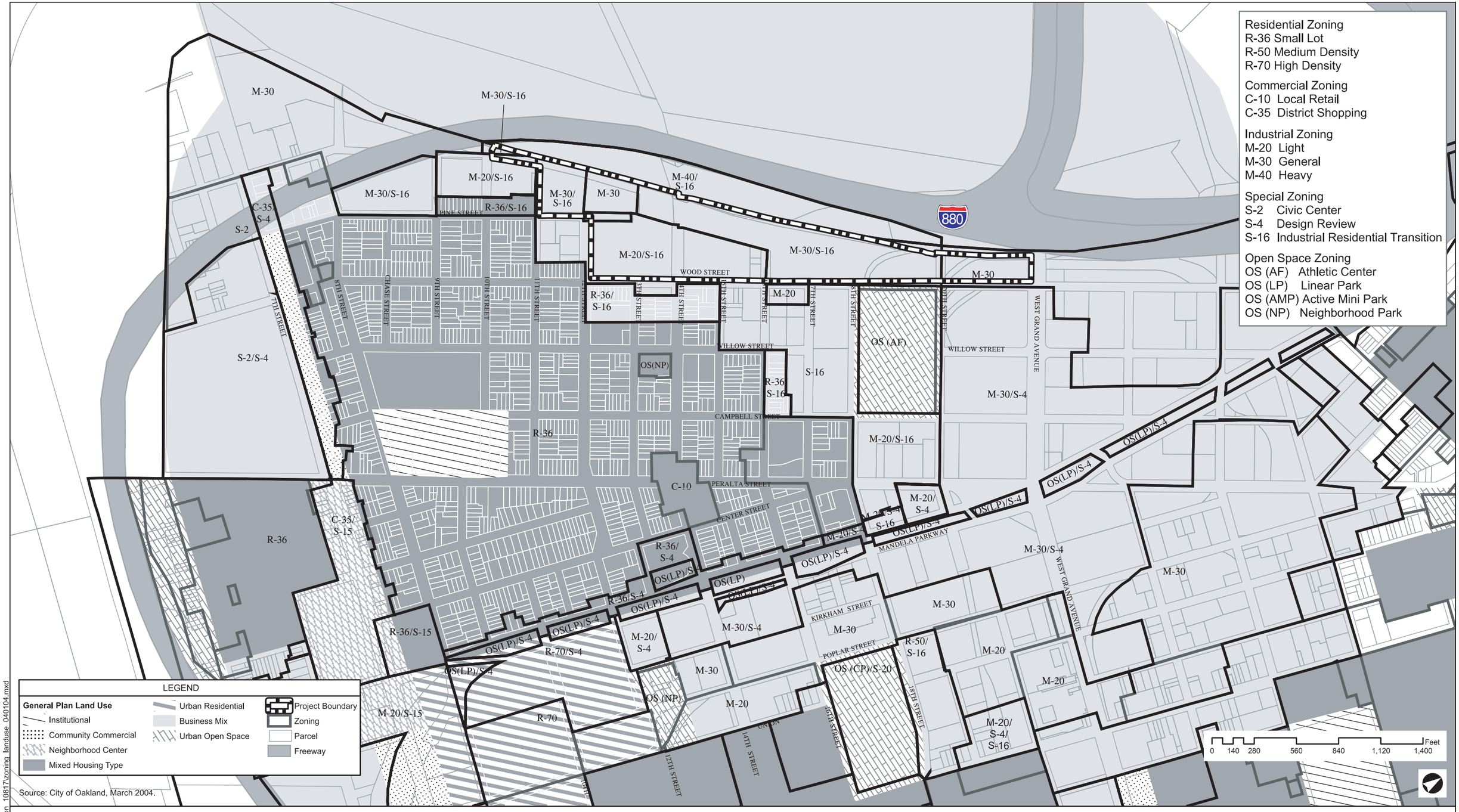
2 *City of Oakland General Plan,* Land Use and Transportation Element (LUTE), Land Use Diagram.
3 City of Oakland, *West Oakland Redevelopment Plan Draft EIR,* June 2003, p. 4-18.
4 *City of Oakland General Plan,* LUTE, p. 148.



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EIP ASSOCIATES

FIGURE 3.2-2

Adopted General Plan Land Use Classifications and Zoning Districts

Zoning. Table 3.2-1 also summarizes the existing zoning for each development area. The Project Area is primarily zoned (M) for light and general industrial uses (M-20 and M-30). Portions of the Project Area also have been zoned S-16 (Industrial-Residential Transition Combining Zone).[5]

Table 3.2-1
Existing General Plan Classifications/Zoning

Development Area	Land Use Classification	Zoning District	Zoning Description
One	Business Mix	M-20/S-16, M-30, M-30/S-16	Light Industrial/Industrial-Residential Transition Combining Zone, General Industrial, General Industrial/Industrial-Residential Transition Combining Zone
Two	Business Mix	M-30, M-30/S-16	General Industrial, General Industrial/Industrial-Residential Transition Combining Zone
Three	Business Mix	M-20/S-16, M-30/S-16	Light Industrial/Industrial-Residential Transition Combining Zone, General Industrial/Industrial-Residential Transition Combining Zone
Four	Business Mix	M-20/S-16, M-30/S-16	Light Industrial/Industrial-Residential Transition Combining Zone, General Industrial/Industrial-Residential Transition Combining Zone
Five	Business Mix	M-30/S-16	General Industrial/Industrial-Residential Transition Combining Zone
Six	Business Mix	M-30/S-16	General Industrial/Industrial-Residential Transition Combining Zone
Seven	Business Mix	M-30/S-16	General Industrial/Industrial-Residential Transition Combining Zone
Eight	Business Mix	M-30	General Industrial
Nine	Business Mix	M-30/S-16	General Industrial/Industrial-Residential Transition Combining Zone

Source: EIP Associates, 2004; CEDA.

The Project Sponsors are seeking to amend the Oakland Zoning Code to add a new zoning district to be known as the Wood Street Zoning District and to rezone the Project Area to that District. The proposed Wood Street Zoning District would impose specially designed zoning regulations to facilitate an integrated mixed-use, residential, and commercial community (proposed Wood Street Zoning Regulations, attached as Appendix H). Specifically, the Draft Wood Street Zoning Regulations would establish the following: (1) land use regulations (setting forth the allowable and prohibited activities); (2) development standards (establishing the minimum and maximum density levels, allowable FAR,

[5] City of Oakland, *West Oakland Redevelopment Plan Draft EIR,* June 2003, p. 4-18 and Figure 4-4.

height restrictions, and requirements regarding setbacks, building frontage, open space, parking/loading, and signage); and (3) design guidelines (defining design parameters such as architectural character, building massing and articulation, exterior features, lighting, materials and colors, and landscaped areas). In addition, the Wood Street Zoning Regulations set forth required procedures that must be satisfied (including submittal of preliminary and final development plans and final design review) prior to development of a particular development area.

A comparison of the proposed Wood Street Zoning Regulations and key development standards from the current zoning being applied to the Project Area is presented in Table 3.2-2. Notable is the absence of building intensity, building heights, and setback standards under current zoning, reflective of the historic industrial uses of the area. The proposed Wood Street Zoning Regulations would establish standards for each of these aspects of Project Area development.

Table 3.2-2
Comparison of Project Development Standards and Existing Zoning

	Project	Manufacturing M-20, M-30
Maximum FAR	2.947:1	None specified
Maximum Residential Density	125 du/acre	Not permitted
Maximum Height	90 feet	Generally unrestricted
Minimum Setbacks		
Wood Street	10 feet	5 feet in M-20
Other interior structures	5 feet	None in other M zones
Required Off-Street Parking		
Residential	1 space/du	
Live/work unit	1 space/unit	
Other uses	One space/1,500 sf of floor area or for each three employees	Per C-51 zoning district

Source: Wood Street Zoning Regulations, 2004; City Zoning Ordinance.
Notes:
FAR = floor area ratio
du = dwelling unit

Applicable Plans and Policies

City of Oakland Municipal Code (Title 17. Planning). The Project is governed by Title 17 of the Oakland Municipal Code (O.M.C.), known as the Oakland Planning Code. Proposed changes in land use activities or facilities must conform with the General Plan (O.M.C. Section 17.01.030) and with Oakland Zoning Regulations set forth in O.M.C. (Sections 17.07-17.154 (O.M.C. Section 17.07.060). To the extent there is an express conflict between the *Oakland General Plan* and the Oakland Zoning Regulations, the requirements of General Plan conformity supersede the requirements for conformity with the Oakland Zoning Regulations (O.M.C. Sections 17.01.030, 17.01.050).

City of Oakland General Plan. The *City of Oakland General Plan* establishes comprehensive, long-term land use policies for the City of Oakland. In accordance with state law, the *City of Oakland General Plan* includes the following mandatory topics: land use, circulation, housing, conservation, open space, noise and safety. The topics of land use and circulation are contained in the LUTE. The topics of conservation and open space are contained in the Open Space, Conservation and Recreation Element (OSCAR). The General Plan also contains a Historic Preservation Element (HPE) and a Bicycle Plan and Pedestrian Master Plan.

As required by O.M.C. Section 17.01.060, the Oakland Planning Commission adopted *Guidelines for Determining General Plan Conformity* (May 6, 1998, as amended November 3, 1999, August 8, 2001, and December 5, 2001) to determine if a project conforms to the General Plan.

Following is a detailed discussion of the various General Plan policies applicable to the Project.

Land Use and Transportation Element. Adopted in 1998, the LUTE of the *Oakland General Plan* identifies objectives and policies for land uses within the City of Oakland, and sets forth an action program to implement these objectives and policies through development controls and other strategies. The LUTE defines the City as six specific planning areas; the Project Area is in the West Oakland area. Key land use objectives for this area include the maintenance and enhancement of established neighborhood areas, the encouragement of business expansion to take advantage of the new Cypress Freeway alignment, and the resolution of existing land use conflicts between businesses and residents.[6]

The following LUTE policies apply to the Project:

> **Policy I/C1.4:** Economic investment, consistent with the City's overall economic strategy, should be encouraged, and where feasible, should promote viable investment in economically distressed areas of the City.
>
> **Policy I/C2.2:** The reuse of abandoned industrial buildings by non-traditional activities should be encouraged where the uses are consistent with, and will assist in the attainment of, the goals and objectives of all elements of the Plan.
>
> **Policy I/C.2.3:** Development in older industrial areas should be encouraged through the provision of an adequate number of vacant or buildable sites designated for future development.
>
> **Policy I/C4.1:** Existing industrial, residential and commercial activities and areas which are consistent with long term land use plans for the City should be protected from the intrusion of potentially incompatible land uses.

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[6] *City of Oakland General Plan*, LUTE, p.187. Zoning in this area should be tailored to support both the character of established neighborhoods and provide guidance for development of the range of housing densities anticipated along the major corridors. The LUTE also views West Oakland as offering many opportunities for new and expanded commercial and industrial businesses, so long as potential land use conflicts are adequately addressed.

Policy T2.3: Promote neighborhood-serving commercial development within one-quarter to one-half mile of established transit routes and nodes.

Policy N1.1: Commercial development in the neighborhoods should be concentrated in areas that are economically viable and provide opportunities for smaller scale, neighborhood-oriented retail.

Policy N3.1: Facilitating the construction of housing units should be considered a high priority for the City of Oakland.

Policy N3.2: In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City of Oakland.

Policy N3.5: The City should actively encourage development of housing in designated mixed housing type and urban housing areas through regulatory and fiscal incentives, assistance in identifying parcels that are appropriate for new development, and other measures.

Policy N3.8: High-quality design standards should be required of all new residential construction. Design requirements and permitting procedures should be developed and implemented in a manner that is sensitive to the added costs of those requirements and procedures.

Policy N5.2: Residential areas should be buffered and reinforced from conflicting uses through the establishment of performance-based regulations, the removal of non-conforming uses, and other tools.

Policy N5.3: The City should support and encourage residents desiring to live and work at the same location where neither the residential use nor the work occupation adversely affects nearby properties or the character of the surrounding area.

Policy N6.1: The City would generally be supportive of a mix of projects that provide a variety of housing types, unit sizes, and lot sizes, which are available to households with a range of incomes.

Policy N7.1: New residential development in Detached Unit and Mixed Housing Type areas should be compatible with the density, scale, design, and existing or desired character of surrounding development.

Policy N7.2: Infrastructure availability, environmental constraints and natural features, emergency response and evacuation times, street width and function, prevailing lot size, predominant development type and height, scenic values, distance from public transit, and desired neighborhood character are among the factors that should be taken into account when developing and mapping zoning designations or determining "compatibility." These factors should be balanced with the citywide need for additional housing.

Policy N7.5: Local streets should be designed to create an intimate neighborhood environment and not support high speed or large volumes of traffic. Providing on-site parking for cars and bicycles, planting and maintaining street trees, and landscaping, minimizing the width of driveway curb cuts,

maintaining streets, bike routes, and sidewalks, and orienting residential buildings toward the street all contribute to the desired environment.

Policy N8.2: The height of development in urban residential and other high density residential areas should step down as it nears lower density residential areas to minimize conflicts at the interface between the different types of development.

Policy N9.5: Identify locations of interest and historic significance by markers, signs, public art, landscape, installations, or by other means.

Policy N9.7: Diversity in Oakland's built environment should be as valued as the diversity in population. Regulations and permit processes should be geared toward creating compatible and attractive development, rather than "cookie cutter" development.

Policy N9.8: Locations that create a sense of history and community within the City should be identified and preserved where feasible.

Policy N9.9: The City encourages rehabilitation efforts which respect the architectural integrity of a building's original style.

Policy N10.1: Neighborhood activity centers should become identifiable commercial, activity and communication centers for the surrounding neighborhood. The physical design of neighborhood activity centers should support social interaction and attract persons to the area. Some of the attributes that may facilitate this interaction include plazas, pocket parks, outdoor seating on public and private property, ample sidewalk width, street amenities such as trash cans and benches, and attractive landscaping.

Policy N12.4: Electrical, telephone, and related distribution lines should be undergrounded in commercial and residential areas, except where special local conditions such as limited visibility of the poles and wires make this unneeded. They should also be undergrounded in appropriate institutional, industrial and other areas, and generally along freeways, scenic routes, and heavily traveled streets. Programs should lead systemically toward the eventual undergrounding of all existing lines in such places. Where significant utility extensions are taking place in these areas, such as in new subdivisions, utilities should be installed underground from the start.

The Open Space, Conservation, and Recreation Element. Adopted in 1996, the OSCAR Element of the *City of Oakland General Plan* addresses the management of open land, natural resources, and parks in Oakland. The OSCAR categorizes Oakland into twelve distinct planning areas and sets forth a strategy for each area that recommends specific priorities to be considered during the decision-making process. In so doing, the OSCAR recognizes that "open space means different things to different people." Accordingly, the approach taken in the OSCAR is to apply as broad a definition of open space as possible, recognizing that different types of open space require different types of policies.

With respect to parks and recreational areas, the OSCAR proposes a local-serving park acreage standard of four acres per thousand residents. In built out areas, much of the OSCAR's emphasis is on underutilized resources, including those that may not match traditional open space definitions.[7] The OSCAR does not establish absolute standards that must be achieved by new development. Rather, it uses the level of service standards as a means of determining where unmet needs exist and prioritizing future capital investments. While the ultimate goal is to achieve the specified level of service standards, the OSCAR acknowledges that the City's built out character presents a major obstacle in most cases. Accordingly, the intermediate goal is to make significant inroads in the gap between what exists now and what is ultimately desired.[8]

The City currently falls short of the park acreage goal, having only 1.33 acres of local-serving park acreage per thousand residents.[9] The Project Area is located in the West Oakland planning area. Although still deficient in park acreage, West Oakland tends to be better served than other areas, possessing 2.43 acres per thousand residents.[10] It currently contains one community park (Raimondi Park), as well as six neighborhood parks, five active mini-parks, and two athletic field areas. Two of the existing parks contain recreation centers. Total park area, including schoolyards and athletic fields, is 56.70 acres. Most of the open space in this planning area consists of storage yards, land around vacant buildings, and other "functional" uses, with very few "natural" features (such as creeks, forests and grasslands) remaining.[11] Within the West Oakland Planning Area, park recommendations in the vicinity of the Project Area include:

- increase activity level at Raimondi Park, which can become a catalyst for redevelopment;
- examine long-term relationships between Raimondi Park and adjacent properties, including the nearby AMTRAK station, and the potential for complementary development nearby as part of a Master Plan; and
- continue street tree planting efforts and other programs to "green" West Oakland.

The following OSCAR policies apply to the Project:

Policy OS-3.5: Encourage the joint use of parking lots and open storage areas for recreation or special events. Such areas should be regarded as potential links in the citywide open space system.

Policy OS-4.1: Continue to require new multi-family development to provide useable outdoor open space for its residents.

Policy OS-4.2: Recognize the value of residential yards as a component of the City's open space system and discourage excessive coverage of such areas by buildings or impervious surfaces.

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7 *City of Oakland General Plan*, Open Space, Conservation, and Recreation Element (OSCAR), p. 2-3.
8 *City of Oakland General Plan*, OSCAR, p. 4-40.
9 *City of Oakland General Plan*, OSCAR, p. 4-9.
10 *City of Oakland General Plan*, OSCAR, p. 5-6.
11 *City of Oakland General Plan*, OSCAR, p. 5-6.

Policy OS-4.4: Discourage property owners from allowing vacant land to become a source of neighborhood blight, particularly in residential areas with large numbers of vacant lots.

Policy OS-5.2: Promote the development of linear parks or trails within utility or transportation corridors; including transmission line rights-of-way, abandoned railroad rights-of-way, and areas under the elevated BART tracks.

Policy OS-10.2: Encourage site planning for new development which minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.

Policy OS-10.3: Enhance Oakland's underutilized visual resources, including the waterfront, creeks, San Leandro Bay, architecturally significant buildings or landmarks, and major thoroughfares.

Policy OS-11.2: Create new civic open spaces at BART stations, in neighborhood commercial areas, on parking garages, and in other areas where high-intensity redevelopment is proposed.

Policy Rec-3.1: Use the level of service standards for Oakland Parks as a means of determining where unmet needs exist and prioritizing future capital investments.

The Historic Preservation Element.[12] The HPE of the *City of Oakland General Plan* (adopted in 1994, as amended in 1998) sets forth goals, objectives, policies and actions that encourage the preservation and enhancement of Oakland's older buildings, districts and other physical environmental features having special historic, cultural, educational, architectural or aesthetic interest or value.

Oakland's citywide program for the designation of historic resources began in 1973. Since 1979, the City has established and maintained ongoing comprehensive historical and architectural surveys. Individual properties are researched, documented, and evaluated on a graduated rating scale ranging from A through E. In addition, possible historic districts[13] are identified and ranked either as "Areas of Primary Importance" (APIs) or "Areas of Secondary Importance" (ASIs).

The HPE designates properties in different ways. The City considers any property rating of "A" (highest importance) or "B" (major importance), and all properties determined to contribute or potentially contribute to an API or ASI to warrant consideration for possible preservation. These properties are referred to as "Potential Designated Historical Properties." The City designates significant older properties that definitively warrant preservation as "Landmarks," "Preservation Districts," or "Heritage Properties." Landmarks, Heritage Properties, and properties that contribute or potentially contribute to Preservation Districts are referred to as "Designated Historic Properties."

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[12] *City of Oakland General Plan*, Summary of Historic Preservation Element, http://www.oaklandnet.com/government/ceda/revised/planningzoning/HistoricPreservation/HP-overviewH.html, accessed March 19, 2004.

[13] A "district" is a significant concentration, linkage, or continuity of buildings, structures, objects, sites, natural features related to human presence, or activities united historically or aesthetically by plan, appearance, or physical development. See *City of Oakland General Plan*, Historic Preservation Element, p. 2-5.

For properties with official City designations, the HPE discusses a number of policies and regulations that may potentially apply, depending upon the designation.

The Project Area contains historic resources as described in greater detail in Section 3.7, Cultural Resources. Accordingly, the following policies apply to the Project.

Policy 2.4:

(a) Demolitions and Removals involving Landmarks or Preservation Districts will generally not be permitted or be subject to postponement unless certain findings are made. Demolition or removal of more important Landmarks and of most Preservation District properties will normally not be permitted without the required findings, while demolition or removal of less important Landmarks will be subject only to postponement.

(b) Alterations or new construction involving Landmarks or Preservation Districts will normally be approved if they are found to meet the Secretary of Interior's Standards for the Treatment of Historic Properties or if certain other findings are made.

(c) Findings for approval of demolitions, removals, alterations or new construction involving Landmarks or Preservation Districts will seek to balance preservation of these properties with other concerns.

(d) Specific regulatory provisions are set forth in (Tables 4-1 and 4-2 in the HPE).

Policy 3.1: The City will make all reasonable efforts to avoid or minimize adverse effects on the Character-Defining Elements of existing or Potential Designated Historic Properties, which could result from private or public projects requiring discretionary City actions.

Policy 3.8: For purposes of environmental review under the California Environmental Quality Act, the following properties will constitute the City of Oakland's Local Register of Historical Resources:[14] (1) All Designated Historic Properties; and (2) those Potential Designated Historic Properties that have an existing rating of "A" or "B" or are located within an Area of Primary Importance. Complete demolition of a Historical Resource will normally be considered a significant effect that cannot be mitigated to a less-than-significant level and will, in most cases, require preparation of an environmental impact report. A proposed addition or alteration to a Historical Resource that has the potential to disqualify a property from Landmark or Preservation District eligibility or may have substantial adverse effects on the property's Character-Defining Elements will normally, unless adequately mitigated, be considered to have a significant effect.

Four historic resources are located within the Project Area. Development Area Two contains the Pacific Coast Canning Company building (one of four components of a cannery complex); Development Area

[14] Any property listed on the California Register of Historical Resources or officially determined to be eligible for listing on the California Register of Historical Resources is also considered a "Historical Resource" pursuant to Public Resources Code Section 21084.1.

Four contains Bea's Hotel, as well as portions of the Elevated Tracks; Development Area Five contains the Main Hall of the 16th Street Train Station and portions of the Elevated Tracks; and Development Area Six contains the attached Baggage Wing, the remaining portion of the structure that supported Elevated Tracks, and the Signal Tower. All of the above-referenced components on Development Area Six are directly associated with the 16th Street Train Station. The impacts of the Project on these resources are evaluated in Section 3.7, Cultural Resources.

The Housing Element. The Housing Element (2004) of the *City of Oakland General Plan* sets forth policies and strategies relating to the development of housing within the City of Oakland.

The following policies apply to the Project:

Policy 1.6: Encourage the reuse of industrial and commercial buildings for joint living quarters and working spaces.

Policy 1.7: The City of Oakland will strive to meet its fair share of housing needed in the region.

Policy 3.2: Allow flexibility in the application of zoning, building and other regulations.

Policy 4.2: To improve housing and neighborhood conditions, the City will abate blighting conditions through a combination of code enforcement, financial assistance and public investment.

Policy 4.3: Continue to implement programs to revitalize commercial districts in low-income neighborhoods. Commercial revitalization will serve as a catalyst for stock in surrounding areas.

Policy 7.1: Develop and promote programs to foster the incorporation of sustainable design principles, energy efficiency and Smart Growth principles into residential developments. Offer education and technical assistance regarding sustainable development to project applicants.

Policy 7.2: Encourage the incorporation of energy efficient conservation design features in existing and future residential development.

Policy 7.3: Continue to direct development toward existing communities and encourage infill development at densities consistent with the surrounding communities.

Policy 7.4: Work with developers to construct new housing that reduces the footprint of new construction, preserves green spaces, and supports the use of public transit.

Policy 7.5: Encourage a mix of land uses in the same zoning district or on the same site in certain zoning districts.

Oakland Bicycle Plan. In July 1999, the City Council adopted the Oakland Bicycle Plan that contains a series of recommendations for bicycle parking to be included in new developments. The recommendations include spaces for short-term and long-term parking. For short-term parking, the Plan recommends a minimum of one space per 10,000 sf of office space, one space per 5,000 sf of

general retail space, and two spaces for "all other categories," which includes hotel space. For long-term parking, the Bicycle Plan recommends a minimum of one space per 3,000 sf of office space, one space per 8,000 sf of retail space, and two spaces or one per each ten employees for "all other categories." For the automotive fee parking use, ten spaces or one space per 20 automobile spaces is recommended for long-term. No short-term parking is recommended for this use. For multifamily residential dwellings with private garages, the Plan recommends one short-term space (a rack) per ten units and one long-term space per two units.

While the Bicycle Plan encourages locating these spaces on site, it notes that developers should be given the option to provide half of the long-term spaces at an off-site location or through payment of an in-lieu fee. The parking ratios described above are presented as recommendations in the Bicycle Plan. However, the City is now considering adopting requirements consistent with those requirements in the City's Zoning Ordinance.

Pedestrian Master Plan. In November 2002, the City Council adopted the Pedestrian Master Plan as part of the LUTE to identify policies and implementation measures for promoting a walkable city. The Plan designates the pedestrian districts, which means that every street is a pedestrian route. Selected routes are identified as having the highest pedestrian use with better connectivity. The Plan refers to the Estuary Policy Plan for proposed improvements for pedestrian routes in and around the Project Area. The following policies apply to the Project:

Policy 1.1: Improve pedestrian crossings in areas of high pedestrian activity where safety is an issue.

Policy 1.2: Use traffic signals and their associated features to improve pedestrian safety at dangerous intersections.

Policy 1.3: Strive to maintain a complete sidewalk network free of broken or missing sidewalks or curb ramps.

Policy 2.1: Create and maintain a pedestrian route network that provides direct connections between activity centers.

Policy 2.3: Implement pedestrian improvements along major AC Transit lines and at BART stations to strengthen connections to transit.

Policy 3.1: Encourage the inclusion of street furniture, landscaping, and art in pedestrian improvement projects.

Policy 3.2: Promote land uses and site designs that make walking convenient and enjoyable.

With the implementation of mitigation measures for traffic signals and other pedestrian safety mitigation measures, the Project would also maintain or improve pedestrian safety at intersections (see Section 3.4, Transportation, Circulation, and Parking).

Oakland Army Base Area Redevelopment Plan. In 2000, the City of Oakland adopted the *OARB Area Redevelopment Plan*, which established a redevelopment project area and a program of

redevelopment, rehabilitation and revitalization for this area. The *OARB Area Redevelopment Plan* is designed to eliminate blight and blighting influences and revitalize the community. The redevelopment project area is approximately 1,800 acres in total (OARB Redevelopment Area) and is divided into three sub-districts:

- The approximate 470-acre OARB sub-district (OARB sub-district),
- The approximate 1,290-acre Port of Oakland industrial maritime area sub-district (Maritime sub-district), and
- The approximate 41-acre area near 16th and Wood Streets in West Oakland (16th/Wood sub-district).

The Project Area is contained within the 16th/Wood sub-district (see Figure 3.2-3). The Redevelopment Land Use Map (in the *OARB Area Redevelopment Plan*) illustrates the location of the OARB Redevelopment Area boundaries, major streets within this area, and the proposed land uses to be permitted in this area. The *OARB Area Redevelopment Plan* currently designates the 16th/Wood sub-district for light industry, office (research and development), retail, live/work, park and public uses. The Project Area occupies the majority of the 16th/Wood sub-district (see Figure 3.2-3).

The *OARB Area Redevelopment Plan* is intended to be long-term in nature, and therefore is designed to retain sufficient flexibility so that the City may respond accordingly to market and economic conditions, developer interest, and redevelopment opportunities. Therefore, it does not present a precise plan or establish specific projects for redevelopment of any area within the OARB Redevelopment Area. Rather, it sets forth a process and a basic framework within which specific plans will be reviewed and considered.[15]

The *OARB Area Redevelopment Plan* contains the following goals:

- The mitigation of the economic and social degradation that is faced by the City of Oakland due to the closure of the Oakland Army Base.
- Implementation of the adopted Reuse Plan (as further described below).
- The elimination of physical and economic blighting influences in the OARB Redevelopment Project Area.
- The subdivision of land into parcels suitable for modern, integrated development with improved pedestrian and vehicular circulation in the OARB Redevelopment Project Area.
- The replanning, redesign and development of portions of the OARB Redevelopment Project Area which are improperly utilized.
- The strengthening of the economic base of the community by the construction and installation of infrastructure and other needed site improvements to stimulate new development, employment, and social and economic growth.

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[15] City of Oakland, *OARB Area Redevelopment Plan*, June 2000, p. 100.



Sources: EIP Associates, 2004.

EIP ASSOCIATES

FIGURE 3.2-3
Redevelopment Project Areas and Sub-Districts

- The expansion, improvement, and preservation of the City's supply of housing available to low- and moderate-income persons and families.
- Other goals and purposes of redevelopment as set forth in the Community Redevelopment Law (Health and Safety Code Sections 33492 et seq.).

The Project Sponsors are requesting an amendment to the *OARB Area Redevelopment Plan* in order to allow the mix of residential and commercial uses that are proposed under the Project.

Oakland Army Base Final Reuse Plan. The *OARB Area Redevelopment Plan* incorporates the *Oakland Army Base Final Reuse Plan* (adopted in 2002, as it may be amended from time to time) (Reuse Plan).

The Reuse Plan contains the following goals:

- Create a balanced land use pattern which best leverages OARB assets, supports sustainable land utilization, and enhances the local quality of development.
- Sustainable job creation and economic development which provide employment and advancement opportunities for Oakland residents and businesses.
- High quality and vibrant districts which provide a safe, attractive, and healthy urban environment.
- Provide for a safe, efficient and effective movement of people and goods to and from the OARB which minimizes adverse impacts to local communities and roadways.
- Protection, preservation and enhancement of environmental resources.
- High quality public/community services.
- High quality practices which maximize reuse and recycling opportunities and minimize waste generation.

Similar to the *OARB Area Redevelopment Plan*, the Reuse Plan is conceptual in nature, and does not constitute a development plan. Rather, it documents the reuse planning process, and provides a broad policy framework within which a specific project may be reviewed and considered. The Reuse Plan includes a menu of acceptable land use activities for two areas of the Oakland Army Base: the Gateway Development Area and the Port Development Area. It does not, however, discuss any particular land use activities for the 16th/Wood sub-district, and therefore does not provide direct guidance for the Project in this regard.

West Oakland Redevelopment Plan. The *West Oakland Redevelopment Plan* establishes an approximately 1,546-acre redevelopment area in West Oakland (West Oakland Redevelopment Area). The West Oakland Redevelopment Area is bounded by 40th Street and the Oakland/Emeryville city limits to the north; I-980 and Union Street to the east; 18th Street and Middle Harbor Road to the south; and Pine and Wood Streets to the west (see Figure 3.2-3). The West Oakland Redevelopment Area is

adjacent to, but does not cover any of, the OARB Redevelopment Area, which includes the Project Area. Therefore, while the foregoing objectives may be viewed as relevant considerations, they are not directly applicable to the Project.

The *West Oakland Redevelopment Plan* is designed to eliminate blight and blighting influences and revitalize the community, and sets forth the following objectives:

- Affordable housing and general housing improvements;
- Public and civil infrastructure, and environmental improvements;
- Improvements to commercial and industrial areas and business activities, and increased opportunities to foster environmentally sound businesses; and
- Incentive-based development programs.[16]

San Francisco Bay Conservation Development Commission's Bay Plan and Seaport Plan. The San Francisco Bay Conservation Development Commission (BCDC) is a state agency that generally performs functions equivalent to the California Coastal Commission in those portions of coastal California adjacent to the San Francisco Bay.

San Francisco Bay Plan. The McAteer-Petris Act of 1965 established the BCDC to "…prepare an enforceable plan to guide the future protection and use of San Francisco Bay and its shoreline." The outcome of that legislation, *The San Francisco Bay Plan* (Bay Plan), was adopted by BCDC in 1968, and has been amended several times, most recently in April 2001. The Bay Plan guides BCDC in its protection of the Bay and in its exercise of permit authority over development adjacent to the Bay.

The Bay Plan defines five special land use designations called "priority uses," which are appropriate to be located at specific limited shoreline sites. The priority use designations are ports, water-related industry, airports, wildlife refuges, and water-related recreation. If a site is designated a priority use area in the Bay Plan, then it is intended to be reserved for that use. In instances where these priority use designations fall outside BCDC's 100-foot shoreline band, the McAteer-Petris Act specifies that the provisions of the Bay Plan pertaining to such areas are "advisory only."[17] A portion of the Project Area, affecting Development Areas Six, Seven, and Eight, is included in the port priority use designation, as described in Figure 4 of the Bay Plan, and lies beyond BCDC's 100-foot shoreline band.

San Francisco Bay Area Seaport Plan. BCDC also recognizes the importance of maritime commerce to the Bay Area, and the necessity of modern facilities to meet current and future maritime commercial needs. As such, the BCDC prepared the *San Francisco Bay Area Seaport Plan* (Seaport Plan) to coordinate the planning and development of port terminals in the Bay.

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[16] City of Oakland, *West Oakland Redevelopment Plan Draft EIR,* June 2003, p. 1-2 and p. 1-4.

[17] Bay Conservation Development Commission, *The San Francisco Bay Plan*, as amended through June 2003. http://www.bcdc.ca.gov/library/bayplan/bayplan.htm, accessed August 8, 2004.

The *OARB Area Redevelopment Plan EIR* identified that future redevelopment activities in the 16th/Wood sub-district would potentially conflict with the port priority land use designation. As part of the adopted Mitigation Monitoring and Reporting Program (MMRP) (included as Appendix I to this EIR), both the City and Port acknowledged that amendments to the Bay Plan and Seaport Plan would be required to resolve this potential land use conflict.

Impacts and Mitigation Measures

Standards of Significance

The Project would have a significant impact on the environment if it would:

- Physically divide an established community;
- Result in a fundamental conflict between adjacent or nearby land uses; or
- Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, without limitation, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually resulting in a physical change in the environment.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not diminish potentially significant or significant effects to a less-than-significant level, the impacts are classified as "significant and unavoidable effects (SU)." For this section, LU refers to Land Use, Plans, and Policies.

LU-1. The Project would not physically divide an established community. (NI)

The Project Area is located in an industrial/warehouse transition area on the periphery of a residential area in West Oakland, near the former Oakland Army Base; this area is dominated by vacant or underutilized lots with industrial and commercial uses. On the west, it is bounded by the frontage road and I-880, where there is no development. Since the Project would not replace any uses, but would develop existing vacant or underutilized lots into new residential, commercial, and open space uses, the Project itself would not create a division in an established community. Therefore, no impact would result.

Summary of Impact LU-1 by Development Area. Since full development of the Project Area would not divide an established community, implementation of proposals in each of the individual development areas would not introduce physical or visual barriers that could physically divide a community within West Oakland.

Development Area	No Impact	LTS	PS	S
1	✓			
2	✓			
3	✓			
4	✓			
5	✓			
6	✓			
7	✓			
8	✓			
9	✓			

LU-2. Proposed higher-density land uses associated with the Project could potentially result in land use compatibility impacts on existing low-density units relating to increased noise, light and glare, and traffic, and to visual encroachment/loss of views. However, provisions of the proposed Wood Street Zoning Regulations would reduce these potential land use conflicts to less than significant. (LTS)

The Project Area is surrounded by light to heavy industrial/commercial and residential uses. Northwest of the Project Area, across I-880, land uses consist primarily of transportation-related uses. The majority of land to the south and east of the Project Area is occupied by single-family residential uses, as well as a church on 13th Street and a few currently vacant commercial buildings. To the south are other industrial uses, including a recycling center and various transportation-related facilities.

Implementation of the Project would help to alleviate existing land use conflicts in the area by reinforcing pedestrian-oriented, mixed-use development in the Project Area, and limiting the expansion of any new industrial operations and transportation-related uses in the Project Area. The Project would result in the reduction of heavy truck traffic, and would serve to buffer the existing adjacent homes from current high levels of noise from I-880 and the frontage road.

The majority of the land in the vicinity of the Project Area is currently used for industrial purposes or is bounded by I-880. However, a portion of land to the southwest of the Project Area consists of low-density, low-rise residential uses. As shown in Figure 3.2-2, much of the residential land in the Project vicinity is zoned for Small Lot Residential (R-36 or R-36/S-16). Residential development in this zoning district is typically single family or multi-family with two units. Development standards include a maximum height of 30 feet and a frontyard setback of 10 to 20 feet, depending on the size of the lot. Thus, the height and scale of the residential uses proposed by the Project would contrast with the adjacent and nearby homes. The physical environmental impacts associated with higher density units near lower density units include:

- Increased traffic volumes;
- Higher levels of activity as a result of the greater residential population;
- Increased noise due to the activities and presence of surface parking lots and garages;

- Light and glare from interior and exterior lighting; and
- Visual encroachment/loss of views.

These potential land use conflicts would occur where existing residential uses adjoin the Project Area; i.e., along Wood Street between 12th and 15th Streets (opposite Development Areas Three and Four); and along 12th Street between Pine and Wood Streets (opposite Development Area Three). As noted in Section 3.3, Visual Quality, Section 3.4, Transportation, Circulation, and Parking, and Section 3.5, Noise, the Project would result in the above physical changes for nearby residents, but the impacts would not be significant. Moreover, these potential conflicts are also similar to other redevelopment projects that could occur in the Project Area under the existing General Plan and zoning designations.

In recognition of the above potential impacts on existing land uses, the proposed Wood Street Zoning Regulations contain a number of development standards and design guidelines to reduce the above types of land use conflicts. Along Wood Street within the stretch that fronts the R-36 zoning district, the Project defines a Wood Street Overlay Zone, which would require the following:

- Building heights would be restricted to 40 feet (which is closer to the 30-foot height limit in the R-36 zoning district);
- Building setbacks from Wood Street would be 10 feet;
- Seventy-five percent of the street setback line must be occupied by building frontage to create an active, well-defined street;
- Corner locations on Wood Street would contain occupied space to help activate the street frontage;
- Surface parking and tuck-under parking would be prohibited within 20 feet of the street;
- Ground-floor parking garages would be prohibited; and
- Significant changes in building massing would be encouraged to reduce the perceived scale of buildings fronting Wood Street.

Along both Wood and 12th Streets, new street lights, undergrounding of utilities, and provision of street trees would be required to improve the visual quality of the area, and reduce the perceived mass of the buildings facing the R-36 zoning district residences. These provisions of the proposed Wood Street Zoning Regulations would serve to reduce land use conflicts that would otherwise occur.

In summary, provisions of the proposed Wood Street Zoning Regulations, as identified above, would reduce some potential land use conflicts to less than significant. In addition, implementation of the Project would help ameliorate existing land use conflicts by reinforcing

pedestrian-oriented, mixed-use development, and by limiting the expansion of new industrial operations and transportation-related uses. As a result, the potential land use conflicts with adjacent or nearby uses associated with the Project would be considered less than significant.

Summary of Impact LU-2 by Development Area. The proposed Wood Street Zoning Regulations would reduce potential land use conflicts between the Project and adjoining lower density housing to a less-than-significant impact.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

LU-3. The Project would not be consistent with the current General Plan land use classification and zoning districts for the Project Area. (PS)

The Project Area is currently designated for Business Mix. The current zoning for the Project Area is light to medium industrial (M-20 and M-30, respectively), with a portion zoned S-16 (Industrial-Residential Transition Combining Zone). The Project's proposed land uses and development densities, which include substantial residential development at urban densities as well as construction of commercial, mixed-use and live/work uses, are not consistent with the current General Plan land use classification and zoning for the Project Area. Therefore, this impact is potentially significant.

Summary of Impact LU-3 by Development Area. The proposed land uses and development densities in each of the development areas, which include significant residential development at urban densities as well as construction of commercial, mixed-use and live/work uses, are not consistent with the current land use classification and zoning for each development area. Therefore, this impact is potentially significant.

Development Area	No Impact	LTS	PS	S
1			✓	
2			✓	
3			✓	
4			✓	
5			✓	
6			✓	
7			✓	
8			✓	
9			✓	

MITIGATION MEASURES. The following mitigation measures would apply to all of the proposed development areas and would eliminate inconsistencies between the Project and the land use classification and zoning. (LTS)

LU-3.1 *General Plan Amendment*. The Project Sponsors shall apply for a General Plan Amendment (GPA) to apply the Urban Residential (UR) land use classification to the Project Area for approval by the City. According to the General Plan, this classification allows multi-unit, mid-rise, or high-rise residential structures and allows ground-floor commercial uses and public facilities of compatible character.[18] The GPA, if approved, would eliminate any inconsistencies with the existing General Plan land use classification.

LU-3.2 *Zoning Code Amendments*. The Project Sponsors shall apply for a Zoning Code Amendment to add the Wood Street Zoning District and to rezone the Project Area to this new zoning district. The Project would be required to adhere to the Wood Street Zoning Regulations, which set forth land use regulations, development standards, design guidelines, and other requirements, including allowable uses, requirements for circulation, open space, streets and public improvements, building heights, massing, maximum densities, setbacks, landscaping, and parking. The change in zoning from the existing industrial and industrial/residential combining districts to the Wood Street Zoning District, if approved, would eliminate any inconsistencies with the existing zoning.

LU-4. The Project would conflict with applicable land use plans, policies, or regulations in certain respects. However, these inconsistencies would not result in a significant physical environmental effect and, therefore, the impact would be less than significant. (LTS)

Conflicts with a general plan or other applicable planning document do not inherently result in a significant effect on the environment within the context of CEQA. As stated in Section 15358(b) of the CEQA Guidelines, "Effects analyzed under CEQA must be related to a physical change." Section 15125(d) states that EIRs shall discuss any inconsistencies between a proposed project and applicable general plan in the setting section of the document, but it does not require an evaluation of all general plan provisions. An inconsistency, however, may indicate that an environmental threshold has been exceeded. Further, Appendix G of the CEQA Guidelines (Environmental Checklist Form) makes explicit the focus on environmental policies and plans, asking if the project would "conflict with any applicable land use plan, policy, or regulation...*adopted for the purpose of avoiding or mitigating an environmental effect*." (emphasis added) Even a response in the affirmative, however, does not necessarily indicate the Project would have a significant environmental effect, unless a physical change

[18] *City of Oakland General Plan*, LUTE, p. 148.

would occur. To the extent that physical impacts may result from such conflicts, such physical impacts are analyzed under respective environmental review topics in this EIR.

City of Oakland General Plan Land Use and Transportation Element. The Project would construct pedestrian-oriented, mixed-use, residential, live/work and commercial developments within the Project Area. Currently, land uses in the Project Area are exclusively industrial and commercial. The vicinity of the Project Area is developed with residential and industrial uses and one community park. The Project itself meets the objective of Policy I/C1.4 – Investing in Economically Distressed Areas of Oakland, as it would bring new investment to the Project Area. The Project would include infill development in an area of West Oakland that is currently dominated by vacant and underutilized land by constructing new housing units and providing space for new commercial uses. The Project also promotes development of new mixed-use housing and live/work development. These components of the Project meet the objectives of Policy N3.2 – Encouraging Infill Development, Policy N3.5 – Encouraging Housing Development, Policy 5.3 – Supporting Live-Work Development, and Policy N6.1 – Mixing Housing Types. Furthermore, development in Development Area Two under the Maximum Residential Scenario proposes to refurbish existing industrial buildings for residential use, which would fulfill Policy I/C2.2 – Reusing Abandoned Buildings. The concentration of commercial development within the Project Area to directly serve the new development and the existing surrounding development would create a more neighborhood-oriented focus within the Project Area, consistent with Policy T2.3 – Promote Neighborhood Services, and Policy N1.1 - Concentrating Commercial Development.

The Project would also retain and restore the 16th Street Train Station Main Hall and construct a public plaza in front of the Main Hall, which would create a sense of visual focus to the neighborhood and would also define the Main Hall and plaza as a neighborhood activity center. These provisions of the Project would be consistent with Policy N9.5 – Marking Significant Sites, Policy N9.8 – Preserving History and Community, and Policy N10.1 – Identifying Neighborhood: Activity Centers. The Project proposes creation of a pedestrian-oriented mixed-use area. New sidewalks, pedestrian links throughout the Project Area, street trees, lighting, and street furnishings, and design guidelines to strengthen the streetscape and create architectural character and visual interest all support the City's Pedestrian Master Plan. Thus, even though the Project requires a change in the land use classification for the Project Area, the Project's components and the Wood Street Zoning Regulations satisfy the applicable policies of the LUTE without triggering significant physical impacts.

City of Oakland General Plan Open Space, Conservation, and Recreation Element. Development of the Project would also achieve the objectives of the OSCAR regarding improvement of parks and open spaces within West Oakland. Provision for development of approximately 60,670 sf of Public Open Space uses as part of the Project would be consistent with the general objective of the OSCAR to develop civic open spaces within Oakland, per Policy OS-11.2. In addition, the Project would provide 122,925 sf of Private Open Space under the Maximum Residential Scenario and 88,350 sf under the Maximum Commercial

Scenario. This OSCAR policy specifies that areas where high intensity redevelopment is proposed should incorporate common outdoor space into new development. Therefore, the Project would be considered consistent with the policies of OSCAR.

City of Oakland General Plan Historic Preservation Element. In accordance with the HPE, restoration and preservation of the 16th Street Train Station Main Hall would contribute to urban revitalization, community identity and image, and educational, cultural, and artistic values. Furthermore, imposition of the proposed Wood Street Zoning Regulations would ensure that the Project would be designed to preserve and restore the historical character of the 16th Street Train Station, thereby avoiding further deterioration. While the Main Hall and a portion of the Elevated Tracks would be restored, the Project would result in demolition of other historic portions of the 16th Street Train Station, a significant and unavoidable impact. Consequently, the Project would be inconsistent with policies to prohibit demolition or removal of City landmarks. Policy 2.4 of the HPE does identify several findings that must be made prior to the City's approval for the removal of a historic resource (see Section 3.7, Cultural Resources, particularly Impact CR-5).

Bicycle Master Plan. The Project would include bicycle parking spaces in accordance with the standards in the *City of Oakland Bicycle Master Plan* (see discussion in Section 3.4, Transportation, Circulation, and Parking), thereby facilitating use of bicycles as an alternative means of transportation. Accordingly, the Project would be consistent with the Bicycle Master Plan.

Oakland Army Base Area Redevelopment Plan. As stated in the Redevelopment Plan, the "Plan does not present a precise plan or establish specific projects for the redevelopment, rehabilitation, and revitalization of any area within the Project Area, nor does this Plan present specific proposals in an attempt to solve or alleviate the concerns and problems of the community relating to the Project Area. Instead, this Plan presents a process and a basic framework within which specific plans will be presented."[19] As such, there is considerable flexibility in implementing the goals of Redevelopment Plan and achieving consistency with the Redevelopment Plan.

By providing for vibrant, pedestrian-oriented, mixed-use, residential, and commercial developments, the Project fosters the goals of the *OARB Area Redevelopment Plan* to eliminate physical and economic blighting influences in the area and to replan, redesign, and develop areas that are improperly utilized. By assembling land into viable development areas, the Project fulfills the Redevelopment Plan goal of subdividing land into parcels suitable for modern, integrated development with improved pedestrian and vehicular circulation. In addition, the Project is consistent with the Plan's goals of improving pedestrian and vehicular circulation through modern, integrated development, and strengthening the community's

[19] City of Oakland, *OARB Area Redevelopment Plan,* June 2000, p. 1.

economic base by constructing and installing infrastructure and other improvements that stimulates new development.

The Redevelopment Plan specifies limitations on the number of buildings and dwelling units; the type, size, and height of buildings; and signage in accordance with local statutes, ordinances, and regulations. The Redevelopment Plan also calls for the undergrounding of utilities and sufficient space to be maintained between buildings in all areas to provide adequate light, air, and privacy. The proposed Wood Street Zoning Regulations contain development regulations that supersede the zoning regulations referenced by the Redevelopment Plan. Adopting Mitigation Measure LU-3.1 (General Plan Amendment) and LU-3.2 (Zoning Code Amendments) would establish the Wood Street Zoning Regulations as the applicable local statute. Amendment of the Redevelopment Plan to allow the uses proposed by the Project, which is one of the required actions prior to Project implementation, would make the Project and the Redevelopment Plan consistent with one another.

In terms of improving infrastructure and removing the blighting influences, the Project would upgrade streets, curbs, landscaping, and underground overhead utilities. Thus, the Project would be consistent with these aspects of the Redevelopment Plan.

The *OARB Area Redevelopment Plan* Land Use Map designates the 16th/Wood sub-district for "Workforce and Business Development;" i.e., light industry, office (research and development), retail, live/work, park and public access uses. The Plan does not contemplate residential uses, nor does it propose industrial mix, open space and recreation, or army reserve enclave designations for the Project Area. In addition, the *Oakland Army Base Final Reuse Plan* calls for sustainable job creation. The Project would not be consistent with the designation of Workforce and Business Development and proposals for job creation. Accordingly, the Project Sponsors are seeking to amend the *OARB Area Redevelopment Plan* land use map; such an amendment, if approved, would resolve these inconsistencies.

In summary, even though the Project calls for a different land use in the Project Area than the Redevelopment Plan, the Project would revitalize the area, support sustainable land utilization, create a high quality district, strengthen the economic base of the community, and eliminate blight.

West Oakland Redevelopment Plan. As discussed above, the West Oakland Redevelopment Area does not include any property within the Project Area; therefore, it does not govern the Project. Nevertheless, the Project would be consistent with the fundamental goal of the Plan to eliminate blight and blighting influences in the community. The Project would include a mix of residential, live/work, commercial and urban open space and public uses. It would demolish uninhabitable, underutilized, and uneconomic structures and replace them with new buildings to house a mix of residential and commercial uses. The Project would also rehabilitate some existing buildings, e.g., the Pacific Coast Cannery building and the 16th Street Train Station. Furthermore, development within the Project Area would attract more private economic investment to this underutilized portion of West Oakland. The proposed restoration of the 16th

Street Train Station Main Hall would also create a new and interesting facility for the Project Area that could attract members of the surrounding community, depending on its use, in contrast to the current underutilized appearance of the existing Project Area.

San Francisco Bay Conservation and Development Commission's Bay Plan and Seaport Plan. While implementation of the Project includes development of land in a manner inconsistent with a port priority designation, the City and Port previously addressed this issue during the certification of the *OARB Area Redevelopment Plan EIR*. As previously stated, amendments to the Bay Plan and Seaport Plan would be required prior to Project implementation on Development Areas Six, Seven, and Eight, to remove the Port priority designation. The Project would not interfere with the efficient movement of cargo through the Port of Oakland. The Port of Oakland proposes to construct a new intermodal facility to facilitate this movement of cargo through the Port. The new intermodal facility, which would be located west of I-880 and generally north of 18th Street, would primarily use the frontage road, I-880, and the Union Pacific Railroad and would remain in operation during and after the Project is constructed. The Project is not expected to interfere with the operation of these facilities, as access to the Project Area from both the frontage road and I-880 currently exists and is shared by existing truck and vehicular traffic within the vicinity of the Project Area.

Summary of Impact LU-4 by Development Area. Since full development of the Project Area would not conflict with applicable land use plans, policies, or regulations, proposals in each of the individual development areas would not conflict with applicable land use plans, policies, or regulations.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

Cumulative Analysis

LU-5 Implementation of the Project, in combination with other related projects, would not result in a cumulative impact associated with physically dividing an established community. (NI)

As discussed in Impact LU-1, the Project would not physically divide an established community because the Project Area is bound by the frontage road, I-880, and the elevated West Grand Avenue. The closest community that could be affected by the Project is the West Oakland neighborhood to the east and south of the Project Area. According to the *West Oakland Redevelopment Plan*, the redevelopment project area is a mixture of residential and

industrial districts, with industrial uses concentrated more to the south and residential uses more to the north, although in many areas, the uses are intermixed. Since the Project Area lies to the west and north of the West Oakland redevelopment project area (i.e., not within the redevelopment project area), it would not result in the physical division of an established community. Because the Project would not contribute in any way to the physical division of an established community, CEQA does not require any further discussion of cumulative impacts.

LU-6 Implementation of the Project, in combination with other related projects, would not result in cumulative land use incompatibility impacts. (LTS)

The Project would develop over the next ten years in the context of redevelopment at the former Oakland Army Base, development at the Port, and new transit-oriented development around the West Oakland BART Station. Related projects within this geographic area are identified in Appendix C. As a result, the West Oakland area and lands at the former Oakland Army Base would be expected to witness a noticeable change in land use, development intensity, and related activity levels. This overall change would be generally consistent with the land use, economic growth, and visual enhancement policy direction articulated in the *OARB Area Redevelopment Plan*, the *West Oakland Redevelopment Plan,* and the LUTE, recognizing that the *OARB Area Redevelopment Plan EIR* and the LUTE envisioned these redevelopment activities with a commercial focus, not primarily residential, as currently proposed under the Project. Thus, the general change in land uses and development intensity is a transformation that is not only anticipated, but desired in these areas.

To ensure that future development and redevelopment protect an area's land use character, the Site Development and Design Review Combining Zoning Regulations, as established in the City's Planning Code, for lands surrounding the Project Area (see Figure 3.2-2) as well as any site-specific standards such as those provided by the Wood Street Zoning Regulations for the Project Area, are intended to ensure that development is sensitively integrated with surrounding uses. Further, the City's design review processes are designed to also ensure that there are no substantial adverse cumulative impacts from land use conflicts. Lastly, the LUTE contains policies that relate to land use compatibility. Specifically, Policy N5.2 (buffering residential areas), Policy N7.1 (ensuring compatible development), Policy N7.2 (defining compatibility), Policy N8.2 (making compatible interfaces between densities), and Policy N9.7 (creating compatible but diverse development) are applicable and would minimize potential land use conflicts. Compliance with, and enforcement of, all of these regulations and policies help to ensure that cumulative land use compatibility impacts would be less than significant.

LU-7. Implementation of the Project, in combination with other related projects, would not result in cumulative inconsistencies with the City's General Plan or zoning districts. (LTS)

As stated previously in Impact LU-6, the Project would develop over the next ten years in the context of redevelopment at the former Oakland Army Base, development at the Port, and new transit-oriented development around the West Oakland BART Station. The overall change would be generally consistent with the land uses articulated in the *OARB Area Redevelopment*

Plan and the *West Oakland Redevelopment Plan,* although specifically within the Project Area, the Project envisions residential uses rather than industrial and commercial uses. Implementation of the Project would require a General Plan Amendment and Zoning Code Amendment to re-designate the Project Area from Business Mix to Urban Residential such that the proposed land uses and development program can be implemented. If the City approves the Project, as well as the proposed Wood Street Zoning District, identified Project inconsistencies with the General Plan and zoning would be eliminated. Thus, the Project, in combination with other related projects covered by the *OARB Area Redevelopment Plan,* and the *West Oakland Redevelopment Plan*, would not result in cumulative inconsistencies with the General Plan and zoning districts.

LU-8. Implementation of the Project, in combination with other related projects, would not result in conflicts with applicable plans, policies, or regulations in a manner that would result in a significant physical environmental effect. (LTS)

As discussed in Impact LU-7, the Project, in combination with development in the OARB Redevelopment area and other areas of West Oakland, is governed by the *OARB Area Redevelopment Plan,* the *West Oakland Redevelopment Plan,* and the *City of Oakland General Plan*. Implementation of the Project and redevelopment of the surrounding areas in conformance with these policy documents would ensure that inconsistencies with applicable General Plan policies or regulations would not occur in a manner that would trigger a significant environmental impact.

Both the *OARB Area Redevelopment Plan* and this Project would result in a potential inconsistency with the BCDC port priority designation. As explained in Impact LU-4, the City and Port previously addressed this issue during the certification of the *OARB Area Redevelopment Plan EIR* and removal of this designation from affected areas in the OARB Redevelopment area and the Project Area would eliminate this inconsistency. As a result, the Project and OARB area redevelopment would not result in cumulative inconsistencies with the BCDC Seaport Plan and Bay Plan.

Summary of Impacts LU-5 through LU-8 by Development Area. Since development of the entire Project Area would result in a less-than-significant contribution to cumulative land use impacts, proposals in each of the individual development areas would also result in a less-than-considerable contribution to cumulative land use impacts. The Project improvements to the Project Area's land use setting in combination with redevelopment efforts in other parts of the OARB and West Oakland would likely have a beneficial cumulative impact on the overall land use compatibility and character in this portion of Oakland.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

3.3 VISUAL QUALITY

Introduction

This section discusses existing aesthetic and visual resources in the Project Area and in its vicinity. In particular, descriptions of existing visual characteristics within the Project Area and in the vicinity of the Project Area are presented. Existing plans and policies relevant to aesthetic and visual resource issues associated with implementation of the Project are described. Potential impacts to aesthetic and visual resources due to implementation of the Project are evaluated, based on analysis of photographs, visual simulations, a shadow study, site reconnaissance, and project data. For visual quality impacts, the Maximum Residential Scenario and Maximum Commercial Scenario were evaluated. These scenarios were selected because they represent the greatest change to the type, height, mass and scale of development in the Project Area. As a result, these scenarios would illustrate the greatest potential impacts to views, visual character, shadows, and wind characteristics. Finally, mitigation measures intended to reduce potential impacts to aesthetic and visual resources are proposed, where appropriate.

Information used for this section was obtained from the *City of Oakland General Plan*, *OARB Area Redevelopment Plan EIR*, and other environmental documentation for the Project Area. The *OARB Area Redevelopment Plan EIR* discusses the general aesthetic environment in West Oakland and important views within the vicinity of the Project Area. However, given the programmatic level of analysis conducted in the *OARB Area Redevelopment Plan EIR*, a more site-specific, project-level discussion of Project Area visual characteristics and impacts is contained in this EIR.

Setting

Local Context

The Project Area is located within the 16th/Wood sub-district of the OARB Redevelopment Area (see Figure 3.2-3). The 16th/Wood sub-district is a highly industrialized area located within West Oakland. The frontage road and elevated I-880 freeway form the western boundary, and Wood Street roughly forms the eastern boundary of this sub-district. Physical development in this sub-district is characterized by various industrial buildings, storage yards for equipment and discarded items, freight storage/handling facilities, industrial rail facilities, and undeveloped or underutilized land. Specifically, abandoned industrial fields and low- to mid-rise industrial buildings are prevalent throughout this area. The underutilized industrial structures are older and have fallen into disrepair, the storage yards are unkempt, and some streets lack amenities such as street trees or sidewalks. The Project Area vicinity is marked by an array of architectural styles as well as a lack of maintenance and landscaping. The quality of existing houses in the vicinity of the Project Area varies with a number of homes and apartment buildings undergoing renovation and reconstruction. Older, overhead utility lines persist throughout. Historic resources in the Project Area include the 16th Street Train Station, a City

landmark. No scenic resources (such as rock outcroppings, cliffs, or knolls) exist and few trees of merit are present within the Project Area.

Project Area Characteristics

On-Site Topography/Vegetation. The Project Area is relatively flat, at approximately 10 feet above mean sea level. The Project Area gently slopes from the southern corner to the north. Little vegetation exists in the Project Area and is limited to sparse vegetation (i.e., weeds due to lack of maintenance), a few scattered trees throughout the Project Area, and some redwood trees planted along a section of the frontage road edge of the Project Area.

Visual Character. The Project Area is generally urbanized and consists of large vacant areas and warehouse-type development, except for the unused and visually deteriorated 16th Street Train Station. As an area in which aging industrial and transportation uses predominate, the Project Area could be characterized as visually degraded and blighted. Many of the industrial/commercial uses in the Project Area appear to be in decline due to deterioration, deferred maintenance, or obsolescence.

Built Environment. The Project Area is predominantly underdeveloped and contains a commercial building, several warehouse buildings, the historic 16th Street Train Station Main Hall, Baggage Wing, and Elevated Tracks, and the 16th Street Signal Tower, along with railroad spurs, and truck and empty rail car storage. Low- to mid-rise buildings/facilities that have fallen into disrepair are located within the vicinity of the Project Area. Bea's Hotel, a two-story wood structure, is located at the corner of 16th and Wood Streets and its exterior appears to be in fair condition. Storage yards found in the area are typically abandoned and are either open or contain empty rail cars or industrial/construction materials.

Lighting. Ambient nighttime lighting is characteristic of older industrial areas along a major transportation corridor. Light sources include vehicular lights, street lighting, and outdoor security lighting.

Views from the Project Area

Due to the relatively flat topography of the site and the elevated roadways to the west and north, views from the Project Area are largely restricted to short-range views of nearby industrial and residential structures, the adjacent elevated I-880 freeway to the west, and the elevated West Grand Avenue to the north. From the northern portion of the Project Area, there are mid-range views of industrial buildings to the east across Raimondi Park.

Views of the Project Area

Although portions of the Project Area are visible from a number of public view corridors and vantage points, the Project Area is not visible in its entirety from a single, ground-level vantage point due to its large size (approximately 29.2 acres), flat topography, and surrounding low- to mid-rise buildings. The frontage road, a four-lane arterial, and Wood Street, a local collector, afford close and medium-

range views of the Project Area. The following discussion describes public corridor views of the Project Area. Figure 3.3-1 depicts locations of eight public vantage points with views of the Project Area. Figures 3.3-2a through 3.3-2h show existing views of the Project Area from these vantage points.

View 1. This view is looking northeast towards the Project Area from the northwestern side of frontage road (between 10th and 11th Streets), as shown in Figure 3.3-2a. The foreground view is of Development Areas One and Two, which are occupied by large-scale industrial buildings; the Icehouse building, about 35 feet tall, and the vacant, former Pacific Coast Cannery facility, about 40 feet tall. Redwood trees line the eastern side of the frontage road.

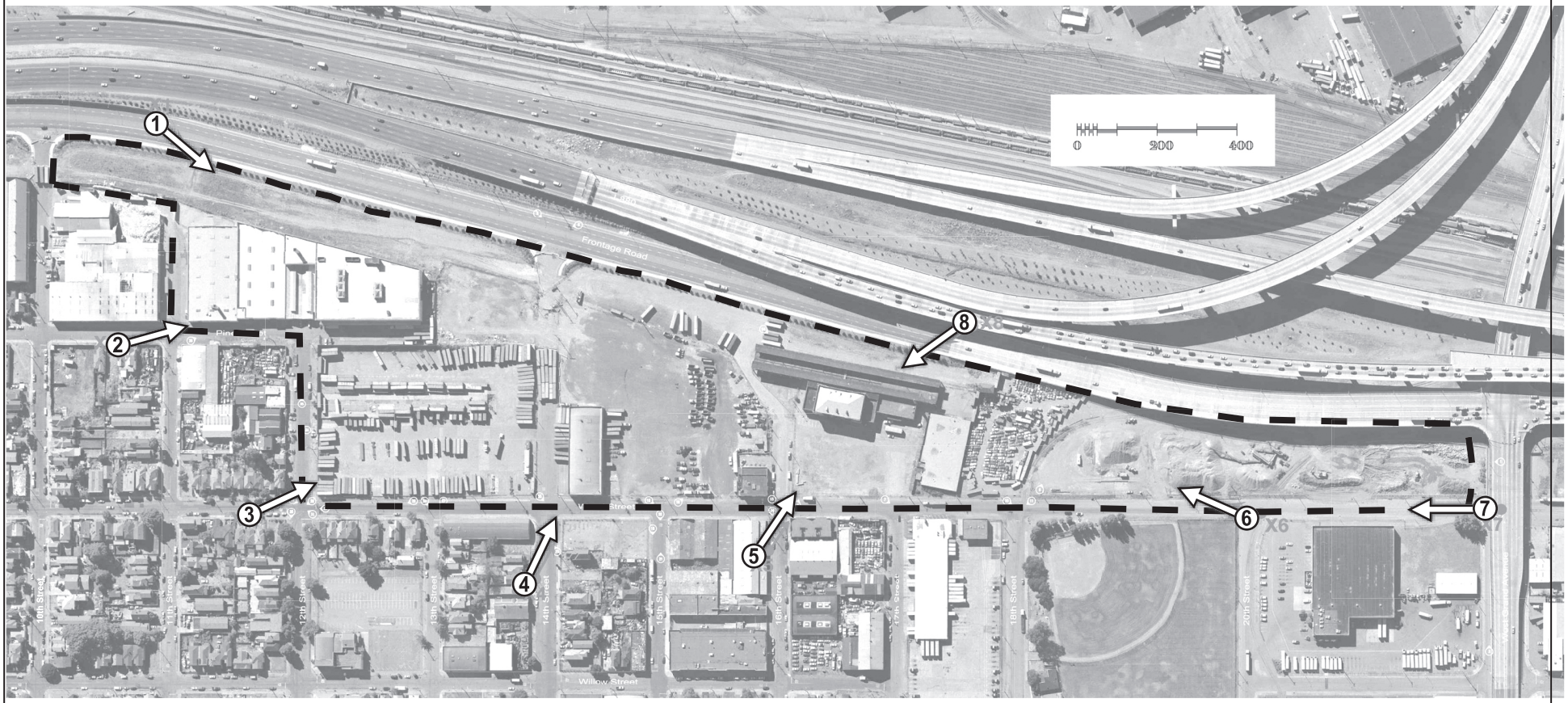
The middle-ground view includes a partial view of the 16th Street Train Station in Development Area Five, with the Elevated Tracks extending into Development Areas Four and Six, and the 16th Street Signal Tower in Development Area Six. The area that would encompass Development Area One is vacant. Long-range views along the I-880 frontage road corridor include the scenic vistas of the Berkeley Hills, spotted with residential development.

View 2. This view looks north towards the Project Area from the eastern edge of Pine Street (between 10th and 11th Streets), as shown in Figure 3.3-2b. Views from this vantage point are dominated by two industrial buildings, primarily constructed of cinder block: in the foreground is the California Waste Solutions facility, which is not in the Project Area, and in the middle ground is the Icehouse building located in Development Area Two. One- and two-story residential structures on the east side of Pine Street are also visible, as well as commercial uses south of the residences. Low-lying, sparse shrubs are present along Pine Street, east of the Project Area.

View 3. This view looks northwest towards the Project Area from the east side of Wood Street (between 11th and 12th Streets), as shown in Figure 3.3-2c. Truck trailer storage surrounded by a chain-link fence is the existing view of Development Area Three. Weeds line the Wood Street edge of the Project Area. Beyond the trailer storage yard is the truck dispatch/distribution facility located in Development Area Four.

Foreground views include two-story, single-family residential uses on the west side of Wood Street, immediately south of the Project Area. One-story, single-family residences on the east side of Wood Street, across from Development Area Three, are also visible, along with the small trees that line the east side of the street. Beyond the residences on the east side of Wood Street is the cinder-block, single-story commercial/light industrial structure that spans the east frontage of Wood Street from 13th Street to 14th Street. This view also illustrates the narrow view the Wood Street corridor offers of the Berkeley Hills to the north. It also shows existing overhead utility lines along Wood and 12th Streets.

View 4. This view looks northwest towards Development Area Four from the south side of 14th Street (between Wood and Willow Streets), as shown in Figure 3.3-2d. The truck loading/dispatch facility at the northwest corner of Wood and 14th Streets is the most prominent Project Area feature from this view. The facility is an industrial, cinder-block structure, approximately 20 feet tall, with a barrel-shaped composition roof. Also visible is the portion of the 14th Street right-of-way that would divide



NORTH

Source: Square One Productions, 2004

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FIGURE **3.3-1**

Photo Location Map



a. View 1 (Development Area 1) - Northeast from Frontage Road



b. View 2 (Development Area 2) - North from Pine Street

Source: Square One Productions, 2004.

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FIGURE 3.3-2

Existing Views of the Project Area



c. View 3 (Development Area 3) - North from 12th and Wood Streets



d. View 4 (Development Area 4) - West from 14th Street

Source: Square One Productions, 2004.

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FIGURE 3.3-2
Existing Views of the Project Area

Development Areas Three and Four but is currently used for truck trailer parking. Beyond Development Area Four, a partial view of elevated I-880 is available west of the truck facility. View 4 also shows the single-story, single-family residential units located along 14th Street, along with the single-story commercial/light industrial structure that spans the east side of the Wood Street frontage between 13th and 14th Streets. No long-range views are available from this vantage point.

View 5. This view looks northwest towards the Project Area from the south side of 16th Street (between Wood and Willow Streets), as shown in Figure 3.3-2e. The primary view includes the historic 16th Street Train Station in Development Area Five, and the associated Baggage Wing and Elevated Tracks that extend into Development Areas Four and Six. The 16th Street Signal Tower is also visible to the north of the 16th Street Train Station in Development Area Six. The vacant area east of the 16th Street Train Station, in the foreground of the view, is proposed to become a public plaza in Development Area Nine. The structures and land in Development Areas Five and Nine have not been regularly maintained and appear unkempt.

Bea's Hotel is at the southwest corner of 16th and Wood Streets and is considered by the City to be a secondary contributor to a former historic district of "secondary importance" according to the City's historic resources survey. The structure is two stories tall with wood plank siding. The Project Sponsor of Development Area Four does not currently have control of Bea's Hotel. If the Project Sponsor ultimately acquires this site, it would be incorporated into plans for Development Area Four. If the Project Sponsor cannot acquire the property, the structure would remain. The view also shows existing overhead utility lines along Wood and 16th Streets.

View 6. This view looks southwest toward the Project Area from the northeast corner of the 20th Street/Wood Street intersection, as shown in Figure 3.3-2f. The foreground view consists of Raimondi Park to the east, outside the Project Area, and Development Areas Seven and Six. Development Area Seven is partially obscured by existing chain-link fencing with sheeting, but this view still shows its generally unkempt condition—vacant, interspersed with weeds, and used for open storage of various materials. The elevated frontage road and I-880 are visible beyond Development Area Seven, to the west. South of Development Area Seven is Development Area Six, characterized from this view as a largely vacant paved lot used for general storage of various materials, with the 16th Street Signal Tower, Elevated Tracks, and vacant office building all partially visible on the western portion of the development area. The central Main Hall of the 16th Street Train Station in Development Area Five is also partially visible beyond the vacant office building. The view also shows existing overhead utility lines along Wood Street.

View 7. This view looks southwest toward the Project Area from the elevated West Grand Avenue, above Wood Street, as shown in Figure 3.3-2g. The foreground view consists of the Wood Street right-of-way and Development Areas Eight and Seven on the west side of the street. Development Area Eight is a vacant, disturbed dirt lot, with earth and concrete spoils piles and storage items such as pipes or wood. A chain-link fence, lined with weeds, separates the development area from Wood Street. No sidewalk is present. Portions of structures in Development Areas Six and Five (particularly

those associated with the 16th Street Train Station) are visible in the background. Views to the west and southwest from this vantage point are obscured by the elevated frontage road and I-880.

East of Wood Street is a large industrial structure that houses the Horizon Beverage Company. Beyond that structure, to the south, a portion of Raimondi Park is also visible. The view also shows existing overhead utility lines along Wood and 16th Streets.

View 8. This view looks east onto Development Area Five and portions of Development Areas Four and Six, from the east side of the frontage road (between 17th and 18th Streets), as shown in Figure 3.3-2h. This view shows the detail of the 16th Street Train Station, particularly the remaining portion of the Elevated Tracks, most of which would be demolished. Beyond the Elevated Tracks, a portion of the rear façade of the Main Hall is visible as it has been marred by graffiti and general neglect. Redwood trees line the eastern side of frontage road within the right-of-way.

Applicable Plans and Policies

City of Oakland General Plan Land Use and Transportation Element (LUTE). The LUTE is intended to guide the development of clean and attractive neighborhoods rich in character and diversity, each with its own distinctive identity, yet well-integrated into a cohesive urban fabric. The LUTE contains the following policies related to visual and aesthetic resources:

Policy N1.5: Commercial development should be designed in a manner that is sensitive to surrounding residential uses.

Policy N3.8: High-quality design standards should be required of all new residential construction. Design requirements and permitting procedures should be developed and implemented in a manner that is sensitive to the added costs of those requirements and procedures.

Policy N3.9: Residential developments should be encouraged to face the street to orient their units to desirable sunlight and views, while avoiding unreasonably blocking sunlight and views for neighboring buildings, respecting the privacy needs of residents of the development and surrounding properties, providing for sufficient conveniently located on-site open space.

Policy N3.10: Off-street parking for residential buildings should be adequate in amount and conveniently located and laid out, but its visual prominence should be minimized.

Policy N7.1: New residential development in Detached Unit and Mixed Housing Type areas should be compatible with the density, scale, design, and existing or desired character of surrounding development.

Policy N8.2: The height of development in urban residential and other higher density residential areas should step down as it nears lower density residential areas to minimize conflicts at the interface between the different types of development.



e. View 5 (Development Area 9) - East from 16th Street



f. View 6 (Development Area 7) - South from 20th and Wood Streets

Source: Square One Productions, 2004.

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FIGURE 3.3-2
Existing Views of the Project Area



g. View 7 (Development Area 8) - South from Elevated West Grand Avenue



h. View 8 (Development Area 6) - West from Frontage Road

Source: Square One Productions, 2004.

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FIGURE 3.3-2
Existing Views of the Project Area

Policy N9.7: Diversity in Oakland's built environment should be as valued as the diversity in population. Regulations and permit processes should be geared toward creating compatible and attractive development, rather than "cookie-cutter" development.

Policy N9.9: The City encourages rehabilitation efforts which respect the architectural integrity of a building's original style.

Policy N12.4: Electrical, telephone, and related distribution lines should be undergrounded in commercial and residential areas, except where special local conditions such as limited visibility of the poles and wires make this unneeded. They should also be underground in appropriate institutional, industrial, and other areas, and generally along freeways, scenic routes, and heavily traveled streets. Programs should lead systematically toward eventual undergrounding of all existing lines in such places. Where significant utility extensions are taking place in these areas, such as in new subdivisions, utilities should be installed underground from the start.

City of Oakland General Plan Open Space Conservation and Recreation Element (OSCAR). One of the major components of the OSCAR is the protection of visual and open space resources. The OSCAR contains the following policies related to visual and aesthetic resources:

Policy OS-3.6: Maintain existing open space buffers along Oakland's freeways to enhance the scenic quality of the roadways. Where compatible with adjacent land uses, support the use of land along, under, or over freeways in urban settings for greenbelts, recreation, public art, or other activities, which enhance the usefulness and appearance of such land.

Policy OS-4.1: Continue to require new multi-family development to provide outdoor open space for its residents.

Policy OS-4.4: Discourage property owners from allowing vacant land to become a source of neighborhood blight, particularly in residential areas with large numbers of vacant lots.

Policy OS-10.2: Encourage site planning for new development which minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.

Policy OS-10.3: Enhance Oakland's underutilized visual resources, including the waterfront, creeks, San Leandro Bay, architecturally significant buildings or landmarks, and major thoroughfares.

Policy OS-11.3: Continue to require public art as a part of new public buildings or facilities. Consider expanding the requirement or creating voluntary incentives to private buildings with substantial public spaces.

Policy OS-11.5: To "green" Oakland's residential neighborhoods and commercial areas with street trees.

Scenic Highway System. The California Department of Transportation (Caltrans) identifies I-80/I-580 from I-280 in San Francisco to State Route 61 in Oakland, including the Bay Bridge, as eligible for official designation to the state scenic highway system, with the I-580 portion of the "MacArthur Maze" to SR-61 identified as an officially designated state-designated scenic highway. California's Scenic Highway Program was created by the Legislature to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of adjacent lands.

The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a Scenic Highway. The scenic corridor protection program is intended to preserve the scenic quality of the corridor by: (1) regulating land uses and density of development; (2) allowing for detailed land and site planning; (3) controlling outdoor advertising (including a ban on billboards); (4) carefully reviewing and controlling earthmoving and landscaping activities; and (5) carefully reviewing and approving the design and appearance of structures and equipment.

The Scenic Highways Element of the *Oakland Comprehensive Plan* (which preceded the currently adopted General Plan) designates the I-80/I-580 corridor recognized in the state scenic highway system as a scenic route. Views of the Project Area from this scenic route are distant and obscured by the elevated West Grand and I-880 roadways.

Impacts and Mitigation Measures

Standards of Significance

The Project would have a significant impact to aesthetics if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the Project Area and its surroundings;
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area;
- Introduce landscape that would now or in the future cast shadow on existing solar collectors (in conflict with California Public Resource Code Section 25980-25986);
- Cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;
- Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space;

- Cast shadow on a historic resource, as defined by CEQA Section 15064.5(a), such that it would substantially diminish/impair its eligibility for listing in the National Register of Historic Places, California Register of Historical Resources, or in a local register of historical resources or a historical resource survey as defined by the Public Resource Code;
- Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light related to appropriate uses; or
- Create winds exceeding 36 miles per hour (mph) for more than one hour during daylight hours during the year.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not diminish potentially significant or significant effects to a less-than-significant level, the impacts are classified as "significant unavoidable effects (SU)." For this section, VQ refers to Visual Quality.

VQ-1. Implementation of the Project would not result in a substantial adverse effect on a scenic vista. (LTS)

Although no scenic views of the surrounding hills are available from the Project Area, the hills can be seen from some adjacent roadways (I-880, the frontage road, and Wood Street) bordering the Project Area. As shown in Figure 3.3-2a, views of the hills to the northeast from the frontage road and the at-grade portions of I-880 are available, but existing industrial development in the Project Area obscures some views of these hills. The views become available again from the elevated portion of I-880. The proposed Wood Street Zoning Regulations would allow building heights of up to 65 feet in Development Area One and in a portion of Development Area Three, which would effectively replace the existing view of the Icehouse structure as an impediment to northeastward views of the hills and would not represent a substantial change to the existing vista. Proposed structures in Development Area Two (which is currently occupied by the Icehouse building) would reach up to 65 feet in height; however, existing views from this area to the north are already obscured by the Icehouse building and would continue to be obscured by proposed structures in Development Areas One and Three. Consequently, proposals for Development Areas One, Two, and Three would not substantially alter existing scenic views from the at-grade portion of I-880 or the frontage road.

In Development Areas Four and Six, which abut the frontage road and the elevated I-880, the proposed Wood Street Zoning Regulations would allow structures up to 65 feet high, and in Development Areas Seven and Eight, which also abut the frontage road and elevated I-880, the

proposed Wood Street Zoning Regulations would allow 90-foot structures. These structures could narrow the available viewshed by extending the period during which views of the hills to the northeast from the roadways would be obscured. Views would still be available, but they would be affected for the brief duration it takes vehicles to pass the Project Area (approximately one minute). Northward and northeastward views of the hills and westward views of the San Francisco Bay would still be available from the elevated portion of I-880.

Views of the Berkeley Hills in the distance are also available looking north along Wood Street (see View 3, Figure 3.3-2c). Proposed development in Development Areas Three, Four, Six, Seven, and Eight would occur along the west side of Wood Street. However, none of the proposed structures would encroach into this view corridor. Moreover, the proposed Wood Street Overlay Zone of the proposed Wood Street Zoning Regulations would impose more restrictive setbacks and height limits for structures along the Wood Street frontage. Other streetscape improvements that would contribute to the scenic vistas would be the undergrounding of existing overhead utilities and the planting of new street trees. As a result, construction in the Project Area along Wood Street would not have a significant impact on views of the Berkeley Hills.

Because the Project would have no substantial effect on a scenic vista in the vicinity of the Project Area, this impact would be less than significant.

Summary of Impact VQ-1 by Development Area. Since full development of the Project Area would not result in a substantial effect on scenic views of the hills in the distance to the north from the frontage road, I-880, or Wood Street, none of the individual development areas would have a significant effect on a scenic vista. All development areas would comply with the proposed Wood Street Zoning Regulations, which establish building setbacks and height limitations, and call for undergrounding of utilities and the planting of street trees. Implementation of these regulations would result in a less-than-significant impact. Proposals for Development Areas Two, Five, and Nine would have no impacts since they would not alter existing conditions in terms of views of the Berkeley Hills.

Development Area	No Impact	LTS	PS	S
1		✓		
2	✓			
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

VQ-2. Implementation of the Project would not substantially damage scenic resources within a state scenic highway. (LTS)

As described in the *OARB Area Redevelopment Plan EIR*, the scenic views available to eastbound travelers on I-80 include elements outside of the Project Area, such as short-term foreground views of the Gateway Development Area of the *OARB Final Reuse Plan*, mid-ground views of the Oakland Outer Harbor, and background views of the Oakland Central Business District and hills, which are to the northeast and would not be affected by development in the Project Area, which is adjacent to and partially obscured by the elevated portion of I-880. Also, as described in the *OARB Area Redevelopment Plan EIR*, the Scenic Highways Element of the 1974 Oakland Comprehensive Plan recognizes the visual setting from I-80/I-580 toward the Project Area as industrial in nature. Further, no scenic resources such as rock outcroppings, cliffs, or knolls lie within the Project Area. Although the 16th Street Train Station, with elements in Development Areas Four, Five, and Six, is a historic resource that would be affected by the Project, proposed changes to the 16th Street Train Station would be obscured from I-580, both by distance (over one-half mile) and by the elevated I-880 and intervening development. Similarly, although Caltrans considers I-80 (the Bay Bridge) to be within the state scenic highway system, the elevated I-880, the interchange ramps (which extend significantly above elevated I-880), and intervening development in the OARB Redevelopment Area all combine to obscure views of the Project Area, including the historic 16th Street Train Station. Because the Project would not substantially damage scenic resources within a state scenic highway corridor, the Project would have no impact on these resources.

Summary of Impact VQ-2 by Development Area. Since full development of the entire Project Area would not substantially damage a scenic resource from a state scenic highway, none of the individual development areas would create a significant visual impact for scenic resources.

Development Area	No Impact	LTS	PS	S
1	✓			
2	✓			
3	✓			
4	✓			
5	✓			
6	✓			
7	✓			
8	✓			
9	✓			

VQ-3. Implementation of the Project would not substantially degrade the existing visual character or quality of the Project Area and its surroundings. (LTS)

The Project Area is visible from I-880, the frontage road, Wood Street, Pine Street, West Grand Avenue, and limited stretches of 10th through 20th Streets. Implementation of the Project would substantially alter the existing visual character of the area. This change is illustrated

from each of the eight vantage points (views 1 through 8) described in the Setting section through computer-generated visual simulations in Figures 3.3-3 through 3.3-10. The simulations of proposed development are illustrative of the development regulations presented in Section 2, Project Description, only. The computer-generated visual simulations provide a close approximation of the height, mass, scale, and setbacks of proposed development but do not represent actual architectural building designs.

Overall, the Project would convert an area characterized by underutilized, generally blighted urban uses to an area occupied by pedestrian-oriented, mixed-use, residential, live-work, and commercial uses, thereby resulting in a long-term change in the visual character of the area. The height, scale, and mass of the proposed developments would exceed the height and bulk of existing Project Area structures in certain regards. The following analysis evaluates this change by comparing the proposed development regulations (which are described for each development area in Section 2, Project Description) and the resulting building envelope and massing with the existing visual environment.

View 1. Figure 3.3-3 provides a post-development simulation of View 1, which includes views of Development Areas One and Four, and a small portion of Development Area Two, visible between the buildings in Development Area One. Under existing conditions, the industrial buildings along the east side of the frontage road are prominent, along with views of the Berkeley Hills in the distance. Under the Project, the existing industrial and vacant streetscape would be replaced by residential development set back from the frontage road and landscaped. Development Areas One and Four would be developed with buildings rising to 65 feet and would be visually much more prominent than the existing, lower, boxy industrial buildings that currently exist. The building façades would be typical of residential development and could include wood, concrete, glass, and detail elements such as balconies and awnings. Surfaces would also be articulated to reduce the apparent massing. Some of the existing redwood trees lining the east side of the frontage road would be removed and replaced with additional plantings to provide an additional visual buffer from the roadway.

Development Area Two would be visible from the frontage road only through the buildings in Development Area One. The scale of the proposed development would be similar to that of Development Area One, but the mix of uses could differ. Some of the existing industrial structures in Development Area Two are anticipated to be renovated and revised. New construction would complement existing development. Renovation of existing structures and new development would not be a degradation of the existing visual character (see Figure 3.3-3).

Overall, the proposed buildings in Development Areas One and Two would be taller than the existing industrial land uses seen from this view (i.e., the Icehouse in Development Area Two) and the California Waste Solutions building to the south of Development Area Two. However, this portion of the site is adjacent to the freeway and is not considered an area of visual distinction or sensitivity. The change in height and character of the buildings would not, therefore, substantially degrade the visual quality of the Project Area or its surroundings.



EXISTING VIEW



PROJECTED VIEW

Source: Square One Productions, 2004

The projected view of Project Area development is illustrative of the height, mass, scale, and setbacks permitted by the proposed Wood Street Zoning Regulations. The simulations are not representative of actual architetural building designs.

Not to Scale

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EIP ASSOCIATES

FIGURE 3.3-3

View 1 (Existing and Projected Conditions)
View Northeast from Frontage Road - Development Area 1

Furthermore, the scenic views of the Berkeley Hills in the distance would be largely preserved. As a result, the visual impact of proposed development in Development Area One and Development Area Two from the frontage road would be less than significant.

View 2. Figure 3.3-4 shows the appearance of Development Area Two under the Project. Under the Maximum Residential Scenario, some of the existing buildings would be renovated and new residential buildings would be up to four stories and would consist of live/work units, townhouses, or flats. Under the Maximum Commercial Scenario, all of the existing buildings would be refurbished.

The Project would replace an existing low-rise, large-scale industrial use with a visually integrated residential and commercial complex. Figure 3.3-4 shows that the existing industrial buildings share a similar height and massing with the uses to the east and with the California Waste Solutions facility in the foreground on the left. While the Project would be considerably taller, the proposed development would be constructed with more refined building materials and architectural design, and more open space, landscaping, and visual buffers than the warehouse facilities that currently occupy the site. The Project would also include street trees along the Pine Street and 11th Street frontages, which would help screen views of the taller Project buildings from adjacent uses. Further, the uses opposite this area along Pine Street are a mix of commercial and light industrial, which are typically less visually sensitive to the proximity of larger structures than residential uses. Consequently, changes in Development Area Two would not substantially degrade the visual quality of the Project Area or its surroundings, and the visual impact would, therefore, be less than significant.

View 3. Figure 3.3-5 shows the appearance of Development Area Three along its Wood Street frontage. Under the proposed Wood Street Zoning Regulations, the maximum height for development in this area would be 40 feet within 30 feet of the Wood Street frontage. While proposed development in this area would represent a substantial intensification over the existing truck trailer storage yard, marked by a number of overhead utility lines, the proposed development would improve the views of the development area from neighboring uses by removing the storage yard, weeds, and overhead lines.

The proposed development in Development Area Three would contrast with the existing one- and two-story residential uses along Wood Street, as well as with the low-scale commercial and light industrial uses on 12th Street, west of Wood Street. However, the height of proposed development along the Wood Street frontage would be partially masked by the street trees planted along Wood Street. To further help reduce the visual impact of the larger scale and mass of the new structures, the proposed Wood Street Zoning Regulations would promote architectural treatment of building façades and setbacks that create more visual interest and greater separation from the adjoining uses. Also, the uses opposite this area along 12th Street are a mix of commercial and light industrial, which are typically less visually sensitive to the proximity of larger structures than residential uses. Finally, the Project would replace a visually degraded area with a visually integrated residential and commercial complex,

characterized by more refined building materials, architectural design, and open space. Consequently, although changes in Development Area Three would be substantial, they would not degrade the visual quality of the Project Area or its surroundings, and the visual impact would, therefore, be less than significant.

View 4. Figure 3.3-6 shows Development Areas Three and Four under the Project. As with Development Area Three, the maximum height for Development Area Four would be 40 feet within 30 feet of the Wood Street frontage, 50 feet within 30 feet of the proposed 16th Street Plaza, and 65 feet elsewhere in the area. Uses in Development Area Four would be predominantly residential with some commercial space under both the Maximum Residential and Maximum Commercial Scenarios.

By replacing an existing trucking facility on a largely vacant lot with a mid-rise courtyard residential development, the Project would substantially intensify development of the site compared to existing conditions. The new structures would be taller and would have more mass than the existing utilitarian industrial buildings. However, the Wood Street Zoning Regulations provide for architectural design features that help to avoid a long, blank wall and instead create visual interest, as seen in Figure 3.3-6. As with Development Area Three, proposed street trees and a landscaped setback along Wood Street would soften the appearance of the façade of the new development. The Project would replace a visually degraded area with visually integrated mixed-use development. Consequently, although changes in Development Area Four would be substantial, they would not degrade the visual quality of the Project Area and its surroundings, and the visual impact would, therefore, be less than significant.

View 5. Figure 3.3-7 shows the Project in Development Areas Five and Nine, flanked by proposals for Development Areas Four and Six. The primary improvement in Development Area Five is the rehabilitation of the Main Hall of the historic 16th Street Train Station. Development Area Nine would become a hardscaped public plaza, interspersed with planters to maintain and emphasize views of the Main Hall. The design intent is for both sides of the portion of 16th Street adjacent to the plaza to be densely lined with street trees to create a parkway effect. Four- to six-story mixed-use buildings would be located on both sides of the restored and rehabilitated 16th Street Train Station, in Development Areas Four and Six, and would require the demolition of portions of the 16th Street Train Station, as further described in Section 2, Project Description, and Section 3.7, Cultural Resources.

Development Areas Four and Six are generally vacant and blighted in appearance, and new development in these areas would, in general, improve the overall visual quality of their respective sites. The land uses opposite Development Areas Four and Six to the east are industrial and commercial uses that are not considered visually sensitive uses. Thus, the more intensive new development would not degrade the visual quality of the area.



EXISTING VIEW



PROJECTED VIEW

Source: Square One Productions, 2004.

The projected view of Project Area development is illustrative of the height, mass, scale, and setbacks permitted by the proposed Wood Street Zoning Regulations. The simulations are not representative of actual architetural building designs.

Not to Scale

EIP ASSOCIATES

FIGURE 3.3-4
View 2 (Existing and Projected Conditions)
View North from Pine Street - Development Area 2

10817-00

Wood Street Project Draft EIR

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EXISTING VIEW



PROJECTED VIEW

Source: Square One Productions, 2004.

The projected view of Project Area development is illustrative of the height, mass, scale, and setbacks permitted by the proposed Wood Street Zoning Regulations. The simulations are not representative of actual architetural building designs.

Not to Scale

EIP ASSOCIATES

FIGURE 3.3-5
View 3 (Existing and Projected Conditions)
View North from Wood Street - Development Area 3

10817-00

Wood Street Project Draft EIR

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EXISTING VIEW



PROJECTED VIEW

Source: Square One Productions, 2004.

The projected view of Project Area development is illustrative of the height, mass, scale, and setbacks permitted by the proposed Wood Street Zoning Regulations. The simulations are not representative of actual architetural building designs.

Not to Scale

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EIP ASSOCIATES

FIGURE 3.3-6

View 4 (Existing and Projected Conditions)
View West from 14th Street - Development 4

10817-00



EXISTING VIEW



PROJECTED VIEW

Source: Square One Productions, 2004.

The projected view of Project Area development is illustrative of the height, mass, scale, and setbacks permitted by the proposed Wood Street Zoning Regulations. The simulations are not representative of actual architetural building designs.

Not to Scale

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EIP ASSOCIATES

FIGURE 3.3-7

View 5 (Existing and Projected Conditions)
View East from 16th Street - Development Area 9

Development Area Nine would offer an improved publicly accessible open space in front of the rehabilitated Main Hall. Street trees would line Wood Street and the plaza, utility lines would be undergrounded in association with this development, and the vacant, abandoned foreground to the 16th Street Train Station would become a public gathering area. Views of the 16th Street Signal Tower and the elevated frontage road and I-880 would be obstructed by the proposed three- to six-story buildings in Development Area Six. However, this change would not substantially degrade the visual quality of the area, since development would be set back from the roadway and improvements in landscaping and inclusion of open space would enhance the visual character and surroundings of the historic uses, as seen in Figure 3.3-7.

In summary, the Project in Development Areas Four, Six, and Nine would substantially alter the visual character of the west side of Wood Street. Large-scale, large footprint industrial buildings and storage areas would be replaced by much more intensely developed, taller residential structures (in Development Areas Four and Six) and a landscaped plaza (in Development Area Nine) that would visually contrast with existing conditions in the Project Area and across Wood Street. However, the proposed development would improve the visual character of the area and, therefore, would have a less-than-significant visual quality impact.

View 6. Buildings up to 90 feet tall containing commercial uses on the bottom floor and residential uses on the upper floors would be located in Development Area Seven (see Figure 3.3-8). The proposed buildings shown from this viewpoint would be approximately four to five stories in height along Wood Street. The desolate, unimproved streetscape would change dramatically as a result of the undergrounding of lines and the scale of development proposed, particularly when viewed opposite the open space of Raimondi Park. Views of the elevated frontage road and I-880, the Main Hall, and the 16th Street Signal Tower would be obstructed by the proposed four- to five-story buildings. This change would not substantially degrade the visual quality of the area, however, as the area is currently underutilized, adjacent to the freeway, and generally absent of visual distinction. Although the scale and mass of the Project Area would change substantially with implementation of the Project, this change would not conflict with adjacent uses, including Raimondi Park, the frontage road, and I-880. Therefore, Project impacts to visual quality and character of Development Area Seven and to off-site land uses from this viewpoint would be considered less than significant.

View 7. Under the Maximum Residential Scenario, high-density residential buildings up to 90 feet tall could be built in Development Area Eight. Under the Maximum Commercial Scenario, the area would be developed with office and other commercial space. Similar to View 6, the streetscape would change dramatically as a result of the scale of development proposed, which would be substantially greater than that of existing uses across the street (see Figure 3.3-9). Views of the elevated frontage road and I-880, the Main Hall, and the Signal Tower would be obstructed by the proposed structures in Development Areas Six and Seven. Although the scale and mass of the Project Area would change substantially with implementation of the Project, this change would not conflict with adjacent industrial or

freeway uses and would generally enhance the visual quality of a blighted and underutilized site through incorporation of street trees, setbacks, and other features included in the proposed Wood Street Zoning Regulations. As a result, impacts to visual quality and character of the Project Area and the surrounding area from this viewpoint would be less than significant.

View 8. Figure 3.3-10 shows the western side of the 16th Street Train Station and the Elevated Tracks in Development Areas Five and Six. The proposed Wood Street Zoning Regulations specify that development in Development Area Six due west of the 16th Street Train Station would be restricted to a maximum height of 35 feet. Existing redwood trees are proposed to be thinned and interspersed with other ornamental trees along the eastern side of the frontage road within the right-of-way. The streetscape and the character of development would change substantially with implementation of the Project because proposed uses would be larger in scale and mass than the existing 16th Street Train Station and Elevated Tracks (portions of which would be removed). These historic uses would become barely visible. However, this change in mass would be visible from the frontage road and the freeway for only a brief duration while driving by. Since this area has not been identified by the General Plan as an important visual resource, the change in visual character would not be considered significant.

In conclusion, visual quality of the Project Area would be significantly altered to include modern structures, open space, and street tree landscaping. The streetscape would change in all eight views, and the scale of development would be substantially greater than that of surrounding uses. Although long-term visual characteristics of the Project Area would be altered with the Project, it would relieve a blighted area and visually improve existing conditions within the Project Area. Thus, the Project would not degrade the overall existing visual character or quality of the site and its surroundings. Implementation of the Project would minimize visual incompatibility between the Project's commercial/residential uses and adjacent industrial/commercial and residential uses through landscaping techniques as well as street-level and upper-story setbacks along Wood Street. The Project would also eliminate vacant areas, visually unattractive fencing, and aboveground utility lines within the Project Area and visually de-emphasize industrial and transportation-related uses that are abandoned or of older construction in the vicinity of the Project Area.

Summary of Impact VQ-3 by Development Area. Construction in individual development areas, except Development Areas Five and Nine, would substantially alter existing development intensity, massing, and building heights. However, since the development areas are generally underutilized, and not visually distinctive, the visual character within the Project Area would not be substantially degraded and the impact would be less than significant. The change in the visual character surrounding the Project Area would be less than significant because the proposed Wood Street Zoning Regulations include architectural character, urban design, lighting, and landscaping standards and guidelines that would reduce potential visual incompatibilities with adjacent residential and open space uses. In most respects, these visual improvements to the Project Area would be considered beneficial effects.



EXISTING VIEW



PROJECTED VIEW

Source: Square One Productions, 2004.

The projected view of Project Area development is illustrative of the height, mass, scale, and setbacks permitted by the proposed Wood Street Zoning Regulations. The simulations are not representative of actual architetural building designs.

Not to Scale

EIP ASSOCIATES

FIGURE 3.3-8
View 6 (Existing and Projected Conditions)
View South from Wood Street - Development Area 7

10817-00

Wood Street Project Draft EIR

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EXISTING VIEW



PROJECTED VIEW

The projected view of Project Area development is illustrative of the height, mass, scale, and setbacks permitted by the proposed Wood Street Zoning Regulations. The simulations are not representative of actual architetural building designs.

Source: Square One Productions, 2004.

Not to Scale

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EIP ASSOCIATES

FIGURE 3.3-9

View 7 (Existing and Projected Conditions)
View South from West Grand Avenue - Development Area 8

10817-00

Wood Street Project Draft EIR



EXISTING VIEW



PROJECTED VIEW

Source: Square One Productions, 2004.

The projected view of Project Area development is illustrative of the height, mass, scale, and setbacks permitted by the proposed Wood Street Zoning Regulations. The simulations are not representative of actual architetural building designs.

Not to Scale

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EIP ASSOCIATES

FIGURE 3.3-10

View 8 (Existing and Projected Conditions)
View West from Frontage Road - Development Area 6

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

VQ-4. Since construction of the Project would be implemented in phases, parts of the Project Area could be visually fragmented as construction occurs, and as individual development areas serve as staging or storage areas for construction equipment and materials. However, because portions of the Project Area are currently vacant or used for storage, views of construction activities or zones would not constitute a substantial degradation in visual quality. (LTS)

Since the Project would be implemented in various phases over several years, various buildings on site would be demolished and constructed during different stages in the process. As buildings are constructed and demolished, the appearance of the Project Area could be visually fragmented by construction activities, construction staging, and completed projects among the various development areas. The Project includes the rehabilitation of an open area in front of the 16th Street Train Station, the demolition of older commercial and industrial buildings within the Project Area, the removal of miscellaneous concrete curbs and other debris, and the undergrounding of utility lines. However, as the Project Area is primarily undeveloped, demolition activities would not be substantial, and visual fragmentation of the Project Area due to construction phasing would not be substantially different than existing conditions that include vacant lots interspersed with industrial and transportation-related storage and chain link fences. The staging of construction equipment and materials would not differ substantially from existing conditions that consist of abandoned construction and/or industrial materials within the undeveloped areas of the Project Area. Construction or alteration of vacant areas could involve removal of trees and other vegetation. However, the removal of this primarily unwanted vegetation (i.e., weeds due to lack of maintenance) would constitute a less-than-significant impact. Generally, construction-related impacts would be considered less than significant given that most of the Project Area is currently visually blighted.

Summary of Impact VQ-4 by Development Area. Since the construction of individual development areas is planned to occur in phases, one development area may be completed while another is in construction, leaving occupants of the developed area to view potentially unsightly construction activities and staging areas. However, the Project Area is currently visually blighted and used for transportation-related and industrial storage, so that changes in the visual setting during construction would not constitute a significant impact in visual quality.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

VQ-5. Implementation of the Project would alter the existing nighttime light and glare characteristics of the Project Area with the introduction of building, parking, and landscaping elements. However, the proposed Wood Street Zoning Regulations include guidelines that ensure that potential light and glare impacts would not adversely affect nighttime views or visibility in the area and would be less than significant. (LTS)

According to the *OARB Area Redevelopment Plan EIR*, security lighting and lighting for nighttime operations are present throughout the occupied portions of the 16th/Wood sub-district. Site visits by EIP confirm this description of the Project Area. As an older industrial area, there are few street lights, and much of the ambient lighting comes from security lights at existing buildings and along I-880 and the frontage road. Development of the proposed pedestrian-oriented, mixed-use, residential, live-work, and commercial developments in the Project Area would increase ambient nighttime lighting with potential glare and light spillage across property boundaries. The proposed exterior lighting would provide for adequate visibility and security and thus not be expected to be at variance with the City's Planning Code and the Uniform Building Code. The new lighting would be particularly noticeable in the currently undeveloped areas of the Project Area, as proposed lighting would sometimes be located in areas adjacent to existing one- and two-story residential uses, such as along 12th Street between Pine and Wood Streets and along Wood Street between 12th and 13th Streets. Residential uses are considered light-sensitive uses, meaning that a change in ambient lighting could evoke a negative response from a high percentage of residents. Even though internal circulation would utilize stop signs rather than traffic signal lights, proposed development would introduce new sources of nighttime light and glare in the area associated with provision of outdoor security lighting, interior street lighting, and landscape illumination.

Impact 4.11-3 in the *OARB Area Redevelopment Plan EIR* concluded that the potential for increased nighttime light and glare constituted a potentially significant impact. Consequently, that EIR identified the following mitigation measure to reduce this impact to a less-than-significant level (p. 4.11-16):

- New lighting shall be designed to minimize off-site light spillage; "stadium" style lighting shall be prohibited.

This mitigation measure has been incorporated into proposed Wood Street Zoning Regulations, which establishes performance standards to design all exterior lighting to avoid glare at occupied spaces and to site and design exterior lighting adjacent to a street or Public Open Space in coordination with lighting at the adjoining streetscape design. As well, interior lights from future buildings could spill out through windows onto adjacent properties. However, the proposed Wood Street Zoning Regulations would encourage low-emissivity glazing to reduce the amount of light transmitted through the windows and would prohibit reflective glazing to reduce glare. Finally, the streetscape and open space improvement plan for the Project (see Figure 2-7 in Section 2, Project Description) shows street trees planted along the perimeter of the Project Area, which would help reduce light spillage onto properties across the streets from the Project Area.

The Project would also introduce new sources of headlight from vehicles emerging from parking structures. However, the Project is designed so that ingress and egress from parking structures and surface lots would be limited to internal streets and along the frontage road. Thus, light-sensitive residential uses adjacent to the Project Area would not be significantly affected by nighttime light and glare as a result of vehicle headlight.

In summary, the additional nighttime light produced by the Project would likely be noticeable, but the Project's proposed light screening, directing, and illumination standards set forth in the proposed Wood Street Zoning Regulations would reduce impacts caused by increased nighttime light and glare to less than significant.

Summary of Impact VQ-5 by Development Area. Proposed Wood Street Zoning Regulations concerning exterior lighting, window treatment, and landscaping would apply to all development areas and would reduce potential light and glare impacts caused by individual development areas to less than significant.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

VQ-6. Implementation of the Project would alter existing daytime glare characteristics of the Project Area with the introduction of building elements. However, design features incorporated as part of the Project would ensure that these impacts would be less than significant. (LTS)

Additional development could increase daytime glare, particularly in areas where large massing of development would occur, such as along the frontage road and Wood Street. Glare effects associated with proposed mixed-use commercial/residential surface materials and windows could affect adjacent existing residential uses, which are considered sensitive uses. The proposed Wood Street Zoning Regulations prohibit the use of reflective glazing except at spandrels and the use of vinyl or aluminum sidings on exterior walls. Preferred wall exteriors, such as stucco, cement board, and brick, are not highly reflective materials and would not be a source of glare. Furthermore, windows would be predominantly inset, and architectural features would include window awnings and canopies that could alleviate additional glare effects from the windows of proposed structures. Therefore, impacts from increased daytime glare would be less than significant. Development Areas Five and Nine would result in no impacts since neither would involve the construction of new structures.

Summary of Impact VQ-6 by Development Area. New construction and buildings in individual development areas would alter existing daytime glare characteristics of the Project Area. However, design features recommended in the proposed Wood Street Zoning Regulations, such as window awnings and canopies, window treatments, and construction materials for exterior walls, would reduce glare impacts to less than significant.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

VQ-7. Implementation of the Project would cast shadows that could result in a long-term change in the shade effects in the area. However, shadows cast by proposed development would not impair the beneficial use of the 16th Street Train Station, Raimondi Park, or solar collectors in the area, and would result in a less-than-significant impact. (LTS)

Implementation of the Project would alter existing shade and shadow effects in the vicinity of the Project Area due to the increased massing and height of proposed development in the Project Area. According to the City of Oakland thresholds, shadow-sensitive uses include existing solar collectors, public and quasi-Public Open Spaces, parks, and lawns, and historic resources. The Project is primarily surrounded by urban industrial/commercial and residential

uses that could contain solar collectors. Raimondi Park, a public park, abuts the Project Area across Wood Street. Once complete, Project implementation would result in a long-term change in the shadow effects within the Project Area.

In a general, a change in shadows would constitute a significant impact if the shadows cast on light-sensitive uses occurs for more than three hours during either the Spring Equinox (March 21), the Summer Solstice (June 21), the Fall Equinox (September 21), or the Winter Solstice (December 21) between the hours of 9:00 a.m. and 3:00 p.m. and impair functioning of solar collectors, detract from enjoyment of an open space, or diminish the features that contribute to a cultural resource's designation as historic. These four days during the year represent the most extreme shade and shadow conditions during each season of the year. For each day, shadows during three times of the day were forecast: 9:00 a.m., 12:00 noon, and 3:00 p.m. This change of shadows in the Project Area is illustrated in Figures 3.3-11 through 3.3-13.

Spring Equinox/Fall Equinox. Spring and Fall Equinox shade and shadow conditions are essentially the same and are presented in Figure 3.3-11. At 9:00 a.m., Project shadows would be cast generally to the west on I-880, the frontage road, internal streets and sidewalks within the Project Area, portions of proposed mixed-use structures and associated open space within the Project Area, and the northeastern portion of the 16th Street Train Station and associated open space. At 12:00 noon, no Project shadows would be cast onto surrounding or internal uses. At 3:00 p.m., Project shadows would be cast generally to the northeast onto a portion of West Grand Avenue, the western Wood Street sidewalk, internal streets and sidewalks within the Project Area, portions of proposed mixed-use structures and associated open space within the Project Area, and the south portion of the 16th Street Plaza.

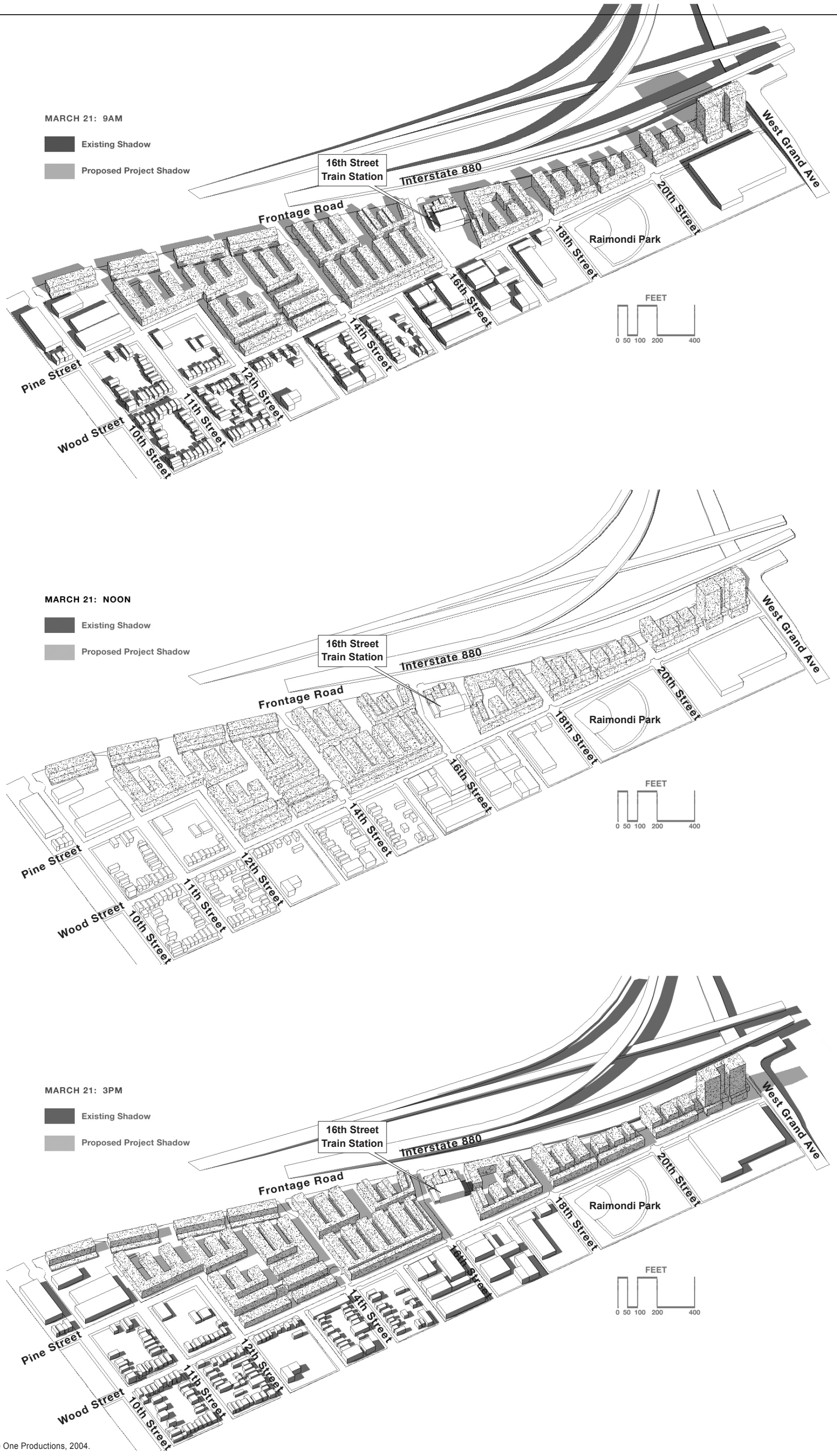
Project development would cast shadows on the northeastern portion of the 16th Street Train Station and associated open space. However, shadow coverage would be minimal at 9:00 a.m., and no shadows would be cast upon these light-sensitive uses at 12 noon. Thus, shadows would not intrude upon these uses for more than three hours during the hours of 9:00 a.m. and 3:00 p.m. and would not compromise the historic integrity and setting of the 16th Street Train Station. Surrounding industrial/commercial and residential uses would not have shadows cast upon them. Thus, no solar collectors utilized by surrounding uses would be blocked at any point by the proposed development between the hours of 9:00 a.m. and 3:00 p.m. The proposed structures also would not cast shadows on Raimondi Park until sometime after 3:00 p.m. Thus, although Project implementation would result in long-term change in the shadow effects within the area, shadows cast by proposed development would result in a less-than-significant impact.

Summer Solstice. Summer Solstice shade and shadow conditions are presented in Figure 3.3-12. They are similar in shape to those presented for the Spring/Fall Equinox but are shorter because of the sun angle in the summer. Since Project implementation did not result in significant shade effects for shadow-sensitive uses in the spring and fall, shade impacts during summer would also be less than significant.

Winter Solstice. Winter Solstice shade and shadow conditions are presented in Figure 3.3-13. Because the sun angle is lowest at this time, shadows are at their longest and shade effects would be greater than at any other time of the year. At 9:00 a.m., Project shadows would be cast generally to the west on I-880, the frontage road and its sidewalks, internal streets and sidewalks within the Project Area, portions of proposed mixed-use structures and associated open space within the Project Area, and the north portion of 16th Street Train Station and associated open space. At 12:00 noon, Project shadows would be shorter than at 9:00 a.m. and cast generally to the northwest. The 16th Street Train Station would not be in shade, but all other uses and facilities affected at 9:00 a.m. would be in shade at noon. At 3:00 p.m., Project shadows would be cast generally to the east on the same uses and facilities as identified at 9:00 a.m.

Project development would cast shadows on the north portion of the 16th Street Train Station and proposed 16th Street Plaza. However, shadow coverage would be minimal at 9:00 a.m., and no shadows are ever cast upon these light-sensitive uses at 12 noon. Thus, shadows would not intrude upon these uses for more than three hours during the hours of 9:00 a.m. and 3:00 p.m. and would not compromise the historic integrity and setting of the 16th Street Train Station. Surrounding industrial/commercial and residential uses would not have shadows cast upon them. Thus, no solar collectors utilized by surrounding uses would be blocked at any point in the future by the proposed development between the hours of 9:00 a.m. and 3:00 p.m. The proposed structures also would not cast any shadows on Raimondi Park across Wood Street. In addition, with sunset occurring at about 4:15 p.m. during the Winter Solstice, shadows would not remain at this length for a substantial duration of time. Although Project implementation would result in long-term change in the shadow effects within the area, shadows cast by proposed development would result in a less-than-significant impact.

Summary of Impact VQ-7 by Development Area. Implementation of the individual development areas of the Project Area would cast shadows that could result in a long-term change in the shade effects in the area. However, shadows cast by proposed development would not impair the beneficial use of the 16th Street Train Station, Raimondi Park, or solar collectors in the area, and would result in a less-than-significant impact.

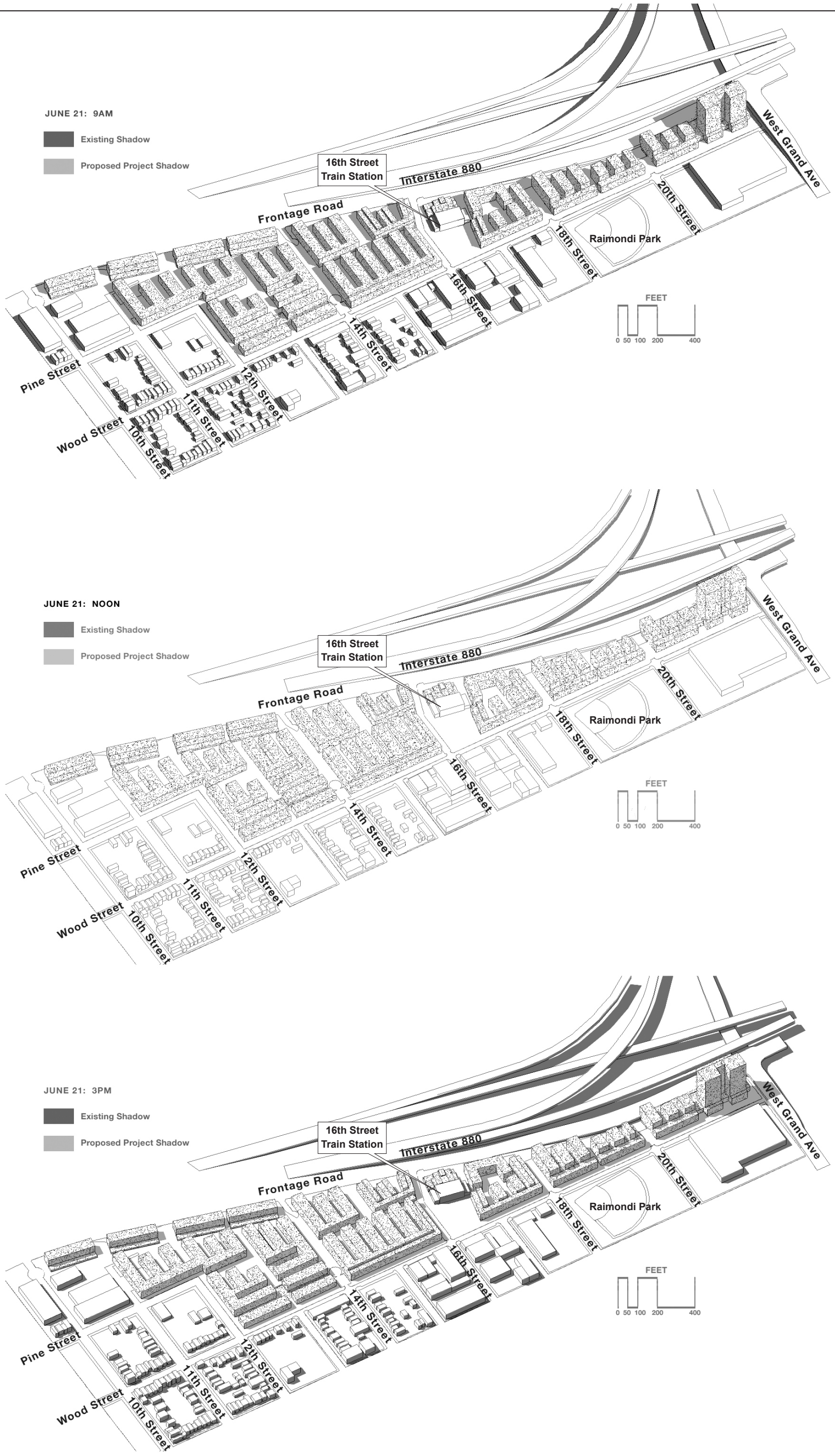


Sources: Square One Productions, 2004.

EIP ASSOCIATES

FIGURE 3.3-11

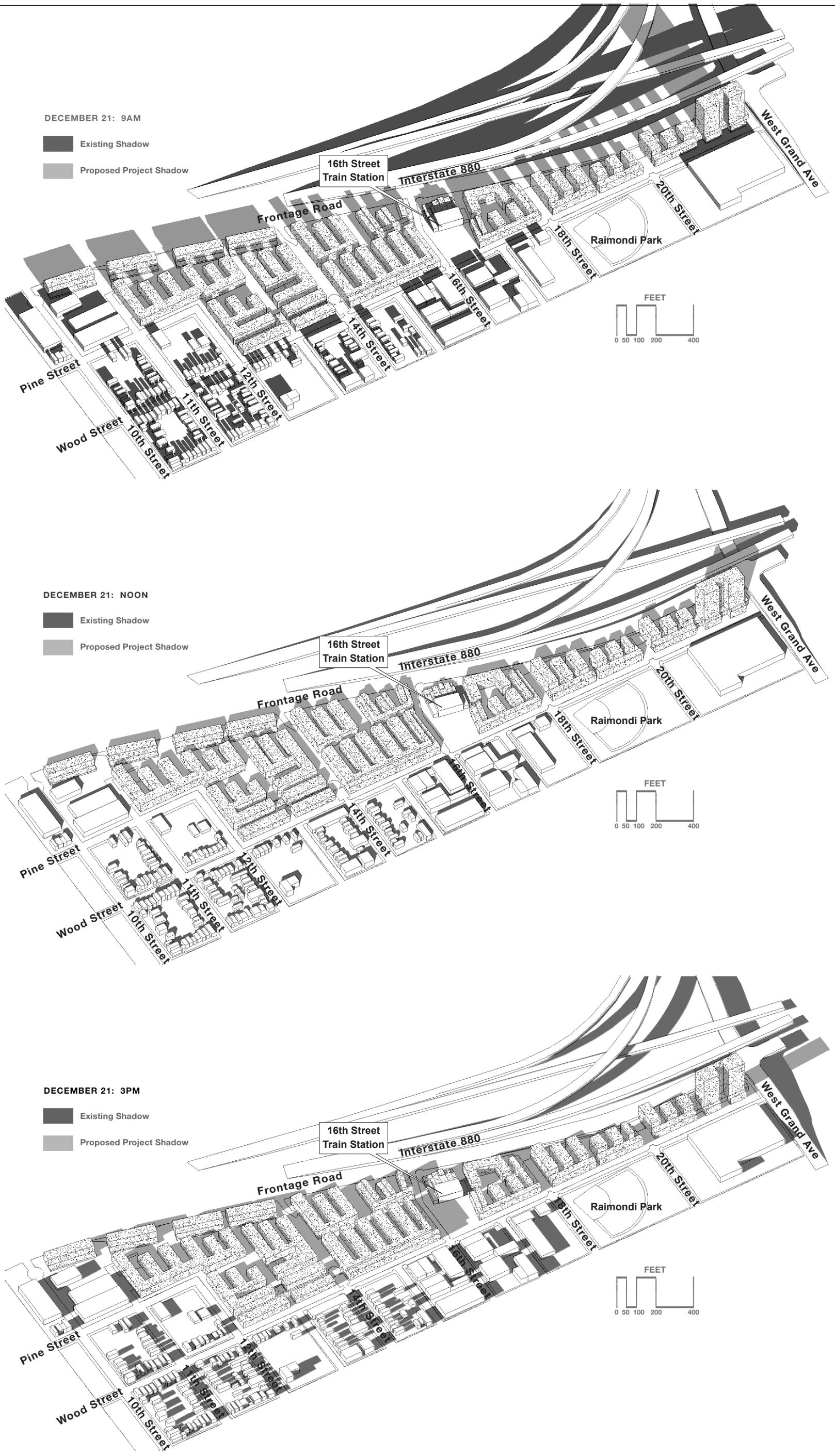
Typical Shadows Cast During Spring and Fall Equinox



Sources: Square One Productions, 2004.

EIP ASSOCIATES

FIGURE 3.3-12
Typical Shadows Cast During Summer Solstice



Sources: Square One Productions, 2004.

EIP ASSOCIATES

FIGURE 3.3-13
Typical Shadows Cast During Winter Solstice

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

VQ-8. The Project would be consistent with General Plan policies concerning design and visual resources. (LTS)

Table 3.3-1 provides a summary of the relevant visual policies from the *Oakland General Plan* and the Project's consistency with the policies. The table indicates that the proposed Wood Street Zoning Regulations address many of the visual compatibility concerns raised by the General Plan policies, and as a result, the Project would be consistent General Plan policies. The specific provisions from the proposed Wood Street Zoning Regulations that address visual and design issues are contained in a section on design guidelines; the entire Wood Street Zoning Regulations can be viewed in Appendix H, attached to this EIR.

Summary of Impact VQ-8 by Development Area. Implementation of the proposed Wood Street Zoning Regulations would ensure that future development in individual development areas would be of high architectural quality and would comply with City policies and performance criteria for visual quality.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

Table 3.3-1
Project Consistency with Visual and Urban Design Policies

Policy	Project Consistency
Land Use and Transportation Element	
N1.5: Sensitivity to surrounding residential uses.	Substantial commercial development is possible in Development Areas Two, Four, and Eight. Only Development Area Two is adjacent to residential uses. Proposed Wood Street Zoning Regulations would require articulation of building façade treatments, as well as street trees that would help mask the mass of the building. Additionally, if Development Area Two were developed as commercial uses, the existing buildings would be renovated and reused, so that there would be no change to the existing visual relationship with nearby residences in terms of building height and mass. Accordingly, the Project would be consistent with Policy N1.5.
N3.8: High-quality design standards for new residential construction.	The proposed Wood Street Zoning Regulations contain development standards and design guidelines, in large measure, to create a visually integrated and functioning mixed-use development. These regulations would govern building frontage, street front entries, architectural character, building articulation, parking garage façades, awnings and canopies, exterior construction materials, signage, and graphics, among other design aspects, in order to assure quality development in the Project Area. Accordingly, the Project would be consistent with Policy N3.8.
N3.9: Orientation toward the street without blocking sunlight.	The proposed Wood Street Zoning Regulations contain guidelines for street front entries, the purpose of which is to encourage street-oriented development projects through provision of a consistent pattern of street-oriented pedestrian entries. Along Wood Street, within the proposed Wood Street Overlay Zone, the maximum distance between adjacent entries would be 90 feet. As discussed in Impact VQ-7, the Project would not cast shadows on neighboring residential buildings. Accordingly, the Project would be consistent with Policy N3.9.
N3.10: Design parking to minimize visual prominence.	The proposed Wood Street Zoning Regulations contain guidelines for the location and screening of surface parking, the purpose of which is to ensure that surface parking would generally be located to screen view of parking from the street. Occupied buildings would be sited to screen views of surface parking, and where this were not possible, the Wood Street Zoning Regulations provide for the use of solid fences, walls, and adjoining planting. Along more visually sensitive areas, such as those areas within the Wood Street Overlay Zone, no surface parking would be permitted. Additional guidelines are recommended to address the location and screening of parking garages, with the similar purpose of generally screening them from view along the street frontage. Accordingly, the Project would be consistent with Policy N3.10.
N7.1: Compatibility with existing or desired character of surrounding development.	As discussed in Impact VQ-3, the Project would not substantially degrade the existing visual character or quality of the Project Area and its surroundings. Accordingly, the Project is consistent with Policy N7.1.
N8.2: Reduction in building heights as development nears lower density residential areas.	The proposed Wood Street Zoning Regulations propose overlay zones that impose more restrictive height limits than the underlying development area standards. These more restrictive height limits apply along Wood Street between 12th and 20th Streets, and would "step down" building heights as Project Area structures get closer to the lower-density residential development to the east across Wood Street. Accordingly, the Project would be consistent with Policy N8.2.
N9.7: Creation of compatible and attractive development.	See rationale for Policy N3.8. The proposed Wood Street Zoning Regulations would promote compatible and attractive development, rather than "cookie-cutter" development, and would be consistent with Policy N9.7.

Table 3.3-1 (continued)
Project Consistency with Visual and Urban Design Policies

Policy	Project Consistency
N9.9: Encouragement of rehabilitation efforts, respecting architectural integrity of building's original style.	In Development Area Five, the 16th Street Train Station Main Hall would be restored in accordance with the Secretary of Interior's standards. In Development Area Two, if the Maximum Commercial Scenario is implemented, the proposal would involve refurbishment and reuse of the existing buildings. In Development Area Four, if the Project Sponsor does not acquire Bea's Hotel, it would be left in its current state. If the Project Sponsor does acquire the hotel property, the building would be demolished. Otherwise, all other buildings in the Project Area are older and deteriorating and none are regarded as historic by the City. Thus, the Project would be consistent with Policy N9.9.
N12.4: Undergrounding of utilities.	The Project would underground all utility lines serving the proposed Wood Street Zoning Regulations. Accordingly, the Project would be consistent with Policy N12.4.
Open Space and Conservation Element	
OS-3.6: Open space buffers and useful use of land along freeways.	The Project Area is separated from I-880 by the frontage road. The proposed Frontage Road Overlay Zone of the Wood Street Zoning Regulations would require increased tree plantings along the frontage road to screen views of the freeway from the proposed development. As discussed in Impact VQ-2, the Project would not be visible from the portion of I-80 that is a state-designated scenic highway. The Project would be visible from I-880, and the proposed massing and significant changes in massing at the roof lines would create an attractive view for passersby. Accordingly, the Project would be consistent with Policy OS-3.6.
OS-4.1: Provision of outdoor open space.	In addition to the 60,670 sf of Public Open Space, the Project proposes 122,925 sf of Private Open Space under the Maximum Residential Scenario and 88,350 sf of Private Open Space under the Maximum Commercial Scenario. Accordingly, the Project would be consistent with Policy OS-4.1.
OS-4.4: Discouragement of vacant land from becoming a source of neighborhood blight.	The Project would transform the existing vacant and underutilized land that is blighted into a pedestrian-oriented, mixed-use development. Accordingly, the Project would be consistent with Policy OS-4.4.
OS-10.2: New development that minimizes visual impacts and creates opportunities for scenic enhancement.	As discussed in Impact VQ-1 through VQ-7, the Project would not result in significant visual impacts. See also rationale for consistency with Policy OS-4.4 that explains that the Project would enhance the scenic qualities of the area. Accordingly, the Project would be consistent with Policy OS-10.2.
OS-10.3: Enhancement of underutilized visual resources.	The Project would result in the restoration of the 16th Street Train Station, a landmark that has fallen into disrepair. There are two other buildings that are recognized by the Oakland historic survey but both were considered by the survey to be of secondary importance. The frontage road would be lined with new development of high architectural character and appropriately landscaped with a mixture of trees. Accordingly, the Project would be consistent with Policy OS-10.3.
OS-11.3: Requirement for public art.	The Project does not include any specific provisions for public art. The policy does not require public art of private buildings but as part of public buildings. Nevertheless, the Project would restore the 16th Street Train Station Main Hall and create a public plaza, both of which could be used for various public events or gatherings. Accordingly, the Project would be consistent with Policy OS-11.3.
OS-11.5: Greening of Oakland.	The Project would plant street trees along the Project Area's perimeters and in other locations, as shown in Figure 2-7 in Section 2, Project Description. Accordingly, the Project would be consistent with Policy OS-11.5.

VQ-9. The Project would not result in adverse wind effects. (LTS)

The City of Oakland uses a pedestrian wind hazard criterion of one occurrence per year, at sidewalk locations, of winds greater than 36 mph as the maximum allowable wind occurrence and speed. After some of the tallest buildings in the Bay Area (e.g., the 48-story TransAmerica Pyramid in San Francisco) were built, the public began to experience uncomfortable winds at the bases of these buildings. The bases of these buildings were never wind-tunnel tested. Considering wind factors during building design and planning can help bring winds to a comfortable and safe level.

Because the ambient wind (unaffected by buildings) in Oakland seldom exceeds 36 mph, a project must substantially increase wind speeds for this threshold to be exceeded, except in very exposed locations where wind speeds would be greater (e.g., the Embarcadero area, Lake Merritt, and other areas were there is little shelter from wind). The frictional drag of the earth's surface tends to make wind speeds at ground level much lower than those in the unobstructed flow several hundred feet higher (gradient wind). The frequency of occurrence, speed, and level of turbulence of winds at ground level are important to the comfort and safety of pedestrians in urban areas. Tall buildings (typically over 40 stories), which rise above general development, may intercept the faster winds that flow higher above the ground. Tall, slab-like buildings tend to deflect wind down into previously sheltered areas. When wind encounters a single tall slab-like building, the wind divides at about three quarters of the buildings height. Above this, the air flows up the face of the building and over the roof; below, it flows down to form a vortex in front of the building before rushing around the windward corners. Because the faster winds are so high above the earth's surface, the City of Oakland does not require a wind analysis if the proposed building height is less than 100 feet and the project site is located either adjacent to a substantial body of water or in Downtown.

The maximum building heights proposed for the Project Area would not exceed 90 feet in Development Areas Seven and Eight, which are located at the northern portion of the Project Area adjacent to the frontage road and I-880, and 65 feet in the other seven development areas. At these heights, the faster gradient winds that flow higher above the ground would not be deflected downward toward the base of the buildings. Because the Project would not include tall, slab-like buildings, given the architectural treatment and massing considerations included in the proposed Wood Street Zoning Regulations, because the ambient wind in Oakland seldom exceeds 36 mph, and because the Project Area is neither near a substantial body of water nor in Downtown the Project would have a less-than-significant effect on wind conditions for pedestrians at ground level.

Summary of Impact VQ-9 by Development Area. The height restrictions of the Wood Street Zoning Regulations limit the tallest buildings in the Project Area to 90 feet. Buildings of this height would not be tall enough to interfere with the high winds and would not create turbulence or funnel winds to the discomfort of people at ground level. Thus, the proposals for each development area would have less-than-significant wind effects.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

Cumulative Analysis

VQ-10. Implementation of the Project, in combination with related projects, would not result in a substantial adverse cumulative effect on a scenic vista. (LTS)

The geographic context for the analysis of cumulative scenic vista impacts includes areas with views from or to the Project Area. Although portions of the Project Area are visible from a number of public view corridors and vantage points, the Project Area is not visible in its entirety from a single, ground-level vantage point due to its large size, flat topography, and surrounding low- to mid-rise buildings. With respect to long-range views, the Project Area is visible from a number of locations in the Berkeley and Oakland Hills, although the majority of these views are from private residences, public streets, or certain locations within the open space areas of the Oakland or Berkeley Hills. The cumulative scenic vista analysis accounts for all anticipated cumulative growth within this geographic area, including the related projects and additional regional growth represented by the City of Oakland's Cumulative Growth Scenario, which is described in Appendix C.

The City of Oakland's Planning Code includes several chapters that address the protection of scenic vistas throughout the City. The Scenic Route Combining Zone Regulations are intended to create, preserve, and enhance areas where hillside terrain, wooded canyons and ridges, and fine vistas or panoramas of Oakland, neighboring areas, or the Bay can be seen from public roadways. Further, the City's design review process, which is also set forth in the Planning Code, requires the review of development proposals that are located in areas or on sites, or involving uses, that require special design treatment and for the consideration of projects' relationships to the surrounding physical environment. Design review approval by the City may be granted only upon determination that a project conforms to the design review criteria and to both of the following additional criteria:

- Siting, grading, and design will, to the maximum extent feasible, preserve existing live trees and other desirable natural features; and
- Proposed development will, as far as practicable, maintain existing vistas or panoramas that can be seen from abutting public roads while maintaining the visual value of the total setting or character of the surrounding area.

Similarly, the City's site development and design review procedure, which is delineated separately in the Planning Code, identifies a process for the review of proposals located in areas or on sites, or involving uses that require special siting, vegetative management, view preservation, or design treatment. The design review processes, which would include any applicable site-specific standards, such as those provided in the Wood Street Zoning Regulations, and the Scenic Route Combining Zone Regulations collectively ensure that there are no substantial adverse cumulative impacts to scenic vistas.

Given the flat topography of the Project Area and the geographic distance separating the development areas from each other, the increased height and massing of the entire Project Area can only be seen from public vantage points at a distance, such as from the Oakland Hills. From distant locations, the Project would occupy a small portion of the viewer's viewshed. Development of the Project in combination with other related development and growth would alter the overall skyline by imposing additional structures in the viewshed, but the distance of hillside viewers would render such changes to the viewshed as slight and views of the Bay, the City of San Francisco, and general urban development of the East Bay area would still predominate. As a result, the cumulative impact on scenic vistas would be less than significant.

Further, full development of the Project Area would not result in a substantial effect on scenic views of the hills in the distance to the north from the frontage road, I-880, or Wood Street since all development areas would comply with the proposed Wood Street Zoning Regulations, which establish building setbacks and heights, and call for undergrounding of utilities and the planting of street trees. Therefore, the Project's contribution to this cumulative impact would be less than cumulatively considerable.

VQ-11. Implementation of the Project, in combination with related projects, would not result in substantial cumulative scenic resource impacts within a state scenic highway. (LTS)

The geographic context for cumulative impacts to scenic highways is the viewshed from the designated scenic highway and considers related projects identified in Appendix C. As noted in Impact VQ-2, the Project would not be visible from a state scenic highway. Accordingly, the Project would not cumulate with other related projects to damage a scenic resource associated with a state scenic highway and, thus, there would be no cumulative impact. Moreover, the City of Oakland regulates development that could result in impacts to scenic resources within a scenic highway through the Scenic Highways Element of the *Oakland Comprehensive Plan* (the precursor of the *City of Oakland General Plan,* 1974), the Open Space, Conservation, and Recreation Element of the *City of Oakland General Plan,* 1996, and through the provisions of the Planning Code. Compliance with, and enforcement of, all of these regulations would ensure that there is no substantial cumulative damage to scenic resources within a state scenic highways.

VQ-12. Implementation of the Project, in combination with related projects, would not substantially contribute to cumulative loss of visual character or quality of the Project Area and its surroundings. (LTS)

The Project would develop over the next ten years in the context of redevelopment at the former Oakland Army Base, development at the Port, and new transit-oriented development around the West Oakland BART Station. Related projects within this geographic area are identified in Appendix C. As a result of this growth, the West Oakland area and lands at the former Oakland Army Base would be expected to witness a noticeable increase in development intensity, building heights, and architectural diversity. This overall change would be consistent generally with the land uses articulated in the *OARB Area Redevelopment Plan* and the *West Oakland Redevelopment Plan,* although the Project would seek General Plan and *OARB Area Redevelopment Plan* amendments to permit residential uses in the Project Area. Thus, the change in development intensity, the economic revitalization, and the enhanced visual character would be part of a transformation that is not only anticipated but desired in these areas.

To ensure that future development and redevelopment protect an area's visual character, the Site Development and Design Review Combining Zoning Regulations, as established in the City's Planning Code, as well as any site-specific standards, such as those provided in the Wood Street Zoning Regulations, are intended to ensure that development is sensitively integrated with land forms, view corridors, and vegetation masses. Further, the City's design review processes and the Scenic Route Combining Zone Regulations also ensure that there are no substantial adverse cumulative impacts to scenic vistas, panoramic views, and that new development is designed with a sensitivity to, and consideration of, its relationship to the physical environment. Lastly, the LUTE contains policies that relate to visual and aesthetic resources with an emphasis on visual compatibility, building design, and site layout. Compliance with, and enforcement of, all of these regulations including the Wood Street Zoning Regulations, would ensure that there is no substantial cumulative degradation of the existing visual character or quality of the City.

VQ-13. Implementation of the Project, in combination with related projects, would not result in cumulative visual impacts during construction. (NI)

Construction activities typically result in views of construction equipment and materials staging areas, ripped up pavement, stockpiles of debris and dirt, and areas devoid of landscaping. Unless there are significant construction activities occurring in nearby areas within the viewshed of the Project Area, there are no cumulative construction-related visual quality impacts. Based upon a review of the list of related projects provided in Appendix C, there are no known, foreseeable projects that would result in adjacent construction activities that would affect, or be affected by, the Project's construction-related visual quality impacts.

VQ-14. Implementation of the Project, in combination with related projects, would alter the existing nighttime light and glare characteristics of the area with the introduction of building, parking, and landscaping elements. However, the proposed Wood Street Zoning Regulations include

guidelines that ensure that potential cumulative light and glare impacts would be less than significant. (LTS)

The geographic context for cumulative impacts associated with nighttime light and glare is the area immediately surrounding the Project Area. In an urban environment, light and glare impacts are a fairly localized phenomenon, and the geographic context would only extend beyond the Project Area to immediately adjacent areas that could be subject to incidental light or glare spillover.

The City of Oakland is urbanized in the flatter areas and is characterized by higher densities and commercial development that already have considerable nighttime light and/or glare. In the hills, land uses are largely residential or open space, and are subject to the provisions of the Planning Code that control the placement of artificial illumination. These provisions apply to all residentially zoned properties throughout the City. With respect to commercial uses, the Planning Code requires that artificial sources of illumination are nonflashing and directed away from residential uses so as to eliminate objectionable light spillage or glare. Further, as a standard condition of approval, the City requires preparation and approval of a lighting plan that identifies the design and location of all exterior lighting fixtures or standards to ensure that lighting is adequately shielded and directed downward such that light spillage or glare is not cast onto adjacent properties. As previously mentioned, the LUTE contains policies that relate to visual and aesthetic resources with an emphasis on visual compatibility, building design, and site layout. Compliance with, and enforcement of, the General Plan, Planning Code, and standard conditions of approval ensures that existing nighttime light and glare characteristics are not altered such that a significant cumulative impact would result.

Further, impacts related to nighttime light and glare characteristics are generally evaluated on a site-specific basis, with potential impacts resulting from glare and light spillage onto surrounding sensitive uses. The proposed Wood Street Zoning Regulations establish performance standards to design all exterior lighting to avoid glare at occupied space and to site and design exterior lighting adjacent to a street or publicly accessible open space area in coordination with lighting at the adjoining streetscape design. The proposed Wood Street Zoning Regulations would also encourage low-emissivity glazing to reduce the amount of light transmitted through the windows and would prohibit reflective glazing to reduce glare. In addition, an applicable mitigation measure from the *OARB Area Redevelopment Plan EIR* would also be imposed on the Project; this measure requires that new lighting be designed to minimize off-site light spillage, and prohibits stadium style lighting. Therefore, the Project's contribution to a cumulative nighttime light and glare impact would be less than cumulatively considerable.

VQ-15. Implementation of the Project, in combination with related projects, would alter existing daytime glare characteristics of the Project Area with the introduction of building elements. However, design features would ensure that these cumulative impacts would be less than significant. (LTS)

Similar to nighttime light and glare, impacts associated with daytime glare as a result of the introduction of new building elements is generally site-specific, with impacts resulting from spillage onto surrounding areas. The City's design review process, as well as site-specific standards, such as those provided in the Wood Street Zoning Regulations, includes criteria to ensure that building design and layout are well related to the surrounding area in terms of setting, landscaping, scale, bulk, height, materials, textures, colors, and appurtenances. Similarly, the City's site development and design review procedure, which is delineated separately in the Planning Code, identifies a process for the review of proposals located in areas or on sites, or involving uses, which require special siting, vegetative management, view preservation, and design treatment. The LUTE contains policies that relate to visual and aesthetic resources with an emphasis on visual compatibility, building design, and site layout. Collectively, the design review processes, the LUTE, applicable site-specific standards, and standard conditions of approval, ensure that there are no cumulative daytime glare impacts.

Furthermore, specific to the Project, the proposed Wood Street Zoning Regulations prohibit the use of reflective glazing except at spandrels and the use of vinyl or aluminum sidings on exterior walls. Preferred wall exteriors, such as stucco, cement board, and brick, are not highly reflective materials and would not be a source of glare. Windows would be predominantly inset and architectural features would include window awnings and canopies that could alleviate additional glare effects from the windows of proposed structures. Therefore, the Project's contribution to a cumulative daytime glare impact would be less than cumulatively considerable.

VQ-16. Implementation of the Project, in combination with related projects, would cast shadows that could result in a long-term change in the shade effects in the area. However, shadows cast by proposed development would not impair the beneficial use of the 16th Street Train Station, Raimondi Park, or solar collectors in the area, and would result in a less-than-significant cumulative impact. (LTS)

Shadow impacts are generally evaluated on a site-specific basis; from a cumulative perspective, an EIR needs to consider those nearby projects that might shade a historic resource, open space resource, or solar collector. Based on a review of Appendix C which identifies related projects in the vicinity of the Project Area, there are no projects that could cumulate with the Project to result in a significant cumulative shade effect.

VQ-17. The Project, in combination with related projects, would be consistent with General Plan policies concerning design and visual resources. (LTS)

The geographic context for cumulative impacts associated with General Plan policies related to visual resources and urban design is the City of Oakland, including the related projects and background growth identified in Appendix C.

As part of the City's standard development review process, projects are evaluated for their conformity with General Plan policies and guidelines. The City's design review process

includes criteria to ensure that building design and layout are well related to the surrounding area in terms of setting, landscaping, scale, bulk, height, materials, textures, colors, and appurtenances, and that any development project is sensitive to topography and landscape. In addition, the LUTE contains policies that relate to visual and aesthetic resources with an emphasis on visual compatibility, building design, and site layout. Projects that may be inconsistent with the General Plan policies are subject to additional scrutiny. For projects that trigger a General Plan amendment, CEQA requires an EIR to evaluate the potential environmental impacts that could result from construction or operation of the project. If a project results in significant visual quality impacts, mitigation measures and alternatives must be explored to reduce those effects. Given these policies, procedures, and requirements, cumulative impacts with respect to consistency with General Plan policies concerning design and visual resources would be less than significant.

VQ-18. The Project, in combination with related projects, would not result in cumulative adverse wind effects. (NI)

As with light, glare, and shade/shadow impacts, the analysis of adverse wind effects is site specific. Accordingly, the City of Oakland requires a site-specific study of wind conditions to ensure that a pedestrian wind hazard criterion of one occurrence per year, at sidewalk locations, of winds greater than 36 mph do not occur. Based on a review of the related projects identified in Appendix C, there are no nearby projects that could combine with the Project to result in a cumulative wind impact. Accordingly, there is no cumulative wind impact.

Furthermore, the height restrictions of the proposed Wood Street Zoning Regulations limit the tallest buildings in the Project Area to 90 feet. Buildings of this height are not of sufficient height to interfere with high winds and, thus, would not create turbulence or funnel winds to the discomfort of people at ground level. Therefore, the Project's contribution to a cumulative wind impact would be less than cumulatively considerable.

Summary of Impact VQ-10 through VQ-18 by Development Area. Since development of the entire Project Area would result in a less-than-significant contribution to cumulative visual quality impacts, proposals in each of the individual development areas would also result in a less-than-significant contribution to cumulative visual quality impacts. Further, since Development Areas Five and Nine do not propose any new structures, they would not contribute at all to cumulative visual impacts. The Project improvements to the Project Area's visual setting in combination with redevelopment efforts in other parts of the OARB and West Oakland would likely have a beneficial cumulative impact on the overall visual quality and character in this portion of Oakland.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

3.4 TRANSPORTATION, CIRCULATION, AND PARKING

Introduction

This section of the EIR evaluates the Project's potential impacts on freeways, local roadways, and transit, as well as motor vehicle, bicycle, and pedestrian safety. The Project would exceed significance thresholds for transportation systems if it results in an increased traffic demand that cannot be met by existing or planned transportation infrastructure, or if the Project conflicts with adopted policies supporting transportation alternatives to the single-occupant automobile.

For transportation impacts, the Maximum Residential Scenario and the Maximum Trips Scenario were evaluated. The Maximum Residential Scenario would contain 1,570 residential units, including 186 live/work units, 13,000 sf of commercial development, and 14,847 sf in the restored 16th Street Train Station. The Maximum Trips Scenario would contain 1,273 residential units, including 162 live/work units, 303,700 sf of commercial development, and 14,847 sf in the restored 16th Street Train Station. These two scenarios would generate the fewest and greatest number of daily and peak hour trips, respectively, that could occur in the Project Area. The Maximum Residential Scenario and Maximum Trips Scenario were evaluated to determine the full range of possible traffic impacts from Project Area development. Evaluation of the Maximum Trips Scenario would encompass impacts that could result from the Maximum Commercial Scenario which contains more commercial floor area in the Project Area but would generate fewer trips.

Setting

Transportation Study Area

The transportation study area was selected to encompass areas within the regional transportation network that could be potentially affected by Project traffic. The study area includes the freeways surrounding or leading to the Project Area: I-80, I-580, I-880, I-980, and State Route (SR) 24. Other potentially affected SRs include SR 123 (San Pablo Avenue). This regional roadway system is shown in Figure 3.4-1. This transportation study area also includes local access routes expected to serve as many as 50 peak hour trips generated by the Project, as more fully discussed below.

Regional Road System

Regional Access. The regional road network includes nearby interstate and state routes. Key features of this system and regional access to the Project Area are summarized below.

Interstate 80 (I-80) is an eight- to ten-lane freeway serving San Francisco and the West Bay as well as East Bay destinations in West Contra Costa County, Sacramento, and points to the north and east. I-80 provides access to the Project Area by freeway ramps that terminate at the West Grand Avenue/



Source: Dowling Associates, Inc., March 2003.

EIP ASSOCIATES

FIGURE 3.4-1

Study Intersections

frontage road intersection. I-80 east has recently been widened to provide High Occupancy Vehicle (HOV) lanes and improved ramp connections to I-580 and the Bay Bridge.

Interstate 880 (I-880) is an eight-lane freeway that serves West Alameda County, the South Bay and southern peninsula, and San Jose. I-880 connects to west I-80 at the Bay Bridge Toll Plaza. Interchange ramps connect I-880 to Maritime, 7th, Union, Adeline, and Market Streets. A connection to I-80 east is provided at the north end of a frontage road that extends from 7th Street to West Grand Avenue.

Interstate 580 (I-580) is an eight-lane freeway serving northern Alameda County, Livermore, Stockton, and Marin County. Access to the Project Area is provided via interchanges at West MacArthur Boulevard and Market Street. The City of Oakland has placed a heavy truck (over four and one-half tons) restriction on I-580 between Grand Avenue and 106th Avenue.

Interstate 980 (I-980) is a six- to eight-lane freeway that provides access to the downtown Oakland area. I-980 becomes SR-24 at the northern end, providing access to Contra Costa County via the Caldecott Tunnel, and provides a direct connection between I-580 and I-880.

State Route 24 (SR 24) is an eight-lane freeway that connects the East Bay with central and east Contra Costa County. SR 24 extends from I-980 to I-680 through the Caldecott tunnel.

State Route 123 (SR 123 - San Pablo Avenue) is a four-lane arterial roadway that extends from West MacArthur Boulevard north to Cutting Boulevard in El Cerrito. San Pablo Avenue is not designated as a SR beyond MacArthur Boulevard on the south, and Cutting Boulevard on the north. On the south, San Pablo Avenue extends into downtown Oakland; on the north, it extends through El Cerrito, Richmond, San Pablo, Pinole, and Hercules to its termination in unincorporated Contra Costa County.

Freeway Conditions. The following discussion of regional freeway conditions is based on the 2002 Level of Service Monitoring Report prepared by the Alameda County Congestion Management Agency (CMA).[1] The CMA monitors congestion on freeways in the region by measuring the average travel speed during the PM peak period (4:00 p.m. to 6:00 p.m.). Freeway traffic conditions are described in terms of level of service (LOS), a standard measure for traffic operations defined by the average number of seconds of delay per vehicle, with LOS A representing free-flow conditions and LOS F representing gridlocked conditions.

According to the CMA, traffic speeds of 49 miles per hour (mph) or higher on the freeway indicate LOS A through C. At LOS D, traffic operating conditions become unstable and speeds can drop to as low as 41 mph. At LOS E, there are virtually no usable gaps in the traffic stream and speeds can drop to as low as 30 mph. Below 30 mph, stop-and-go traffic operations often occur and the LOS is F.

[1] Alameda County Congestion Management Agency, 2002 Level of Service Monitoring Report, November 2004.

As shown in Table 3.4-1, in 2002 during the PM peak hour, traffic congestion occurred on most routes leading away from the major employment centers. During the PM peak hour, I-80 is congested in both directions and SR 24 is congested eastbound. I-580, I-880, and I-980 were operating at LOS D or better within the study area.

Table 3.4-1
Freeway Operations around the Project Area, 2002

	AM Peak Hour [a]		PM Peak Hour	
Freeway Segment	**LOS**	**Speed (mph)**	**LOS**	**Speed (mph)**
I-80 at the Bay Bridge				
Eastbound	-	-	F	14.2
Westbound	F	8.8	F	38.3
I-80 east of I-80/I-580 Split				
Eastbound	-	-	F	18.9
Westbound	F	16.1	F	30.6
I-580 east of I-980/SR-24				
Eastbound	-	-	D	48.2
Westbound	E	39.9	A	63.4
I-580 west of I-980/SR-24				
Eastbound	-	-	D	41.0
Westbound	F	26.7	D	42.8
I-880 south of I-980				
Northbound	D	43.6	D	48.9
Southbound	-	-	D	42.8
I-880 north of I-980				
Northbound	E	38.0	D	44.6
Southbound	-	-	D	41.1
I-980				
Northbound	-	-	B	49.5
Southbound	-	-	D	55.3
SR-24 east of I-580				
Eastbound	-	-	F	22.5
Westbound	B	56.9	A	60.7

Source: Alameda County Congestion Management Agency, 2002 Level of Service Monitoring Report, 2004.

Note:

a. Missing values (designated with "-") were not reported in the source document from the Alameda County Congestion Management Agency.

During the AM peak period (7:00 a.m. to 9:00 a.m.), bottlenecks occur on many of the freeways leading to the major employment centers. Congestion regularly occurs on westbound I-80 at the I-580 split and on the approach to the Bay Bridge toll plaza. On I-580, slowing occurs regularly in both directions between I-80 and I-980. I-880 is congested northbound and I-980 is congested southbound. SR-24 is congested at its southbound connection to I-580.

Local Road System

Local Circulation and Access. The Project Area is well served by an extensive local roadway system. The circulation system for West Oakland is characterized by several four-lane arterial streets, many collector and local streets, transit services, and rail lines. Most of the streets provide on-street parking on both sides of the street, with prohibitions that allow for street cleaning. The following is a general description of the local street network.

West Grand Avenue is an east/west arterial providing direct access to the downtown Oakland area and San Francisco Bay Bridge. This four- to six-lane facility has a median island and left-turn lanes.

Frontage Road is a four-lane arterial that extends from 7th Street to West Grand Avenue along the east side of the I-880 freeway. The frontage road provides a connection between the I-880 south ramps at 7th Street and the I-80 east ramps at West Grand Avenue.

Wood Street is a two-lane north/south collector street located just east of the I-880 frontage road. Wood Street provides access from 7th Street on the south to approximately I-580, where it becomes Beach Street, with connections into Emeryville under 40th Street.

14th Street runs east/west from West Oakland to the downtown Oakland area. It is a four-lane arterial from Mandela Parkway to I-980, with a landscaped median from Kirkham Street to Brush Street. West of Mandela Parkway, 14th Street is classified as a collector. Traffic signals and left-turn lanes are provided at major intersections.

7th Street is a four-lane east/west arterial which provides direct access to the West Oakland BART Station, the Port of Oakland, and the former Oakland Army Base. A substantial amount of traffic along 7th Street is truck traffic; the street is also designated as a local transit arterial.

3rd Street is a two-lane arterial from Mandela Parkway to Brush Street, and a two-lane collector elsewhere. Currently, 3rd Street is discontinuous between Union Street and Mandela Parkway; however, a connection is currently under construction.

Mandela Parkway runs north/south from 3rd Street to just south of I-580 primarily as a four-lane arterial road, with a 60- to 100-foot-wide median. Mandela Parkway is a two-lane roadway south of 8th Street and east of Horton Street. Parallel parking is provided on both sides of the roadway, and the intersections at major cross streets are signalized. Mandela Parkway is designated as a local transit arterial north of 7th Street. Mandela Parkway is currently being reconstructed in West Oakland as a fully landscaped, tree-lined parkway with landscaped median.

Adeline Street runs north/south from Berkeley to 3rd Street near the Port of Oakland, where it becomes Middle Harbor Road. The segment within the West Oakland area is a four-lane arterial street with signals at major intersections. Between 7th Street and 3rd Street, Adeline Street serves as a major access road for the Port of Oakland.

Market Street is an arterial which runs north/south throughout West Oakland and Emeryville, and later becomes Sacramento Street in Berkeley. Market Street is a four-lane road with left-turn lanes at major intersections, and a landscaped median throughout West Oakland.

San Pablo Avenue is a four-lane arterial roadway which begins in downtown Oakland and extends north to unincorporated Contra Costa County north of Hercules. San Pablo Avenue is designated as SR 123 between MacArthur Boulevard and Cutting Boulevard.

Martin Luther King, Jr. Boulevard is a north/south six-lane arterial road that extends from West Oakland into Berkeley.

Brush Street is a four- to six-lane one-way arterial street which runs southbound west of I-980. Southbound off-ramps from I-980 are provided at 12th and 18th Streets and southbound on-ramps are provided at 17th and 11th Streets.

The City of Oakland is responsible for constructing and maintaining non-state transportation facilities in West Oakland. The City has a traffic calming program in place that provides speed bumps on many streets and truck prohibitions on all of the streets within an area bounded by Pine Street, 12th Street, Center Street, and 8th Street in the Prescott neighborhood (generally located between Grand Avenue, Middle Harbor Way, Magnolia Street, and Wood Street).

Local Intersection Operations. The efficiency of traffic operations at study area intersections was evaluated for existing (2003) and future (2025) conditions. Thirty-three intersections, shown in Figure 3.4-1, were identified for study. Twenty-nine of the study intersections were included because they are expected to have the greatest potential for traffic impacts due to growth and development within the Project Area. Four additional intersections were included in this traffic study, because they had been previously found to be significantly impacted:[2]

- 3rd Street/Adeline Street;
- 3rd Street/Market Street;
- 12th Street/Brush Street; and
- Powell Street/I-80 Northbound Ramps.

The LOS at study area intersections was analyzed for the AM and PM peak hours, using methodologies described in the *2000 Highway Capacity Manual* by the Transportation Research Board. The LOS for

[2] City of Oakland, *OARB Area Redevelopment Plan Draft EIR,* July 2002.

signalized and unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, and lost travel time. Delay is a complex measure and is dependent upon a number of variables, including the number of vehicles in the traffic stream. For signalized intersections, delay is also dependent on the quality of signal progression, the signal cycle length, and the "green" ratio for each approach or lane group. For intersections with one or two stop signs, delay is dependent on the number of gaps available in the uncontrolled traffic stream.

Existing AM and PM peak-hour traffic turning movement counts were collected at all of the study area intersections within the past three years to derive the LOS calculations. The existing levels of service at study area intersections for the AM and PM peak hours are provided in Table 3.4-2. Detailed LOS calculation worksheets are available on file with the City of Oakland. All intersections operate at or above the City of Oakland's LOS standard (LOS D outside of downtown and LOS E within downtown).[3]

Public Transit

Transit service in the study area is provided primarily by the Alameda-Contra Costa Transit District (AC Transit) and the Bay Area Rapid Transit District (BART).

AC Transit. AC Transit provides bus service to residents and visitors along the east shore of the San Francisco Bay Area with an extensive network of local transit lines and transbay service. AC Transit Route 13 provides local service between the Oakland-Piedmont city limits, Lake Merritt, and the Oakland Army Base, through downtown Oakland. The route travels along 14th Street, passing closest to the Project Area along Wood Streets between 14th and 12th Streets. Weekday service is provided every 20 minutes during peak periods, and every 30 minutes at other times from 5:30 a.m. to 8:00 p.m. Weekend service is provided on an hourly basis from 10:00 a.m. to 6:00 p.m.

AC Transit Route 19 provides local service between the Fruitvale and North Berkeley BART Stations, with intervening stops at the 12th Street and West Oakland BART Stations. The route comes closest to the Project Area along Peralta Street. Weekday service is provided every 30 minutes from 6:00 a.m. to 10:30 p.m. No weekend service is provided.

AC Transit Routes NL and N provide transbay service for the Project Area. Route NL (MacArthur Limited) provides weekday service every 15 minutes and weekend service every 30 minutes from 6:00 a.m. to midnight along West Grand Avenue, with a stop at Peralta Street and another near the I-880 frontage road. Route N (MacArthur Owl) provides hourly service from midnight to 6:00 a.m. along 7th Street, with a stop at the West Oakland BART Station.

[3] Downtown is defined in the *City of Oakland General Plan* Land Use and Transportation Element (p. 67) as the area generally bounded by West Grand Avenue to the north, Lake Merritt and Channel Park to the east, the Oakland Estuary to the south and I-980/Brush Street to the west.

Table 3.4-2
Existing (2003) Intersection Operations in Project Area Vicinity

Intersection	AM Peak Hour		PM Peak Hour	
	LOS[a]	Delay[a]	LOS[a]	Delay[a]
1) W. Grand Avenue / Maritime Street	C	31.8	C	34.1
2) W. Grand Avenue / frontage road	C	29.3	C	33.0
3) W. Grand Avenue / Mandela Parkway	B	11.4	B	13.4
4) W. Grand Avenue / Adeline Street	B	12.2	B	11.9
5) W. Grand Avenue / Market Street	B	12.2	B	12.2
6) W. Grand Avenue / San Pablo Avenue	B	12.4	B	13.7
7) W. Grand Avenue / MLK Jr Way[b]	B	10.5	B	12.8
8) W. Grand Avenue / Northgate Blvd[b]	B	18.1	C	20.1
9) 18th Street / Wood Street (TWSC)	A	8.9	A	9.2
10) 18th Street / Mandela Parkway (TWSC)	B	11.1	B	13.5
11) 16th Street / frontage road (TWSC)	na	na	na	na
12) 14th Street / frontage road (TWSC)	na	na	na	na
13) 14th Street / Wood Street (TWSC)	A	9.5	B	10.2
14) 14th Street / Mandela Parkway	B	12.4	B	12.4
15) 14th Street / Adeline Street	A	9.2	A	9.2
16) 14th Street / Market Street	B	11.0	B	11.1
17) 12th Street / Brush Street [b]	C	30.4	C	22.2
18) 10th Street / frontage road (TWSC)	na	na	na	na
19) 7th Street / Maritime Street	D	37.5	C	29.1
20) 7th Street / I-880 SB Ramp	A	6.2	A	7.4
21) 7th Street / I-880 NB Ramp	C	20.2	B	19.5
22) 7th Street / Wood Street	C	26.0	C	28.8
23) 7th Street / Peralta Street	A	8.2	A	9.4
24) 7th Street / Mandela Parkway	B	18.0	B	20.0
25) 7th Street / Union Street	B	15.5	B	16.3
26) 7th Street / Adeline Street	B	10.2	B	10.1
27) 5th Street / Adeline Street	C	21.8	D	38.7
28) 5th Street / Market Street	A	9.8	A	9.6
29) 3rd Street / Adeline Street (AWSC)	B	12.2	B	11.4
30) 3rd Street / Market Street (TWSC)	B	11.7	B	11.4
31) 32nd Street / Mandela Parkway (AWSC)	A	7.5	A	9.0
32) Hollis Street / 40th Street	C	25.9	C	31.6
33) Powell Street / I-80 NB Ramps	C	25.2	D	43.9

Source: Dowling Associates, 2003.

Notes:

na = not applicable; intersection does not exist.

AWSC = all-way stop control.

TWSC = two way stop control.

a. For signalized and all-way stop control intersections, the average LOS and average control delay in seconds are provided for all vehicles entering the intersection. For two-way stop control intersections, the LOS and delay in seconds are provided for the movement with the highest control delay.

b. Defined as a downtown intersection by the City of Oakland.

BART. The BART system serves the Project Area with direct links to San Francisco and the metropolitan areas of Contra Costa and Alameda Counties. BART operates between 4:00 a.m. and 1:30 a.m. Monday through Friday; 6:00 a.m. to 1:30 a.m. on Saturdays; and 8:00 a.m. to 1:30 a.m. on Sundays and major holidays. The West Oakland BART Station is located just south of 7th Street and west of Mandela Parkway, approximately seven-tenths of a mile from the site.

Pedestrian and Bicycle Facilities

The Project Area is located in a densely populated area, where residents depend on walking and transit. Schools within the Project Area serve many students whose primary means of transportation is on foot. Sidewalks exist along most streets in West Oakland with residential, retail, or office frontage, and signalized crossings are provided at major intersections where pedestrians would otherwise have difficulty crossing. Currently, there are no sidewalks on Wood Street adjacent to the Project Area, except for a section between 12th and 14th Streets. Bicycle facilities in the Project Area are limited. Class II[4] bike lanes are currently being constructed on 8th Street in West Oakland. The City of Oakland Bicycle Master Plan calls for Class II bike lanes along Mandela Parkway and 3rd Street, Peralta Street north of Mandela Parkway, Market Street, West Grand Avenue, and 14th Street.

At-grade railroad crossings create a safety concern for bicyclists. Railroad spur tracks extend along portions of 18th Street and 20th Street, crossing Wood Street adjacent to the Project Area.

Applicable Plans and Policies

Congestion Management Plan. The CMA is responsible for ensuring local government conformance with the Congestion Management Plan (CMP), a seven-year program aimed at reducing traffic congestion. The CMA has review responsibility for proposed development actions in the County expected to generate 100 or more PM peak-hour trips than otherwise would occur. The CMA reviews the adequacy of CEQA transportation impact analyses and measures proposed to mitigate significant impacts. The CMA maintains a Countywide Transportation Model and has approval authority for the use of any local or subarea transportation model. Because the Project would generate more than 100 PM peak-hour trips, the Project is subject to CMA review.

City of Oakland General Plan **Land Use and Transportation Element.** As discussed in Section 3.2, Land Use Plans and Policies, the Land Use and Transportation Element contains the policy framework for both public and private decisions governing land use and transportation services in Oakland. The following transportation policies would apply to the Project:

> **Policy T2.2:** Transit-oriented developments should be pedestrian oriented, encourage night and day time use, provide the neighborhood with needed goods and services, contain a mix of land uses, and be designed to be compatible with the character of surrounding neighborhoods.

[4] A Class II bike lane is a striped lane for one-way bike travel on a street or highway.

Policy T3.5: The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realized streets, wherever possible.

Policy T4.1: The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage use of alternative modes of transportation such as transit, bicycling, and walking.

Policy N3.10: Off-street parking for residential buildings should be adequate in amount and conveniently located and laid out, but its visual prominence should be minimized.

Policy N7.4: Local streets should be designed to create an intimate neighborhood environment and not support high speed or large volumes of traffic. Providing on-site parking for cars and bicycles, planting and maintaining street trees, and landscaping, minimizing the width of driveway curb cuts, maintaining streets, bike routes, and sidewalks, and orienting residential buildings toward the street all contribute to the desired environment.

Impacts and Mitigation Measures

Standards of Significance

The Project would have a significant effect on the environment if any of the following were to occur:

- Cause an increase in traffic which is substantial in relation to the existing or future baseline[5] traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ("V/C") ratio on roads, or congestion at intersections), or change the condition of an existing street (i.e., street closures, changing direction of travel) in a manner that would substantially impact access or traffic load and capacity of the street system. Specifically, this potential impact is further defined as being significant if the Project would:

    - Cause the existing or future baseline level of service (LOS) to degrade to worse than LOS D (i.e., LOS E or F) at a signalized intersection which is located outside the Downtown area;

    - Cause the existing or future baseline LOS to degrade to worse than LOS E (i.e., LOS F) at a signalized intersection which is located within the Downtown area;

    - Cause the total intersection average vehicle delay to increase by four or more seconds, or degrade to worse than LOS E (i.e., LOS F) at a signalized intersection outside the Downtown area where the existing or future baseline level of service is LOS E;

[5] The future baseline condition refers to the 2025 No Project conditions without the addition of Project traffic.

- Cause an increase in the average delay for any of the critical movements of six seconds or more, or degrade to worse than LOS E (i.e., LOS F) at a signalized intersection for all areas where the existing or future baseline level of service is LOS E;

- At a signalized intersection for all areas where the existing or future baseline level of service is LOS F, cause:

    a. The total intersection average vehicle delay to increase by two or more seconds,

    b. An increase in average delay for any of the critical movements of four seconds or more, or

    c. The V/C ratio exceeds three percent (but only if the delay values cannot be measured accurately);

- Add ten or more vehicles and after project completion, satisfy the Caltrans peak-hour volume warrant at an unsignalized intersection for all areas; or

- Make a considerable contribution to cumulative impacts (a project's contribution to cumulative impacts is considered "considerable" when the project contributes five percent or more of the cumulative traffic increase as measured by the difference between existing and cumulative [with project] conditions).

- Cause a roadway segment on the Metropolitan Transportation System to operate at LOS F or increase the V/C ratio by more than three percent for a roadway segment that would operate at LOS F without the Project.

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

- Substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature (e.g., sharp curves or dangerous intersections) that does not comply with Caltrans design standards, or incompatible uses (e.g., farm equipment).

- Result in less than two emergency access routes for streets exceeding 1,000 feet in length.

- Fundamentally conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

- Generate added transit ridership that would:

    - Increase the average ridership on AC Transit lines by three percent where the average load factor with the Project in place would exceed 125 percent over a peak 30-minute period;

- Increase the peak-hour average ridership on BART by three percent where the passenger volume would exceed the standing capacity of BART trains;

- Increase the peak-hour average ridership at a BART station by three percent where average waiting time at fare gates would exceed one minute.

- Cause unreasonable delays to commercial vessels plying their trade.

Not all criteria listed above apply to the Project. The Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; nor would it cause unreasonable delays to commercial vessels plying their trade. Therefore, these topics are not discussed further in this EIR.

For purposes of CEQA, unmet parking demand created by a project need not be considered a significant environmental impact unless it would cause significant secondary effects.[6] Parking is not considered part of the physical environment, as parking conditions change over time in response to a variety of conditions. Parking supply/demand varies by time of day, day of week, and seasonally. As parking demand increases faster than the supply, parking prices rise to reach equilibrium between supply and demand. Decreased availability and increased costs result in changes to people's mode and pattern of travel. However, as a matter of policy, the City of Oakland reviews parking issues when considering the merits of a project in order to ensure that the project's provision of additional parking spaces along with measures to lessen parking demand (by encouraging the use of non auto travel modes) would result in minimal adverse effects to project occupants and visitors, and that any secondary effects (such as on air quality due to drivers searching for parking spaces) would be minimized. As such, although not required by CEQA, parking conditions are evaluated in this document.

Parking deficits may be associated with secondary physical environmental impacts, such as air quality and noise effects, caused by congestion resulting from drivers circling as they look for a parking space. However, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, shuttles, taxis, bicycles or travel by foot), may induce drivers to shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service would be in keeping with the City's "Transit First" policy.

Additionally, regarding potential secondary effects, cars circling and looking for a parking space in areas of limited parking supply is typically a temporary condition, often offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts that might result from a shortfall of parking in the vicinity of the Project are considered less than significant.

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[6] San Franciscans Upholding the Downtown Plan v. the City and County of San Francisco (2002) 102 Cal.App.4th 656.

This EIR evaluates if the Project's estimated parking demand (both project-generated and project-displaced) would be met by the Project's proposed parking supply or by the existing parking supply within a reasonable walking distance of the Project Area. Project-displaced parking results from the Project's removal of standard on-street parking, City or Agency owned/controlled parking, and/or legally required off-street parking (non-open-to-the-public parking which is legally required).

Methodology

Project Analysis. The analysis of traffic operations was performed using the *2000 Highway Capacity Manual* methodologies. The analysis encompasses the combination of development area proposals that yield the maximum and minimum traffic and thereby brackets the range of impacts from development of the entire Project Area.

Trip generation for the Maximum Residential Scenario and Maximum Trips Scenario for the Project Area reported in Table 3.4-3 is based on information in *Trip Generation,* an industry standard for estimating vehicular trips from various land uses.[7] The Maximum Trips Scenario would generate the greatest number of trips of all the scenarios considered during the AM and PM peak hours and would also create the greatest number of daily trips. The Maximum Trips Scenario is defined by the following land use program by development area:

Development Area One – Maximum Residential
Development Area Two – Maximum Residential
Development Area Three – Maximum Residential
Development Area Four – Maximum Commercial
Development Area Five – Maximum Residential
Development Area Six – Maximum Residential
Development Area Seven – Maximum Residential
Development Area Eight – Maximum Commercial
Development Area Nine – Maximum Residential

The distribution of Project trips is based on the distribution of traffic derived from the Alameda County CMA Countywide Transportation Model. This distribution is shown in Table 3.4-4 and illustrated in Figure 3.4-2. Project trips were then added to the existing traffic conditions in the study area and the LOS was calculated using the TRAFFIX™ project impact assessment software. The change between existing conditions and existing plus Project conditions is evaluated against the significance thresholds to assess the Project impacts.

[7] Institute of Transportation Engineers, *Trip Generation, 7th Edition*, 2001.

Table 3.4-3
Project Trip Generation

Land Use	Amount	Project Trips Generated						
			AM Peak Hour			PM Peak Hour		
		Daily	In	Out	Total	In	Out	Total
Maximum Residential Scenario								
DA 1: Live/Work[a]	82 Units	542	18	42	60	24	26	50
DA 2: Condominiums/Townhouse	169 Units	861	15	63	78	45	28	73
DA 2: Live/Work[a]	20 Units	163	4	10	15	6	6	12
DA 3: Condominiums/Townhouse	200 Units	978	17	70	87	52	32	83
DA 4: Apartments	426 Units	2,711	42	170	212	164	88	252
DA 4: Live/Work[a]	24 Units	191	5	12	17	7	8	15
DA 4: Retail (65% pass-by[b])	7 KSF	422	7	4	11	18	20	38
DA 5: Special Event Space[c]	15 KSF	0	0	0	0	0	0	0
DA 6: Condominiums	201 Units	981	17	71	87	52	32	84
DA 6: Live/Work[a]	14 Units	121	3	7	10	4	4	8
DA 6: Retail (65% pass-by[b])	6 KSF	382	6	4	10	16	18	34
DA 7: Condominiums	148 Units	782	14	58	72	41	25	66
DA 7: Live/Work[a]	22 Units	177	5	11	16	6	7	13
DA 8: Condominiums	240 Units	1,128	19	80	98	60	37	97
DA 8: Live/Work[a]	24 Units	191	5	12	17	7	8	15
TOTAL		**9,630**	**176**	**615**	**791**	**502**	**337**	**840**
Maximum Trips Scenario								
DA 1: Live/Work[a]	82 Units	542	18	42	60	24	26	50
DA 2: Condominiums	169 Units	861	15	63	78	45	28	73
DA 2: Live/Work[a]	20 Units	163	4	10	15	6	6	12
DA 3: Condominiums	200 Units	978	17	70	87	52	32	83
DA 4: Apartments	393 Units	2,512	39	157	196	152	82	234
DA 4: Live/Work[a]	24 Units	191	5	12	17	7	8	15
DA 4: Retail (65% pass-by[b])	40 KSF	1,310	19	12	32	57	62	120
DA 5: Special Event Space[c]	15 KSF	0	0	0	0	0	0	0
DA 6: Condominiums	201 Units	981	17	71	87	52	32	84
DA 6: Live/Work[a]	14 Units	121	3	7	10	4	4	8
DA 6: Retail (65% pass-by[b])	6 KSF	382	6	4	10	16	18	34
DA 7: Condominiums	148 Units	782	14	58	72	41	25	66
DA 7: Live/Work[a]	22 Units	177	5	11	16	6	7	13
DA 8: Non-Retail Commercial	258 KSF	2,768	352	48	400	63	305	368
TOTAL		**11,768**	**514**	**566**	**1,080**	**525**	**634**	**1,160**

Sources: *Trip Generation, 7th Edition,* Institute of Transportation Engineers, 2003. *Trip Generation Handbook*, Institute of Transportation Engineers, 2001.

Notes:

KSF = thousand square feet

a. Peak hour trip generation rates used in this analysis were based on field survey data collected and analyzed at a number of similar types of live/work development projects already occupied in Oakland and Emeryville. A summary of the trip generation for live/work units is contained in Appendix B.

b. A reduction in retail trips was made to account for pass-by trips, defined as trips made as an intermediary stop on the way from an origin to a primary trip destination without a route diversion. The 65percent pass-by reduction was based on the data for small (less than 20,000 sf gross leasable area) shopping centers as provided in the Institute of Transportation Engineers *Trip Generation Handbook* (Table 5.5). An analysis applying a more conservative 15 percent pass-by reduction is provided in Appendix B.

c. Negligible peak hour traffic is expected to be generated from development of 14,800 sf of special event space.



Source: Dowling Associates, Inc., 2004.

EIP ASSOCIATES

FIGURE 3.4-2

Project Trip Distribution

Table 3.4-4
Distribution of Project Trips

Route	Percent of Project Trips
I-80 West	8
I-80 East	19
SR 24	4
I-880 South	15
Mandela North of 32nd	6
40th East of Hollis	3
I-580 East (local)	8
Grand East of Adeline	6
Grand East of Northgate	5
7th East of Market	4
Powell Street	1
14th East of Market	6
18th East of Mandela	5
West Oakland BART	5
Estuary	5
	100

Sources: Dowling Associates, Inc., 2003; Alameda Countywide Model, 2003.

Cumulative Analysis. The cumulative analysis of transportation impacts examines the effects of the Project, in combination with other past projects, other current projects, and probable future projects. The cumulative analysis relies on traffic forecasts from the 2003 version of the Alameda Countywide Transportation Model. The model provides forecasts of travel demand for the years 2010 and 2025 based on ABAG's *Projections 2002*, socioeconomic forecasts. A cumulative CMP analysis was performed using the model with the ABAG land uses for 2010 and 2025. A summary of the CMP analysis is provided in Appendix B.

A second more detailed cumulative analysis was conducted using a growth forecast developed for the City. This approach updates ABAG's regional forecasts with recent and anticipated future development projects in Oakland, as well as other changes in employment and population. Development projects and other changes in Oakland were based on input from City of Oakland staff, the General Plan buildout, Port of Oakland staff, and analysis of economic and real estate market data and trends. Hausrath Economics Group (HEG) has compiled the approved, proposed, and potential development projects expected to be completed by the year 2025, plus growth projected for the Project Area, and developed future employment and population forecasts, which are described in detail in Appendix C. Other future developments in West Oakland that would affect the traffic in the transportation study area are also listed in Appendix C.

The 2025 forecasts developed by HEG represent more recent data than the Alameda Countywide Model data, and include more updated and comprehensive projections regarding cumulative projects for the City of Oakland. Therefore, the higher employment and population growth numbers from HEG were used in place of the ABAG 2025 land use data set that was originally provided for use in the Alameda Countywide Model to analyze cumulative conditions for the year 2025.

The Alameda Countywide Model was used to create cumulative baseline traffic volumes – 2025 traffic volumes without the Project. Project trips were then added to the cumulative baseline traffic volumes using the TRAFFIX™ project impact assessment software. Because the land use intensity assumed for this EIR is greater than the ABAG land use data used in the CMP analysis, the EIR analysis yields more conservative results (i.e., greater cumulative impacts) than the CMP analysis.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not diminish potentially significant or significant effects to a less-than-significant level, the impacts are classified as "significant unavoidable effects (SU)." For this section, TR refers to Transportation, Circulation, and Parking.

TR-1. Construction would generate a maximum of 3,300 trips daily. Construction-related traffic delays, detours, utility improvements, and activities could adversely affect local circulation. As a result, construction-related transportation impacts would be considered potentially significant. (PS)

Potential short-term construction impacts generated by the Project would result from the delivery of construction materials and equipment, removal of construction debris, travel to and from the Project Area by construction workers, and parking for workers and delivery trucks. Construction trucks would use designated local truck routes, which include West Grand Avenue, and avoid local roadways with existing truck prohibitions. Under both development scenarios, a maximum of 1,070 workers and 24 trucks would access the Project Area daily during peak construction periods, resulting in a maximum of 3,300 construction-related trips.

Construction traffic levels would be significantly lower than Project traffic levels of 9,630 (under the Maximum Residential Scenario) to 11,768 daily trips (under the Maximum Trips Scenario), which would result in less-than-significant intersection impacts (see Impact TR-2). The maximum number of construction-related trips would be 3,300, less than one-third of total Project trips. Therefore, the Project's construction traffic impacts would be considered less than significant. All parking related to construction activities would take place on site. Therefore, there would not be construction-related parking impacts on adjacent streets and areas.

The above notwithstanding, truck movements, construction equipment activity, and local utility and landscaping improvements would affect local vehicular and pedestrian circulation and AC Transit bus operations. Street and/or sidewalk closures or detours, along with traffic delays, could result from Project construction activities. Thus, even though intersection levels of service are expected to remain acceptable, localized circulation around the Project Area could be adversely affected.

Summary of Impacts TR-1 by Development Area. Construction at each individual development area could affect local vehicular and pedestrian circulation and bus operations. This impact is considered potentially significant.

Development Area	No Impact	LTS	PS	S
1			✓	
2			✓	
3			✓	
4			✓	
5			✓	
6			✓	
7			✓	
8			✓	
9			✓	

MITIGATION MEASURE. The following measure would reduce potentially significant construction-related transportation impacts to less than significant. (LTS)

TR-1.1 *Construction Traffic Management Plan.* The Project Sponsors shall prepare and implement a construction phasing plan and traffic management plan that defines how traffic operations would be managed and maintained during each phase of construction. The plan shall be developed with the direct participation of the City of Oakland. In addition, the property owners of all businesses adjacent to the construction areas shall be consulted. To the maximum practical extent, the plan shall:

a. Detail how access will be maintained to individual businesses where construction activities may interfere with ingress and egress. Any driveway closures shall take place during non-business hours.

b. Specify predetermined haul routes from staging areas to construction sites and to disposal areas of agreement with the City prior to construction. The routes shall follow streets and highways that provide the safest route and have the least impact on traffic.

c. During construction, require the contractor to provide information to the public using signs, press releases, and other media tools of traffic closures, detours or temporary displacement of left-turn lanes.

d. Identify a single phone number that property owners and businesses can call for construction scheduling, phasing, and duration information, as well as for complaints.

e. Identify construction activities that must take place during off-peak traffic hours or result in temporary road closures due to concerns regarding traffic safety or traffic congestion. Any road closures will be done at night under ordinary circumstances. If unforeseen circumstances require road closing during the day, the City of Oakland shall be consulted.

TR-2. The Project would increase traffic at study area intersections, but would not substantially impact access or traffic load and capacity of the street system. (LTS)

The impacts of both Project scenarios (Maximum Residential and Maximum Trips) on study area intersections are summarized in Table 3.4-5. The Maximum Residential Scenario would generate 791 trips during the AM peak hour and 840 trips during the PM peak hour. The Maximum Trips Scenario would generate 1,080 trips during the AM peak hour and 1,160 trips during the PM peak hour. For both scenarios, all study intersections would operate at satisfactory levels, LOS D or better, with the addition of Project-related trips. The intersection of West Grand Avenue/frontage road would be most significantly affected as PM peak-hour LOS would deteriorate from LOS C in existing conditions to LOS D under both scenarios. This level of delay would not be considered significant according to the City's significant thresholds. Therefore, no intersections would be significantly affected by the Project.

Summary of Impact TR-2 by Development Area. Since there would be no significant impacts from development of the entire Project Area, none of the proposals for individual development areas would result in a significant impact to intersection operations.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

Table 3.4-5
Intersection Operations with the Project

	Intersection	Existing Conditions (2003)				Maximum Residential Scenario				Maximum Trips Scenario			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1)	W. Grand Avenue / Maritime Street	C	31.8	C	34.1	C	31.9	C	34.6	C	32.1	C	34.7
2)	W. Grand Avenue / frontage road	C	29.3	C	33.0	C	30.2	D	35.1	C	30.5	D	35.7
3)	W. Grand Avenue / Mandela Parkway	B	11.4	B	13.4	B	11.8	B	13.5	B	11.6	B	13.9
4)	W. Grand Avenue / Adeline Street	B	12.2	B	11.9	B	11.9	B	11.8	B	11.7	B	11.7
5)	W. Grand Avenue / Market Street	B	12.2	B	12.2	B	12.1	B	12.2	B	12.1	B	12.2
6)	W. Grand Avenue / San Pablo Avenue	B	12.4	B	13.7	B	12.3	B	13.7	B	12.3	B	13.6
7)	W. Grand Avenue / MLK Jr Way [a]	B	10.5	B	12.8	B	10.3	B	12.6	B	10.2	B	12.6
8)	W. Grand Avenue / Northgate Blvd [a]	B	18.1	C	20.1	B	18.4	C	21.7	B	18.4	C	23.4
9)	18th Street / Wood Street (TWSC)	A	8.9	A	9.2	A	9.6	B	10.4	A	9.7	B	10.5
10)	18th Street / Mandela Parkway (TWSC)	B	11.1	B	13.5	B	11.9	B	14.9	B	12.3	C	16.3
11)	16th Street / frontage road (TWSC)	na	na	na	na	B	12.1	B	11.9	B	13.1	B	14.2
12)	14th Street / frontage road (TWSC)	na	na	na	na	B	11.0	B	11.1	B	11.3	B	11.4
13)	14th Street / Wood Street (TWSC)	A	9.5	B	10.2	B	11.6	B	12.2	B	11.7	B	12.6
14)	14th Street / Mandela Parkway	B	12.4	B	12.4	B	12.7	B	12.6	B	12.7	B	12.6
15)	14th Street / Adeline Street	A	9.2	A	9.2	A	9.2	A	9.3	A	9.3	A	9.3
16)	14th Street / Market Street	B	11.0	B	11.1	B	11.0	B	11.2	B	11.0	B	11.2
17)	12th Street / Brush Street [a]	C	30.4	C	22.2	C	30.4	C	22.2	C	30.4	C	22.2
18)	10th Street / frontage road (TWSC)	na	na	na	na	B	12.3	B	12.2	B	12.7	B	12.4
19)	7th Street / Maritime Street	D	37.5	C	29.1	D	37.5	C	29.1	D	37.5	C	29.1
20)	7th Street / I-880 SB Ramp	A	6.2	A	7.4	A	6.8	A	7.8	A	6.7	A	8.3
21)	7th Street / I-880 NB Ramp	C	20.2	B	19.5	C	20.7	B	20.0	C	20.7	B	19.9
22)	7th Street / Wood Street	C	26.0	C	28.8	C	27.4	C	30.5	C	27.5	C	30.9
23)	7th Street / Peralta Street	A	8.2	A	9.4	A	8.2	A	9.1	A	8.1	A	8.9
24)	7th Street / Mandela Parkway	B	18.0	B	20.0	B	18.1	B	19.8	B	18.0	B	20.0
25)	7th Street / Union Street	B	15.5	B	16.3	B	15.8	B	16.6	B	15.9	B	16.8

Table 3.4-5 (Continued)
Intersection Operations with the Project

Intersection	Existing Conditions (2003)				Maximum Residential Scenario				Maximum Trips Scenario			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
26) 7th Street / Adeline Street	B	10.2	B	10.1	A	10.0	B	10.1	A	10.0	B	10.1
27) 5th Street / Adeline Street	C	21.8	D	38.7	C	22.2	D	38.5	C	22.2	D	38.4
28) 5th Street / Market Street	A	9.8	A	9.6	A	9.8	A	9.8	A	10.0	A	9.8
29) 3rd Street / Adeline Street (AWSC)	B	12.2	B	11.4	B	12.2	B	11.4	B	12.2	B	11.4
30) 3rd Street / Market Street (TWSC)	B	11.7	B	11.4	B	11.9	B	12.2	B	12.0	B	12.2
31) 32nd Street / Mandela Parkway (AWSC)	A	7.5	A	9.0	A	7.8	A	9.4	A	7.8	A	9.7
32) Hollis Street / 40th Street	C	25.9	C	31.6	C	26.0	C	31.8	C	26.3	C	31.8
33) Powell Street / I-80 NB Ramps	C	25.2	D	43.9	C	25.2	D	44.2	C	25.2	D	44.3

Source: Dowling Associates, 2003.

Notes:

LOS = Level of service

AWSC = All-way stop control

TWSC = Two-way stop control

na = not applicable; intersection does not exist.

For signalized and AWSC intersections, the average LOS and average control delay in seconds are provided for all vehicles entering the intersection. For TWSC intersections, the LOS and delay are provided for the movement with the highest control delay.

a. Defined as a downtown intersection.

TR-3. The Project would add traffic to some roadway segments on the Metropolitan Transportation System (MTS), but would not cause any freeway segments on the MTS to operate at LOS F, or increase the V/C ratio by more than three percent for segments that would operate at LOS F without Project traffic. (LTS)

The impact of both scenarios on study area freeways is summarized in Table 3.4-6. Several freeway segments currently operate at LOS F during peak periods. The addition of trips under the Maximum Residential or Maximum Trips Scenarios would increase the V/C ratio but would not cause any additional freeway segment to operate at LOS F. Likewise, neither scenario would increase the V/C ratio by more than three percent for those segments that operate at LOS F without the Project. Therefore, no freeway segments would be significantly affected by the Project.

Summary of Impact TR-3 by Development Area. Since there would be no significant impacts from development of the entire Project Area, none of the proposals for individual development areas would result in a significant impact to freeway segment operations.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

TR-4. The Project could substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature. (PS)

The illustrative concept plan for the Project (see Figure 2-3 in Section 2, Project Description) shows that 18th and 20th Streets would extend west of Wood Street to a dead end approximately 100 feet from Wood Street, and that 11th Street would similarly dead end where it abuts Development Area One. The western portion of 18th Street would provide vehicular access to Development Areas Six and Seven; the western portion of 20th Street would provide vehicular access to Development Areas Seven and Eight; and 11th Street would provide access to Development Area Two. The truncation of these streets may require vehicles to back out into the Wood Street intersections, resulting in a traffic hazard and a potentially significant impact.

Table 3.4-6
Freeway Operations in 2003 with the Project

	Existing Conditions (2003)				Maximum Residential Scenario				Maximum Trips Scenario			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Freeway Segment	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**
I-80 at the Bay Bridge												
Eastbound	A	0.12	F	1.13	A	0.12	F	1.13	A	0.13	F	1.13
Westbound	F	1.09	D	0.82	F	1.09	D	0.82	F	1.09	D	0.82
I-80 east of I-80/I-580 Split												
Eastbound	B	0.48	F	1.13	B	0.50	F	1.14	B	0.50	F	1.14
Westbound	F	1.18	C	0.72	F	1.19	C	0.73	F	1.19	C	0.73
I-580 east of I-980/SH-24												
Eastbound	E	0.99	F	1.32	E	0.99	F	1.32	E	0.99	F	1.33
Westbound	F	1.20	F	1.08	F	1.21	F	1.08	F	1.21	F	1.09
I-880 north of Union												
Northbound	D	0.81	C	0.66	D	0.81	C	0.67	D	0.82	C	0.67
Southbound	B	0.36	D	0.84	B	0.37	D	0.85	B	0.37	D	0.85
I-880 north of I-980												
Northbound	C	0.75	C	0.62	C	0.76	C	0.63	C	0.77	C	0.63
Southbound	A	0.34	D	0.79	B	0.36	D	0.80	B	0.35	D	0.81
I-880 south of I-980												
Northbound	E	0.93	D	0.88	E	0.94	D	0.89	E	0.94	D	0.89
Southbound	D	0.86	E	0.96	D	0.87	E	0.96	D	0.87	E	0.97
I-980 north of 27th Street												
Eastbound	A	0.32	C	0.64	A	0.33	C	0.64	A	0.33	C	0.65
Westbound	C	0.63	A	0.33	C	0.63	A	0.34	C	0.64	A	0.34
SR 24 east of I-580												
Eastbound	B	0.39	F	1.02	B	0.39	F	1.02	B	0.39	F	1.02
Westbound	F	1.06	B	0.46	F	1.06	B	0.46	F	1.06	B	0.46

Source: Dowling Associates, 2003.

Note:

LOS = Level of service

V/C = Volume/Capacity ratio

The Project would be designed in compliance with City of Oakland design standards. Sidewalks would be provided along all public streets. Pedestrian and bicycle access would be provided throughout the Project Area, and barriers to automobile traffic are shown on the concept plan to impede autos from traveling through the Project.

The railroad spur tracks extending along 18th and 20th Streets would be removed west of Wood Street and across Wood Street as part of Project construction. The portion of the railroad tracks east of Wood Street would remain in place, posing a safety hazard for bicyclists. The Project could increase exposure to the hazard because the direct line of travel between the north portion of the Project and the Mandela Parkway bike trail would be along 18th and 20th Streets. No Project design feature would substantially increase the hazard to bicyclists; therefore, the Project impact with regard to the remaining sections of railroad track would be less than significant.

Summary of Impact TR-4 by Development Area. The extensions of 18th and 20th Streets, serving Development Areas Six, Seven, and Eight may require vehicles to back out into the Wood Street intersections resulting in a traffic hazard and a potentially significant impact.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6			✓	
7			✓	
8			✓	
9		✓		

MITIGATION MEASURE. The following mitigation measure applies to Development Areas Six, Seven, and Eight and would reduce safety impacts to a less-than-significant level by reducing the potential for motorists to back out into the Wood Street intersections. (LTS)

TR-4.1 *Turn-Arounds at 11th Street and the 18th and 20th Street Extensions.* The Project Sponsor for Development Areas Two, Six, Seven, and Eight shall incorporate the design of a cul-de-sac or other appropriate turn-around at the end of 11th Street and at the end of the 18th and 20th Street extensions and construct these extensions in compliance with City of Oakland Design Standards. Appropriate turn-around designs would allow vehicles to return along 11th Street and enter Wood Street in a front-end-first manner.

TR-5. Development of the Project could fundamentally conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks). (PS)

Detailed development plans for the Project have not been developed, so it is not known if the Project would conflict with adopted policies, plans, or programs supporting alternative transportation. Because occurrence of this impact depends on site-specific design not currently defined, the impact is considered potentially significant.

Summary of Impact TR-5 by Development Area. The Project would include a pedestrian and bicycle system throughout the Project Area. However, detailed development plans have not been prepared for each of the development areas, so there may still be potential conflicts with policies, plans, or programs supportive of alternative modes of transportation. Accordingly, impacts for each development area would be potentially significant and mitigation measures proposed below would apply to all development areas.

Development Area	No Impact	LTS	PS	S
1			✓	
2			✓	
3			✓	
4			✓	
5			✓	
6			✓	
7			✓	
8			✓	
9			✓	

MITIGATION MEASURE. The following mitigation measure, in combination with Mitigation Measures TR-10.1 (Transportation Demand Management) and TR-10.2 (Shuttle Service), would reduce alternative transportation impacts to a less-than-significant level. (LTS)

TR-5.1 *Bicycle Parking*. The Project Sponsors shall incorporate into the final design plans the number of bicycle parking spaces specified by the parking space requirements in Table 3.4-7 and install the bicycle parking in compliance with City standards.

TR-6. The Project would increase the average ridership on AC Transit lines by more than three percent on transit lines serving the Project Area, but the average load factor with the Project would not exceed 125 percent over a peak 30-minute period. (LTS)

The Project would increase transit ridership on existing AC transit routes serving the Project Area. The impacts of the Maximum Residential and Maximum Trips Scenarios on AC Transit bus service are based on the ridership estimates from the Alameda Countywide Transportation Model. A summary of AC Transit ridership is shown in Table 3.4-8. Although the Project would increase the AC Transit ridership on three routes, there is enough available capacity on the AC Transit routes to accommodate the additional demand. Because the average load factor

Table 3.4-7
Bicycle Parking Requirements

Land Use	Amount	Parking Space Requirement		Parking Spaces Required	
		Short-Term	Long-Term	Short-Term	Long-Term
Maximum Residential Scenario					
Live/Work	186Units	1per 10 DU	1per 2 DU	19	94
Condominiums	958Units	1per 10 DU	1per 2 DU	96	480
Apartments	426Units	1per 10 DU	1per 2 DU	43	214
Retail	13KSF	1per 5,000sf	1per 8,000sf	3	2
Special Event Space	15KSF	10	2	10	2
TOTAL				**171**	**792**
Maximum Trips Scenario					
Live/Work	162Units	1per 10 DU	1per 2 DU	17	82
Condominiums	718Units	1per 10 DU	1per 2 DU	72	360
Apartments	393Units	1per 10 DU	1per 2 DU	40	197
Retail	46KSF	1per 5,000sf	1per 8,000sf	10	6
Special Event Space	15KSF	10	2	10	2
Non-Retail Commercial	258KSF	1per 10,000sf	1per 3,000sf	26	87
TOTAL				**175**	**734**

Source: City of Oakland Bicycle Master Plan, adopted July 20, 1999.

Notes:

DU = dwelling unit
KSF = thousand square feet
sf = square feet

Table 3.4-8
AC Transit Riders with the Project

Route	Direction	Headway (Minutes)	Capacity	Existing (2003)		Project (2025)		Total with Project		Load Factor with Project		Ridership Increase	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Maximum Residential Scenario													
13	Eastbound	20	60	30	28	3	2	33	30	55%	50%	10.0%	7.1%
13	Westbound	20	60	20	28	1	2	21	30	35%	50%	5.0%	7.1%
19	Southbound	30	32	13	16	1	1	14	17	44%	53%	7.7%	6.3%
19	Northbound	30	32	19	18	1	1	20	19	63%	59%	5.3%	5.6%
NL	Eastbound	15	86	64	75	1	1	65	76	76%	88%	1.6%	1.3%
NL	Westbound	15	86	45	27	1	1	46	28	53%	33%	2.2%	3.7%
Maximum Trips Scenario													
13	Eastbound	20	60	30	28	3	3	33	31	55%	52%	10.0%	10.7%
13	Westbound	20	60	20	28	2	2	22	30	37%	50%	10.0%	7.1%
19	Southbound	30	32	13	16	1	1	14	17	44%	53%	7.7%	6.3%
19	Northbound	30	32	19	18	2	2	21	20	66%	63%	10.5%	11.1%
NL	Eastbound	15	86	64	75	2	2	66	77	77%	90%	3.1%	2.7%
NL	Westbound	15	86	45	27	1	1	46	28	53%	33%	2.2%	3.7%

Sources: Howard Der, AC Transit Long-Range Planning & Data Analysis Department; Alameda Countywide Transportation Model, Year 2025 Forecast.

Notes: The table includes AC Transit Riders during peak 30-minute periods. Approximately two percent of Project trips would use AC Transit.

with the Project would not exceed 125 percent over a 30-minute period, this impact would be less than significant.

Summary of Impact TR-6 by Development Area. Since there would be no significant impacts from development of the entire Project Area, none of the proposals for individual development areas would result in a significant impact to AC Transit ridership.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

TR-7. The Project would increase the passenger volume such that passenger volume could exceed the standing capacity of BART trains, but the increase would not raise peak-hour average ridership by three percent. (LTS)

The number of existing BART riders during both the morning and evening peak commute hour is approximately 19,500 at the West Oakland BART Station. Both the Maximum Residential and the Maximum Trips Scenarios would add about 210 trips to the West Oakland BART Station during the peak hours (one percent of existing ridership). BART is currently studying system-wide capacity issues and will be adjusting service to match demand. The impact of the Project on capacity would be less than significant since system-wide peak-hour average ridership would increase by less than three percent.

Summary of Impact TR-7 by Development Area. Since there would be no significant impacts from development of the entire Project Area, development of individual development areas would not result in a significant impact to BART system ridership.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

TR-8. The Project would increase peak-hour average ridership at the West Oakland BART Station by three percent where average waiting time at fare gates could exceed one minute. (S)

The Project would increase transit ridership on BART at the West Oakland Station. A summary of BART ridership is shown in Table 3.4-9. Approximately 1,010 BART riders enter or exit the West Oakland BART Station during both the morning and evening peak commute hours. Both the Maximum Residential and the Maximum Trips Scenarios would add about 210 trips to the West Oakland BART Station during the peak hours (21 percent of existing ridership).

There are currently five fare gates at the station, two for entering passengers, two for exiting passengers, and one reversible gate that serves the peak direction of passenger flow. BART staff has indicated that delays are sometimes a problem for the peak direction at the station.[8] The Maximum Residential Scenario would increase demand for the peak direction of flow at the fare gates by about 17 percent and the Maximum Trips Scenario would increase demand for the peak direction of flow at the fare gates by about 16 percent. Either scenario could result in an average waiting time exceeding one minute at the West Oakland BART Station fare gates, and, therefore, this impact would be considered significant.

Table 3.4-9
BART Riders at the west Oakland Station with the Project

	Existing (2003)		Project (2025)		Total with Project	
Direction	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Maximum Residential Scenario						
Boarding	914	209	156	83	1,070	292
Leaving	99	805	42	127	141	932
TOTAL	**1013**	**1014**	**198**	**210**	**1211**	**1224**
Maximum Trips Scenario						
Boarding	914	209	103	113	1017	322
Leaving	99	805	91	95	190	900
TOTAL	**1013**	**1014**	**194**	**208**	**1207**	**1222**

Sources: BART Data Acquisition System, 2002; Alameda Countywide Transportation Model, Year 2025 Forecast.

Notes:
Approximately 25 percent of total trips for the Maximum Residential Scenario would use BART.
Approximately 18 percent of the Maximum Trips Scenario would use BART.

[8] City of Oakland, *OARB Area Redevelopment Plan Draft EIR*, July 2002.

Summary of Impact TR-8 by Development Area. None of the development areas alone would cause a significant impact at the West Oakland BART Station fare gates. However, the aggregate demand from those development areas that generate trips causes a potentially significant impact that would have to be mitigated. Because restoration of the 16th Street Train Station in Development Area Five and creation of the 16th Street Plaza in Development Area Nine would result in negligible trip generation to the West Oakland BART Station, the Project Sponsors for these development areas would not need to contribute to the mitigation measure identified below. Project Sponsors for the other development areas, however, would need to collaborate with the City and BART with the goal of ensuring that adequate fare gate capacity would be available at the West Oakland BART Station.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

MITIGATION MEASURE. The following mitigation measure applies to all development areas except Development Areas Five and Nine and would reduce BART ridership impacts. However, this mitigation measure would be outside the City of Oakland's jurisdiction and would require BART approval. In addition, there is no mechanism at this time to allocate the costs or collect fees to implement improvements. Therefore, impacts to BART fare gates would remain significant and unavoidable. (SU)

TR-8.1 *Fare Gate Capacity*. The Project Sponsors for all development areas except Development Areas Five and Nine shall participate in efforts to provide adequate fare gate capacity at the West Oakland BART Station to accommodate the Project. The City and the Project Sponsors shall provide detailed information regarding development to BART to enable BART to conduct a comprehensive fare gate capacity assessment at the West Oakland BART Station. Based on the results of that assessment, the Project Sponsors shall fund their fair share for adding one or more new fare gates at the West Oakland BART Station.

Cumulative Analysis

TR-9. The Project, in combination with other related projects and background growth, would cause some signalized intersections to operate at unacceptable levels of service. (S)

Based on the cumulative analysis methodology outlined previously under "Methodology," cumulative traffic growth was modeled for the year 2025 according to growth projections in the Project Area vicinity as described in Appendix C.

The cumulative impact of the Maximum Residential and Maximum Trips Scenarios in combination with other related projects and background growth on study area intersections is summarized in Table 3.4-10. Significant cumulative impacts would occur at the following intersections:

- West Grand Avenue/frontage road – the Project in combination with other related projects and background growth would cause the future baseline LOS to degrade to worse than LOS D.
- West Grand Avenue/Mandela Parkway – the Project in combination with other related projects and background growth would cause the future baseline LOS to degrade to worse than LOS D.
- 7th Street/Mandela Parkway – the Project in combination with other related projects and background growth would cause the future baseline LOS to degrade to worse than LOS D.

In addition to the above three intersections, the Project would contribute to significant cumulative impacts at the following two intersections, but the contribution would be considered less than cumulatively considerable in accordance with City standards for the following reasons:

- West Grand Avenue/Maritime Street – the Project in combination with other related projects and background growth would cause the average vehicle delay to increase by more than two seconds where the future baseline level of service is already projected to be LOS F. However, the Project would add less than five percent of the cumulative traffic increase, which is the City's threshold for making a considerable contribution to significant cumulative effects.
- 3rd Street/Market Street – the Project in combination with other related projects and background growth would add ten or more vehicles and after completion satisfy the Caltrans peak-hour volume warrant at an unsignalized intersection. However, the Project would add less than five percent of the cumulative traffic increase, which is the City's threshold for making a considerable contribution to significant cumulative effects.

Table 3.4-10
Intersection Operations for Cumulative Conditions with and without the Project (2025)

Intersection	No Project (2025)				Maximum Residential Scenario				Maximum Trips Scenario			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1) W. Grand Avenue / Maritime Street	**F**	**119.0**	**F**	**177.5**	**F**	**122.7**	**F**	**185.0**	**F**	**122.9**	**F**	**201.8**
2) W. Grand Avenue / frontage road	D	50.4	**E**	**69.1**	**E**	**67.4**	**F**	**88.4**	**E**	**71.4**	**F**	**94.9**
3) W. Grand Avenue / Mandela Parkway	C	23.9	**E**	**77.0**	C	26.0	**F**	**89.8**	C	25.9	**F**	**90.0**
4) W. Grand Avenue / Adeline Street	B	12.1	B	12.6	B	12.0	B	12.5	B	12.1	B	12.5
5) W. Grand Avenue / Market Street	B	12.6	B	13.0	B	12.6	B	13.2	B	12.7	B	13.3
6) W. Grand Avenue / San Pablo Avenue	B	14.1	B	15.6	B	14.0	B	15.7	B	14.1	B	15.7
7) W. Grand Avenue / MLK Jr. Way [a]	B	11.1	B	13.2	B	11.0	B	13.2	B	11.0	B	13.1
8) W. Grand Avenue / Northgate Blvd [a]	B	19.0	D	35.8	B	19.3	D	39.3	B	19.3	D	42.1
9) 18th Street / Wood Street (TWSC)	A	8.9	B	10.3	A	9.6	B	11.1	A	9.6	B	11.2
10) 18th Street / Mandela Parkway (TWSC)	B	13.8	C	21.4	B	15.0	D	25.4	C	15.2	D	29.2
11) 16th Street / I-880 frontage road (TWSC)	na	na	na	na	C	22.5	C	19.1	D	26.8	D	34.2
12) 14th Street / I-880 frontage road (TWSC)	na	na	na	na	C	17.8	C	16.3	C	18.1	C	17.0
13) 14th Street / Wood Street (TWSC)	A	9.5	B	10.2	B	11.6	B	12.2	B	11.5	B	12.5
14) 14th Street / Mandela Parkway	B	13.2	B	13.4	B	13.4	B	13.6	B	13.4	B	13.7
15) 14th Street / Adeline Street	A	9.5	B	10.1	A	9.5	B	10.2	A	9.5	B	10.3
16) 14th Street / Market Street	B	11.6	B	12.8	B	11.7	B	12.9	B	11.7	B	13.0
17) 12th Street / Brush Street [a]	E	61.5	C	27.1	E	61.5	C	27.1	E	61.5	C	27.1
18) 10th Street / I-880 frontage road (TWSC)	na	na	na	na	D	26.5	C	22.4	D	27.5	C	22.8
19) 7th Street / Maritime Street	F	257.3	F	200.5	F	257.3	F	200.5	F	257.3	F	200.5
20) 7th Street / I-880 SB Ramp	A	4.7	A	8.5	A	5.0	A	8.7	A	4.9	A	9.0
21) 7th Street / I-880 NB Ramp	D	39.5	C	28.6	D	44.4	C	31.4	D	44.6	C	30.8

Table 3.4-10 (Continued)
Intersection Operations for Cumulative Conditions with and without the Project (2025)

Intersection	No Project (2025)				Maximum Residential Scenario				Maximum Trips Scenario			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
22) 7th Street / Wood Street	C	27.2	C	30.0	C	28.2	C	31.5	C	27.8	C	31.8
23) 7th Street / Peralta Street	A	9.0	A	8.8	A	8.7	A	8.7	A	8.6	A	8.6
24) 7th Street / Mandela Parkway	**E**	**64.0**	**F**	**209.7**	**E**	**72.8**	**F**	**203.1**	**E**	**70.9**	**F**	**201.8**
25) 7th Street / Union Street	B	17.8	C	20.6	B	18.3	C	22.5	B	18.4	C	23.9
26) 7th Street / Adeline Street	B	10.9	B	12.6	B	11.1	B	13.0	B	11.1	B	13.3
27) 5th Street / Adeline Street	F	180.8	F	168.8	F	177.3	F	166.8	F	177.5	F	166.0
28) 5th Street / Market Street	B	13.4	B	15.6	B	13.6	B	15.8	B	13.6	B	15.8
29) 3rd Street / Adeline Street (AWSC)	F	53.0	C	23.2	F	53.0	C	23.2	F	53.0	C	23.2
30) 3rd Street / Market Street (TWSC)	**F**	**93.2**	**F**	**OVRFL**	**F**	**111.8**	**F**	**OVRFL**	**F**	**111.9**	**F**	**OVRFL**
31) 32nd Street / Mandela Parkway (AWSC)	A	8.5	B	13.9	A	8.7	C	15.4	A	8.8	C	16.6
32) Hollis Street / 40th Street	C	25.5	D	37.7	C	25.3	D	38.3	C	25.5	D	38.2
33) Powell Street / I-80 NB Ramps	C	27.9	F	129.2	C	28.0	F	129.9	C	28.0	F	130.1

Source: Dowling Associates, 2003.

Notes:

LOS = Level of service

TWSC = two-way stop control

AWSC = all-way stop control

na = not applicable; intersection does not exist.

For signalized and AWSC intersections, the average LOS and average control delay in seconds are provided for all vehicles entering the intersection. For TWSC intersections, the LOS and delay are provided for the movement with the highest control delay.

Bold Values indicate a significant traffic impact. OVRFL indicates the delay would be very high (outside the range of the methodology).

a. Defined as a downtown intersection.

Summary of Impact TR-9 by Development Area. The total trips from all the development areas in combination with other related projects and background growth would cause significant impacts at study area intersections, and the contribution of the Project to the cumulative impact at three intersections would be considerable. None of the development areas alone would make a considerable contribution to cumulative impacts at any intersection. Trip generation from Development Areas Five and Nine is estimated to be negligible and the contribution from these development areas is considered less than cumulatively considerable. In contrast, all other development areas contribute to exceeding acceptable intersection LOS, requiring Project Sponsors from these development areas to contribute a fair share to the proposed mitigation measures.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

MITIGATION MEASURES. The following mitigation measures apply to all development areas except Development Areas Five and Nine and would reduce the cumulative operation impacts at the affected intersections. While these improvements would reduce the cumulative operations impacts at the West Grand Avenue / frontage road intersection, the improvements are outside of the City of Oakland's jurisdiction because they would require Caltrans approvals. Accordingly, the mitigation for West Grand Avenue/frontage road may not be feasible, and the impact would remain significant and unavoidable (SU). The mitigation measure for the other intersections would reduce cumulative impacts to less than significant. (LTS)

TR-9.1 *West Grand Avenue/Frontage Road.* The Project Sponsors shall fund, on a fair share basis, the following improvements that would reduce the cumulative operations impact at the intersection of West Grand Avenue/frontage road:[9]

- Revise the northbound frontage road lanes to provide:
  - one left-turn lane
  - one combination left-through lane

[9] The mitigation measure from the *OARB Area Redevelopment Plan EIR* for the intersection of West Grand Avenue/frontage road would not result in less-than-significant impacts under the PM peak-hour conditions.

  - one through lane
  - one right-turn lane with overlap signal phasing (green arrow)

- Revise the southbound I-80 East Ramp lanes to provide:
  - one left-turn lane
  - one combination left-through lane
  - one through lane
  - one right-turn lane with overlap signal phasing (green arrow)

- Revise the eastbound West Grand Avenue lanes to provide:
  - one left-turn lane
  - one through lane
  - one combination through-right lane

- Revise the westbound West Grand Avenue lanes to provide:
  - one left-turn lane
  - two through lanes
  - one right-turn lane

While these improvements would reduce the cumulative operations impacts at the West Grand Avenue/frontage road intersection to an acceptable level of service, improvements would be outside the City of Oakland's jurisdiction and would require Caltrans approvals. As a result, the improvements may not be feasible, and the impact at this intersection would remain significant and unavoidable.

TR-9.2 *West Grand Avenue/Mandela Parkway Intersection.* The Project Sponsors shall contribute their fair share of modifications at the West Grand Avenue/Mandela Parkway intersection. The modifications at the intersection shall include providing protected left-turn signal phasing (left-turn green arrows) for the West Grand Avenue approaches to the intersection.

TR-9.3 *7th Street/Mandela Parkway Intersection*. The Project Sponsors shall contribute their fair share of modifications at the 7th Street/Mandela Parkway intersection. The modifications at the intersection shall include adding a northbound lane on the 3rd Street extension to provide one left-turn lane, one combination through-right turn lane, and protected left-turn signal phasing (left-turn green arrows) for all four approaches to the intersection.

TR-9.4 *West Grand Avenue/Maritime Street and 3rd Street/Market Street Intersections*. As part of the cumulative growth of the *OARB Area Redevelopment Plan*, the Project Sponsors shall contribute their fair share, as defined in the *OARB Area Redevelopment Plan EIR*, 2002, to future improvements at these locations.

TR-10. The cumulative impact of the Project in combination with other related projects and background growth would cause some roadway segments on the MTS to operate at LOS F. However, only the Maximum Trips Scenario contribution to I-880 northbound under the AM peak hour has the potential to increase the V/C ratio by more than three percent for a segment that would already operate at LOS F under the future baseline conditions. Therefore, the cumulative contribution of the Project under the Maximum Trips Scenario would be significant. (S)

Based on 2025 growth projections provided by HEG, a summary of freeway operations for cumulative conditions is provided in Table 3.4-11. Significant cumulative impacts for both Maximum Residential and Maximum Trips Scenarios would occur on the following freeway sections:

- I-80 at the Bay Bridge
- I-80 east of I-80/I-580 Split
- I-880 north of I-980
- SR 24 east of I-580

The contribution of Project traffic to the cumulative traffic levels on freeway segments would not be cumulatively considerable, and the incremental effect of the Project on cumulative regional roadway congestion is considered less than significant, except under the Maximum Trips Scenario. The Maximum Trips Scenario would contribute 5.2 percent of the cumulative traffic increase on northbound I-880 north of I-980 during the AM peak hour, which exceeds the City's threshold and would result in a significant and unavoidable cumulative impact.

Summary of Impact TR-10 by Development Area. None of the development areas alone would cause a significant cumulative impact on freeway segments. However, the aggregate trips from those development areas increasing travel demand would cause a significant cumulative impact. Trip generation from Development Areas Five and Nine is estimated to be negligible and contribution from these development areas would be considered less than cumulatively considerable. In contrast, all other development areas contribute to exceeding acceptable freeway segment operations. Development Areas Four and Eight contribute the most substantive increase in trips in comparing the Maximum Residential Scenario (which would not result in a significant cumulative impact) and the Maximum Trips Scenario (which would result in a significant cumulative impact) and, thus, contribute the most towards exceeding the significance threshold.

Table 3.4-11
Freeway Operations for Cumulative Conditions with and without the Project (2025)

	No Project (2025)				Maximum Residential Scenario				Maximum Trips Scenario			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Freeway Segment	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**
I-80 at the Bay Bridge												
Eastbound	A	0.12	F	1.13	D	0.80	**F**	**1.74**	D	0.80	**F**	**1.74**
Westbound	F	1.09	D	0.82	**F**	**1.82**	**F**	**1.56**	**F**	**1.82**	**F**	**1.56**
I-80 east of I-80/I-580 Split												
Eastbound	B	0.48	F	1.13	**F**	**1.36**	F	1.14	**F**	**1.36**	F	1.15
Westbound	F	1.18	C	0.72	D	0.89	**F**	**1.25**	D	0.90	**F**	**1.25**
I-580 east of I-980/SH-24												
Eastbound	E	0.99	F	1.32	C	0.62	F	1.26	C	0.62	F	1.27
Westbound	F	1.20	F	1.08	F	1.17	D	0.86	F	1.17	D	0.86
I-880 north of Union Street												
Northbound	D	0.81	C	0.66	D	0.88	D	0.85	D	0.89	D	0.85
Southbound	B	0.36	D	0.84	C	0.56	E	0.96	C	0.56	E	0.96
I-880 north of I-980												
Northbound	C	0.75	C	0.62	**F**	**1.01**	D	0.84	**F**	**1.02**	D	0.84
Southbound	A	0.34	D	0.79	B	0.54	E	0.93	B	0.54	E	0.94
I-880 south of I-980												
Northbound	E	0.93	D	0.88	E	0.99	E	0.99	E	0.99	E	0.99
Southbound	D	0.86	E	0.96	D	0.78	E	0.95	D	0.78	E	0.96
I-980 north of 27th St.												
Eastbound	A	0.32	C	0.64	B	0.37	C	0.76	B	0.37	C	0.76
Westbound	C	0.63	A	0.33	C	0.71	B	0.45	C	0.72	B	0.45
SR 24 east of I-580												
Eastbound	B	0.39	F	1.02	C	0.57	**F**	**1.24**	C	0.57	**F**	**1.24**
Westbound	F	1.06	B	0.46	**F**	**1.24**	D	0.79	**F**	**1.24**	D	0.79

Source: Dowling Associates, 2003.

Notes:

LOS = Level of service

V/C = Volume-to-capacity ratio

Bold Values indicate a significant traffic impact.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

While none of the development areas alone would cause a significant cumulative impact on freeway segments, the aggregate trips from those development areas would cause significant cumulative impacts.

MITIGATION MEASURES. The following mitigation measures apply to all development areas, except Development Areas Five and Nine, and would reduce the significant cumulative freeway operation impact under the Maximum Trips Scenario on I-880 and would also serve to improve other cumulative freeway impacts; however, the impact would remain significant and unavoidable. (SU)

TR-10.1 *Transportation Demand Management*. The Project Sponsors shall participate in a transportation demand management program developed by the City to reduce the dependence on the single occupant vehicle. The program shall include Project Sponsor fair share participation in providing financial incentives for use of alternate modes and in the Alameda County CMA's Guaranteed Ride Home Program.

TR-10.2 *Shuttle Service*. The Project Sponsors shall provide a shuttle service between the Project Area and the West Oakland BART Station and incorporate shuttle stops into the final design plans. The shuttle stops shall be located within the Project Area and would be dispersed such that Project residents would be no more than one-quarter mile from a shuttle stop. Shuttle stops at the existing AC transit bus stop on Wood Street by Development Area Three, in front of the 16th Street Plaza (Development Area Nine), and on Wood Street at 20th Street by Development Area Seven should be considered. The shuttle service would operate at 15-minute peak-hour headways during commute hours. The shuttle service shall be designed to meet City of Oakland standards, link with pedestrian access, and be reviewed for approval by the City.

TR-11. The cumulative impact of the Project in combination with other related projects and background growth would increase average ridership on AC Transit lines serving the Project Area by more than three percent. However, the average load factor with the Project would not exceed 125 percent over a peak 30-minute period. (LTS)

Development along the AC Transit lines is not expected to create a substantial increase in the demand for bus transit service. AC Transit lines serving the Project Area have adequate capacity to accommodate the expected increase in demand from the Project (under any scenario) in combination with other potential developments. Therefore, the cumulative impact on AC Transit service would be less than significant.

Summary of Impact TR-11 by Development Area. Since there would be no significant cumulative impacts from full development of the Project Area, none of the proposals for individual development areas would contribute to cumulative impacts on AC bus service to a considerable degree. Trip generation from Development Areas Five and Nine is estimated to be negligible and the contribution from these development areas is considered less than cumulatively considerable.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

TR-12. The cumulative impact of the Project, in combination with other related projects and background growth, could increase the overall passenger volume such that the passenger volume could exceed the standing capacity of BART trains and could increase peak-hour average ridership by three percent. (S)

The Project, in combination with other related projects and background growth, could increase peak-hour average BART ridership by three percent, where passenger volumes exceed the standing capacity of BART trains. Transit-oriented development is being developed near the West Oakland BART Station, and the combination of additional development with either of the Maximum Residential or Maximum Trips Scenarios could result in cumulative impacts on BART train service; therefore, cumulative impacts to BART are considered significant.

Summary of Impact TR-12 by Development Area. None of the development areas alone would contribute to a significant cumulative impact on BART service. However, the aggregate trips from those development areas increasing travel demand could cause a significant cumulative impact on BART service. Since Development Areas Five and Nine are expected to generate negligible riders, their contribution to cumulative impacts would likewise be negligible. On the other hand, the aggregate ridership increase from the other development areas would be considered cumulatively considerable and Project Sponsors of those development areas should participate with the City and BART in arriving at an acceptable mitigation program.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

MITIGATION MEASURE. The following mitigation measure would apply to all development areas except Development Areas Five and Nine and would reduce the cumulative BART system ridership impacts. However, this mitigation measure would be outside the City of Oakland's jurisdiction and would require BART approval. In addition, there is no mechanism at this time to allocate the costs or collect fees to implement improvements. Therefore, cumulative impacts to BART ridership would be significant and unavoidable. (SU)

TR-12.1 *BART Train Capacity*. The Project Sponsors shall participate in efforts to ensure that adequate BART train capacity will be available for riders to and from the Project Area, and fund BART train capacity improvements on a fair share basis.

TR-13. The cumulative impact of the Project in combination with other related projects and background growth, would increase peak-hour average ridership at the West Oakland BART Station by three percent where average waiting time at fare gates could exceed one minute. (S)

The Project, in combination with other related projects and background growth, would increase the peak hour average ridership at the West Oakland BART Station by three percent, where average waiting time at fare gates could exceed one minute. The Project in combination with the other related projects, including transit-oriented development that is being developed near the West Oakland BART Station, would likely result in cumulative impacts on BART service at fare gates; therefore, the cumulative impact is significant.

Summary of Impact TR-13 by Development Area. None of the development areas alone would contribute to a significant cumulative impact on BART service. However, the aggregate trips from those development areas increasing travel demand could cause a significant cumulative impact on the West Oakland BART Station fare gate. Since Development Areas Five and Nine are expected to generate negligible riders, their contribution to cumulative impacts would likewise be negligible. On the other hand, the aggregate ridership increase from the other development areas would be considered cumulatively considerable, and Project Sponsors of those development areas should participate with the City and BART in arriving at an acceptable mitigation program.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

MITIGATION MEASURE. Mitigation Measure TR-8.1 (Fare Gate Capacity) would apply to all development areas except Development Areas Five and Nine and would reduce cumulative BART ridership impacts. However, Mitigation Measure TR-8.1 would be outside the City of Oakland's jurisdiction and would require BART approval. In addition, there is no mechanism at this time to allocate the costs or collect fees to implement improvements. Therefore, cumulative impacts to BART fare gates would remain significant and unavoidable. (SU)

Parking Analysis

Table 3.4-12 summarizes the estimated parking demand and vehicle parking requirements for the Maximum Residential and Maximum Trips Scenarios. Parking demand is estimated by applying average parking generation rates from the Institute of Transportation Engineer's Parking Generation (1987), with the exception of the live/work units. For the live/work units, the parking demand is based on the field survey data collected for similar live/work development projects already occupied in Oakland and Emeryville. The Maximum Residential Scenario would generate an estimated demand for 1,888 parking spaces, while the Maximum Trips Scenario would generate an estimated demand for 2,258 spaces. This parking demand does not account for transit use or shared parking opportunities among the proposed mix of office/retail/residential uses.

Table 3.4-12
Parking Demand Versus On- Site Parking Supply

Land Use	Amount		Peak Demand (ITE)		Current City Municipal Code		Proposed District Regulations		Project Parking	
			Weekday	Saturday	Parking Space Requirement	Parking Spaces	Parking Space Requirement	Parking Spaces	Parking Spaces	Surpus/ Deficit[a]
Maximum Residential Scenario										
DA 1: Live/Work[a]	82	Units	91	78	1 per DU	82	1 per DU	82	87	-4
DA 2: Condominiums	169	Units	195	155	1 per DU	169	1 per DU	169	169	-26
DA 2: Live/Work[a]	20	Units	22	19	1 per DU	20	1 per DU	20	20	-2
DA 3: Condominiums	200	Units	235	175	1 per DU	200	1 per DU	200	345	110
DA 4: Apartments	426	Units	427	509	1 per DU	426	1 per DU	426	759	250
DA 4: Live/Work[a]	24	Units	27	23	1 per DU	24	1 per DU	24	43	16
DA 4: Retail	7	KSF	23	28	1 per 900 sf	8	1 per 1000 sf	7	11	-17
DA 5: Special Event Space[b]	15	KSF	91	91	1 per 160 sf	91	1 per 160 sf	91	0	-91
DA 6: Condominiums	201	Units	236	176	1 per DU	201	1 per DU	201	243	7
DA 6: Live/Work[a]	14	Units	16	13	1 per DU	14	1 per DU	14	17	1
DA 6: Retail	6	KSF	19	24	1 per 900 sf	7	1 per 1000 sf	6	10	-14
DA 7: Condominiums	148	Units	168	141	1 per DU	148	1 per DU	148	179	11
DA 7: Live/Work[a]	22	Units	24	21	1 per DU	22	1 per DU	22	26	2
DA 8: Condominiums	240	Units	287	200	1 per DU	240	1 per DU	240	294	7
DA 8: Live/Work[a]	24	Units	27	23	1 per DU	24	1 per DU	24	29	2
TOTAL			**1,888**	**1,676**		**1,676**		**1,674**	**2,232**	**-154**
Maximum Trips Scenario										
DA 1: Live/Work[b]	82	Units	91	78	1 per DU	82	1 per DU	82	87	-4
DA 2: Condominiums	169	Units	195	155	1 per DU	169	1 per DU	169	169	-26
DA 2: Live/Work[b]	20	Units	22	19	1 per DU	20	1 per DU	20	20	-2
DA 3: Condominiums	200	Units	235	175	1 per DU	200	1 per DU	200	345	110
DA 4: Apartments	393	Units	393	466	1 per DU	393	1 per DU	393	707	241
DA 4: Live/Work[b]	24	Units	27	23	1 per DU	24	1 per DU	24	43	16

Table 3.4-12 (Continued)
Parking Demand Versus On- Site Parking Supply

Land Use	Amount		Peak Demand (ITE)		Current City Municipal Code		Proposed District Regulations		Project Parking	
			Weekday	Saturday	Parking Space Requirement	Parking Spaces	Parking Space Requirement	Parking Spaces	Parking Spaces	Surpus/ Deficit[a]
DA 4: Retail	40	KSF	129	159	1 per 900 sf	44	1 per 1000 sf	40	63	-96
DA 5: Special Event Space[c]	15	KSF	91	91	1 per 160 sf	91	1 per 160 sf	91	0	-91
DA 6: Condominiums	201	Units	236	176	1 per DU	201	1 per DU	201	243	7
DA 6: Live/Work[b]	14	Units	16	13	1 per DU	14	1 per DU	14	17	1
DA 6: Retail	6	KSF	19	24	1 per 900 sf	7	1 per 1000 sf	6	10	-14
DA 7: Condominiums	148	Units	168	141	1 per DU	148	1 per DU	148	179	11
DA 7: Live/Work[b]	22	Units	24	21	1 per DU	22	1 per DU	22	26	2
DA 8: Non-Retail Commercial[d]	258	KSF	612	102	1 per 600 sf	430	1 per 1,400 sf	184	475	-137
TOTAL			**2,258**	**1,643**		**1,845**		**1,594**	**2,384**	**-370**

Sources: *Draft Wood Street Zoning District, August 2004*; City of Oakland Municipal Code Title 17.116.080; *Parking Generation*, Institute of Transportation Engineers, 1987; *Shared Parking,* Urban Land Institute, 1983

Notes:
KSF = thousand square feet
DU = dwelling unit
sf = square feet

a. No shared parking will be allowed, so the total on-site parking deficit is shown.

b. The parking demand for the live/work dwelling units is assumed to be the same as for condominiums.

c. The parking demand for the special event space is assumed to be the same as the City Code requirement.

d. Saturday parking demand for non-commercial retail was based on the relationship between Saturday and Weekday parking demand factors described in *Shared Parking*, Exhibit 26, Urban Land Institute, 1982.

The adequacy of on-site parking was evaluated in relation to the ITE estimated demand and the current Oakland Municipal Code requirements. The residential parking requirements proposed in the Wood Street Zoning Regulations would be similar to existing residential zoning standards, but the non-retail commercial (office) requirement is higher under the current code. This difference is most pronounced under the Maximum Trips Scenario, where the zoning code would require 251 more off-street parking spaces than the proposed Wood Street Zoning Regulations. Both development scenarios would provide enough parking spaces to comply with the current City Municipal Code for all development areas except at Development Area Five, where no parking supply is proposed.

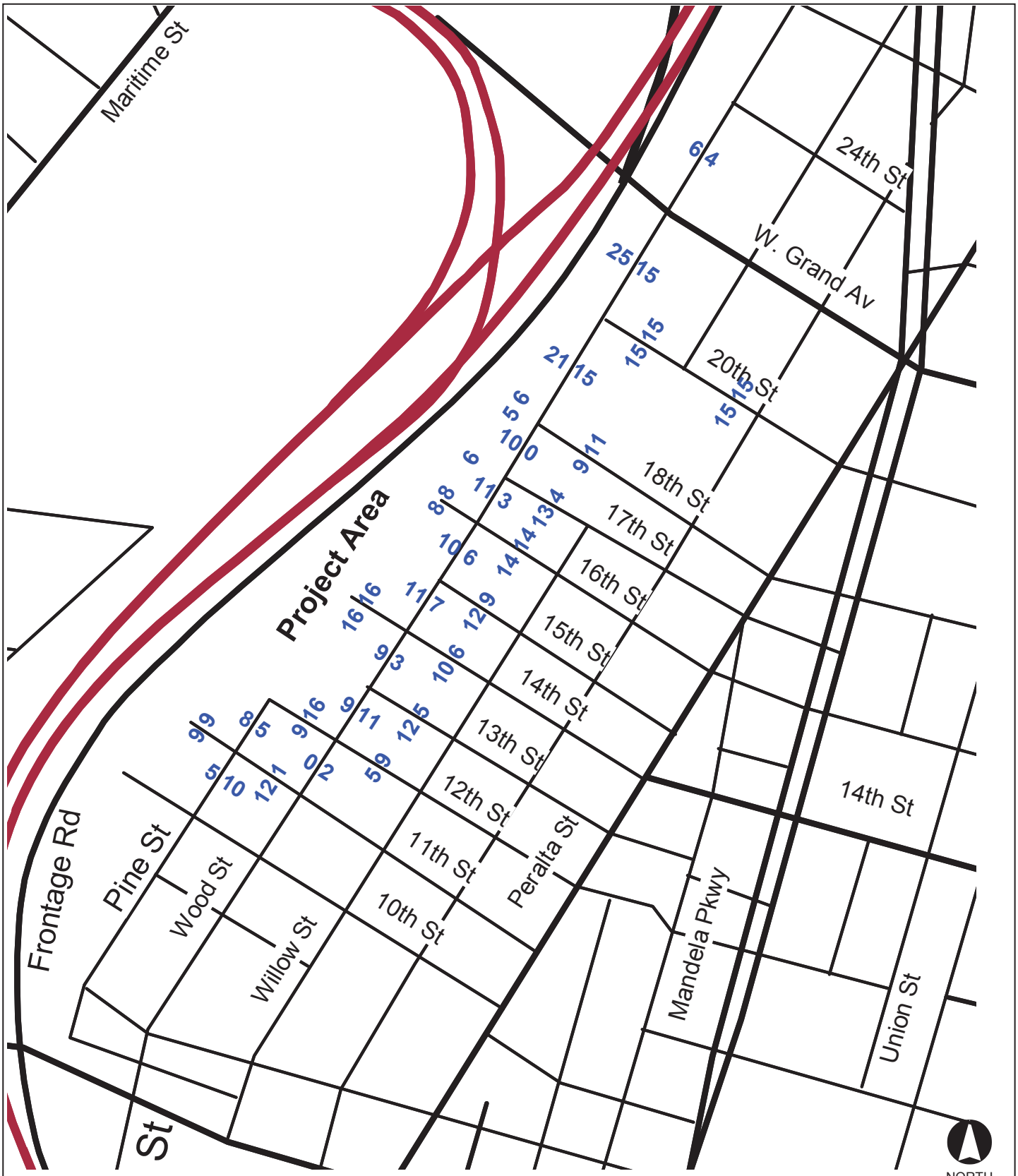
The Project would provide more than enough on-site parking spaces for some land uses and not enough for others. The on-site parking supply for each land use in each development area would be restricted to use by only those served by that land use. For example, retail land uses would not have access to the residential parking supply. As a result the on-site parking deficits for each land use are cumulative. The total on-site parking deficit for the Maximum Residential Scenario would be 154 spaces; the Maximum Trips Scenario would have an on-site parking deficit of 370 spaces.

A parking survey was conducted on August 12, 2004, at 11:00 p.m. to determine the amount of available on-street parking supply within a reasonable walking distance of the project site. The survey covered the streets adjacent to the Project and intersecting streets within one block. 128 vehicles were observed parked within the survey area, including 100 autos and 28 semi-trucks. The semi-trucks were parked illegally and were not considered for the purposes of the parking study. The parking demand data are provided in Appendix B. A supplemental assessment of daytime parking was performed using aerial photographs and a site visit. The findings were that the daytime parking demand was essentially the same in the survey area except for 16th and 17th Streets, where effectively no on-street parking was available.

An inventory of the number of on-street parking spaces in the Project vicinity was conducted. The inventory included the number of on-street parking spaces in the parking survey area and the on-street parking spaces that would be provided by the Project. No parking spaces were assumed along the I-880 frontage road or any of the internal Project roadways parallel to it. The number of available on-street parking spaces during the evening is shown in Figure 3.4-3. The daytime on-street parking would be essentially the same except along 16th and 17th Streets where no parking would be available.

All of the parking demand for each land use area where the demand would not be accommodated on site could be accommodated within a two-block walking distance, with one exception. It is not likely nearby on-street parking would be available to serve Development Area Five. It is recommended that Development Area Five (Special Event Space) provide the number of parking spaces that would be sufficient to accommodate the demand it generates.

If the parking demand for the special event space generates the amount of parking demand consistent with the City Code requirements for special event space, 91 parking spaces would be required, as shown in Table 3.4-12. There would be enough room on Development Area Five to accommodate up to 100 parking spaces. At this time it is not certain how the special event space will be used. As plans



Sources: Dowling Associates, Inc., 2004.

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FIGURE 3.4-3
Available On-Street Parking Spaces

for the special event space are developed, there should be a re-evaluation of the number of on-site parking spaces that will be required.

Development Areas Three and Seven would have enough parking spaces to accommodate the parking demand. Development Area Nine would not generate demand for parking because the open space in front of the 16th Street Train Station Main Hall is expected to be used by Project residents, employees and guests, who would walk to the site. The estimated parking demand would exceed the on-site parking supply for some land uses in Development Areas One, Two, Four, Five and Six for both the Maximum Residential and Maximum Trips Scenarios. The parking demand would exceed the on-site supply for Development Area Eight for the Maximum Trips Scenario but would not exceed the supply for the Maximum Residential Scenario. Under either scenario, the parking demand that cannot be accommodated on site would be able to be accommodated along adjacent streets, except for Development Area Five.

Pursuant to the Wood Street Zoning Regulations, the Project sponsor must submit a Preliminary Development Plan and a Final Development Plan for each of the development areas. In order to accommodate the projected parking demand for Development Area Five, at the time of the Preliminary Development Plan, the Project sponsor shall include calculations and drawings that demonstrate satisfaction of the projected parking demand shown in Table 3.4-12 or as estimated using a method acceptable to the City. The location, design and access to off-street parking areas shall comply with the regulations, standards and guidelines of the Wood Street Zoning Regulations.

3.5 NOISE

Introduction

This section describes the existing noise environment in and around the Project Area. The description is based on noise measurements taken by EIP Associates on August 27, 2003. Projected increases in noise levels in the Project Area vicinity would be expected in the future from additional traffic, expansion of various mechanical systems, and construction activities associated with the Project. The incremental change in noise levels experienced by receptors in the Project Area vicinity is evaluated against standards in the *City of Oakland General Plan* Noise Element, and the City's Noise Ordinance. Potential groundborne noise and vibration during construction activities, as well as during Project operations, are also considered in this section. In addition, the exposure of future residents to existing industrial operations, truck traffic, and nearby I-880 vehicular noise is discussed. For noise impacts, the Maximum Residential Scenario and the Maximum Trips Scenario were evaluated. These scenarios were selected because they represent the fewest and greatest number of daily and peak hour trips, respectively, and thus encompass the range of potential noise impacts from vehicular traffic that could occur as a result of the Project. Additionally, the Maximum Residential Scenario would represent the greatest number of new sensitive noise receptors in the Project Area that could be disturbed by the surrounding noise environment.

Setting

Fundamentals of Noise

Definition of Noise. Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The decibel scale adjusted for A-weighting (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Over the audible range of pitch, the human ear is less sensitive to low frequencies and is more sensitive to mid-level and high-pitched sound. Table 3.5-1 lists dBA noise levels for common events in the environment and industry.

The ambient noise environment in an area consists of a base of steady "background" noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway.

Table 3.5-1
Typical Sound Levels Measured in the Environment and Industry

Noise Source (Distance)	A-Weighted Sound Level in Decibels (dBA)	Subjective Impression
Civil Defense Siren (100')	130	Pain Threshold
Jet Takeoff (200')	120	
Rock Music Concert (50')	110	
Pile Driver (50')	100	Very Loud
Ambulance Siren (100')	90	
Diesel Locomotive (25')	85	Loud
Pneumatic Drill (50')	80	
Freeway (100')	70	Moderately Loud
Vacuum Cleaner (10')	60	
Light Traffic (100')	50	
Large Transformer (200')	40	Quiet
Soft Whisper (5')	30-0	Threshold of Hearing

Source: Peterson & Gross, 1963.

Measurement Scales for Describing Noise. Several rating scales have been developed to analyze the adverse effect of community noise on people. To account for the varying nature of environmental noise, these scales recognize that the potential effect of noise upon people depends on the total acoustical energy and the time of day when the noise occurs.

Common measures along these scales are as follows:

- L_{eq}, the equivalent energy noise level, is the average acoustic energy content of noise, usually measured over one hour. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure, no matter what time of day or night they occur.
- L_{dn}, the day-night average noise level, is a 24-hour average L_{eq} with a 10 dBA "penalty" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for the greater nocturnal noise sensitivity of people.
- CNEL, Community Noise Exposure Level, is a 24-hour average with a 5-dBA penalty added to noise during the evening from 7:00 p.m. to 10:00 p.m. and a 10-dBA penalty added during the nighttime from 10:00 p.m. to 7:00 a.m. The CNEL is very similar to the L_{dn}, with the CNEL about 0.2 to 1 decibel greater than the L_{dn}.
- L_{max} is the maximum instantaneous noise level experienced during a given period of time.
- L_{min} is minimum instantaneous noise level experienced during a given period of time.

Community noise environments are typically represented by noise levels measured throughout the day and night, or over a 24-hour period (i.e., by L_{dn}). The one-hour period is especially useful for

characterizing noise caused by short-term events, such as operation of construction equipment or concert noise (i.e., with L_{eq}). Community noise levels are generally perceived as quiet when the L_{dn} is below 45 dBA, moderate in the 45 to 60 dBA range, and loud above 60 dBA. Very noisy urban residential areas are usually around 70 dBA L_{dn}. Along major thoroughfares, roadside noise levels are typically between 65 and 75 dBA L_{dn}. Noise levels above 45 dBA at night can disrupt sleep, and levels greater than 85 dBA can cause temporary or permanent hearing loss. In general, a difference of 3 dBA is a minimally perceptible change, while a 5-dBA difference is the typical threshold that would cause a change in community reaction. An increase of 10 dBA would be perceived by people as a doubling of loudness.[1]

Noise Attenuation and Abatement. Noise levels diminish as distance from the source to the receptor increases. Other factors such as the weather and reflecting or shielding can intensify or reduce noise levels at any given location. A commonly used rule of thumb for traffic is that for every doubling of distance from the road, the noise level is reduced by about 3 dBA. When the distance from a stationary noise source to a receptor doubles, the noise level is reduced by 6 dBA. A doubling of traffic on any given roadway would cause a noise increase of approximately 3 dBA. Noise levels may also be reduced by interrupting the "pathway" between the source and receptor. For example, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA. Generally, the most effective way to reduce noise in a development is through site planning techniques, such as placing noise-sensitive uses in less noisy areas; providing a physical separation, or buffer, between the source and receptor; and orienting buildings so that noise does not "bounce" between walls. In cases where these techniques do not provide sufficient noise reduction, barriers such as sound walls can be used. Sound walls are most effective if placed at the source of the noise rather than at the noise receptor.

Fundamentals of Groundborne Vibration

Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. The ground motion caused by vibration is measured as particle velocity in inches per second and, in the U.S., is referenced as vibration decibels (VdB). The background vibration velocity level in residential and educational areas is usually about 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate point at which vibration goes from barely perceptible level to a distinctly perceptible level. Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. Groundborne vibration levels vary from approximately 50 VdB, which is the typical background vibration velocity level that is barely perceptible by humans, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. The general human response to different levels of groundborne vibration velocity levels is described in Table 3.5-2.

[1] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, DOT-T-95-16, April 1995.

Table 3.5-2
Human Response to Different Levels of Groundborne Vibration

Vibration Velocity Level	Human Perception
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate level when vibration becomes distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Source: Federal Railroad Administration, 1998.

Existing Noise Environment

Land uses in the vicinity of the Project Area include residential, commercial, industrial, and recreational uses. Although other noise sources occur in the Project Area vicinity, vehicular traffic is the primary source of noise at, and around, the Project Area. Traffic along Wood Street, the frontage road, and I-880 are the primary sources of vehicular traffic noise, as well as traffic along 11th and 12th Streets. Other noise sources include loading dock activities related to California Containers, Lodi Truck Service, and the Bayport Warehouse sites, all of which currently exist in the Project Area. Also, operational activities at the California Waste Solutions recycling center, located at 11th and Pine Streets, contribute to ambient noise levels within the Project Area.

Existing Noise Levels. Existing ambient daytime noise levels were measured at five locations around the Project Area on August 27, 2003 (see Figure 3.5-1). Noise level measurements were not taken on the west side of the Project Area because noise levels in this location are mostly influenced by freeway traffic, which is accounted for in the description of existing roadway noise levels. The monitoring locations on the east side of the Project Area represent sites where changes to vehicular noise would be most pronounced, and also reflect the sites of the more noise-sensitive receptors in the Project Area vicinity. Noise levels were measured using a Larson-Davis Model 814 precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. The average noise levels and sources of noise measured at each location are identified in Table 3.5-3. The noise levels recorded on August 27, 2003 ranged from 59.9 dBA to 68.7 dBA L_{eq}. The daytime noise levels at the Project Area are characteristic of an urban environment. In sparsely populated residential areas, the L_{dn} is likely to be around 50 to 60 dBA. Levels around 70 to 75 dBA L_{dn} are more common in busy urban areas (e.g., downtown San Francisco and Oakland). Nighttime ambient levels in urban environments are about 7 decibels lower than the

Figure 3.5-1 L_{eq} Noise Measurement Location

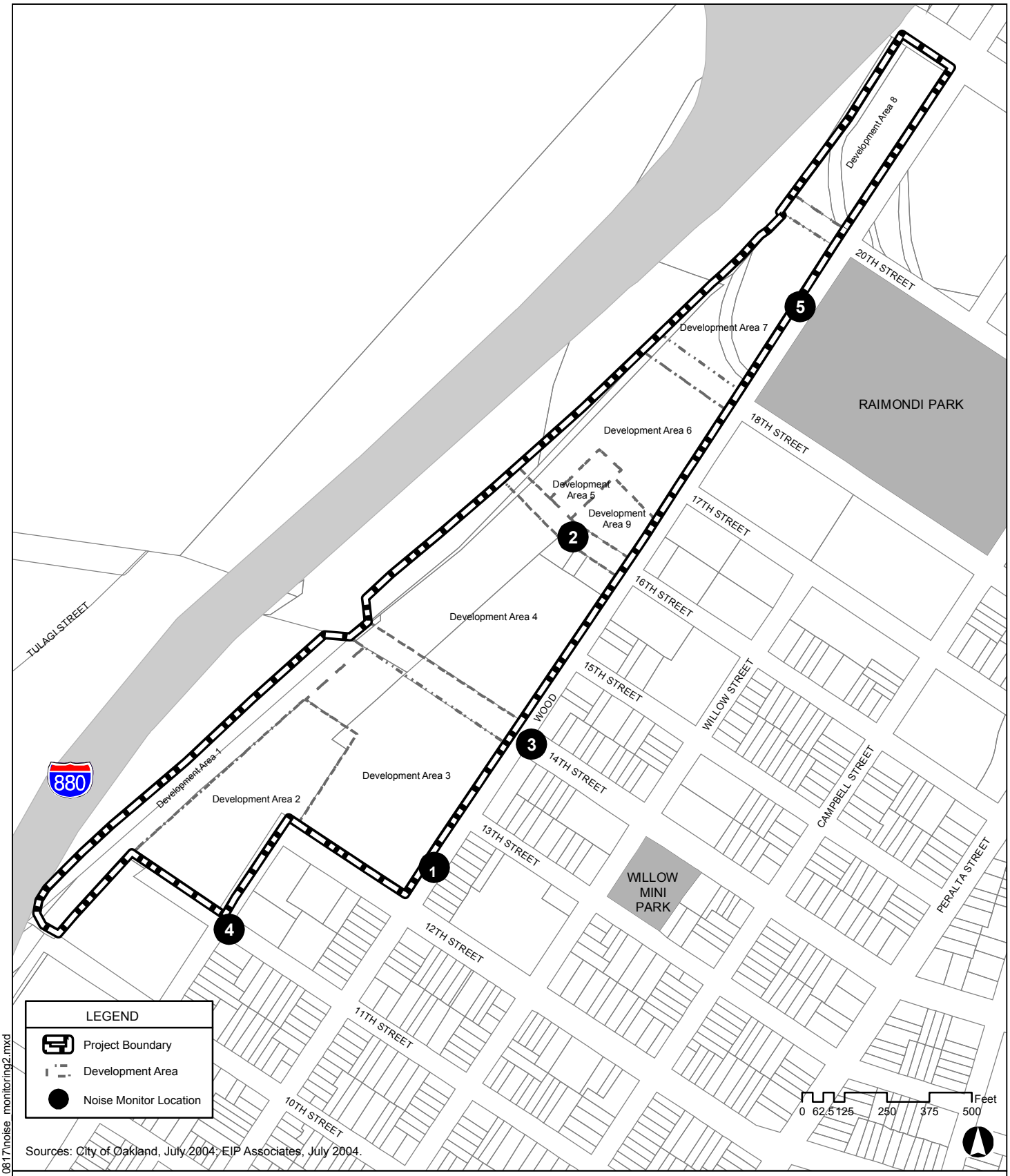

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FIGURE 3.5-1

Noise Monitoring Locations

10817-00

Wood Street Project Draft EIR

corresponding daytime levels.[2] Therefore, the noise levels recorded on August 27, 2003 are representative of ambient daytime noise levels in an urban area that consists of a mixture of industrial/commercial uses and residential uses.

Table 3.5-3
Existing Daytime Noise Levels at Selected Locations in the Vicinity of the Project Area

Noise Measurement Location	Primary Noise Sources	Noise Level Statistics (dBA)		
		L_{eq}	L_{min}	L_{max}
1. Wood Street between 12th and 13th Streets	Vehicular traffic	65.1	51.3	83.7
2. End of 16th Street, West of Wood Street	Vehicular traffic	62.4	57.0	75.7
3. Northeast corner of Wood and 14th Streets	Vehicular traffic	68.6	53.8	86.3
4. Southeast corner Pine and 11th Streets	Vehicular traffic, loading dock activity, and recycling center	59.9	51.0	73.1
5. Wood Street between 18th and 20th Streets	Vehicular traffic	68.7	59.3	84.8

Source: EIP Associates, 2003.

Existing Roadway Noise Levels. Existing 24-hour noise levels were calculated for various roadways surrounding the Project Area, using the Federal Highway Administration Highway Noise Prediction Model (FHWA-RD-77-108) and traffic volumes from the Project traffic analysis (noise calculations are available at the City of Oakland). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by the California Department of Transportation (Caltrans). The Caltrans data show that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The noise levels calculated for the roadways in the Project Area vicinity are presented in Table 3.5-4, along with the distances to various noise level contours. As presented in the table, vehicular noise levels along Wood Street along the east side of the Project Area range from 55.6 to 60.9 L_{dn}. The 60 L_{dn} contour, which is noise level that the City considers normally acceptable for low-density residential uses, generally falls within the street right-of-way and thus would not affect adjoining land uses. Based on the FHWA model, noise contours greater than 60 L_{dn} occur at the southern end of the Wood Street and along the frontage road.

[2] California Public Utilities Commission, *Jefferson-Martin 230 kV Transmission Line Project,* October 2003, p. D.11-1.

Existing Stationary and Operational Noise Sources. Operation of typical building mechanical equipment within the Project Area may include air conditioning and heating units, trash pick-up, and landscaping maintenance. Typical noise levels generated from heating, ventilation and air conditioning (HVAC) units range from 60 to 75 dBA at 50 feet from the noise source. These types of mechanical equipment noises can currently be found at the Bayport Warehouse (in Development Area Two) and at the California Waste Solutions recycling center (adjacent to Development Areas One and Two).

Table 3.5-4
Existing Roadway Noise Levels at Representative Roadway Segment within the Vicinity of the Project Area

Roadway	Roadway Segment	Reference L_{dn} at 50 Feet[a]	Distance to Noise Contour[b]		
			70 L_{dn}	65 L_{dn}	60 L_{dn}
Wood Street	Between 7th and 10th Streets	60.9	--	--	58
Wood Street	Between 14th and 15th Streets	55.6	--	--	--
Wood Street	Between 18th and 20th Streets	55.6	--	--	--
Frontage Road	Between 10th and 14th Streets	62.3	--	33	71

Source: EIP Associates 2003.

Notes:

a. Distances are in feet from roadway centerline. The identified noise level at 50 feet from the roadway centerline is for reference purposes only as a point from which to calculate the noise contour distances. It does not reflect an actual building location or potential impact location.

b. Noise contour is located within the roadway lanes and would not affect surrounding residences.

Loading activities (e.g., idling, backing, and using hydraulic liftgates) involving small- to medium-sized trucks generate noise in the range of 60 to 65 dBA at 50 feet from the source, while larger trucks generate noise in the range of 70 to 75 dBA at 50 feet. Trash compaction and collection typically generate noise levels ranging from 70 to 75 dBA at 50 feet. Traffic circulation and parking lot noises typically range from 60 to 65 dBA at 50 feet. These noise sources are presently found at loading dock activities related to the California Containers, Lodi Truck Service, and Bayport Warehouse sites in the Project Area, and at the California Waste Solutions recycling center, which is adjacent to the Project Area at 11th and Pine Streets.

Noise levels associated with the BART tracks to and from the West Oakland Station generally range between 70 and 75 L_{dn}. Noise from the Union Pacific and Amtrak passenger and freight trains is much less frequent than BART trains, but would be expected to range from 72 to 75 L_{dn}. Based on EIP's site visit, neither BART nor the Union Pacific or Amtrak trains were a distinct audible noise source in the Project Area. The nearest BART station is located more than one-half mile from the Project Area and the nearest Union Pacific lines are separated from the Project Area by I-880.

Existing Groundborne Vibration. The greatest regular sources of groundborne vibration in the Project Area and the immediate vicinity are trucks, which typically generate groundborne vibration velocity levels of around 63 VdB. These levels could reach 72 VdB where trucks pass over bumps in

the road. In addition, heavy cargo trains passing through the Project Area can create groundborne vibrations up to 90 VdB.[3]

Sensitive Receptors. Noise-sensitive land uses are typically given special attention in order to achieve protection from excessive noise. Noise-sensitive land uses, as defined in the *City of Oakland General Plan*, include single- and multi-family residences, hospitals, churches, libraries, schools, and retirement homes. Sensitive land uses in the vicinity of the Project Area include the residences located to the east across Pine Street between 10th and 11th Streets, south across 12th Street between Pine and Wood Streets, east across Wood Street between 12th and 15th Streets and between 16th and 17th Streets; a hotel in the Project Area at 16th and Wood Streets (Bea's Hotel); Raimondi Park across Wood Street between 18th and 20th Streets; and several churches located approximately 500 feet east of the Project Area. No other sensitive land uses (e.g., hospitals, libraries, and retirement homes) are within 1,000 feet of the Project Area.

Applicable Plans and Policies

State of California Noise Insulation Standards. Title 24, Part 2 of the California Code of Regulations (CCR) codifies Sound Transmission Control requirements, which establish uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family dwellings. Specifically, Title 24 states that interior noise levels attributable to exterior sources shall not exceed 45 dBA (CNEL or L_{dn}) in any habitable room of new dwellings. Dwellings are to be designed so that interior noise levels will meet this standard for at least ten years from the time of building permit application.

City of Oakland General Plan, Noise Element. The *City of Oakland General Plan* contains guidelines for determining the compatibility of various land uses with different noise environments.[4] The Noise Element recognizes that some land uses are more sensitive to ambient noise levels than others, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. The City uses state noise guidelines (Table 3.5-5) for judging the compatibility between various land uses and their noise environment. Based on the noise guidelines, the Project Area and its vicinity are classified as "Conditionally Acceptable" (between 60 and 70 dBA for residential multi-family land use) because ambient conditions at the Project Area range from 59.9 to 68.7 dBA. Conditionally acceptable conditions are interpreted to mean "new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice."[5]

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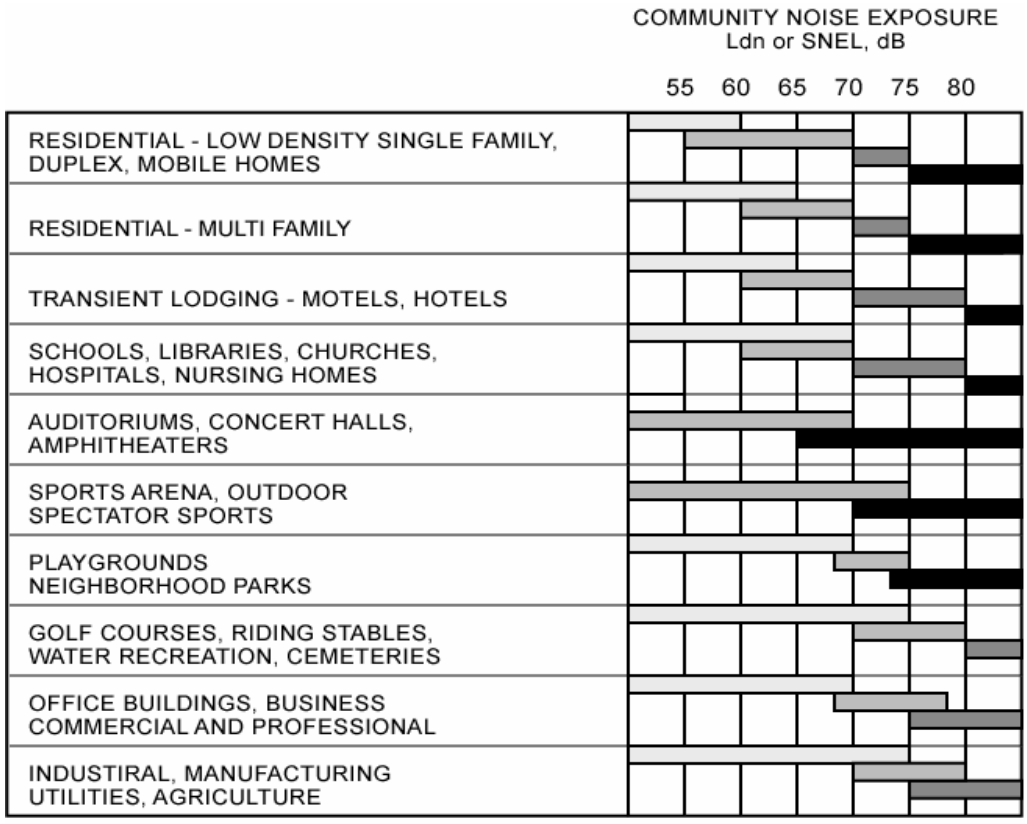
3 ESI Engineering, Inc., *City of Mankato - Dakota, Minnesota & Eastern Railroad Vibration Assessment*, October 28, 1999.

4 *City of Oakland General Plan,* Noise Element, September 1974.

5 State of California, Governor's Office of Planning and Research, *General Plan Guidelines*, 1998, Appendix A, Figure 2.

Table 3.5-5
State and City Land Use Compatibility Guidelines



Source: California Department of Health, Office of Noise Control, Guidelines for the Preparation and Content of Noise Elements of the General Plan, 1990.

City of Oakland Noise Ordinance. The City has adopted a noise ordinance to control noise (City of Oakland, Municipal Code Section 17.120.050, et seq.). The Noise Ordinance includes restrictions on activities related to demolition and construction. Section 17.120.050, et seq., includes restrictions on the hours and days when demolition activity can occur and restrictions on the noise levels generated by such activities. The hours of limitation and the maximum allowable noise levels for construction activities are specified in Section 17.120.050, et seq., of the Municipal Code, as shown in Table 3.5-6.

Table 3.5-6
Maximum Allowable Receiving Noise Standards for Temporary Construction or Demolition Activities (dBA)

	Daily 7 A.M. to 7 P.M.	Weekends 9 A.M. to 8 P.M.
Short-Term Construction (less than 10 days)		
Residential	80	65
Commercial, Industrial	85	70
Long-Term Construction (10 days or more)		
Residential	65	55
Commercial, Industrial	70	60

Source: City of Oakland Municipal Code, 1996 (revised April 2002).

In addition, Section 17.120.050, et seq., includes restrictions on the maximum allowable receiving noise levels at residential, commercial, and industrial uses. The hours of limitation and the maximum allowed noise levels for construction activities are specified in Section 17.120.050, et seq., of the Municipal Code, as shown in Table 3.5-7.

Table 3.5-7
Maximum Allowable Receiving Noise Level Standards (dBA) at Residential/Commercial/Industrial Uses

Cumulative Number of Minutes in Either the Daytime or Nighttime One Hour Time Period	Daytime 7 A.M. to 10 P.M.	Nighttime 10 P.M. to 7 A.M.
20	60/65/70	45/65/70
10	65/70/75	50/70/75
5	70/75/80	55/75/80
1	75/80/85	60/80/85
0	80/85/90	65/85/90

Source: City of Oakland Municipal Code, 1996 (revised April 2002).

Standards of Significance

The Project may have a significant adverse impact on noise if it would result in any of the following:

- Expose persons to or generate noise levels in excess of guidelines established in the *City of Oakland General Plan* or applicable standards of other agencies (e.g., the Occupational Health and Safety Administration);
- Conflict with city/state land use compatibility guidelines for all specified land uses for determination of acceptability of noise levels as shown in Table 3.5-5;
- Violate the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise, except if an acoustical analysis is performed and all feasible mitigation measures are imposed, including the standard City of Oakland noise measures adopted by the Oakland City Council on January 16, 2001. This standard includes:

  > During the hours of 7:00 p.m. to 7:00 a.m. on weekdays and 8:00 p.m. to 9:00 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standards.

- Violate the City of Oakland Noise Ordinance (Oakland Planning Code Section 8.18.020) regarding nuisance or persistent construction-related noise outside the hours of construction or fail to comply with City of Oakland adopted noise construction measures;
- Create a vibration which is perceptible without instruments by the average person at or beyond any lot line containing vibration-causing activities not associated with motor vehicles, trains, and temporary construction or demolition work, except activities located within the M-40 zone, or within the M-30 zone more than 400 feet from any legally occupied residential property;
- Maintain interior L_{dn} or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories, and long-term care facilities (and may be extended by local legislation action to include single family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24);
- Result in a 5-dBA permanent increase in ambient noise levels in the vicinity of the Project Area above levels existing without the Project;
- Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would expose people residing or working in the Project Area to excessive noise levels; or
- Be located within the vicinity of a private airstrip, and would expose people residing or working in the Project Area to excessive noise levels.

The Project Area is located more than five miles from the Metropolitan Oakland International Airport and outside the existing and future (2010) airport noise contour of 65 dBA.[6] Therefore, excessive airport-related noise is not anticipated in the Project Area and the last two standards of significance are not addressed further in this EIR.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not diminish potentially significant or significant effects to a less-than-significant level, the impacts are classified as "significant unavoidable effects (SU)." For this section, NO refers to Noise.

NO-1. The Project would result in short-term increases in noise and vibration levels due to construction over the course of multiple years. This would be considered a significant impact. (S)

Construction of the Project would occur over a ten-year period, beginning in 2005. During this period, a wide variety of construction and demolition equipment would be used, and material would be transported to and from each of the development areas by truck. Construction activities would also involve the use of smaller power tools, generators, and other sources of noise. Pile driving may also be necessary for Project construction. During each stage of development, there would be a different mix of equipment operating, and noise levels would vary based on the amount of equipment in operation and the location of the activity. The U.S. Environmental Protection Agency has compiled data regarding the noise-generating characteristics of specific types of construction equipment and typical construction activities (see Table 3.5-8). These noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6 dBA L_{eq} per doubling of distance. For example, a noise level of 84 dBA L_{eq} measured at 50 feet from the noise source to the receptor would be reduced to 78 dBA L_{eq} at 100 feet from the source to the receptor, and to 72 dBA L_{eq} at 200 feet from the source to the receptor.

The Oakland Noise Ordinance limits construction noise levels to maximum levels during specific daytime and nighttime hours. The Noise Ordinance limits vary depending on the affected land use. Given the scale of the Project and the construction proposed for each development area under both development scenarios, long-term (more than 10 days) noise

[6] City of Oakland, Oakland Redevelopment Agency, *West Oakland Redevelopment Plan*, State Clearinghouse # 2002072065, 2003, Chapter 7 – Noise, p. 7-12.

Table 3.5-8
Construction Equipment Noise Levels Before and After Mitigation (dBA)

Equipment	Noise Level at 50 Feet (Before Mitigation)	With Feasible Noise Control[a] (After Mitigation)	Noise Level at 100 Feet (Before Mitigation)	With Feasible Noise Control[a] (After Mitigation)
Earthmoving				
Front Loaders	79	75	73	69
Backhoes	85	75	79	69
Dozers	80	75	74	69
Tractors	80	75	74	69
Scrapers	88	80	82	74
Graders	85	75	79	69
Trucks	91	75	85	69
Pavers	89	80	83	74
Materials Handling				
Concrete Mixer	85	75	79	69
Concrete Pump	82	75	76	69
Crane	83	75	77	69
Derrick	88	75	82	69
Stationary				
Pumps	76	75	70	69
Generator	78	75	72	69
Compressors	81	75	75	69
Impact				
Jack Hammers	88	75	82	69
Pneumatic Tools	86	80	80	74
Impact Pile Driver	101	95	95	89
Vibration Pile Driver	96	90	90	83
Other				
Saws	78	75	72	69
Soil Vibrators/Compactors	76	75	70	69

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

Note:

a. Feasible noise control methods include selection of quieter procedures or machines and implementation of noise-control features requiring no major redesign or extreme cost.

limits would apply as presented in Table 3.5-6. Except for emergencies or in cases where nighttime roadway construction is carried out to minimize traffic congestion, construction is not allowed during nighttime hours. In general, construction noise levels (as listed in Table 3.5-8) would be consistent with the Noise Ordinance's weekday limits wherever construction occurs more than 50 feet from any receptor and recommended noise controls are implemented. At distances closer than 50 feet, noise generated by construction equipment would generally exceed weekday and weekend Noise Ordinance limits.

The nearest sensitive receptors to the Project Area are the mixture of single-family and multi-family residences adjacent to Development Area Two, across Pine Street between 10th and 11th Streets (approximately 50 feet from the street right-of-way); residences adjacent to Development Area Three, across 12th Street between Pine and Wood Streets and across Wood Street between 12th and 13th Streets (approximately 50 feet from the street right-of-way); residences adjacent to Development Area Nine, across Wood Street between 16th and 17th Streets (approximately 50 feet from the street right-of-way); and Raimondi Park, across Wood Street between 18th and 20th Streets. Construction activities without pile driving would generate noise levels of up to 84 dBA L_{eq} at these homes during ground clearing, and 89 dBA L_{eq} at these homes during excavation, grading, and finishing. In addition, since the Project may require the use of pile drivers, noise levels of approximately 101 dBA L_{eq} at 50 feet from the source may be generated. With pile driving, noise is generated in short bursts separated by a few seconds, rather than as a steady-state source. This activity would be highly disturbing to surrounding uses and could affect indoor environments. Without mitigation, this impact would be significant.

In addition to off-site construction noise impacts, there would be on-site construction noise impacts for Project Area residents. For example, Development Area Four is scheduled to be developed after Development Area Three. Future residents in Development Area Three would be exposed to construction activities in Development Area Four. Similarly, future residents of Development Area Seven would be affected by construction equipment and noise during the development of Development Area Eight.

Pile driving is potentially the greatest source of noise and vibration generated from construction activities. There are essentially two types of pile drivers: vibratory and impact. A vibratory pile driver, which can operate at different frequencies, vibrates the pile into the ground. The continuous motion of vibratory pile driving may increase the resonance response (sympathetic vibrations in response to ground vibrations) of building structures. The typical noise level at 50 feet from this type of source is 96 dBA. Typical peak particle velocity (PPV) values at 25 feet for vibratory equipment range from 0.734 to 0.170.[7] Impact pile drivers produce a high level of vibration for short periods (0.2 second) with sufficient time between impacts to allow a

[7] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment,* DOT-T-95-16, April 1995, Table 12-2 – Vibration Source Levels for Construction Equipment.

building's resonant effects to decay before the next vibration event.[8] Typical PPV values at 25 feet for impact equipment ranges from 1.518 to 0.644.

Since much of the Project Area is on unconsolidated soils, consisting of sand, rock, clay and mud, it is difficult to quantify the potential vibration impacts of pile-driving activities. However, it is possible that impacts would occur from pile-driving activities next to existing and occupied structures, as well as future residences located adjacent to development areas under construction. These impacts would be temporary (on the range of days or weeks since pile driving would only occur during building foundation construction phases) and potential impacts would depend on factors such as the location of the piles relative to existing structures, the time and energy required to drive the piles, the type of pile driver, and the structural design of the buildings. Any existing structure or sensitive receptor within 50 feet of the pile driving activity would be affected if appropriate mitigation measures were not implemented to reduce these noise and vibration impacts.

The Project Area, in aggregate, represents one of the largest land areas of collective development in the City, and more than half the land area contains deep bay mud layers above structurally sound building-supporting sand and clay. The likely need for driven piles, the large land area, and the private financing-driven need for phased construction over an approximately ten-year period make this Project unique in the City of Oakland with respect to the significant construction-related noise impacts.

Summary of Impact NO-1 by Development Area. Construction activities in each of the development areas have the potential to result in significant noise and vibration impacts. Accordingly, all Project Sponsors would be required to implement the mitigation measures identified below.

Development Area	No Impact	LTS	PS	S
1			✓	
2			✓	
3			✓	
4			✓	
5			✓	
6			✓	
7			✓	
8			✓	
9			✓	

MITIGATION MEASURES. The following mitigation measures would apply to all development areas and would reduce significant construction noise impacts. Implementation of these measures would minimize the effects of construction-related noise and vibration on nearby structures and sensitive receptors; however, if pile drivers are necessary and would be used

[8] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment,* DOT-T-95-16, April 1995.

within 100 feet of any sensitive receptor, the maximum allowable receiving noise standard for temporary construction or demolition activities (i.e., 80 dBA-residential land uses) would be exceeded. Accordingly, Mitigation Measure NO-1.2 below specifically addresses pile-driving noise abatement. The combination of all suggested mitigation measures would reduce significant construction noise to a less-than-significant level. (LTS)

NO-1.1 *City Council-Adopted Best Management Practices to Reduce Construction Noise.* The Project Sponsors shall incorporate the following practices into the construction documents to be implemented by the Project's contractor, and these practices shall be provided to the Department of Building Inspection for approval prior to the issuance of building permits:

a. The Project Sponsors shall require construction contractors to limit standard construction activities as required by the City Building Department. Such activities are generally limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, with pile driving and/or other extreme noise generating activities greater than 90 dBA limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday, with no extreme noise generating activity permitted between 12:30 and 1:30 p.m. No construction activities shall be allowed on weekends, without prior authorization of the Building Services Division, and no extreme noise-generating activities shall be allowed on weekends and holidays.

b. Equipment and trucks used for construction shall utilize the best available noise control techniques (improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts.

c. The physical separation between noise generators and noise receptors shall be maximized as feasible. Such separation includes, but is not limited to, the following measures:

   - Use shields, impervious fences, or other physical sound barriers to inhibit transmission of noise to sensitive receptors;
   - Locate stationary equipment to minimize noise impacts on the community; and
   - Minimize backing movements of equipment.

d. Impact equipment (e.g., jack hammers and pavement breakers) used for Project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Compressed air exhaust silencers shall be used on other equipment. Other quieter procedures, such as drilling rather than impact equipment, shall be used whenever feasible.

e. Prohibit unnecessary idling of internal combustion engines.

f. Schedule construction activity that produces higher noise levels during less noise-sensitive hours (normally 8:00 a.m. to 4:00 p.m. on weekdays). Minimize noise-intrusive impacts during the most noise-sensitive hours by planning noisier operations during times of highest ambient noise levels.

g. Select routes for movement of construction-related vehicles and equipment so that noise-sensitive areas, including residences, hotels, and outdoor recreation areas, are avoided as much as possible. Include these routes in materials submitted to the Department of Building Inspection for approval prior to the issuance of building permits.

h. Designate a noise disturbance coordinator who will be responsible for responding to complaints about noise during construction. The telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site and shall be provided to the Department of Building Inspection. Copies of the construction schedule shall also be posted at nearby noise-sensitive areas.

NO-1.2 *Pile Driving Noise and Vibration Effects on Structures*. To mitigate potential pile driving or other extreme noise-generating impacts, a set of site-specific noise attenuation measures shall be completed under the supervision of a qualified acoustical consultant. This plan shall be submitted for review and approval by the Department of Building Inspection to ensure that feasible noise attenuation is achieved to satisfy the City's standards contained in Section 17.120.050 of the Planning Code. These attenuation measures shall include as many of the following control strategies as feasible and shall be implemented prior to any required pile driving activities:

a. Implement "quiet" pile driving technology (e.g., cast-in-drilled hole piles, soil-mix wall technology, shielded pile drivers, vibratory pile driving or pre-drilled pile holes), where feasible, in consideration of geotechnical and structural requirements and conditions;

b. Erect temporary plywood noise barriers around the entire construction site;

c. Adjust the scheduling and duration of pile driving;

d. Utilize noise control blankets on the building structures as the building is erected to reduce noise emissions from the site;

e. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings; and

f. Monitor the effectiveness of noise attenuation measures by taking noise measurements during pile driving activities.

NO-1.3 *Proper Noticing Procedures*. Prior to the issuance of each building permit, along with the submission of construction documents, the Project Sponsors shall submit to the City Building Department a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include:

a. A procedure for notifying the City Building Division staff and Oakland Police Department;

b. A plan for posting signs on site pertaining to permitted construction days and hours, complaint procedures, and who to notify in the event of a problem;

c. A listing of telephone numbers (during regular construction hours and off hours);

d. The designation of an on-site construction complaint manager for the Project; and

e. Notification of neighbors within 300 feet of the Project construction area at least 30 days in advance of pile-driving activities about the estimated duration of the activity.

A preconstruction meeting to be held with the job inspectors and the general contractor/on-site project manager to confirm that noise mitigation and practices (including construction hours, neighborhood notification, and posted signs) are completed.

NO-2. The Project would introduce residential land uses in an area where noise levels would be "Conditionally Acceptable" for such uses. Existing regulations would ensure that these new uses would not substantially contribute to existing ambient noise levels. Consequently, changes in the acceptable noise levels for land use compatibilities would be less than significant. (LTS)

Noise monitoring in the Project Area indicates that the ambient noise environment is currently in the range of 60 to 69 dBA, which is within the "Conditionally Acceptable" land use compatibility category for multi-family residential land uses. The Project would expose new residential uses to existing mechanical noise associated with the California Waste Solutions and other warehouse facilities in the Project Area vicinity (particularly along Wood and Pine Streets). However, the Project would be required to conform to Title 24 of the California Code of Regulations, which requires an interior standard of 45 CNEL in any habitable room with all doors and windows closed and an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard. Because interior noise levels would be maintained at or below 45 dBA, and the Project under both development scenarios would be consistent with the General Plan in this regard, no significant noise impacts would result from development of the Project.

In addition, ambient noise levels that currently exist within the Project Area vicinity would not likely change due to the Project under either development scenario, because new noise sources located in the Project Area would not exceed existing operational noise from roof-mounted equipment, trash collection activities, loading/trucking activities, and noises from off-site facilities such as the California Waste Solutions recycling center. To further ensure that such activities are not intrusive from a noise perspective, the proposed Wood Street Zoning Regulations require:

- Screening of surface parking lots with a solid wall or fence or an open fence combined with adjoining planting;
- Prohibition of surface parking within the Wood Street Overlay Zone, which would avoid surface parking noise near sensitive residential receptors on the east side of Wood Street;
- Screening of all tuck-under parking visible from and within 60 feet of Wood so that it cannot be directly viewed from Wood Street;
- Screening of parking garages from the street frontage;
- Design of service doors or gates to preclude any view into the service area;
- Screening of all equipment located within 25 feet of a street line or adjoining setback line;
- Siting of rooftop equipment so that it is not visible from the street; and
- Enclosure of all waste handling areas.

Therefore, development of the Project would not result in a significant increase in ambient noise levels.

Summary of Impact NO-2 by Development Area. Development areas that would introduce residential uses into the Project Area would expose new residents to conditionally acceptable noise levels in the Project Area vicinity; however, compliance with local and state regulations would ensure that future residents are not significantly affected. In addition, the proposed Wood Street Zoning Regulations include design standards and regulations that would screen potential Project Area noise sources from sensitive receptors off site and reduce potential impacts to less than significant.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

NO-3. Under both of the development scenarios for the Project, increased traffic noise levels due to implementation of the Project would not result in an increase in ambient noise levels of an amount greater than 5 dBA. (LTS)

New resident and employee vehicle trips generated by the Project would contribute to existing traffic noise levels along nearby roadways. Vehicular traffic between the frontage road and Wood Street would not be permitted by the Project. Table 3.5-9 presents the existing traffic noise levels with and without the Project along three roadway segments along Wood Street. Traffic noise levels are based on peak traffic counts provided by Dowling Associates, used in conjunction with the Federal Highway Administration Highway Noise Prediction Model (FHWA-RD-77-108).

Table 3.5-9
Existing and Projected Traffic Noise Levels, L_{dn} (dBA) at 50 feet

Roadway Segment	Existing Traffic Noise (2004)	Existing Plus Maximum Residential Scenario Traffic Noise (2004)	Existing Plus Maximum Trips Scenario Noise (2004)
Wood Street between 7th and 8th Streets	60.9	61.3	61.3
Wood Street between 14th and 15th Streets	55.6	58.3	58.7
Wood Street between 18th and 20th Streets	55.6	58.0	58.0

Source: EIP Associates, 2004.

Notes: Based on FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.

Traffic on Wood Street between 7th and 8th Streets generates the greatest street noise levels in the Project Area vicinity, ranging from 60.9 to 61.3 dBA in 2004. As shown in Table 3.5-9, the greatest increase in noise between existing traffic noise (2004) and existing plus Project traffic noise (2004), is 3.1 dBA along Wood Street between 14th and 15th Streets under the Maximum Trips Scenario. Therefore, traffic noise levels with implementation of the Project would be below the 5-dBA significance threshold, and impacts related to increased traffic noise levels due to Project implementation under any of the development scenarios would be considered less than significant.

Summary of Impact NO-3 by Development Area. Proposals for each of the development areas would increase vehicular trips in the Project Area vicinity; however, the change in ambient noise levels would be less than the 5-dBA threshold used by the City to identify a significant effect. Accordingly, increased vehicular noise associated with individual development areas would be less than significant.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

Cumulative Analysis

NO-4. The Project, in combination with related projects, could result in short-term cumulative increases in noise and vibration levels due to construction; however, compliance with the controls imposed under the City's Noise Ordinance would reduce significant cumulative construction noise impacts to less than significant. (LTS)

For the purposes of this analysis, development of the related projects represented by the City of Oakland's Cumulative Growth Scenario, described in Appendix C, is considered to contribute to cumulative noise impacts. Noise by definition is a localized phenomenon, and drastically reduces in magnitude as distance from the source increases. Consequently, only projects nearby in the West Oakland area (in the Project Area vicinity) could contribute to cumulative noise impacts.

Construction projects currently occur, and are anticipated to continue to occur, throughout the West Oakland area. The list of related projects in Appendix C does not indicate any projects within one-quarter mile of the Project Area. Accordingly, there are no foreseeable projects (and associated construction activities) in the vicinity of the Project Area whose construction could cumulate with the Project. However, new projects not currently identified in Appendix C could result from the redevelopment activities anticipated by the *West Oakland Redevelopment Plan* and the *Oakland Army Base Area Redevelopment Plan*. To the extent that these potential projects occur within one-quarter mile of the Project Area and construction is concurrent with the Project, there may be significant cumulative construction noise or vibration impacts. Because the City's Noise Ordinance establishes strict criteria to control construction-related noise, and these criteria would apply to all projects in the City of Oakland, it is expected that construction-related noise impacts would be reduced to less than significant.

NO-5. Traffic generated from either the Maximum Residential Scenario or the Maximum Trips Scenario in combination with other related projects and background growth would not significantly contribute to cumulative noise impacts. (LTS)

The traffic generated due to the Project would be the major contributor to cumulative noise effects. Traffic noise from background growth (2004) and related projects were added to

existing traffic noise to derive "future traffic noise in 2025." Cumulative noise analysis for the Project includes West Oakland and surrounding freeways and major roadways in the Project Area vicinity. The complete list of cumulative projects used in the traffic analysis is reported in Appendix C. The resultant noise level increases in the Project Area vicinity between 2004 and 2025 range from 0 to 2.5 dBA, with the greatest increases in traffic noise levels occurring at Wood Street between 7th and 8th Streets.

Cumulative noise conditions with the addition of the Project under the Maximum Residential and Maximum Trips Scenarios are shown in Table 3.5-10. The roadway segment of Wood Street between 14th and 15th Streets is predicted to experience the greatest increase in cumulative noise conditions. The existing noise level for this segment is 55.6 dBA. The future plus Maximum Trips Scenario (2025) noise level is 58.7 dBA. This represents an increase of 3.1 dBA above existing conditions, which is below the 5 dBA significance threshold for traffic-related noise. Therefore, traffic generated from the Project would result in a less-than-significant contribution to this significant cumulative effect and associated noise levels.

Table 3.5-10
Cumulative Traffic Noise Levels with and without the Project, 2025
(L_{dn} [dBA] at 50 feet)

Roadway Segment	Future without Project Traffic Noise (2025)	Future Plus Maximum Residential Scenario Traffic Noise (2025)	Future Plus Maximum Trips Scenario Noise (2025)
Wood Street between 7th and 8th Streets	63.4	63.6	63.6
Wood Street between 14th and 15th Streets	55.7	58.3	58.7
Wood Street between 18th and 20th Streets	55.7	58.0	58.3

Source: EIP Associates, 2004.

Note: Based on FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.

Summary of Impact NO-5 by Development Area. Since development of the entire Project Area would result in a less-than-significant contribution to cumulative noise impacts, proposals in each of the individual development areas would also result in a less-than-significant contribution to cumulative noise impacts.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

3.6 AIR QUALITY

Introduction

This section summarizes pertinent air quality baseline information including descriptions of the climate in the Project Area; federal, state, and regional air quality standards; and existing air quality conditions in the San Francisco Bay Area for both "criteria air pollutants" (pollutants for which state and federal ambient standards exist) and "toxic air contaminants" (TACs) (pollutants that pose human health risks). An extensive discussion of particulate emissions is included because this pollutant is of particular concern in the vicinity of the Project Area, in light of the nearby industrial and Port-related trucking traffic. Air quality effects caused by stationary and mobile sources related to the Project and its individual components are evaluated in this section, based on City of Oakland CEQA significance criteria, including state and federal ambient air quality standards as well as the standards established by the Bay Area Air Quality Management District (BAAQMD). For air quality impacts, the Maximum Residential Scenario and the Maximum Trips Scenario were evaluated. These scenarios were selected for localized carbon monoxide impacts because they represent the fewest and greatest number of vehicular trips and thus carbon monoxide impacts that could be anticipated from Project implementation. For regional air emissions, the Maximum Trips Scenario was evaluated in order to illustrate the greatest amount of emissions from Project implementation. Other air quality impacts, such as construction-related emissions, creation of odors, and emissions of TACs, do not vary substantially with the particular development scenario, and thus the analyses for these effects would be applicable to all scenarios.

Setting

Topography and Meteorology

The San Francisco Bay Area's regional meteorological conditions are cool and dry in the summers and mild and moderately wet in the winters. A daytime sea breeze provides fresh air to the Bay Area but also tends to cause temperature inversions, or the positioning of cool surface air underneath warmer upper air. The inversions limit vertical motion of pollution and cause pollution potential to be highest in the sheltered valleys throughout the region and in the subregions that are not directly affected by the marine air entering through the Golden Gate.[1]

Temperatures in Oakland average 58 degrees Fahrenheit annually, ranging from the mid-40s in the winter to the mid-70s in summer. Oakland averages 18 inches of precipitation annually, but because much of the area's rainfall is derived from the fringes of mid-latitude storms, a shift in the annual storm track of a few hundred miles can mean the difference between a wet year and near-drought

[1] BAAQMD, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, April 1996, revised December 1999.

conditions. Winds in Oakland generally travel from the southwest through the northeast at eight to ten miles per hour and then diverge across the entire Bay Area. At night, especially in winter, as the land becomes cooler than the nearby ocean, an offshore wind of two to four miles per hour develops from the Oakland Hills towards the Bay. The net effect of the prevailing wind pattern is that the Oakland area is ventilated with clean marine air, resulting in relatively good air quality.

Ambient Air Quality Standards

Federal, state, and local laws and regulations form the foundation for controlling air pollution. The federal Clean Air Act (CAA), including Amendments of 1990, and the California Clean Air Act (CCAA) of 1988, specify that federal and state regulatory agencies set upper limits on the airborne concentrations of six criteria air pollutants. National Ambient Air Quality Standards exist for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter, and lead.[2] Reactive organic gases (ROG) and oxides of nitrogen (NO_x) are also regulated as precursor contaminants that react in the atmosphere to form ozone, and particulate matter is regulated as inhalable particulate matter of ten microns or less in diameter (PM_{10}) and as fine particulate matter of less than two and a half microns in diameter ($PM_{2.5}$).

Federal and state standards for these pollutants establish upper limits that protect all segments of the population, including those most susceptible to the pollutants' adverse effects (e.g., children, the elderly, people weak from illness or disease, or persons doing heavy work or exercise). The U.S. Environmental Protection Agency (EPA) develops and is responsible for updating the National Ambient Air Quality Standards, and the California Air Resources Board (CARB) is responsible for establishing the California Ambient Air Quality Standards. Ambient air quality standards for criteria pollutants are summarized in Table 3.6-1.

Existing Air Quality Sources and Conditions

The nine-county San Francisco Bay Area Air Basin has a history of recorded violations of federal and state ambient air quality standards for ozone, carbon monoxide, and inhalable particulate matter. Since the early 1970s, the Bay Area has made progress toward controlling these pollutants. This progress has led the area to attain all federal standards and all state standards except for ozone and PM_{10}. The Bay Area is an ozone nonattainment area for state and federal purposes. However, in 2003 the EPA proposed a finding of attainment for the federal one-hour ozone standard in the San Francisco Bay Area. Although the Bay Area does not meet the state standard for PM_{10}, it meets the federal standard.

[2] National Ambient Air Quality Standards have been established for criteria pollutants, named for the "criteria" documents that justified their regulation.

Table 3.6-1
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standard[a]	Federal Standard[b]
Ozone	1-hour	0.09 ppm	0.12 ppm
	8-hour	—	0.08 ppm
Carbon Monoxide (CO)	1-hour	20.00 ppm	35.00 ppm
	8-hour	9.00 ppm	9.00 ppm
Nitrogen Dioxide (NO_2)	1-hour	0.25 ppm	—
	Annual Average	—	0.053 ppm
Sulfur Dioxide (SO_2)	1-hour	0.25 ppm	—
	3-hour	—	0.5 ppm
	24-hour	0.04 ppm	0.14 ppm
	Annual Average	—	0.03 ppm
Particulate Matter (PM_{10})	24-hour	50 $\mu g/m^3$	150 $\mu g/m^3$
	Annual Geometric Mean	20 $\mu g/m^3$	—
	Annual Arithmetic Mean	—	50 $\mu g/m^3$
Fine Particulate Matter ($PM_{2.5}$)	24-hour	—	65 $\mu g/m^3$
	Annual Arithmetic Mean	12$\mu g/m^3$	15 $\mu g/m^3$
Lead (Pb)	30-day Average	1.5 $\mu g/m^3$	—
	Calendar Quarter	—	1.5 $\mu g/m^3$

Source: Summarized by EIP Associates from *BAAQMD CEQA Guidelines*, 1996, revised 1999.

Notes:

ppm = parts per million by volume

$\mu g/m^3$ = micrograms per cubic meter

— = no standard exists for this category

a. California standards for ozone, CO, NO_2, SO_2, and PM_{10} are values that are not to be exceeded.

b. Federal standards other than for ozone, particulates, and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the three-year average of the fourth highest daily concentrations is 0.08 ppm or less. The 24-hour PM_{10} standard is attained when the three-year average of the 99th percentile of the monitored concentrations is less than 150 $\mu g/m^3$. The 24-hour $PM_{2.5}$ standard is attained when the three-year average of 98th percentile is less than 65 $\mu g/m^3$.

Existing Air Pollution Sources in the Region. Air pollution sources can be grouped into three categories: mobile sources, area-wide sources, and stationary sources. Mobile sources include all on-road vehicles as well as off-road mobile equipment, watercraft, and trains. Area-wide sources are stationary, but typically occur throughout developed areas. These sources include use of products such as fertilizers, paints, and sprays, and fuel combustion at residences. Stationary sources include industrial sources and facilities. Additional emissions are also generated by natural sources such as wildfires. The inventory of emissions for each of the state's air basins is maintained by the CARB and the local air district (in the Bay Area, it is the BAAQMD). The emission inventory for Alameda County and the entire Bay Area is summarized in Table 3.6-2.

Table 3.6-2
Estimated Annual Emissions by Source Category
(Tons Per Day – Annual Average)

	2002 Base Year				2020 Forecast			
	ROG	**NO_x**	**CO**	**PM_{10}**	**ROG**	**NO_x**	**CO**	**PM_{10}**
Alameda County								
On-Road Motor Vehicles Emissions	38.6	76.2	369.4	2.1	12.9	17.4	96.9	2.2
Total Emissions (All Sources)	93.5	123.1	490	34.9	70	51.7	211.5	41.9
San Francisco Bay Area Air Basin								
On-Road Motor Vehicles Emissions	182.9	330.4	1795.8	9.4	63.6	89.5	493	10.4
Total Emissions (All Sources)	456.6	621.8	2470	196.3	335.2	316.2	1113	221.4

Source: CARB, Emissions Inventory Branch, Emissions by Category, 2004.
Notes: Emissions from natural vegetation are excluded for all source categories.

Exhaust emissions from on-road motor vehicles are the primary source of ROGs, NO_x, and CO in the San Francisco Bay Area, and road dust sent airborne by traveling vehicles is the primary source of particulate matter. Area-wide and stationary sources make up the remainder of the emission inventory in the region. Particulate matter is regulated in coarse and fine fractions, with $PM_{2.5}$ constituting the fine fraction and PM_{10} constituting the coarse fraction. The health effects from long-term exposure to high concentrations of particulate matter are increased risk of chronic respiratory disease like asthma and altered lung function in children. Short-term exposure to high levels of particulate matter has been shown to increase the number of people seeking medical treatment for respiratory distress, and to increase mortality among those with severe respiratory problems.[3] Particulate matter also results in reduced visibility. Ambient particulate matter has many sources. It is emitted directly by combustion

[3] City of Oakland, *OARB Area Redevelopment Plan EIR*, July 2002, p. 4.4-5.

sources like motor vehicles, industrial facilities, and residential wood burning, and in the form of dust from ground-disturbing activities such as construction and farming. It also forms in the atmosphere from the chemical reaction of precursor gases. Health effects associated with each of the criteria air pollutants in the Bay Area are shown in Table 3.6-3.

Table 3.6-3
Health Effects Summary of the Major Criteria Air Pollutants in the Bay Area

Air Pollutant	Adverse Effects
Ozone	eye irritation respiratory function impairment
Carbon Monoxide	impairment of oxygen transport in the blood stream aggravation of cardiovascular disease impairment of central nervous system function fatigue, headache, confusion, dizziness fatal in the case of very high concentrations in enclosed places
Nitrogen Dioxide	risk of acute and chronic respiratory illness
Sulfur Dioxide	aggravation of chronic obstruction lung disease increased risk of acute and chronic respiratory illness
Lead	impairment of blood functions and nerve constriction behavioral and learning problems in children
Particulate Matter	may be inhaled and lodge in and irritate the lungs increased risk of chronic respiratory disease with long exposure altered lung function in children may produce acute illness with sulfur dioxide

Source: BAAQMD, 1999.

Pollutant Monitoring. The BAAQMD operates a network of air quality monitoring stations throughout the Bay Area. The closest air quality monitoring station to the Project Area is located at Alice Street in Oakland, about two miles to the northeast of the Project Area. Since the San Francisco Bay Area Air Basin has a history of recorded violations of federal and state ambient air quality standards for ozone, CO, and particulate matter, monitoring data are presented for these pollutants.

Ambient Air Quality Monitoring. Table 3.6-4 presents CO and ozone monitoring data from the Alice Street monitoring station, and Table 3.6-5 presents comprehensive data for particulate matter data based on monitoring conducted by the Port of Oakland. Table 3.6-4 indicates that from 2001 to 2003, the Alice Street monitoring station did not report any violations of the California or National Ambient Air Quality Standards for CO or ozone.

Table 3.6-4
Ambient Air Quality Ozone and CO Standards and Monitoring Data Near the Project Area

	Ozone		CO	
Regulatory Standards	**1-hour (ppm)**	**8-hour (ppm)**	**1-hour (ppm)**	**8-hour (ppm)**
California Ambient Air Quality Standard	0.09	N/A	20.0	9.0
National Ambient Air Quality Standard	0.12	0.08	35.0	9.0
Monitoring Data				
2001: Alice Street	0.069	0.043	N/A	3.98
2002: Alice Street	0.053	0.043	N/A	3.34
2003: Alice Street	0.081	0.054	N/A	2.78

Source: CARB, 2003.

Notes:
ppm = parts per million
N/A = not available or not applicable

Particulate Exposure Monitoring. In April 1997, the Port of Oakland initiated a monitoring program to measure PM_{10} and $PM_{2.5}$ to track air quality conditions in West Oakland, and to provide baseline data on particulate air pollution with implementation of Port projects. Particulate samples were collected using Sierra-Anderson Model 241 dichotomous samplers. Concentrations were measured at two sites over a continuous 24-hour period. Monitoring stations were originally located on the Port property near the intersection of 7th Street and Middle Harbor Road, and in a residential area of West Oakland near the intersection of Filbert Street and 24th Street. In 2002, the monitoring station located on Port property was moved to the top of Port Building D581. All three locations are closer to the Project Area than any of the BAAQMD monitoring stations, which makes the Port data relevant for this analysis of the Project. Data reported for the years 1997 to 2003 are summarized in Table 3.6-5.

During this sampling period, the highest annual average PM_{10} concentration in the Project Area was 34.6 $\mu g/m^3$ in 1999, which is above the California Standard but below the National Ambient Air Quality Standard. In 2003, annual average PM_{10} emissions at the Port dropped to 16.2 $\mu g/m^3$. According to the West Oakland Particulate Air Quality Monitoring Program Annual Progress Report for September 2002 to August 2003 by GAIA Consulting, this reduction is likely due to a decrease in construction activities and completion of paving projects at the Port. Annual PM_{10} concentrations in West Oakland were found to be above the California Standard but well below the National Ambient Air Quality Standard. Annual PM_{10} levels at the West Oakland monitoring station were generally lower than those at the Port monitoring station, except in 2003.

Table 3.6-5
PM_{10} and $PM_{2.5}$ Concentrations Near the Project Area

	24-Hour Maximum Concentration		Annual Average Concentration		Days Above National/State Standard	
	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$	PM_{10}
Regulatory Standards						
California Standard	N/A	150	12	20		
National Standard	65	50	15	50		
Monitoring Data						
Port of Oakland Site (7th/Middle Harbor/D851)						
1997	53	83	10.6	25.5	0	0/2
1998	58	76	10.8	26.5	0	0/6
1999	53	72	12.6	34.6	0	0/14
2000	32	60	11.0	30.6	0	0/2
2001	44.6	68.1	11.6	33.4	0	0/7
2002	36.09	39.88	10.6*	27.1*	0	0
2003	29.94	49.98	12.5†	16.2†	0	0
West Oakland Site (Filbert/24th)						
1997	51	77	9.6	23.6	0	0/1
1998	59	65	9.9	22.2	0	0/1
1999	49	81	11.8	25.5	0	0/4
2000	35	59	11.2	25.0	0	0/2
2001	44.6	83	10.6	26.8	0	0/3
2002	43.99	67.53	11.0*	25.6*	0	0
2003	25.46	43.91	9.9†	22.3†	0	0/2

Sources: *OARB Area Redevelopment Plan EIR*, July 2002; West Oakland Particulate Air Quality Monitoring Program Annual Progress Report, September 2002–August 2003.

Notes:

All concentrations in $\mu g/m^3$ = micrograms per cubic meter

N/A = not available or not applicable

* = September 2001 – August 2002

† = September 2002 – August 2003

Annual $PM_{2.5}$ concentrations at the Port monitoring station exceeded California Ambient Air Quality Standards in 1999 and 2003. At the West Oakland monitoring site, and for the years 1997, 1998, 2000, 2001, and 2002 monitored at the Port, there were no annual or 24-hour exceedances of $PM_{2.5}$. In general, particulate matter levels at these monitoring stations are comparable to particulate matter concentrations at other BAAQMD monitoring stations in the Bay Area. As a result, the GAIA report concludes that since particulate monitoring data for West Oakland correlates to other BAAQMD monitoring stations, particulate matter levels seem to be influenced more by regional phenomena than local phenomena.[4]

Sensitive Receptors

Sensitive receptors are facilities or land uses most likely to be used by people that are particularly sensitive to the effects of air pollutants (the very young, the elderly, people weak from illness or disease, or persons doing heavy work or exercise). Residential areas, schools, childcare centers, hospitals, retirement homes, and convalescent homes are each considered sensitive to air pollution. The nearest sensitive receptors to the Project Area are single-family homes, located approximately 50 feet east of the Project Area across Wood Street, and single-family homes located south of 12th Street. Additional sensitive receptors in the area are the Mount Zion Missionary Baptist Church on 13th Street, one block east of the Project Area, and Raimondi Park, located directly across Wood Street between 18th and 20th Streets. No other sensitive land uses (e.g., hospitals, libraries, and retirement homes) are within 100 feet of the Project Area. The Project would also introduce additional sensitive land uses in the Project Area, including residential units.

Applicable Plans and Policies

Air Quality Management Plans. Alameda County is within the San Francisco Bay Area Air Basin, which is in the jurisdiction of the BAAQMD. This air basin also includes Santa Clara, Marin, San Francisco, San Mateo, Contra Costa, Napa, and parts of Solano and Sonoma Counties. The San Francisco Bay Area Air Basin does not currently meet the state ambient air quality standards for ozone or PM_{10}, and the air basin does not meet the federal eight-hour standard for ozone. However, in 2003 the EPA proposed a finding of attainment for the national one-hour ozone standard in the San Francisco Bay Area.

The federal CAA, as amended, and the CCAA of 1988 provide the legal framework for attaining and maintaining ambient air quality standards. Both the federal and state acts require that the CARB designate "nonattainment areas" – portions of California where federal or state ambient air quality standards are not met. Where a pollutant exceeds standards, air quality management plans must be formulated that demonstrate how the standards will be achieved. These laws also provide the basis for the implementing agencies to develop mobile and stationary source performance standards.

[4] GAIA, *West Oakland Particulate Air Quality Monitoring Program Annual Progress Report,* 2002-2003.

The BAAQMD is primarily responsible for planning, implementing, and enforcing the federal and state ambient air quality standards in the Bay Area. The BAAQMD adopted the *Bay Area '91 Clean Air Plan* to implement the requirements of the CCAA of 1988. Since the state ozone standard and the state PM_{10} standard are exceeded in the Bay Area region, the BAAQMD adopted the *2000 Clean Air Plan* on December 20, 2000, and submitted it to the CARB as required by the CCAA. The *2000 Clean Air Plan* includes a control strategy review to ensure that the plan continues to include "all feasible measures" to reduce ozone. No state plan is required to meet state PM_{10} measures.

In 1998, the Bay Area was redesignated as nonattainment for the federal ozone standards. Under the EPA's direction, the *Bay Area 2001 Ozone Attainment Plan* (Final Plan) was prepared in June 2001 by the BAAQMD, the Metropolitan Transportation Commission, and the Association of Bay Area Governments. On October 31, 2003, the EPA proposed a finding of attainment for the San Francisco Bay Area for the national one-hour ozone standard.

Toxic Air Contaminants. TACs, which may have the potential to cause cancer or may pose a present or potential hazard to human health, are considered separately from the criteria pollutants in the regulatory process. Unlike criteria pollutants, there are no ambient standards for TACs; this is partially due to the localized nature of the adverse health impacts caused by TAC emissions. Stationary sources of TACs are regulated directly through emission standards and risk reduction strategies implemented at the sources of the emissions. When a new source of TACs is proposed, a health risk assessment may be needed to estimate the project's potential health risks. Individual TACs vary greatly in the risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another. Where data are sufficient to conduct a health risk, a "unit risk factor" can be developed for cancer risk. The unit risk factor describes the estimated number of individuals in a million who may develop cancer as the result of continuous, lifetime (70-year) exposure to one microgram per cubic meter (μg/m3, equal to one part per million) of the TAC. Unit risk factors provide a standard that can be used to establish regulatory thresholds for permitting purposes. However, they are not a measure of actual health risk because actual populations do not experience the extent and duration of exposure that the hypothetical population is assumed to experience. A project that passes this risk screening is judged to have an insignificant impact on public health. If a project fails this risk screening, this does not necessarily constitute a significant impact, but the project would require further review. Further review usually consists of more detailed dispersion modeling.

Federal, state, and local regulations and guidelines govern the level of analysis necessary for sources that appear to have the potential for high TAC emissions. The state Air Toxics Hot Spots Program and the BAAQMD Risk Management Policy require public notification, reporting, and risk assessments for facilities that have the potential to emit TACs that may cause substantial health risks. Many sources of TACs, such as gasoline stations and dry cleaning businesses, emit levels that are below the thresholds for public notification and reporting and would not be expected to cause substantial health risks.

There are no standards currently regulating the air toxics emitted by diesel engines at construction sites or making deliveries. However, the state has adopted various regulations such as Title 13 California

Code of Regulations (CCR) Sections 1956.1—1956.4 and 1956.8, and Title 13 CCR Section 2420 et seq., that would reduce diesel emissions in the overall fleet of diesel-fueled vehicles. These regulations include new diesel fuel and emissions standards, and inspection and maintenance requirements. In particular, the reformulated fuel requirements that have already been adopted by EPA and CARB are expected to reduce, but not eliminate, mobile-source TAC emissions.

The major concern with air toxics from diesel exhaust is along heavily traveled transportation corridors and around permanent facilities, such as truck depots and distribution centers, with a high concentration of diesel-fueled vehicles. According to EPA's *Diesel Health Assessment Document* (July 2000), diesel vehicles account for a large portion of the toxic air contamination in the state, and the risk is highest where these vehicles concentrate (such as along freeways or in depots). For this reason, the state is taking an active role in devising new standards for these vehicles, for the fuel itself, and for alternative fuels.

No approved or mandated methods or models have been developed to accurately predict localized diesel exhaust emissions and the associated risks of placing people near roadways with diesel vehicles. With EPA's classification of diesel exhaust as a toxic air contaminant in July 2000, air districts throughout the state are waiting for the CARB to promulgate the methods and/or models for evaluating the local concentrations and associated risks of the pollutant.

Diesel exhaust emission is not only a local issue, but also one of statewide importance. CARB has addressed this issue by preparing and approving the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (Risk Reduction Plan) (approved on September 28, 2000). This plan represents the state's comprehensive blueprint to substantially reduce diesel particulate emissions throughout the state. The plan contains the following components:

- New regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce diesel PM emissions by about 90 percent overall from current levels;
- New retrofit requirements for existing on-road, off-road, and stationary diesel-fueled engines and vehicles where determined to be technically feasible and cost effective; and
- New diesel fuel regulations to reduce the sulfur content levels of diesel fuel to no more than 15 parts per million, to provide the quality of diesel fuel needed by the advanced diesel PM emission controls.

The Risk Reduction Plan shows that on-road mobile sources comprise a good portion of the past, existing, and future (through 2010) diesel PM_{10} emission inventory within the state. Therefore, the risks associated with on-road diesel vehicles have been addressed by the state and will be substantially reduced by statewide programs over the next decade. In addition, it is now recognized that the maintenance of the truck fleet is a major determinant of the amount of emissions, as critical as the number of truck trips and the size of the trucks. Consequently, a primary means of reducing diesel exhaust emissions will be statewide efforts to retrofit and maintain the truck fleet. There are no specific timelines for components of the Risk Reduction Plan, but CARB will implement proposed

control measures and amendments to current regulations presented in the plan over the next decade to reach the ultimate goal of reducing California's diesel PM emissions and associated cancer risk by 85 percent by 2020.

In addition, on July 22, 2004, the CARB banned heavy diesel trucks and buses from unnecessary idling for more than five minutes. Expected to become effective in six months, the ban would substantially reduce diesel emissions, which are estimated to account for 70 percent of the TACs in the state.

Impacts and Mitigation Measures

Standards of Significance

The Project would have a significant impact on the environment if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the region for the Project Area is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people;
- Contribute to CO concentrations exceeding the State Ambient Air Quality Standards of 9 ppm averaged over eight hours and 20 ppm averaged over one hour;
- Result in total emissions of ROG, NOx, or PM_{10} of 15 tons per year or greater, or 80 pounds (36 kilograms) per day or greater;
- Result in potential to expose persons to substantial levels of TACs, such that the probability of contracting cancer for the maximally exposed individual (MEI) exceeds be ten in one million;
- Result in ground-level concentrations of non-carcinogenic TACs, such that the Hazard Index would be greater than one for the MEI;
- Result in any individually significant impact; or
- Result in a fundamental conflict with the local general plan, when the general plan is consistent with the regional air quality plan. When the general plan fundamentally conflicts with the regional air quality plan, then if the contribution of the project is cumulatively considerable.

Analysis of Project consistency with the local air quality plan and applicable air quality standards is combined with the discussion of air pollutant emissions associated with the Project. There are no TACs associated with the Project Area or implementation of the Project; therefore, the significance standard addressing ground-level concentrations of TACs would not apply. In addition, cumulatively considerable impacts of the Project are addressed in the discussion of consistency with the General Plan and General Plan consistency with the *Clean Air Plan*. Because this Project requires a General Plan Amendment, cumulative impact analysis also considers the difference between the Project and the original land use designation for the Project Area in terms of population projections, vehicle miles traveled, and potential land use conflicts.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not diminish potentially significant or significant effects to a less-than-significant level, the impacts are classified as "significant unavoidable effects (SU)." For this section, AQ refers to Air Quality.

AQ-1. Construction activities for the Project could result in short-term increases in PM_{10} emissions that could violate City and BAAQMD air quality standards. (PS)

Foreseeable construction activities would occur during site preparation, grading, placement of utilities and other infrastructure, placement of foundations for structures, and fabrication of structures across the entire 29.2-acre Project Area. Construction activities would require the use of heavy trucks, excavating and grading equipment, concrete breakers, concrete mixers, and other mobile and stationary construction equipment. Emissions during construction would be caused by material handling, traffic on unpaved or unimproved surfaces, use of paving materials and architectural coatings, exhaust from construction worker vehicle trips, and exhaust from diesel-powered construction equipment.

Heavy construction activity on dry soil exposed during construction phases between 2005 and 2015 could cause emissions of dust (usually monitored as PM_{10}). ROGs, NO_x, CO, and additional particulate matter emissions also would be created from the combustion of diesel fuel by heavy equipment and construction worker vehicles. Throughout the construction phases, construction-related emissions would vary day to day depending on the specific phase at the time.

Construction-related activities associated with the Project would result in dust and equipment exhaust emissions that could, at times, contribute to nuisances to adjacent residential uses, at Mount Zion Missionary Baptist Church, or at Raimondi Park, or could contribute to deterioration of local air quality. Construction projects using typical construction equipment, such as dump trucks, scrapers, bulldozers, compactors, and front-end loaders which temporarily emit precursors of ozone (e.g., ROGs or NO_x), are already included in the

emission inventories of state- and federally-required air plans and would not have a significant impact on the attainment and maintenance of ozone ambient air quality standards. However, unless particulate emissions are reduced by implementation of feasible control measures, impacts caused by these emissions would be potentially significant. As a result, construction activities at each of the nine development areas that comprise the Project Area would result in potentially significant air quality impacts.

Summary of Impact AQ-1 by Development Area. Construction activities and ground disturbance would occur in each of the development areas. As a result, proposals for each of the areas could result in significant construction-period air quality impacts, and all Project Sponsors would need to implement the recommended mitigation measures.

Development Area	No Impact	LTS	PS	S
1			✓	
2			✓	
3			✓	
4			✓	
5			✓	
6			✓	
7			✓	
8			✓	
9			✓	

MITIGATION MEASURES. The following mitigation measures in accordance with City practice and BAAQMD standard mitigation requirements would reduce construction-related air quality impacts to a less-than-significant level. (LTS)

AQ–1.1 *Construction Dust Control Measures*. The Project Sponsors shall require the following practices be implemented by including them in the contractor construction documents:

a. Water all active construction areas at least twice daily.

b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.

c. Pave, apply water three times daily, or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at the construction sites.

d. Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at the construction sites.

e. Sweep public streets adjacent to construction sites daily (with water sweepers) if visible soil material is carried onto the streets.

f. Hydroseed or apply non-toxic soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).

g. Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).

h. Limit traffic speeds on unpaved roads to 15 miles per hour.

i. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

j. Replant vegetation in disturbed areas as soon as possible.

k. Install wheel washers for all exiting trucks or wash off the tires or tracks of all trucks and equipment leaving the construction site.

l. Install wind breaks at the windward sides of the construction areas.

m. Suspend excavation and grading activities when wind (as instantaneous gusts) exceeds 25 miles per hour.

AQ-2. The regional air emissions due to the Project would not violate any City or BAAQMD air quality standard or contribute substantially to an existing air quality problem. (LTS)

Mobile and stationary source emissions for the Project were calculated using the CARB's URBEMIS 2002 computer model and assuming that project buildout would be complete by 2010.[5] Mobile source emissions estimates rely on vehicle trip generation rates derived from factors published by the Institute of Transportation Engineers and project-specific vehicle turning movements from the transportation study conducted by Dowling Associates for this EIR. In addition, peak hour trip generation rates for live/work uses associated with the Project were based on field surveys of similar types of live/work developments in Oakland and Emeryville. The URBEMIS 2002 results combine both vehicle and stationary source emissions generated by the Project.

The Project would increase the number of vehicles and vehicle trips in the Project Area; therefore, mobile air emissions would increase. However, as indicated in Table 3.6-6, operational emissions (including vehicle source emissions) associated with this Project under the Maximum Trips Scenario would not exceed adopted threshold emissions for ROG, NO_x, and PM_{10} and would not contribute to an existing air quality problem. Therefore, emissions of ROG, NO_x, and PM_{10} associated with the Project would not be considered a significant impact.

Because the Project is predicted to exceed the 550 pounds per day significance threshold based on the URBEMIS 2002 modeling results, the BAAQMD recommends further modeling (i.e., CALINE4) to determine if the Project would cause a substantial contribution to the exceedance of the one-hour or eight-hour CO standards (see Impact AQ-3, below).

[5] This assumption of buildout by 2010 is conservative in that the Project Sponsors believe buildout may not occur until 2015. The URBEMIS model takes into account the gradual introduction of cleaner vehicles; thus, analysis years that are farther in the future tend to show lower emissions, while other factors remaining constant. Thus, an assessment assuming Project completion in 2010, rather than 2015, yields more conservative results (i.e., greater emissions).

Table 3.6-6
Air Pollutant Emissions from Project Operations for Maximum Trips Scenario (pounds per day), 2010

Operational Activity	ROG	NO_x	CO	PM_{10}
Maximum Trips Operational Emissions	68.85	78.62	680.54	87.40
Existing Site Emissions	<14.29>	<16.51>	<141.22>	<11.44>
Net Maximum Trips Operational Emissions	4.56	62.11	539.32	75.96
Significance Threshold	80	80	550	80

Source: EIP Associates, 2004.

Summary of Impact AQ-2 by Development Area. Since emissions of air pollutants would not exceed the BAAQMD's significance thresholds for the scenario that considers the maximum trip generation for the entire Project Area, none of the individual development area proposals would exceed City or BAAQMD air quality standards.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

AQ-3. The Project would not contribute to CO concentrations exceeding the State Ambient Air Quality Standard. (LTS)

Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Although the BAAQMD's monitoring stations have not recorded any exceedances of the state or federal CO standards since 1991, consistent with the results from the Alice Street monitoring station, elevated CO concentrations due to heavy traffic volumes and congestion at specific intersections or roadway segments are generally localized and can lead to high levels of CO, or "hot spots." For this reason, the BAAQMD recommends that CO modeling be performed for projects in which traffic would affect intersections or roadway segments operating at LOS D, E, or F, or would cause a decline to LOS D, E, or F. As a result, CO modeling was performed for the following 15 roadway intersections:

- Powell Street / I-80 Northbound Ramps
- 5th Street / Adeline Street
- 7th Street / Maritime Street
- W. Grand Avenue / frontage road
- W. Grand Avenue / Mandela Parkway
- 7th Street / Mandela Parkway
- 3rd Street / Market Street
- W. Grand Avenue / Maritime Street
- W. Grand Avenue / Northgate Boulevard
- 18th Street / Mandela Parkway
- 16th Street / I-880 frontage road
- 12th Street / Brush Street
- 10th St / I-880 frontage road
- 7th St / I-880 Northbound Ramp
- Hollis Street / 40th Street

For this analysis, CO concentrations were calculated based on a simplified CALINE4 screening procedure developed by the BAAQMD. This methodology assumes worst-case conditions (i.e., wind direction is parallel to the primary roadway, 90° to the secondary road; wind speed of less than one meter per second; and a high level of atmospheric stability or lack of change) and provides a screening of maximum, worst-case CO concentrations. Maximum CO concentrations were calculated for peak-hour traffic volumes at the intersections noted above under existing conditions, the Maximum Residential Scenario, and the Maximum Trips Scenario. Results are presented in Tables 3.6-7 and 3.6-8.

The year 2025 was used as the date for CO emission under cumulative conditions, which include the future growth assumed in Section 3.4, Transportation, Circulation, and Parking. In some cases, future or cumulative CO emissions are lower than existing CO levels because vehicles are projected to improve in efficiency in the future and reduce CO emissions. Traffic conditions may also improve in the future at some intersections because of traffic improvement measures, thus reducing concentrated CO emissions. Based on the CALINE4 computer-modeling results (Tables 3.6-7 and 3.6-8), local CO concentrations would not exceed state or national ambient air quality standards. Therefore, emissions of CO associated with the Project would not result in a significant CO air quality impact.

Summary of Impact AQ-3 by Development Area. Since significant CO impacts have not been identified for full development of the Project Area, individual development proposals would not by themselves result in significant CO impacts.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

Table 3.6-7
Summary of Localized CO Analysis (1-hour) for the Project

Intersection	1-Hour CO Concentrations (ppm)			
	Existing 2004	w/Maximum Residential Scenario	w/Maximum Trips Scenario	Cumulative w/Project
Powell Street / I-80 Northbound Ramp	6.0	6.1	6.2	4.8
5th Street / Adeline Street	5.4	5.5	5.5	4.7
7th Street / Maritime Street	4.9	4.9	4.9	4.8
W. Grand Avenue / frontage road	5.6	5.6	5.6	4.8
W. Grand Avenue / Mandela Parkway	5.5	5.5	5.7	4.7
7th Street / Mandela Parkway	5.1	5.1	5.2	4.7
3rd Street / Market Street	4.7	4.8	4.8	4.6
W. Grand Avenue / Maritime Street	5.6	5.6	5.6	4.8
W. Grand Avenue / Northgate Boulevard	5.5	5.5	5.5	4.7
18th Street / Mandela Parkway	4.7	4.7	4.7	4.5
16th Street / I-880 frontage road	N/A	4.9	5.0	4.6
12th Street / Brush Street	5.5	5.5	5.5	4.7
10th Street / I-880 frontage road	N/A	4.8	4.8	4.6
7th Street / I-880 Northbound Ramp	4.9	5.0	5.0	4.7
Hollis Street / 40th Street	5.5	5.5	5.5	4.6
1-Hour Ambient Air Quality Standard	**20.0**	**20.0**	**20.0**	**20.0**

Source: EIP Associates, 2004.

Notes:

Concentrations are based on CALINE4 outputs that are adjusted with anticipated background CO concentrations of 1.4 ppm (1-hr).

N/A= not available or not applicable

Table 3.6-8
Summary of Localized CO Analysis (8-hour) for the Project

Intersection	8-Hour CO Concentrations (ppm)			
	Existing 2004	w/Maximum Residential Scenario	w/Maximum Trips Scenario	Cumulative w/Project
Powell Street / I-80 Northbound Ramp	4.8	4.9	5.0	4.1
5th Street / Adeline Street	4.5	4.5	4.5	4.0
7th Street / Maritime Street	4.2	4.2	4.2	4.1
W. Grand Avenue / frontage road	4.6	4.6	4.6	4.1
W. Grand Avenue / Mandela Parkway	4.5	4.6	4.7	4.1
7th Street / Mandela Parkway	4.3	4.2	4.4	4.1
3rd Street / Market Street	4.1	4.1	4.1	4.0
W. Grand Avenue / Maritime Street	4.6	4.6	4.6	4.2
W. Grand Avenue / Northgate Boulevard	4.5	4.6	4.6	4.1
18th Street / Mandela Parkway	4.1	4.1	4.1	4.0
16th Street / I-880 frontage road	N/A	4.2	4.3	4.0
12th Street / Brush Street	4.6	4.6	4.2	4.1
10th Street / I-880 frontage road	N/A	4.1	4.1	4.0
7th Street / I-880 Northbound Ramp	4.2	4.2	4.2	4.1
Hollis Street / 40th Street	4.5	4.5	4.5	4.0
8-Hour Ambient Air Quality Standard	**9.0**	**9.0**	**9.0**	**9.0**

Source: EIP Associates, 2004.

Notes:

Concentrations are based on CALINE4 outputs that are adjusted with anticipated background CO concentrations of 1.0 pm (8-hr).

N/A = not available or not applicable

AQ-4. The Project would not create objectionable odors affecting a substantial number of people. Accordingly, the Project would have less-than-significant odor impacts. (LTS)

Construction activities could generate airborne odors associated with the operation of construction vehicles (e.g., diesel exhaust) and the application of architectural coatings. However, these emissions would occur during daytime hours only for limited periods and would be restricted to the immediate vicinity of the construction sites and activity. The wind would also tend to disperse odors, and such activities would not affect a substantial number of people or cause a significant impact.

According to the BAAQMD, typical operational uses that may result in significant odor impacts include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing, fiberglass manufacturing, painting/coating operations, rendering plants, and coffee roasters. None of these types of uses are proposed in the Project Area; therefore, creation of objectionable odors would not be a likely impact of the Project.

Summary of Impact AQ-4 by Development Area. Construction-related activities could generate objectionable odors, but the limited duration and exposure to construction vehicle exhausts and other odor-causing activities would be less than significant. None of the development areas propose uses whose operations are typically associated with significant odor impacts.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

AQ-5. The Project would not be a significant source of Toxic Air Contaminants. (NI)

According to the *BAAQMD CEQA Guidelines* Appendix E, TACs may be produced by a variety of sources, including industrial facilities such as refineries, chemical plants, and chrome platers; commercial facilities such as dry cleaners and gasoline stations; and motor vehicles. TACs associated with motor vehicles are generally a result of diesel exhaust emissions associated with truck or bus operations. According to the *BAAQMD CEQA Guidelines*, any project with the potential to expose sensitive receptors or the general public to significant TACs would be deemed to have a significant impact. The Project involves mixed-use, residential and commercial uses, which would not be considered a significant source of TACs. Industrial uses

immediately surrounding the Project Area do not include refineries, chemical plants and chrome platers, or commercial facilities such as dry cleaners. Trucks that use the streets surrounding the Project Area may result in diesel exhaust emissions. However, according to the GAIA report on particulate emissions in West Oakland, particulate emissions in the Project Area are generally comparable to the rest of the Bay Area.[6] In addition, the Project proposes residential and commercial uses rather than industrial uses, which may reduce future truck traffic to the area. As a result, the Project would not be considered a potential source of TACs.

Summary of Impact AQ-5 by Development Area. None of the development areas propose uses that are typically associated with significant TAC emissions. Accordingly, no impact on TAC emissions would be expected with any of the development area proposals.

Development Area	No Impact	LTS	PS	S
1	✓			
2	✓			
3	✓			
4	✓			
5	✓			
6	✓			
7	✓			
8	✓			
9	✓			

Cumulative Analysis

AQ-6. The Project would not conflict with the applicable air quality plan or result in a fundamental conflict with the General Plan, and, therefore, would not have cumulatively considerable air quality impacts. (LTS)

According to the *BAAQMD CEQA Guidelines for Assessing the Air Quality Impacts of Proposed Plans*, the evaluation of cumulative impacts should be limited to an analysis of the consistency of the project with the local general plan and the local general plan with the regional clean air plan.[7] Therefore, if a project is proposed in a city with a general plan that is consistent with the *Clean Air Plan* (CAP), and the project is consistent with the General Plan, then it would not have a significant cumulative impact. However, any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact.

[6] GAIA, *West Oakland Particulate Air Quality Monitoring Program Annual Progress Report*, 2002-2003.

[7] BAAQMD, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, April 1996, revised December 1999.

Because this Project would require a General Plan Amendment, the cumulative analysis should be based on an evaluation of the consistency of the General Plan, as amended, to the CAP. As discussed under Impacts AQ-2 and AQ-3, the Project would not be considered to have an impact on regional air emissions or result in a violation of City or BAAQMD standards and, further, the Project would not result in any individually significant air quality impacts.

According to BAAQMD Guidelines, in order to evaluate General Plan consistency with the CAP, the Lead Agency should consider the Plan's consistency with CAP population and vehicle use projections. Section 3.12, Population, Employment, and Housing, of this EIR provides a discussion of ABAG growth projections and documents that the land use designation and zoning changes proposed by the Project fall within the ABAG citywide growth projections. The *City of Oakland General Plan*, which was completed in 1998, is based on very similar population estimates to the ABAG projections. For example, year 2005 population estimates completed by ABAG and the City of Oakland in 1998 differ by only 0.4 percent, and estimates for 1995 (also completed in 1998) are practically identical. The *City of Oakland General Plan* also includes CAP transportation control measures, and was consistent with the CAP at the time of completion. Although a specific rate of vehicle miles traveled (VMT) increase compared to population growth is not available in the General Plan, the Project would not interfere with the implementation of CAP transportation control measures included in the General Plan and would promote pedestrian travel and transit-oriented development. The General Plan also incorporates buffer zones between industrial and residential land uses by placing business mix or open space uses with lower operational emissions and lower potential for toxics or industrial uses, between residential and industrial uses. The Project has similarly been designed to provide various buffers between residential and industrial uses to the maximum extent possible.

Further, the Project would reduce the motor vehicle emissions resulting from the original General Plan designation for the Project Area. As discussed under Section 3.2, Land Use, Plans, and Policies, the Project would convert Business Mix uses, including commercial and industrial operations, to Urban Residential uses. According to the General Plan, operational emissions associated with industrial and commercial uses would be greater than with residential and limited commercial uses as designated under the Urban Residential classification. The Project would not be a source of odors, toxics, or accidental releases and would be consistent with BAAQMD Land Use and Design Guidelines, which would encourage high density housing development near transit stations (West Oakland BART) and would design new streets and sidewalks to promote pedestrian and bicycle travel, which would also reduce vehicle trips. Therefore, the Project would not be considered to have a cumulatively considerable air quality impact that would fundamentally conflict with the General Plan.

Summary of Impact AQ-6 by Development Area. Since full development of the Project Area would not have a cumulatively considerable effect on air quality, individual development proposals would have a smaller contribution. Accordingly, proposals for each development are would not be expected to contribute to a cumulative air quality impact.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

3.7 CULTURAL RESOURCES

Introduction

This section discusses potential impacts to cultural resources in and near the Project Area. It includes a description of the known historic and prehistoric resources in the Project Area, as well as a summary of the Project Area's cultural history, the regulatory environment governing protection of cultural resources, potential impacts associated with the Project, and mitigation measures to reduce potential impacts to a level of insignificance. The *OARB Area Redevelopment Plan EIR* includes a general discussion of the cultural resources within the vicinity of the Project Area. Since that EIR only provided a programmatic level of analysis, this EIR provides a project-level, site-specific analysis. For the evaluation of impacts to cultural resources, the Maximum Residential Scenario, Maximum Commercial Scenario, and Maximum Trips Scenario would result in similar impacts to cultural resources because all three of the scenarios would have the same potential to affect known and unknown historic and prehistoric resources through construction, renovation, and associated ground-disturbing activities.

Setting

The historic context presented below includes a narrative of prehistoric and historic resources and a general history of the Project Area. The historic resources information is summarized from the *OARB Area Redevelopment Plan EIR,*[1] the Oakland Cultural Heritage Survey files on the Southern Pacific Railroad (SPRR) Station, and the State of California Historic Resources Inventory. The description of prehistoric resources is also from the *OARB Area Redevelopment Plan EIR*.

Regional History

Prehistoric Setting. Human occupation of Oakland extends back 5,000 years or more. The Oakland vicinity was occupied and used prehistorically by Native American groups that subsisted by hunting and gathering the resources of the marshlands along the Bay shore and the nearby uplands, including abundant game, acorns, and other plant sources. At the time of European contact, this area was occupied by the Ohlone (or Costanoan) group of Native Americans, who probably entered the Bay Region between 1,500 and 2000 years ago.

The Ohlone lived in villages generally consisting of thatched, domed huts, usually grouped by clan and divided into the deer and bear moieties (cultural subdivisions). Warfare occurred both within and among the Costanoan culture groups, as well as other groups; however, widespread trade was also practiced with neighboring groups.

[1] City of Oakland, *OARB Area Redevelopment Plan EIR*, July 2002.

The population and traditional livelihood of the Ohlone were severely affected by the influences of contact with Europeans. Spanish missionization, beginning in 1769 and continuing until 1823, brought disease and mistreatment to California Indians. From 1770 to 1900, as a result of disease and warfare, the native population declined by 90 percent, from some 310,000 people to about 20,000,[2] and by 1800, few if any Ohlone remained on the land. In the mid-nineteenth century, the United States negotiated treaties with many groups of California Indians; the treaties established a number of reservations that included more than eight million acres of land. These treaties were rejected by the U.S. Senate, and the people were progressively displaced by direct assault, mining, settlement, and other forms of development.[3]

Historic Setting. Historic settlement of Oakland began during the Spanish Pueblo era, from 1791 to 1820. West Oakland, where the Project Area is located, was originally part of Rancho San Antonio that stretched from San Leandro to El Cerrito on the San Francisco Bay, and inland to the hills. The land was granted to Sergeant Luis Maria Peralta in 1820, although Peralta never made his home on the Rancho, but resided in San Jose. Peralta's four sons lived on the Rancho, and later inherited subdivided portions of the Rancho. Vicente Peralta inherited the portion of Oakland nearest to the Project Area.

The beginnings of Oakland are considered somewhat controversial in that three "partners" squatted on Vicente Peralta's land since 1850. A deal was eventually struck among the parties and Peralta agreed to lease his property to Horace W. Carpentier, who sold lots within his townsite. As a result, the core of the City of Oakland was incorporated in 1852 by Horace W. Carpentier. He became mayor of Oakland in 1854, and received a monopoly of the waterfront area. In 1868, Carpentier granted his holdings to Oakland Waterfront Company, which was then able to attract the Central Pacific Railroad (later Southern Pacific Railroad) to Oakland, and thus, Oakland became the western terminus for the transcontinental railroad.

In 1869, transcontinental rail service began along 7th Street, which was followed by the 1st Street freight line and Long Wharf in 1891. With the arrival of the railroad, Oakland was transformed into a commercial center with a rapidly growing population. The City's population tripled from 10,500 in 1870 to 34,555 in 1880. Much of the Old Oakland Historic District, containing elaborate multi-story brick commercial buildings, dates from this era. By 1880, rapid construction of Italianate Victorian homes occurred between downtown and the railroad service yards in West Oakland. Industries and warehouses also located along the waterfront and railroad.

The Project Area lies on top of a vast human-made fill plain, most of which was constructed between 1900 and 1945. The fill consists primarily of refuse deposits located along the Southern Pacific and Western Pacific railroads. During World War II, the federal government undertook construction of two separate military facilities in the Project Area, the Oakland Army Base (OARB) and the Naval Supply Center Oakland (NSCO). These facilities operated until the 1990s, when they were slated for closure. The

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2 Sherburne F. Cook, "The Epidemic of 1830-1833 in California and Oregon." Berkeley: *University of California Publications in American Archaeology and Ethnology* 43(3), 1955, pp. 303-326

3 Robert F. Heizer, "Treaties," Robert F. Heizer, ed., *Handbook of North American Indians*, Vol. 8, California, 1978, pp.701-704.

NSCO (later called the Fleet and Industrial Supply Center, Oakland) has subsequently undergone redevelopment for industrial port and regional recreational uses.

Record and Literature Search

Previous Records and Literature Searches. The staff of the California Historical Resources Information System's Northwest Information Center (NWIC) at Sonoma State University, Rohnert Park, California, completed a record search of the Project Area on March 13, 2003 (File No. 02-680) as part of the *OARB Area Redevelopment Plan EIR*. The search covered previous archaeological surveys and recorded sites for the Project Area and two blocks beyond its boundaries (referred to as the 16th/Wood sub-district in the *OARB Area Redevelopment Plan EIR*). The record search included a review of the National Register of Historic Places (NRHP) due to its significance in the identification of historic resources and the assessment of impacts, the California Register of Historical Resources (CRHR), the California Inventory of Historic Resources (1976), the listing of California Historical Landmarks (1990), the California Points of Historical Interest listing (May 1992 and updates), the Historic Property Directory (Office of Historic Preservation) current computer list, the Survey of Surveys (1989), General Land Office Plats or government-funded surveys, and other pertinent historic data available at the NWIC for each specific county.

The City of Oakland Cultural Heritage Survey (OCHS) was also consulted in 2003 as part of the OARB study for information on existing historic structures in the Project Area. Copies of 1953 Sanborn maps (updated through the early 1970s by the Oakland Zoning Division, with the use of maps produced by the Sanborn Fire Insurance Company) were reviewed for this analysis. A photocopied set of these maps contain field survey notes and estimated construction dates of structures observed during the 1985—1986 and 1996—1997 OCHS windshield surveys of Oakland.[4]

Consultation with the Native American Heritage Commission. The Native American Heritage Commission (NAHC) in Sacramento was contacted on March 11, 2003 by letter with a description of the proposed *OARB Area Redevelopment Plan* and a request for a listing of local, interested Native American representatives and information on traditional or sacred lands within the Project Area and vicinity.

Previous Historic/Architectural Resources Surveys. Four potential historical resources are known to be located within the Project Area. Development Area Two contains the Pacific Coast Canning Company building (one of four components of a cannery complex), Development Area Four contains Bea's Hotel, Development Area Five contains the Main Hall of the 16th Street Train Station, and Development Area Six contains the attached Baggage Wing, the remaining portion of the structure that supported the Elevated Tracks and the 16th Street Signal Tower. All of the components on Development Area Six are directly associated with the 16th Street Train Station.

Pacific Coast Canning Company, 1111–1119 Pine Street. Four reconnaissance surveys evaluated or included the Pacific Coast Canning Company—in February 1988, 1990, 1994, and September 30, 1996. The initial 1988 evaluation concluded that although the cannery was representative of an important aspect

[4] City of Oakland Planning Department, Cultural Heritage Survey, 1997.

of the early twentieth century regional economy, and although the founder of the cannery, Lew Hing, was an important figure in local ethnic and industrial history, the cannery building had undergone numerous alterations and was determined to lack sufficient integrity to be considered eligible for the NRHP. However, the 1988 study further concluded that if restoration of the cannery were to occur, the integrity of the structure should be reevaluated. By 1996, one of the four structures in the cannery complex (the steel-framed cooling room) had been demolished. A citywide reconnaissance survey of potential historic districts in that year included preliminary evaluation of the remaining structures in the cannery complex. The survey assigned each of the individual structures—including the cannery building—a status code of Cb (of secondary importance, primarily due to lack of sufficient integrity). Because the cannery building remains a structure of secondary importance, the City, in accordance with Policy 3.8 of the General Plan Historic Preservation Element, does not consider the building to be a historical resource for the purposes of this analysis.

Bea's Hotel,[5] *1751 16th Street*. Bea's Hotel was evaluated in September 1988 as part of the OCHS. The survey concluded that the hotel is a representative architectural example (Colonial Revival hotel), but appears to lack sufficient individual architectural distinction and historical association to meet the criteria for listing on the NRHP. The survey considered the hotel to contribute to the architectural and historical significance of the 16th Street Train Station commercial district but was determined to be of secondary importance and was assigned a status code of Db (secondary importance, contributes to a district) under the City's classification system. The district to which Bea's Hotel belongs is also considered an Area of Secondary Importance. Because Bea's Hotel remains a structure of secondary importance, the City, in accordance with Policy 3.8 of the General Plan Historic Preservation Element, does not consider the building to be a historical resource for the purposes of this analysis.

16th Street Train Station and 16th Street Signal Tower. On January 31, 1984, the City of Oakland City Council adopted Ordinance No. 10435 C.M.S., which found that the 16th Street Train Station, consisting of the Main Hall, Elevated Tracks, and Baggage Wing and the nearby 16th Street Signal Tower "is of special historical and architectural significance and is a unique asset to the City," and designated the 16th Street Train Station as a City Landmark. In 1988, a California Department of Parks & Recreation (DPR) historic resources inventory form (DPR Form 523) was completed by the OCHS, and the 16th Street Train Station was assigned an NRHP status of 3—"appears to be eligible for inclusion in the National Register." The 16th Street Train Station and the 16th Street Signal Tower were also recorded in a California Department of Transportation (Caltrans) Architectural Inventory/Evaluation form in 1990 and were determined eligible for the NRHP. The 16th Street Train Station and 16th Street Signal Tower were determined to be eligible for the NRHP under Criterion A, for their association with the development of rail transportation in the Bay Area and on a national level. The criteria used by NRHP are described below under "Applicable Plans and Policies." The 16th Street Train Station was also determined to be eligible under NRHP Criterion C for its architectural significance as an exceptional example of train station design. Although these structures have previously been documented, the following summary discussion is provided as a baseline for the analysis below.

[5] Bea's Hotel was previously called the Golden Eagle Hotel and is still occasionally referred to as such.

The 16th Street Train Station is a terra cotta-clad structure located at the northwest terminus of 16th and 17th Streets (see Figure 3.7-1). It is set at the rear of an open, unevenly paved area approximately 200 feet from Wood Street. The 16th Street Train Station shares the site with a large complex of utilitarian structures set diagonally to the west. The view of the 16th Street Train Station is almost entirely unobstructed from the north, west (along the frontage road), south, and east. The front façade is especially visible from the east at Wood and 16th Streets (see Figure 3.7-2).

The 16th Street Train Station consists of a central, main structure about 50 feet tall, flanked by symmetrical, lower wings to the north and south, known collectively as the Main Hall. A large Baggage Wing extends to the north and west of the Main Hall's north wing. Elevated Tracks—the remainder of the elevated streetcar tracks that ran above the main rail line—run along the entire west side of the Main Hall, extending beyond the Main Hall to the north and south (see Figure 3.7-3). Original plans indicate that the entire complex was constructed at one time, between 1910 and 1912.[6] The rectangular, three-story 16th Street Signal Tower, constructed in 1913, is located about 150 feet to the north of the 16th Street Train Station, along the line of the original tracks (see Figure 3.7-4). The 16th Street Signal Tower was constructed of reinforced concrete with a stucco exterior. The structure has a hipped roof with broad eaves.

The exterior of the Main Hall is clad in granite-colored terra cotta over a granite base. The windows are steel sash and deeply inset in the façade. The hipped roof, originally clad with clay tile, is now covered in rolled composite roofing. The bare metal sub-structure of an entry canopy remains above the main entry. The Elevated Tracks are constructed of steel columns and girders, with two decorative steel canopies extending its full length. The stairs accessing the tracks are cast iron with marble treads.

The Main Hall occupies the full volume of the interior of the central portion of the 16th Street Train Station. The original, marble floors remain, and evidence remains of a tall, marble wainscot (decorative wall lining) that once ran the entire circumference of the room. The original, elaborately decorative, molded plaster walls and ceilings remain, as well.

The buildings have been unoccupied since the 16th Street Train Station sustained structural damage in the 1989 Loma Prieta earthquake, and deterioration has continued since that time. The exterior terra cotta is in generally good condition, showing minimal spalling or cracking, although it is covered with graffiti in many places. Diagonal grouting lines are visible on the north and south walls of the Main Hall, where repairs were made to stabilize areas that were damaged in the earthquake, but no repairs are evident in the remaining portions of the 16th Street Train Station. The decorative metal is missing from the entry canopy, much of the glazing is broken, and the original roof tile is missing, although a number of the tiles are stored inside the Main Hall.

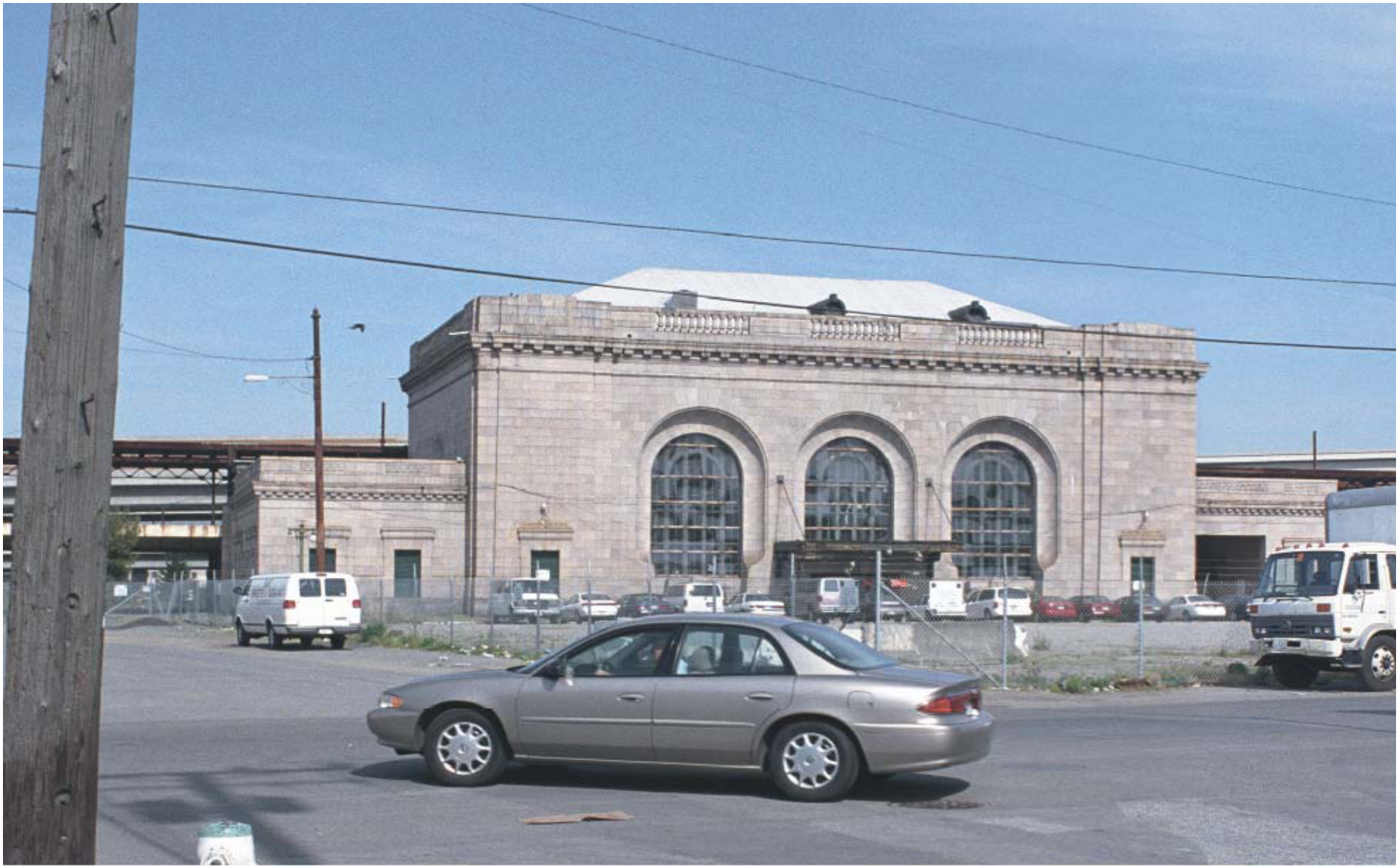
[6] Alan Dreyfuss, AIA, Historic Evaluation of the 16th Street Station, April 22, 2004.



Source: EIP Associates, 2004.

Not to Scale

FIGURE 3.7-1
16th Street Train Station



Source: EIP Associates, 2004.

Not to Scale

FIGURE 3.7-2

16th Street Train Station from Wood Street and 16th Street



Source: EIP Associates, 2004.

Not to Scale

FIGURE 3.7-3
16th Street Train Station and Platform from Northeast



Source: EIP Associates, 2004.

Not to Scale

EIP ASSOCIATES

FIGURE 3.7-4
16th Street Signal Tower

The condition of the interior has substantially deteriorated since the buildings were vacated. The marble wainscot that was originally present has been almost entirely stripped from the walls of the Main Hall, and the plaster walls and ceiling have suffered substantial damage from vandalism and lack of weatherproofing. Two huge paintings that occupied the north and south walls of the Main Hall are missing, with the exception of a small corner of one of the paintings on the south wall. Most doors are missing, as are the original clocks, the decorative light fixtures and the restroom partitions and fixtures throughout the structure.

According to a structural assessment of the 16th Street Signal Tower, the structure appears to be reasonably intact but in need of maintenance and repairs.[7]

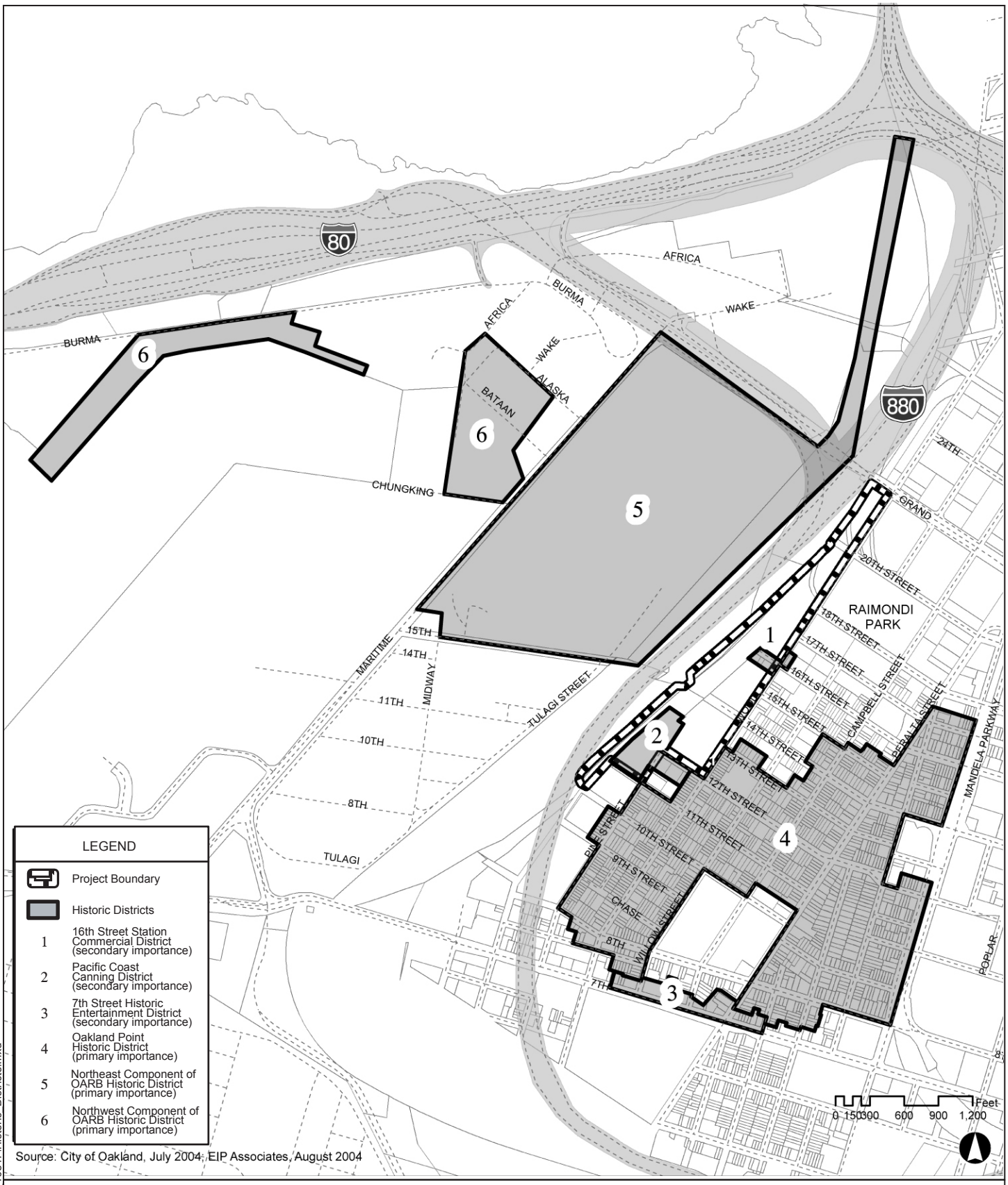
Historic Districts Within or in the Vicinity of the Project Area

As illustrated by Figure 3.7-5, two historic districts are located within the Project Area, including: (1) the 16th Street Station Commercial District; and (2) the Pacific Coast Canning District. In addition, three historic districts are located in the vicinity of the Project Area, including: (1) the 7th Street Historic Entertainment District, consisting of structures along West 7th Street, about one-half mile from the Project Area; (2) the Oakland Point Historic District; and (3) a portion of the OARB National Register Historic District, located immediately north of the Project Area but separated from the Project Area by I-880. Each of these districts is further discussed in the following paragraphs.

16th Street Station Commercial District. This district consisted of hotels and commercial uses supported by the 16th Street Train Station during its operation. Only two surviving components of the district remain: Bea's Hotel (described above) and the Southern Pacific Hotel, located outside of the Project Area at the northeast corner of Wood Street and 16th Street. The primary historical association of the district is as a part of the historical setting of the 16th Street Train Station, which is discussed in detail under Impact CR-3. However, both of the structures referenced above were determined to be of secondary importance under the City's classification system, and the district is also considered an Area of Secondary Importance by the City. Consequently, these resources are not considered historic resources pursuant to CEQA.

Pacific Coast Canning District. This district and the structures that comprise this district were previously discussed under "Previous Historic/Architectural Resources Surveys." However, to summarize the previous discussion, a citywide reconnaissance survey of potential historic districts in 1996 included an evaluation of the structures of the cannery complex that remain. The survey assigned each of the individual structures—including the cannery building—a status code of Cb (of secondary importance, primarily due to lack of sufficient integrity). The cannery building remains a structure of secondary importance under the City's classification system, and the district is also considered an Area of Secondary Importance by the City. Further, there is no designated historical association for this district, as opposed to the 16th Street Station Commercial District. Consequently, neither these resources nor the setting are considered historic resources pursuant to CEQA, and therefore are not evaluated further.

[7] KPa Consulting Engineers, *Oakland 16th Street Station Structural Assessment and Impact Plan*, July 1997.



Source: City of Oakland, July 2004; EIP Associates, August 2004

C:\GISProjects\CentralStation_10817\Historic_Districts.mxd

FIGURE 3.7-5

Historic Districts Adjoining Project Area

7th Street Historic Entertainment District. The entire length of West 7th Street became a major commercial, lodging, and entertainment center in the late 1910s and 1920s, similar to other significant transit streets with commercial nodes, as rail along 7th Street connected central Oakland with Oakland Point. Surviving components of the district include the Arcadia Hotel, the Brotherhood of Sleeping Car Porters Headquarters, and Esther's Orbit Room.[8] The 7th Street Historic Entertainment District lies about one-quarter to one-half mile south of the Project Area.

Oakland Point Historic District. The Oakland Point Historic District occupies about 47 city blocks and includes 845 properties, of which 616 contribute to the district's character. The district is one of Oakland's largest and most intact Victorian neighborhoods. The buildings in the district are predominantly one- to two-story wood-frame houses constructed for working people and those particularly associated with the western terminus of the transcontinental railroad at Oakland Point. Uses are still predominantly industrial and residential, and close to one-third of the houses in the area were constructed as parts of matching groups of structures or "twins." Contributing resources date from 1866 to 1910 and were built in popular architectural styles of that period, including Queen Anne, Italianate, Stick, and Colonial Revival. The district was determined eligible for the NRHP and is on Oakland's Local Register. The northern portion of this district is located adjacent to the southeastern portion of the Project Area, along Wood Street, 12th Street, and Pine Street.

OARB Historic District. The OARB Historic District was determined eligible for listing to the NRHP as a result of a 1990 study conducted by Caltrans for the Cypress Structure Replacement Project. The District is also listed as an Area of Primary Importance in the City of Oakland's General Plan. The Port Development Area Sub-District of the OARB National Register Historic District includes all or part of nine buildings and two wharves. The wharves in the sub-district represent about 1,300 linear feet, or 38 percent, of the 3,500 total linear feet of historic wharves within the OARB National Register Historic District. As stated above, these contributing elements are separated from the Project Area by I-880, which blocks views to and from the Project Area.[9]

Archaeological Resources on or Near the Project Area

No archaeological sites or other resources of concern to Native Americans have been identified within any portion of the Project Area. Only one previous archaeological survey was conducted within or adjacent to the Project Area (#S-1786), and no prehistoric sites were recorded within the vicinity of the Project Area. The nearest recorded prehistoric resource is located approximately one-half mile southeast of the southern boundary of the Project Area.[10]

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8 City of Oakland *West Oakland Redevelopment Plan Draft EIR*, June 2003, pp. 11-4 through 11-5.
9 City of Oakland, *OARB Area Redevelopment Plan EIR,* July 2002, pp. 4.6-12 through 4.6-15.
10 City of Oakland, *OARB Area Redevelopment Plan EIR,* July 2002, pp. 4.6-10 through 4.6-11.

Applicable Plans and Policies

A historical resource under CEQA is a resource that meets any of the following criteria: (1) is listed in, or determined eligible by the State Historical Resources Commission for listing, or meets the criteria for listing, in the California Register of Historical Resources; (2) is included in a local register of historical resources; (3) is identified as significant in a DPR Form 523 historical resource survey; or (4) is determined by the lead agency to be historically or culturally significant (under Public Resources Code Section 5020.1(j) or 5024.1) even though it does not meet the other three criteria listed here (Public Resources Code Section 21084.1; CEQA Guidelines, Section 15064.5). The criteria for evaluating historical significance are discussed below.

National Historic Preservation Act. The National Historic Preservation Act established the NRHP to recognize resources associated with the country's history and heritage. Structures and features must usually be at least 50 years old to be considered for listing on the NRHP, barring exceptional circumstances. Criteria for listing on the NRHP, which are set forth in Title 26, Part 63 of the Code of Federal Regulations (36 CFR Part 63), are significance in American history, architecture, archaeology, engineering, and culture as present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that are:

A. associated with events that have made a significant contribution to the broad patterns of our history;

B. associated with the lives of persons significant in our past;

C. embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values, represent a significant and distinguishable entity whose components may lack individual distinction; or

D. have yielded, or may be likely to yield, information important in prehistory or history.

Criterion D is usually reserved for archaeological and paleontological resources.

Eligible properties must meet at least one of the criteria listed above and exhibit integrity, measured by the degree to which the resource retains its historical properties and conveys its historical character, the degree to which the original fabric has been retained, and the reversibility of changes to the property.

Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.[11] The U.S. Secretary of the Interior is responsible for establishing standards for all programs under Departmental authority and for advising federal agencies on the preservation of historic properties listed in or eligible for listing in the NRHP. The Standards for Rehabilitation (codified in 36 CFR 67 for use in the Federal Historic

[11] Kay D. Weeks, and Anne E. Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, & Reconstructing Historic Buildings*, 1995.

Preservation Tax Incentives program) address the most prevalent treatment. "Rehabilitation" is defined as "the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values."

The intent of the Standards is to assist the long-term preservation of a property's significance through the preservation of historic materials and features. The Standards pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and interior of the buildings. They also encompass related landscape features and the building's site and environment, as well as attached, adjacent, or related new construction. The Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility.

The treatment "rehabilitation" assumes that at least some repair or alteration of the historic building would be needed to provide for an efficient contemporary use; however, these repairs and alterations must not damage or destroy materials, features, or finishes that are important in defining the historic character of the building. For example, certain treatments—if improperly applied—may cause or accelerate physical deterioration of the historic building. This can include using improper repainting or exterior masonry cleaning techniques, or introducing insulation that damages historic fabric. In almost all of these situations, use of these materials and treatments would result in a project that does not meet the Standards. Similarly, exterior additions that duplicate the form, material, and detailing of the structure may compromise the historic character of the structure, and would fail to meet the Standards.

California Register of Historical Resources (Public Resources Code Section 5020 et seq.). The CRHR was created to identify resources deemed worthy of preservation on a state level and was modeled closely after the NRHP. The criteria are nearly identical to those of the NRHP but focus upon resources of statewide, rather than national, significance. The CRHR automatically includes resources listed on the NRHP.

The State Historic Preservation Office (SHPO) maintains the CRHR. Automatic listings include properties listed or determined eligible for listing in the NRHP, either by the Keeper of the National Register or through a consensus determination on a project review, or State Historical Landmarks from number 770 onward. In addition, Points of Interest nominated from January 1998 onward will be jointly listed as Points and in the CRHR. Landmarks prior to 770 and Points of Historical Interest may be listed through an action of the State Historical Resources Commission. Any individual resource, district, or local landmark may be nominated; however, if an owner objects, it will not be placed on the register, but is listed as eligible.

In order for a resource to meet the criteria for listing in the CRHR, it must satisfy all of the following three provisions:

1. It meets one or more of the following four criteria of significance (these criteria are nearly identical to those listed above for the NRHP):

    a. The resource is associated with events or patterns of events that have made a significant contribution to the broad patterns of local and regional history.

b. The resource is associated with the lives of persons important to the nation or to California's past.

c. The resource embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or

d. The resource has the potential to yield information important to the prehistory or history of the state or the nation (this criterion applies primarily to archaeological sites).

2. The resource retains historic integrity (defined below); and

3. It is 50 years old or older (except for rare cases where it can be demonstrated that sufficient time has passed to understand the historical importance of the resource).

The CRHR regulations define integrity as "the authenticity of a property's physical identity, evidenced by the survival of characteristics that existed during the property's period of significance." In essence, the property must retain enough of its historic character or appearance to be recognizable as an historical resource. California Register regulations specify that integrity is a quality that applies to historic resources in seven ways: location, design, setting, materials, workmanship, feeling, and association. A property must retain most of these qualities to possess integrity.

California Senate Bill 297 (1982). This bill addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the Native American Heritage Commission to resolve disputes regarding the disposition of such remains. A portion of the provisions regarding discovery of skeletal remains has been incorporated into Section 15064.5(e) of the State CEQA Guidelines and would also apply to construction activities under the Project.

Oakland Historic Preservation Element. In March 1994, the Oakland City Council adopted a Historic Preservation Element (hereinafter referred to as the Preservation Element) of the *City of Oakland General Plan* and amended it in 1998. The Preservation Element was designed to govern the treatment of "Designated Historic Properties" (DHPs) and "Potential Designated Historic Properties" (PDHPs) and sets out a graduated system of ratings and designations resulting from the OCHS and Oakland zoning regulations. The rating system is based on age and "historical and architectural interest," and is designed to aid in the evaluation and treatment of DHPs and PDHPs. The City rating system utilizes the letters A-E in assigning relative importance to historic properties; "the City considers any property that has at least a contingency rating of C ("secondary importance") or contributes or potentially contributes to a primary or secondary district to "warrant consideration for possible preservation." If they are not already designated, all properties meeting these minimum significance thresholds are called PDHPs. As previously discussed under "Record and Literature Search," the 16th Street Train Station appears to be eligible for listing on the NRHP under Criteria A and C, and has been designated a City landmark.

The following goals and policies of the Preservation Element relate to historic preservation; identification of historic resources in the CEQA process; and the circumstances under which alterations to or demolition of Landmarks and Preservation Districts could occur:

Goal 1: This goal strives to use historic preservation to foster the economic vitality and quality of life in Oakland by:

(1) Stressing the positive community attributes expressed by well-maintained older properties;

(2) Maintaining and enhancing throughout the city the historic character, distinct charm, and special sense of place provided by older properties;

(3) Establishing and retaining positive continuity with the past thereby promoting pride, a sense of stability and progress, and positive feelings for the future;

(4) Stabilizing neighborhoods, enhancing property values, conserving housing stock, increasing public and private economic and financial benefits, and promoting tourist trade and interest through preservation and quality maintenance of significant older properties;

(5) Preserving and encouraging a city of varied architectural styles and environmental character reflecting the distinct phases of Oakland's cultural, social, ethnic, economic, political, and architectural history; and

(6) Enriching the quality of human life in its educations, spiritual, social, and cultural dimensions through continued exposure to tangible reminders of the past.

Policy 2.4: This policy and associated tables prohibit demolition or removal of Class 1 and Class 2 Landmarks, Class 1 Preservation District Properties, and contributing or potentially contributing properties in Class 2 Preservation Districts unless at least one of the following three findings are made:

- The property cannot be sold in the open market for a price sufficient to generate a reasonable economic return on the owner's investment in the property, and the property is economically infeasible to move.
- The postponement would result in excessive economic hardship to the owner.
- The property constitutes a hazard to public safety and is economically infeasible to rehabilitate either on its present site or at any relocation site.

Alterations or new construction involving Landmarks or Preservation Districts will normally be approved if they are found to meet the Secretary of the Interior's Standards for the Treatment of Historic Properties, or if other findings set forth in Table 4-2 of the Historic Preservation element are made. The findings for demolition, removal, or alteration of Landmarks or Preservation Districts seek to balance preservation of these properties with other concerns.

Regulations in Policy 2.4 also delay demolition or removal of Class 3 Landmarks or noncontributing Class 2 Preservation District properties for up to 240 days, to allow investigation of the sale or moving of the property, unless the applicant for the project can demonstrate one of the findings identified previously.

In addition, Policy 2.4 streamlines regulations regarding Landmarks and Preservation Districts, including elimination of design review for demolition or removal of noncontributing properties in Class 2 Preservation Districts, which would be relevant to the Project.

Policy 3.5: For additions or alterations of Heritage Properties or Potential Designated Historic Properties (PDHPs) requiring discretionary City permits, the City must find that (1) the design matches or is compatible with, but not necessarily identical to, the property's existing or historical design; or (2) the proposed design comprehensively modifies and is at least equal in quality to the existing design and is compatible with the character of the neighborhood; or (3) the existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood.

For any project involving complete demolition of Heritage Properties or Potential Designated Historic Properties requiring discretionary City permits, the City must find that: (1) the design quality of the project is at least equal to that of the original structure and is compatible with the character of the neighborhood; or (2) the public benefits of the project outweigh the benefit of retaining the original structure; or (3) the existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood.

Policy 3.8: For purposes of environmental review under the California Environmental Quality Act, the following properties would constitute the City of Oakland's Local Register of Historical Resources:

- All Designated Historic Properties, and
- Those Potential Designated Historic Properties that have an existing rating of "A" or "B" or are located within an Area of Primary Importance.

Until complete implementation of Action 2.1.2 (Redesignation), the "Local Register of Historical Resources" will also include the following designated properties: Oakland Landmarks, S-7 Preservation Combining Zone properties, and Preservation Study List properties.

The Preservation Element includes an Appendix B, which includes existing Landmarks, S-7 Preservation Districts, and properties listed on the NRHP as of 1993.

Impacts and Mitigation Measures

Standards of Significance

The Project would have a significant impact to cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5. Specifically, substantial adverse changes include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be "materially impaired." The significance of an historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance and that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historical Resources, Local Register, and historical resources survey form (DPR Form 523);
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not diminish potentially significant or significant effects to a less-than-significant level, the impacts are classified as "significant unavoidable effects (SU)." For this section, CR refers to Cultural Resources.

CR-1. Ground-disturbing activities have the potential to directly impact previously unknown archaeological resources, including human burials, or paleontological resources in the Project Area by disturbing both surface and subsurface soils. Such disturbance could result in the loss of integrity of cultural deposits. (PS)

According to the *OARB Area Redevelopment Plan EIR*, "no archaeological sites, cultural landscapes, or other resources of concern to local Native Americans [were] identified within the study area [including the Project Area]." Studies completed for that EIR found only one recorded archaeological site, one-half mile from the OARB study area. Further, as stated on pages 4.6-10 through 4.6-11 of the *OARB Area Redevelopment Plan EIR*, "the study area lies almost entirely upon fill, [and] it is considered to have low archaeological sensitivity."

Nonetheless, Impact 4.6-1 in the *OARB Area Redevelopment Plan EIR* concluded that the potential for the discovery of and damage to previously unknown subsurface cultural resources (archaeological resources and paleontological resources) constituted a potentially significant impact, particularly in the 16th/Wood sub-district (where the Project Area is located), which is not entirely underlain by fill material. Consequently, that EIR identified the following mitigation measure to reduce this impact to a less-than-significant level (p. 4.6-20):

- Should previously unidentified cultural resources be encountered during redevelopment, work in that vicinity shall stop immediately, until an assessment of the finds can be made by an archaeologist. If the resource is found to be significant under CEQA, an appropriate mitigation plan must be developed.

Also, the OARB analysis recognized that the potential still exists for the presence of buried historic and prehistoric resources, including human burials on all nine of the proposed development areas. The presence of historical structures and the historic pattern of the use of portions of the Project Area suggest that buried historic features, such as foundations, privies, and trash deposits, could exist in the area. These deposits and features could be covered by development or buried by fill or natural sediments, and ground-disturbing activities associated with development under the Project and could result in damage to, or destruction of, these resources.

Summary of Impact CR-1 by Development Area. Construction activities and ground disturbance would occur in each of the development areas. As a result, proposals for each of the areas could result in potential disturbance of significant cultural deposits, and all Project Sponsors would need to implement the recommended mitigation measures.

Development Area	No Impact	LTS	PS	S
1			✓	
2			✓	
3			✓	
4			✓	
5			✓	
6			✓	
7			✓	
8			✓	
9			✓	

MITIGATION MEASURES. The following measure, which expands upon the mitigation measure contained in the *OARB Area Redevelopment Plan EIR*, would apply to all development areas and would reduce this potential impact to a less-than-significant level. (LTS)

CR-1.1 *Archaeological Monitoring.* The Project Sponsors shall retain a qualified archaeologist upon any discovery of prehistoric remains or buried historic features. The archaeologist shall prepare a preliminary evaluation to assess the archaeological sensitivity of the specific site(s) under consideration and shall

recommend actions to protect archaeological resources. If the archaeologist's evaluation indicates a more detailed site assessment is warranted, a testing program shall be initiated under the supervision of the qualified archaeologist. If, after testing, the archaeologist determines that the discovery is not significant as defined in CEQA, no further investigations or precautions are necessary to safeguard the find. The archaeologist shall prepare a final report to be sent to the responsible agency, the Oakland Landmarks Advisory Board, and the California Historical Resources Information System Northwest Information Center. If, however, after testing, the archaeologist determines that the discovery is significant as defined in CEQA, ground-disturbing activities in the immediate vicinity of the discovery shall remain suspended until an appropriate mitigation plan can be agreed upon by the archaeologist and the City and implemented by the Project Sponsors as discussed in Mitigation Measure CR-1.2.

CR-1.2 *Cultural Resources Management/Mitigation Plan.* If further investigations or precautions are necessary or appropriate as determined by Mitigation Measure CR-1.1, the City of Oakland and the archaeologist shall jointly determine the additional procedures necessary to protect the resource and/or mitigate any significant impacts. Additional measures to be implemented by the Project Sponsors might include a redesign of the Project, data recovery excavations, or a program to monitor all site excavation, during which the archaeologist shall record observations in a permanent log. The archaeologist shall prepare a final report to be sent to the responsible agency, the Oakland Landmarks Advisory Board, and the California Historical Resources Information System Northwest Information Center.

CR-1.3 *Discovery of Human Remains.* Should any human remains be encountered, work in the vicinity shall halt and the County Coroner notified immediately. If the remains are determined to be Native American, the coroner shall contact the California Native American Heritage Commission (NAHC) pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code. The NAHC in Sacramento would identify a Most Likely Descendant (MLD) pursuant to subdivision (a) of Section 5097.98 of the Public Resources Code. The City of Oakland and the archaeologist shall consult with the MLD. The MLD may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendations within 24 hours of their notification by the NAHC. The recommendation may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Work may not commence until the coroner's approval has been received.

CR-2. The Project would involve demolition of portions of the 16th Street Train Station, a City landmark and a designated historic structure, which would be considered a significant impact. (S)

The Project includes the demolition of portions of the 16th Street Train Station, a City Landmark and a resource eligible for the National Register. Loss of portions of the 16th Street Train Station would diminish the historical significance of the structure as a whole and would constitute a significant impact.

The location of planned new development to the north and west of the 16th Street Train Station, particularly on Development Area Six, would require demolition of significant portions of the 16th Street Train Station (portion of the Elevated Tracks and the Baggage Wing). Project construction to the north would require demolition of the Baggage Wing and the portion of the Elevated Tracks that extends over the Baggage Wing and beyond it to the north. The proposed extension of 16th Street to the frontage road would result in the demolition of 70 percent of the remaining Elevated Tracks, including one of the decorative canopies. A 20-foot-wide section of the Elevated Tracks extending the western length of the Main Hall would be retained, and potentially would be used to connect the Main Hall to new construction to the west of the Elevated Tracks.

The Main Hall portion of the 16th Street Train Station is the most prominent aspect of the 16th Street Train Station as a historic and visual resource and also best lends itself to adaptive reuse, consistent with Goal 1 of the Preservation Element, which strives to use historic preservation to foster economic vitality and quality of life in Oakland. Further, the provision of the 16th Street Plaza on Development Area Nine would preserve and enhance views of the main façade of the Main Hall and would allow wider appreciation of the resource by the public.

The Baggage Wing and the portions of the Elevated Tracks that extend beyond the northern and southern ends of the Main Hall could not generally be subject to reuse even after rehabilitation, and their demolition would facilitate the Project by allowing a higher use intensity on Development Area Six, and more importantly, the extension of 16th Street to the frontage road. However, the Baggage Wing and the Elevated Tracks are still an integral part of the design of the 16th Street Train Station and substantially contribute to the architectural significance of the 16th Street Train Station as an outstanding example of its type. Consequently, demolition of these portions of the 16th Street Train Station would still adversely affect the historical and architectural significance of the 16th Street Train Station and would represent a significant impact.

The Project includes renovation and reuse of the Main Hall and the 16th Street Signal Tower. The proposed Wood Street Zoning Regulations include standards for the treatment of the 16th Street Train Station and the 16th Street Signal Tower, as described below.

General Standards

1. Any renovation, modification or addition to the 16th Street Train Station shall conform with standards set forth in the Planning Code Section 17.102.030, "Special regulations for designated landmarks," and to the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*.

2. Any reuse of the 16th Street Train Station shall include stabilization and repair of exterior materials to improve the exterior appearance and to ensure a water tight building envelope.

3. For the purpose of these standards, the primary portion of the 16th Street Train Station is defined as the Main Hall and the symmetrical wings to the north and south.

Standards for Additions and New Construction Adjacent to the 16th Street Train Station and 16th Street Signal Tower

1. 16th Street Train Station

    a. No additions to the 16th Street Train Station shall be permitted, unless attached to the remaining portion of the Elevated Tracks.

    b. New construction in Development Area Six shall be restricted to the northwest (rear) of the 16th Street Train Station and shall be set back the width of the remaining portion of the Elevated Tracks (20 feet) from the Main Hall. New construction shall not exceed the length of the 16th Street Train Station and shall not exceed 35 feet in height.

2. 16th Street Signal Tower

    a. No additions to the 16th Street Signal Tower shall be permitted.

    b. New construction shall be set back from the 16th Street Signal Tower a minimum of 15 feet.

The general standards described above would also address the treatment of the interior and exterior of the remaining portions of the 16th Street Train Station and the exterior of the 16th Street Signal Tower as part of any planned reuse by requiring consistency of such treatments with the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*. As described above under Applicable Plans and Policies, the Standards for Rehabilitation assist in the long-term preservation of the significance of a historic resource by providing standards for treatment that preserve the historic integrity of the resource, including standards regarding appropriate methods and materials to be employed in the treatment of the resource. The Standards also describe inappropriate methods and materials in order to avoid potentially damaging practices. Further, according to Section 15064.5(b)(3) of the CEQA Guidelines, a project that follows these standards and guidelines shall generally be considered to have mitigated to a less-than-significant level the impact that would result

from alteration (in this case, rehabilitation and reuse) of a historic structure. Compliance with these standards and guidelines would ensure that the proposed renovation to the Main Hall and the Signal Tower would be designed in a manner that is sensitive to the character and qualities of the structure that convey its historic significance. These standards and guidelines would also ensure that installation of new structural elements and mechanical systems or fixtures, and renovation or augmentation of original finishes, would occur in an appropriate manner that would preserve and emphasize the historic fabric of the structure.

Compliance with the general standards of the proposed Wood Street Zoning Regulations, particularly the requirement for consistency of rehabilitation and reuse activities with the Secretary of the Interior's standards and guidelines, would, as described above, prevent additional significant impacts that could otherwise result from renovation and reuse of the remaining portions of the 16th Street Train Station and the 16th Street Signal Tower.

Summary of Impact CR-2 by Development Area. The 16th Street Train Station and its associated structures and facilities occupy Development Areas Four, Five, and Six. Proposed development in these areas would have a significant effect on this historic resource.

Development Area	No Impact	LTS	PS	S
1	✓			
2	✓			
3	✓			
4				✓
5				✓
6				✓
7	✓			
8	✓			
9	✓			

MITIGATION MEASURES. The mitigation measures below, which apply only to Development Areas Four, Five, and Six, would reduce this historic resource impact; however, the physical change associated with demolition would be irreversible, and the loss of the structures and the change in building form would be permanent. As a result, the impact would remain significant and unavoidable. (SU)

CR-2.1 *HABS Recordation of the 16th Street Train Station.* Prior to any construction-related activities in Development Areas Four, Five, and Six, the Project Sponsors for those development areas shall record the 16th Street Train Station in accordance with the procedures of the Historical American Building Survey (HABS). In accordance with the HABS recordation process, the Project Sponsors shall consult with the National Park Service (NPS) to determine the appropriate level of documentation, and all documentation shall be subject to review and approval by NPS.

CR-2.2 *Salvage and Reuse of Original Building Materials from Structures Proposed for Demolition.* Prior to any construction-related activities in Development Areas

Four, Five or Six, the Project Sponsors for those development areas shall submit a study to the City of Oakland detailing those portions of the 16th Street Train Station's structure that can be feasibly salvaged. Following City approval of the study, the Project Sponsors shall salvage architectural elements and materials from the portion of the building to be demolished, including terra-cotta cladding, windows, doors and hardware. These salvaged materials shall be reused to the extent feasible and in accordance with the *Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* in the rehabilitation of the Main Hall. Salvaged materials that cannot be reused shall be incorporated into an interpretive display in or near the Main Hall.

CR-3. The Project would adversely affect the historical setting and views of the historic 16th Street Train Station and the 16th Street Signal Tower. (S)

New construction as proposed by the Project would adversely affect the architectural setting of the 16th Street Train Station by blocking views of the 16th Street Train Station and/or by diminishing its visual prominence, by altering the relationship between the 16th Street Train Station and the 16th Street Signal Tower, and by demolishing Bea's Hotel, in the event that the Project Sponsor of Development Area Four acquires and demolishes that property. Direct views of the historic structures are available from the north, west, south, and east. For the most part, the location and scale of new construction proposed for the Project would be restricted to preserve the most important view corridors and to prevent adjacent new construction from overshadowing the 16th Street Train Station. Specifically, the view of the front façade of the Main Hall would be protected by designating areas to the east of the building as open space areas (Development Area Nine). This would preserve the view of the 16th Street Train Station from Wood Street and 16th Street, as well as from the main approaches to the 16th Street Train Station, and would facilitate the reuse and public enjoyment of the 16th Street Train Station. Portions of Development Areas Four and Six to the south and north, respectively, would be within the proposed Plaza Overlay Zone that provides a deeper building setback from the street, thereby further preserving the main view of the 16th Street Train Station façade from the east. New construction to the west in Development Area Six would be limited in height to 35 feet, with a required setback of 20 feet from the Main Hall. The current view of the Main Hall is obscured by the Elevated Tracks from this direction.

New construction to the south and north (Development Areas Four and Six) would be permitted to 65 feet in height and would require a minimum setback of 15 feet. The small setback is appropriate for the area to the north,[12] because this area is currently occupied by the Baggage Wing and existing utility sheds that are not significantly set back from the 16th Street Train Station. The presence of structures would not, by itself, represent a substantial encroachment. However, the 65-foot height limit south and north of the 16th Street Train Station would allow

[12] Alan Dreyfuss, AIA, Historic Evaluation of the 16th Street Train Station, April 22, 2004.

development of structures that are taller than the 16th Street Train Station, which would block views of the 16th Street Train Station from the northeast and northwest and the southeast and southwest. This loss of views and the diminution of the 16th Street Train Station's visual prominence would be considered a significant impact.

New construction in Development Area Six would be permitted within 15 feet of the 16th Street Signal Tower to a height of up to 65 feet. Preliminary plans for Development Area Six indicate that a non-development zone would extend from the terminus of 18th Street to the northern border of the 16th Street Signal Tower, and that a proposed access road would border the 16th Street Signal Tower to the west. These site plan features would preserve views of the 16th Street Signal Tower from the northwest, including the I-880 freeway and the frontage road, which currently provide the best views of the 16th Street Signal Tower. The remaining new construction in Development Area Six would have the potential to eliminate other long-range views of the 16th Street Signal Tower, a significant impact. Because the 16th Street Signal Tower is 35 feet tall at its peak, limiting the height of surrounding construction on Development Area Six to even half of what is proposed (65 feet) would not reveal enough of the building to significantly reduce the potential impacts to these views.

Additionally, development in Development Area Four as proposed would require the demolition of Bea's Hotel, as described above. Bea's Hotel is one of two surviving components of a historic commercial district associated with the 16th Street Train Station. Although both the structure and the district have been designated as being of only secondary importance, both are historically associated with the 16th Street Train Station and contribute to the integrity of its historical setting. Therefore, the loss of the structure would contribute to the significant impact of the Project on the setting and views of the 16th Street Train Station.

Summary of Impact CR-3 by Development Area. The historic setting of the 16th Street Train Station in part lies in its relationship to the Elevated Tracks and views of its exceptional architecture from multiple directions. Proposed development in Development Areas Four and Six would detract from these relationships and result in an impact on the 16th Street Train Station. Proposals for Development Areas Five and Nine would affect the setting but have the potential to reinforce and enhance the setting.

Proposed renovation and rehabilitation of the Main Hall exterior and interior to the Secretary of Interior Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings would preserve and enhance this important historic asset in Development Area Five. The improvements creating the 16th Street Plaza in Development Area Nine would enhance and preserve the significant view of the main entrance to the Main Hall.

Development Area	No Impact	LTS	PS	S
1	✓			
2	✓			
3	✓			
4				✓
5		✓		
6				✓
7		✓		
8		✓		
9		✓		

MITIGATION MEASURE. No mitigation is available to reduce the impact on the views of the 16th Street Train Station and Signal Tower, the physical relationship between the two, and the loss of Bea's Hotel. Thus, this impact would remain significant and unavoidable. (SU)

CR-4. The Project would not adversely affect the historical setting and views of other historic resources in the vicinity of the Project Area. (LTS)

As described above in the Setting section, three historic districts lie in the vicinity of the Project Area: (1) a portion of the OARB National Register Historic District, located north of I-880, adjacent to the Project Area; (2) the Oakland Point Historic District to the southwest; and (3) the 7th Street Historic Entertainment District located along West 7th Street, about one-quarter to one-half mile south of the Project Area.

OARB Historic District. I-880 buffers the site from the OARB Historic District by blocking views of the Project Area. Because the Project Area is not visible from the adjacent portion of the OARB Historic District, implementation of the Project would not affect the historic visual setting of the OARB Historic District and would not, therefore, result in a significant impact upon the OARB Historic District.

7th Street Historic Entertainment District. As with the OARB Historic District, the Historic Entertainment District located along West 7th Street is located too far from the Project Area for the immediate setting of the remaining, potentially contributing elements to be affected by implementation of the Project. Further, the setting of the remaining structures has already been substantially altered by development since the early twentieth century, and additional development more than one-quarter mile from the contributing elements of the District would not represent a substantial adverse change to the existing setting of the district. Implementation of the Project would not, therefore, affect the historic visual setting of the 7th Street Historic Entertainment District and would not, therefore, result in a significant impact upon the District.

Oakland Point Historic District. The Oakland Point Historic District occupies an area of approximately 47 city blocks, bounded roughly on the east by the remnants of the Cypress Freeway, on the south by the fragments of the 7th Street Commercial District, and on the west and north by industrial areas originally associated with the railroad. Of the 845 properties located within the district boundaries, 616 have been determined to be contributing to the

district character. The buildings in the district are predominately small wood frame, Victorian era structures of one or two stories constructed for working people, largely employed by the railroad. The houses are typically on small lots, and many were constructed in matching groups reinforcing the coherence of the district. Contributing resources were constructed between 1866 and 1910, and were built in the popular styles of the period including Italianate, Stick and Queen Anne Victorians, and a smaller number of Colonial or Classical Revival. The district has been determined eligible at the local level for the National Register of Historic Places under criteria A and C as one of the largest and most intact Victorian neighborhoods, and for its distinctive architecture.

The Project Area abuts this historic district along one block of Wood Street between 12th and 13th Streets and approximately one third of a block of 12th Street. Wood Street is the historic edge of the district where it bordered the railroad and associated industrial development. The row of houses fronting on this portion of Wood Street are characteristic of the district, a near matching group of raised basement, single story Victorian cottages set on small, regular lots with matching setbacks. The Project Area across Wood Street from the district is currently a vacant lot surrounded by a chain link fence, and is currently used for container and truck storage.

Design of the Project would conform to the Wood Street Zoning Regulations. The portion of the Project Area adjacent to Oakland Point Historic District is Development Area Three. In this development area, a minimum setback of 10 feet would be required along Wood Street, and no setback requirement exists along 12th Street. The first 30 feet of development along Wood Street is restricted to 40 feet in height. Beyond that area, construction is allowed to a maximum height of 50 feet of Wood Street for about another 125 feet, and 65 feet beyond. At least 75 percent of the frontage on Wood Street must be occupied by building frontage, and a minimum of two-thirds of that frontage is to be located within 2 feet of the setback line.

The design guidelines described above would result in a project that is approximately twice the height of the existing residences across Wood Street, and the solid street wall would present a stark contrast to the small, individual houses in the district. The Project has greater mass and proposes a higher density than is typical of the district, and the Project streetscape would not be generally consistent with the existing pattern of development. The Project would be highly visible along the district edge within approximately one block of Wood Street and would represent a change to the current district setting.

While the Project design would contrast with the setting of the district, the Project would replace an unattractive and non-contributing current use (container storage). Any original industrial use associated with the development of the historic district has been lost, and replacement of the vacant lot with a housing development would not be considered to adversely affect the district context. The new construction would not result in alteration of any portion of the district, and would not intrude into the district, but would provide a backdrop that reinforces a historic district edge. The view of the district from Wood Street would be unaltered, although the new development would be visible from inside the district. Changes

associated with the Project would not create a substantial adverse change to the existing setting of the district. Therefore, implementation of the Project would not affect the historic visual setting of this district and would not result in a significant impact upon the district.

Summary of Impact CR-4 by Development Area. None of the development areas individually would be close enough to visually or functionally affect historic districts in the vicinity of the Project Area.

Development Area	No Impact	LTS	PS	S
1	✓			
2	✓			
3	✓			
4	✓			
5	✓			
6	✓			
7	✓			
8	✓			
9	✓			

Cumulative Analysis

CR-5. The Project, in combination with other related development and background growth, would not result in a significant cumulative loss of the City's historic fabric. (LTS)

The geographic context for the analysis of cumulative cultural resources includes development of the related projects and additional regional growth represented by the City of Oakland's Cumulative Growth Scenario, both described in Appendix C.

The Project, in conjunction with other development throughout the City, would contribute to infill and redevelopment of the City's built environment. As a result, future development, including the Project, has the potential to demolish or adversely alter historic structures that contribute to the City's historic fabric. However, the City has worked and continues to work to identify and evaluate potential historical resources as part of ongoing city-wide surveys—the City's list of historic resources now includes over 10,000 structures and sites. This in turn, helps to ensure the preservation of such historical resources.

Also, the City has adopted a Historic Preservation Element of its General Plan, as described above under Applicable Plans and Policies, which contains goals and objectives related to the preservation of historic resources, with a particular emphasis on rehabilitation and reuse of these structures as a means of promoting economic growth and civic pride and identity. The goals and objectives of the Preservation Element are implemented through the policy framework provided in the historic preservation provisions of the Planning Code. Together, these documents form a well-defined regulatory framework for the alteration of historic structures, and through the CEQA environmental review process, the City's Landmarks Preservation Advisory Board uses the city-wide survey to advise the City Planning Commission

and Planning Director on matters concerning historic preservation. The CEQA process, in conjunction with implementation of the City's General Plan Historic Preservation Element objectives and policies and Planning Code regulations, mitigates the cultural resource impacts of individual projects to the degree that the historic fabric of the City is preserved and a significant cumulative impact to historical resources within the City would not occur.

As noted in the regulatory setting section, only two structures within the Project Area are considered historic resources as defined by CEQA—the 16th Street Train Station and the 16th Street Signal Tower. Under the Project, a portion of the 16th Street Train Station would be demolished, and the remainder of the 16th Street Train Station would be rehabilitated and reused. The exterior of the 16th Street Signal Tower would also be rehabilitated, and this structure would potentially be reused as well. As described above, the Main Hall portion of the 16th Street Train Station is the most prominent aspect of the 16th Street Train Station and would be preserved and reused, consistent with the goals of the Preservation Element regarding the use of preservation to foster economic vitality and quality of life. Reuse of the Elevated Tracks even after rehabilitation would not be feasible given that they are rail structures with no usable square footage and cannot accommodate uses, and their partial demolition is necessary for the extension of 16th Street to the frontage road, which is a critical component of the Project in that it provides a necessary emergency access opportunity and efficient vehicular circulation. Although the loss of these components would adversely affect the historical and architectural significance of the 16th Street Train Station, the primary portion of the 16th Street Train Station—the Main Hall—would still retain its historical significance. This purpose would also be fulfilled by the restoration and potential reuse of the 16th Street Signal Tower. Further, the provision of the 16th Street Plaza on Development Area Nine would preserve and enhance views of the main façade of the Main Hall and allow wider appreciation of the resource by the public.

Because the Project would implement the goals of the Historic Preservation Element by preserving and reusing a major historic resource while retaining its historical significance to the maximum extent possible, the contribution of the Project to cumulative impacts to historical resources in the City would, therefore, be considered less than significant.

Summary of Impact CR-5 by Development Area. The existing regulatory and policy framework addresses the cultural resource impacts of individual projects to prevent cumulative impacts to historical resources within the City. The Project would implement the goals of the Historic Preservation Element by reusing a major historic resource while preserving the historical significance of the 16th Street Station and 16th Street Signal Tower—the components of which are present only in Development Areas Four, Five, and Six—to the maximum extent possible, the contribution of the Project to cumulative impacts to historical resources in the City would not be cumulatively considerable and would be less than significant. The other development areas in the Project Area contain no culturally significant resources and thus do not contribute to cumulative cultural resource impacts.

Development Area	No Impact	LTS	PS	S
1	✓			
2	✓			
3	✓			
4		✓		
5		✓		
6		✓		
7	✓			
8	✓			
9	✓			

3.8 HAZARDOUS MATERIALS

Introduction

This section describes the types of hazardous materials historically and currently handled within the Project Area, the regulatory setting applicable to such activities, and the potential for the Project to result in health and safety impacts as a result of increasing the use of hazardous materials and the generation of hazardous waste. The Maximum Residential Scenario, Maximum Commercial Scenario, and Maximum Trips Scenario would result in similar hazardous materials impacts, because (1) hazardous materials that currently exist within the Project Area would affect all future development scenarios similarly, and (2) proposed uses (residential or commercial) under the Project would involve the same routinely used household chemicals. As a result, the analyses presented in this section would apply to all Project development scenarios.

The term "hazardous material" is defined in different ways for different regulatory programs. For purposes of this EIR, the definition of "hazardous material" is similar to that in the California Health and Safety Code, Section 25501:

> Hazardous materials are materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.

"Hazardous waste" is a subset of hazardous materials. For the purposes of this EIR, the definition of hazardous waste is essentially the same as that in the California Health and Safety Code, Section 25517, and in the California Code of Regulations, Title 22, Section 66261.2:

> Hazardous wastes are wastes that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may either cause, or significantly contribute to an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Setting

Classification of Hazardous Materials

As discussed in this EIR, public health concerns associated with the Project generally fall into four categories:

- **Hazardous Materials.** Hazardous materials include chemicals and products that may be harmful if improperly released to the environment or improperly handled by people. These

include a broad spectrum of products, including pesticides, petroleum fuel products, paints and other coatings, and common household materials such as cleansers and other cleaning products.

- **Hazardous Waste.** Hazardous wastes are produced when hazardous materials are used or discarded, and may be produced by manufacturing or other processes. These include used oil products, containers of hazardous materials that are ready to be disposed, and spent solvents or other materials from manufacturing, coating, or other hazardous materials handling activities.

- **Contaminated Soil and Groundwater.** Contaminated soil and groundwater usually results from land uses that previously released hazardous materials or hazardous wastes into the soil, groundwater, or sewer systems. Leaking underground storage tanks (USTs) and pumps are common causes of such contaminated conditions, as are historic industrial activities that routinely spilled or disposed of hazardous materials or wastes onto soils.

- **Hazardous Building Components.** Examples of hazardous building components include asbestos-containing materials (ACMs), electric transformers containing polychlorinated biphenyls (PCBs), USTs and aboveground storage tanks (ASTs), and lead-based paint. Applicable federal, state, and local legal requirements exist that relate to the safe maintenance and removal of these materials.

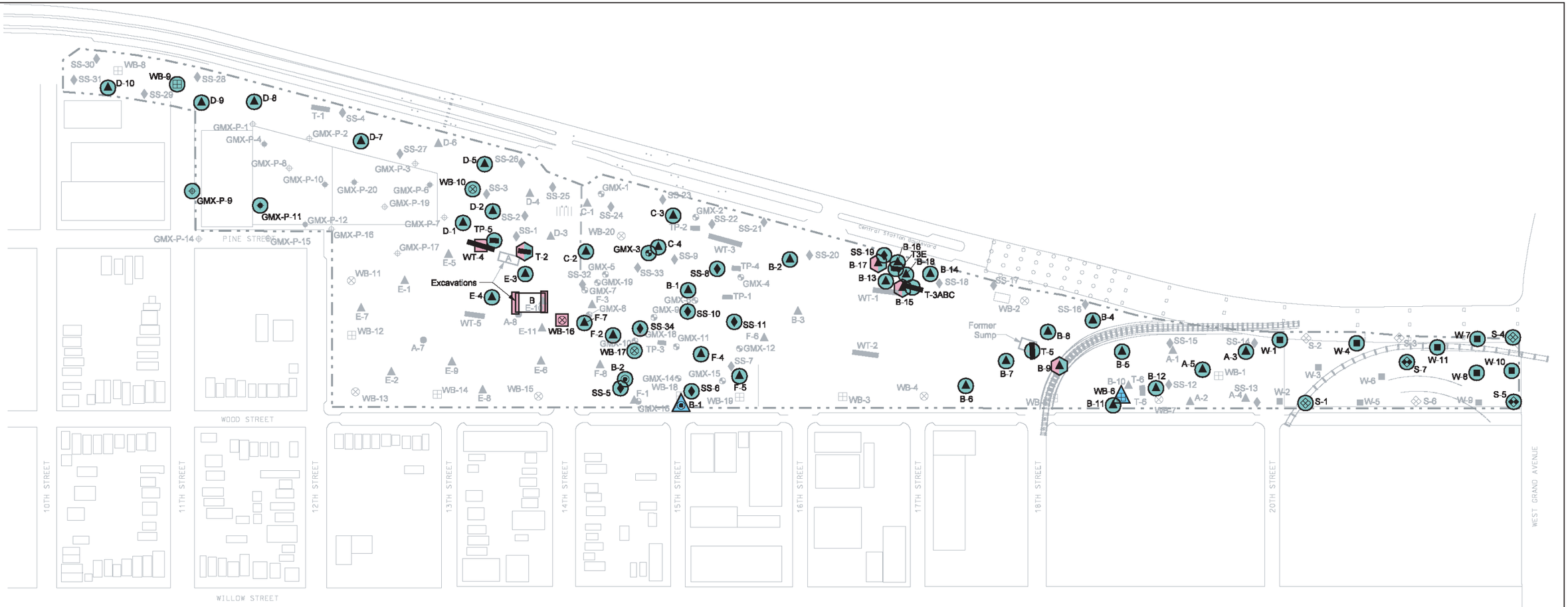
Environmental Contamination in the Project Area

The Project Area consists of nine development areas that are under separate ownership, totaling approximately 29.2 acres. Many former industrial and commercial uses, including railroad operations, auto repair and dismantling operations, warehousing, a foundry, trucking operations, auto repair and vehicle painting, and other industrial and commercial operations previously existed in the Project Area. Existing uses include warehousing, truck parking, and other transportation-related activities. Hazardous materials in the Project Area are most likely limited to those from past uses associated with rail, industrial, and commercial activities and occur as residual soil and groundwater contamination.

Several investigations have been conducted in the Project Area by various parties since 1994.[1] Figure 3.8-1 shows soil sampling locations in the Project Area from previous site investigations. As shown on Figure 3.8-1, each development area that makes up the Project Area contains soils with chemical contaminant concentrations that exceed proposed remediation standards. On May 21, 2004, the California Regional Water Quality Control Board (RWQCB) approved the proposed cleanup levels (i.e., remediation standards) that would allow for unrestricted land uses in the Project Area.[2] These remediation standards are based on an environmental risk screening evaluation conducted by Geomatrix Consultants, Inc. (Geomatrix) to assess the potential risks associated with redevelopment of the Project

[1] Data have been compiled from several sources including, but not limited to, investigation reports, laboratory data sheets, and data summaries prepared by others. Data was collected by several consultants, including Geomatrix, WEST, Terranext, Environmental Resource Management (ERM), Harding Lawson Associates (HLA), and Industrial Compliance (IC). These investigations cover all nine development areas.

[2] California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), *Approval of Remediation Cleanup Levels, Central Station Site, Wood Street between 10th Street and West Grand Avenue, Oakland, California*, May 21, 2004, File No. 01S0556 (MEJ). See Appendix E.



EXPLANATION

- Development boundary
- SS-30 Sample location (ERM, 1998)
- WB-8 Sample location (WEST, 2000)
- D-10 Sample location (WEST, 2002&2003)
- T-1 Trench/test pit location (ERM, 1998)
- WB-10 Sample location (WEST, 2000)
- A-7 Sample location (Terranext, 1997)
- GMX-28 Sample location (Geomatrix, 2002&2003)
- WT-5 Trench/test pit location (WEST, 2000)
- GWS-2 Groundwater sample location (Terranext, 1997)
- B-2 Sample location (ERM, 1998)
- W-1 Sample location (WEST, 2003)
- S-2 Soil sample location (unknown, 2001)
- S-7 Groundwater soil sample location (unknown, 2001)
- Screening level exceedance ≤3 feet below ground surface (bgs)
- Screening level exceedance >3 feet bgs
- Screening level exceedance greater than and less than 3 feet bgs
- Screening level exceedance, Depth unknown

0 250
SCALE IN FEET

Source: Geomatrix, 2004.

EIP ASSOCIATES

FIGURE 3.8-1

Locations with Chemical Contaminant Screening Level Exceedences in Soil

Area.[3] The remediation standards are also based on the U.S. Environmental Protection Agency (EPA) – Region 9 Preliminary Remediation Goals (PRGs) that would, following confirmed satisfactory remediation, provide for either unrestricted or restricted land uses in the Project Area. Based on previous site investigations, it has been determined that soil and groundwater have been impacted with petroleum hydrocarbons (e.g., gasoline, diesel, motor oil), volatile organic compounds (VOCs) (e.g., benzene, toluene, ethylbenzene, total xylenes, methylene chloride), polynuclear aromatic hydrocarbons (PAHs) (e.g., benzo(a)pyrene, dibenz(a,h)anthracene), polychlorinated biphenyls (PCBs), and pesticides/herbicides.[4] Some contaminants may have arrived in loads of imported fill soil. Groundwater is approximately 5 to 9 feet below ground surface in the Project Area. However, existing direct exposure to groundwater at the Project Area and, hence, the elevated levels of contaminants, is not likely since the groundwater is not used for domestic purposes.

Applicable Plans and Policies

Hazardous materials and hazardous waste are regulated under federal, state, and local laws. In California, federal environmental laws generally establish minimum applicable standards; more stringent state and local standards may apply as well. For example, California regulates a broader array of wastes defined as "hazardous waste" than those regulated under federal law.

Some environmental regulatory requirements apply to all categories of hazardous materials and hazardous wastes. For example, the Occupational Safety and Health Administration (OSHA) has regulations that apply to employees working with hazardous materials and hazardous waste, to workers conducting cleanup of contaminated soil and groundwater, and to workers exposed to hazardous building components. Similarly, hazardous materials transportation requirements apply to all four categories of hazardous materials. In contrast, there are numerous environmental regulatory requirements that apply to only some of the four categories. For example, the regulation of products containing hazardous materials may emphasize consumer disclosure and proper handling procedures. The regulation of contaminated soil and groundwater, in contrast, may emphasize restrictions on the types of future site uses that are appropriate in a given area, or may require special construction methods, or both. Other hazardous materials laws apply depending on the nature and quantity of hazardous materials being handled.

Hazardous materials handling and hazardous waste management are subject to laws and regulations at all levels of government, as summarized below. Former and existing Project Area uses are required to comply with these laws and regulations, in part by implementing a series of in-house policies and procedures or by correcting adverse environmental conditions that pose a risk to the public and/or the environment. The following section discusses the major federal, state, and local environmental legal programs relevant to each category.

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3 Geomatrix Consultants, Inc., *Proposed Remediation Levels, Central Station, Wood Street between 10th Street and West Grand Avenue, Oakland, California*, letter report to California Regional Water Quality Control Board, October 20, 2003. See Appendix E.

4 West Environmental Services and Technology, *Sampling and Analysis Plan*, Central Station, Oakland, California, September 2002.

Hazardous Materials Management and Emergency Planning. State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to health or the environment. The federal Emergency Planning and Community Right to Know Act (EPCRA, [42 USC Section 11001, et seq.]) requires facilities that store, use, or produce certain amounts of hazardous chemicals to provide state and local authorities with material safety data sheets, or, alternatively, a list of chemicals. EPCRA also requires reporting of permitted and accidental releases of hazardous substances, and requires certain facilities to complete and submit the EPA's Toxic Chemical Release Inventory form annually.

California's Hazardous Materials Release Response Plans and Inventory Act, sometimes called the Business Plan Act (California Health and Safety Code Section 25500 et seq.) requires businesses using hazardous materials to prepare a plan that describes their facilities, chemical inventories, emergency response plans, and training programs. Businesses that use, store, or handle 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas at standard temperature and pressure require hazardous materials business plans. Plans must be prepared prior to facility operation and are reviewed/updated biennially (or within 30 days of a change). In addition, the Safe Drinking Water and Toxic Enforcement Act (Proposition 65, California Health and Safety Code Section 25249.5 et seq.) requires that any person with ten or more employees operating within the state or selling products in California (1) be prohibited from knowingly discharging listed chemicals into sources of drinking water; and (2) be required to provide a "clear and reasonable" warning before knowingly and intentionally exposing anyone to a listed chemical. This warning can be given by a variety of means, such as by labeling a consumer product, by posting signs at the workplace, or by publishing notices in a newspaper.

Locally, Section 15.12 of the Oakland Municipal Code adopts the California Fire Code (24 CCR, Part 9). The California Fire Code regulates storage and use of hazardous materials at commercial and industrial facilities. Section 15.04 of the Oakland Municipal Code adopts the California Building Code (24 CCR, Part 1). The California Building Code regulates how protective measures within a structure will be built and implemented. Certified Unified Program Agencies (CUPAs) are responsible for local regulation and enforcement of hazardous materials laws and regulations. The Oakland Fire Department (OFD) serves as the City of Oakland's CUPA. The City's CUPA has been certified by the California Environmental Protection Agency (Cal-EPA) to implement six state environmental programs within the City's jurisdiction: the hazardous materials business plan/emergency response plans and inventories program; the hazardous waste program; the California accidental release prevention program; the underground storage tank (UST) program; the aboveground storage tank (AST) program; and the uniform hazardous materials management plan program.

Hazardous Waste Handling. The federal Resource Conservation and Recovery Act (RCRA, [42 USC Section 6901 et seq.]) regulates handling and tracking of hazardous waste from generation to disposal. Under RCRA, hazardous waste generators must comply with regulations concerning record keeping and reporting, waste storage, proper treatment and disposal, and the use of a manifest system. In California, the Department of Toxic Substances Control (DTSC) has been authorized by Cal-EPA to

administer the RCRA program. California's Hazardous Waste Control Act (HWCA, [California Health and Safety Code Section 25100 et seq.]) is similar to, but more stringent than, the federal RCRA program. The HWCA provides authority for DTSC to regulate the transportation and disposal of hazardous wastes, and establishes standards for hazardous waste facilities. OFD, as the CUPA, implements the hazardous waste program for the Project Area.

Contaminated Soil and Groundwater. The federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, [42 USC Section 9601 et seq.]) requires cleanup of inactive or abandoned sites that are contaminated with hazardous substances. CERCLA hazardous substances are defined as either those substances specifically designated as hazardous under CERCLA, or those substances identified as hazardous under certain other laws (42 USC Section 9601 [14]). CERCLA dictates the cleanup and closure of hazardous waste sites through its Corrective Action Program. Contaminated soils may be classified as hazardous waste once excavated or otherwise handled during the cleanup process.

The California Hazardous Substances Account Act (HSAA, [California Health and Safety Code Section 25300 et seq.]) is similar to CERCLA. The HSAA authorizes DTSC to order and/or oversee the cleanup of contaminated sites and hazardous substances releases. In addition, the Porter-Cologne Act (California Water Code Section 13163) authorizes the State Water Resources Control Board (SWRCB) and the RWQCB to coordinate water-quality related investigations of state agencies. SWRCB and RWQCB also have jurisdiction to engage in site cleanups (California Health and Safety Code Section 25355). The Project Area is within the jurisdiction of RWQCB Region 2, the San Francisco Bay RWQCB.

Hazardous Building Components. Structural building components sometimes contain hazardous materials such as asbestos, PCBs, lead, and mercury. During demolition or renovation of any existing building or structure, these hazardous material building components may be disturbed and thus expose workers, the public, and the environment to these hazards. These materials are subject to various regulations, as described below.

Asbestos. Asbestos is regulated both as a hazardous air pollutant and as a potential worker safety hazard. The BAAQMD and the California Division of Occupational Safety and Health (Cal/OSHA) regulations restrict asbestos emissions from 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, or 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 fibers; and require notice to federal and local government agencies prior to beginning renovation or demolition that could disturb asbestos. California requires licensing of contractors who conduct asbestos abatement activities.

PCBs. DTSC has classified PCBs as a hazardous waste when concentrations exceed 5 parts per million (ppm) in liquids or 50 ppm in non-liquids. Fluorescent light ballasts[5] may contain PCBs, and if so, they are regulated as hazardous waste and must be transported and disposed of as hazardous waste. Ballasts manufactured after January 1, 1978, should not contain PCBs and are required to have a label clearly stating that PCBs are not present.

Lead-Based Paint (LBP). Cal/OSHA standards establish a maximum safe exposure level for types of construction work where lead exposure may occur, including demolition of structures where LBPs 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 removing lead-containing building materials must be performed by state-certified contractors who are required to comply with applicable health and safety and hazardous materials regulations. Typically, building materials with LBP attached are not considered hazardous waste unless the paint is chemically or physically removed from the building debris. The U.S. Department of Housing and Urban Development has developed guidelines for the evaluation and control of lead-based paint hazards.[6]

Mercury. Spent fluorescent light tubes, thermostats, and other electrical equipment contain heavy metals that, if disposed of in landfills, can leach into soil or groundwater. Fluorescent light tubes typically contain concentrations of mercury that may exceed regulatory thresholds for hazardous waste and, therefore, must be managed in accordance with hazardous waste regulations. Elemental mercury can be found in many electrical switches, and when disposed of, such mercury is considered hazardous waste.

Worker Safety. Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. Cal/OSHA is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses to prepare injury and illness prevention plans and chemical hygiene plans. The Cal/OSHA Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle. For example, manufacturers are to appropriately label containers, material safety data sheets are to be available in the workplace, and employers are to properly train workers.

Hazardous Materials Transportation. The U.S. Department of Transportation (DOT) has developed regulations pertaining to the transport of hazardous materials and hazardous wastes by all modes of transportation. The U.S. Postal Service (USPS) has developed additional regulations for the transport of hazardous materials by mail. DOT regulations specify packaging requirements for different types of materials. The EPA has also promulgated regulations for the transport of hazardous wastes. These more stringent requirements include tracking shipments with manifests to ensure that wastes are delivered to their intended destinations. In California, the California Highway Patrol, the California

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5 The ballast is a small transformer that starts the light bulb and then stabilizes it on the correct operating voltage.

6 U.S. Department of Housing and Urban Development, *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*, June 1995, revised 1997, Chapter 7.

Department of Transportation (Caltrans), and the DTSC play a role in enforcing hazardous materials transportation requirements.

Impacts and Mitigation Measures

Standards of Significance

The Project would be considered to result in a significant hazardous materials impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would result in a safety hazard for people residing or working in the project area;
- Be located within the vicinity of a private airstrip, and would result in a safety hazard for people residing or working in the project area;
- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Not all of the above criteria would apply to the Project. The Project Area is located more than five miles from the Metropolitan Oakland International Airport and is therefore outside the airport land use plan, and no other public or private airstrips are located within the vicinity of the Project Area. In addition, according to the California Department of Forestry and Fire Protection, the Project Area is not located within an area designated as a substantial risk for wildland fires.[7] Accordingly, the environmental analysis focuses on the routine use, transport, or disposal of hazardous materials and wastes and the potential adverse environmental effects of handling and treating residual contaminated soil and/or groundwater during Project Area redevelopment.

[7] California Department of Forestry and Fire Protection, Alameda County natural Hazard Disclosure (Fire) Map, http://www.fire.ca.gov/ab6/nhd01.pdf, accessed February 11, 2004.

Methodology

To assess the potential for the Project to involve the use, production, or disposal of materials in a manner that poses substantial hazards to people, or to animal or plant populations, the following analysis considers the pathways through which exposure to hazards could potentially occur, and evaluates the controls that would foreseeably be placed on each of these pathways. Exposure pathways that would be sufficiently controlled to pose no substantial hazards are considered less-than-significant health and safety issues.

Exposure pathways are means by which hazardous substances move through the environment from a source to a point of contact with people, or with animal or plant populations. A complete exposure pathway must have four parts: (1) a source of contamination, (2) a mechanism for transport of a substance from the source to the air, surface water, groundwater or soil, (3) a point where people come in contact with contaminated air, surface water, groundwater, or soil, and (4) a route of entry into the body. Routes of entry can be eating or drinking contaminated materials, breathing contaminated air, or absorbing contaminants through the skin. Risks can be assessed when an exposure pathway is complete. If any part of an exposure pathway is absent, the pathway is said to be incomplete and no exposure or risk is possible. In some cases, although a pathway is complete, the likelihood that significant exposure will occur is very small.

The Project would create the same impacts under all possible development scenarios (Maximum Residential, Maximum Commercial, and Maximum Trips Scenarios) because hazardous materials that currently exist within the Project Area would affect all future development similarly, and proposed uses (residential or commercial) would involve the same routinely used household chemicals, such as paints, oils, cleaning solvents, and ammonia. Therefore, this section does not include a separate analysis of the different scenarios.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not diminish potentially significant or significant effects to a less-than-significant level, the impacts are classified as "significant unavoidable effects (SU)." For this section, HM refers to Hazardous Materials.

HM-1. Project-related demolition or renovation could disturb hazardous materials in existing building components and thereby could cause adverse health or safety effects. (PS)

All development scenarios of the Project include the demolition or renovation of the existing on-site buildings in Development Areas Four, Five, and Six. Development Area Two envisions demolition and renovation of existing on-site buildings under the Maximum Residential and Maximum Trips Scenarios only; under the Maximum Commercial Scenario, the buildings would not be demolished or renovated. Development Areas One, Three, Seven,

Eight, and Nine do not include any existing structures, and therefore this impact would not apply.

Development in Development Areas Two, Four, Five, and Six all include structures built prior to 1981 that could contain hazardous materials, such as asbestos, PCBs, lead, and mercury. These buildings include the Pacific Coast Cannery building located on the southern portion of the Project Area, which may be converted into residential use, and the 16th Street Train Station, which would be renovated.

Exposure pathways that could occur during demolition or renovation include the following:

- Direct dermal contact with hazardous materials;
- Incidental ingestion of hazardous materials (usually due to improper hygiene, when workers fail to wash their hands before eating, drinking, or smoking); and
- Inhalation of airborne dust released from dried hazardous materials.

Asbestos poses health hazards only when inhaled; therefore, friable (easily crumbled) asbestos is potentially hazardous if not encapsulated. Non-friable asbestos or encapsulated asbestos does not pose substantial health risks. Upon building renovation or demolition in Development Areas Two, Four, Five, and Six, asbestos fibers (if present) could be disturbed, released into the air, and inhaled by construction workers or the public unless proper precautions are taken. Existing government regulations such as the California Health and Safety Code Section 39000 et seq. limit asbestos emissions from asbestos-related demolition or construction activities, and specify precautions and safe work practices that must be followed to minimize the potential release of asbestos fibers.

Building components containing PCBs, lead, or mercury could also be found in structures located in Development Areas Two, Four, Five, and Six to be demolished or renovated. In sufficient concentrations, lead and mercury are regulated as hazardous wastes. RCRA requires that generators of PCBs, lead, or mercury waste test the debris for toxicity characteristics. The U.S. Department of Housing and Urban Development has prepared guidelines for evaluation and control of lead-based paint hazards. The guidelines provide detailed, comprehensive, technical information on how to identify lead-based paint hazards and how to control such hazards safely and efficiently. If any unidentified hazardous materials were to remain in the existing buildings when demolition or renovation occurred, these hazardous materials could create worker health hazards or result in environmental release (or inappropriate disposal) of hazardous materials. Further, as the Project would be phased over a number of years, certain development areas would be renovated and occupied prior to others. Residents, employees, and patrons of the residential and commercial uses would be located in closer proximity to demolition and renovation activities in a manner that would increase the number of persons exposed to hazardous materials.

For this reason, the Project could involve handling materials in a manner that poses a hazard to people, or to animal or plant populations, if appropriate hazardous materials surveys and safety precautions are not undertaken. This exposure would constitute a potentially significant impact.

To the extent that the Project could involve removing hazardous materials within existing buildings, it could reduce potential health threats and prevent individuals on and off site from encountering these materials in the future. Proper handling and disposal of contaminated materials would protect the environment and prevent potential future adverse health, safety, or related environmental effects.

Summary of Impact HM-1 by Development Area. Demolition and renovation activities would occur in Development Areas Two, Four, Five, and Six and could expose construction workers to hazardous building components. This potentially significant impact would require Project Sponsors of these development areas to implement the recommended mitigation measures. The other development areas are not occupied by existing structures, and, thus, there would be no adverse health and safety impacts from hazardous building components in these areas.

Development Area	No Impact	LTS	PS	S
1	✓			
2			✓	
3	✓			
4			✓	
5			✓	
6			✓	
7	✓			
8	✓			
9	✓			

MITIGATION MEASURE. The following mitigation measure would apply to Development Areas Two, Four, Five, and Six and would reduce potential significant exposure to hazardous building components to a less-than-significant level. (LTS)

HM-1.1 Pre-Construction Hazardous Materials Surveys and Management of Hazardous Materials Properly if Identified. Prior to demolition or renovation of any structures, the Project Sponsor of Development Areas Two, Four, Five, and Six shall retain a qualified environmental specialist (e.g., a certified consultant or lead inspector/assessor or similarly qualified individual) to inspect existing buildings subject to demolition or renovation for the presence of as yet unidentified asbestos, PCBs, mercury, lead, or other hazardous materials. If after inspection and analytical testing, hazardous building materials are found at levels that require special handling (e.g., special packaging prior to transport, separation from other non-hazardous solid waste, keeping material damp with water, etc.), the Project Sponsors and their contractors shall manage these materials as required by law and according to federal

and state regulations and guidelines, including those of DTSC, RWQCB, BAAQMD, Cal/OSHA, and any other agency with jurisdiction over these hazardous materials. The Project Sponsors shall obtain permits for demolition and show proof that the building materials have been tested and/or removed by a certified environmental professional.

HM-2. Site grading and landscaping, excavation, and construction of proposed building foundations, utility trenches, and roadwork for the Project could expose construction personnel and the public to existing contaminated soil and/or groundwater if approved remediation cleanup levels have not been achieved. (PS)

As shown on Figure 3.8-1, every development area within the Project Area contains soils with chemical contaminant concentrations that exceed proposed remediation standards. Geomatrix established the proposed remediation cleanup levels based on EPA Region 9 residential land use PRGs and the RWQCB's risk-based screening criteria.[8] The RWQCB approved the proposed cleanup levels on May 21, 2004 (see Appendix E). These remediation goals, once satisfactorily met, would allow either unrestricted or restricted land uses in the Project Area. Based on EPA PRGs and the RWQCB's screening criteria for residential land use, potentially exposed soil containing concentrations exceeding total threshold level concentrations (TTLCs) and soil above the proposed remediation standards would be removed prior to development for unrestricted land uses. However, successful completion of remediation activities cannot be confirmed until closure reports have been submitted and accepted by the local oversight agency that verifies the site has been satisfactorily remediated.

Since the Project under all development scenarios would involve the disturbance of surface and subsurface soil during site grading, excavation, and construction of building foundations, utility trenches and roadwork in each of the development areas, these construction activities could encounter residual contaminated soil or groundwater. On the basis of existing information, the most likely contaminants encountered during earth-moving activities would be petroleum hydrocarbons, VOCs, PAHs, pesticides/herbicides, and metals. During excavation, construction, and dewatering activities, construction workers and members of the public could be at risk for exposure to contaminated soil and/or groundwater.

Exposure to hazardous materials could cause various short-term or long-term health effects specific to each chemical present if the exposure is of sufficient concentration and duration. Acute effects, often resulting from a single exposure, could include nausea, vomiting, headache, or dizziness. Chronic exposure to hazardous materials could result in systemic damage or damage to specific organs, such as lungs, liver, or kidneys (related to benzene exposure, a known carcinogen and a common additive to petroleum hydrocarbons).

[8] Geomatrix Consultants, Inc., *Proposed Remediation Levels, Central Station, Wood Street between 10th Street and West Grand Avenue, Oakland, California*, letter report to the RWQCB, October 20, 2003.

Construction workers would be at the greatest risk of exposure to contaminated soil or groundwater, particularly if not all hazardous materials in the soil or groundwater are adequately identified. These individuals would be exposed to a complete exposure pathway, as described above, provided that a source of contamination is present. The mechanism for transport from the source to the receptor exists in the form of earth-moving activities. Construction workers could come into contact with the contaminated materials through dermal contact, incidental ingestion of hazardous materials, or inhalation of airborne dust. The contaminated materials could enter into the body though the skin or lungs.

In addition, exposure to contaminants could occur if these contaminants migrated from the contaminated zone to surrounding areas either before or after the surrounding areas were developed, or if contaminated zones were disturbed by future development at the contaminated location. The potential exposure of construction personnel or the public to remnant hazardous substances from former on-site uses and facilities at the Project Area exists, and this would be a potentially significant impact.

The population that would be present at Project completion would include workers employed within the Project Area, residents, and visitors. However, as required by the RWQCB and the DTSC, potentially exposed soil containing concentrations exceeding TTLCs and soil above the proposed remediation standards would have been removed prior to unrestricted land use development. In addition, direct exposure to groundwater at the Project Area and, hence, the elevated levels of contaminants, is not likely to affect the public, since the groundwater would not be exposed following completion of construction and would not be used for domestic purposes.[9] Remaining contamination would either be below regulatory standards or located underground and away from persons located on site. Thus, a complete exposure pathway would not exist because there would be no mechanism to transport the substance from the source to the receptor. Therefore, future residents and/or site workers and visitors would not be exposed to contaminated soil and/or groundwater.

Summary of Impact HM-2 by Development Area. Construction and ground-disturbing activities would occur in every development area and could expose construction workers and the public to existing contaminated soil and/or groundwater. Each Project Sponsor shall implement the mitigation measures identified below.

[9] Geomatrix Consultants, Inc., *Proposed Remediation Levels, Central Station, Wood Street between 10th Street and West Grand Avenue, Oakland, California*, letter report to the RWQCB, October 20, 2003.

Development Area	No Impact	LTS	PS	S
1			✓	
2			✓	
3			✓	
4			✓	
5			✓	
6			✓	
7			✓	
8			✓	
9			✓	

MITIGATION MEASURES. The following mitigation measures would apply to all development areas and would reduce impacts from exposure to contaminated soils and/or groundwater to a less-than-significant level. (LTS)

HM-2.1 *Site Health and Safety Plan*. Because historic uses at the Project Area have led to soil and groundwater contamination, the Project Sponsor and its contractors shall comply with the *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*[10] regulatory requirements for hazardous materials/waste health and safety plans. The site health and safety plan shall establish policies and procedures to protect workers and the public from potential hazards posed by residual contamination in the development area. The plan shall identify contaminants, potential hazards, material handling procedures, dust suppression measures, personal protection clothing and devices, access controls to the site, health and safety training requirements, monitoring equipment used during construction to verify health and safety of workers and the public, measures to protect public health and safety, and emergency response procedures. If petroleum hydrocarbons or VOCs are present in the soil and/or groundwater proposed for the use of backfill or disposal, the handling and disposal of the contaminated soil and groundwater shall be in accordance with applicable local and federal hazardous materials regulations.

HM-2.2 *Compliance with Soil Remediation Standards*. Since the RWQCB and DTSC have already approved the soil remediation standards,[11] the Project Sponsor and its contractors shall be responsible for ensuring that potentially exposed soils containing concentrations exceeding TTLCs and soils above the proposed remediation standards shall be removed or treated on site prior to development.

[10] National Institute for Occupational Safety and Health, U.S. Occupational Health and Safety Administration, U.S. Coast Guard, and U.S. Environmental Protection Agency, *Occupational Safety and Health Guidance Manual for Hazardous Waste and Site Activities*, 1985.

[11] RWQCB, *Approval of Remediation Cleanup Levels, Central Station Site, Wood Street between 10th Street and West Grand Avenue*, Oakland, California, May 21, 2004, File No. 01S0556 (MEJ); Geomatrix Consultants, Inc., *Proposed Remediation Levels, Central Station, Wood Street between 10th Street and West Grand Avenue*, Oakland, California, letter report to the RWQCB, October 20, 2003. See Appendix E.

The soil remediation standards are included in a May 18, 2004, letter from Geomatrix to the RWQCB. Successful completion of remediation activities cannot be confirmed until closure reports have been submitted to and approved by RWQCB that the development areas have been satisfactorily remediated.

HM-3. Routine use or accidental release of hazardous materials during operations of the Project could expose people or the environment to these materials. However, management of hazardous materials shall comply with applicable laws so that the impact from accidental releases is considered less than significant. (LTS)

The Project under all possible development scenarios (Maximum Residential, Maximum Commercial, and Maximum Trips Scenarios) would include the use of hazardous materials and the storage of hazardous materials. Some chemicals can pose physical hazards (e.g., chemical burns) or health hazards (e.g., poisoning), including potential acute or chronic illnesses. The properties and health effects of different chemicals are unique to each chemical and depend on the extent to which an individual is exposed. The extent and exposure of individuals to hazardous materials would be limited by the relatively small quantities of these materials that would be stored and used in the Project Area. Under all possible development scenarios, hazardous materials storage and handling would involve the routine use of household chemicals like paints, oils, cleaning solvents and ammonia, etc. Most of these chemicals would be consumed by use and with adherence to warning labels and storage recommendations from the individual manufacturers, these hazardous materials would not pose any greater risk than at any other residential or commercial development.

Workers and Other Individuals. The project-related effects of hazardous materials handling and storage would generally be limited to the immediate areas where materials would be located, because this is where exposure would be most likely. Exposure at more distant locations would require some mechanism, like wind, to transport the material to the location. Best management practices (BMPs) to control particulate matter emissions during construction activities and adherence to applicable regulations regarding hazardous materials management (i.e., laws required to ensure hazardous materials are properly handled, used, stored, and disposed of) would reduce impacts to individuals located outside of the Project Area to less-than-significant levels. For this reason, the individuals most at risk would be residents, employees, or others in the immediate vicinity of the hazardous materials from the Project Area. The routes through which these individuals could be exposed include inhalation, ingestion, contact, and other accidents.

As described in the Setting section, businesses are required to comply with health and safety and environmental protection laws and regulations, including the Business Plan Act, which requires that businesses handling or storing certain amounts of hazardous materials prepare a hazardous materials business plan that includes an inventory of hazardous materials stored on site (above specified quantities), an emergency response plan, and an employee training program. To accomplish this, and to otherwise provide a safe and healthy environment, businesses that use hazardous materials must implement health and safety policies and

procedures. Along with future workers, future Project residents would also be exposed to hazardous materials in the form of routinely used household chemicals. As mentioned earlier, most of these chemicals would be consumed by use and with adherence to warning labels and storage recommendations from the individual manufacturers; therefore, these hazardous materials would not pose any risk greater than that at any other residential or commercial development.

Community and Environment. For the most part, the health and safety procedures that protect workers and other individuals in the immediate vicinity of hazardous materials would also protect the more distant community and environment. The pathways through which the community or the environment (e.g., local air quality and biota) could be exposed to hazardous materials include air emissions, transport of hazardous materials to and from the Project Area, waste disposal, human contact, and accidents.

With implementation of any of the possible development scenarios (Maximum Residential, Maximum Commercial, or Maximum Trips Scenarios), hazardous materials would be stored within the Project Area, but the materials would generally be in the form of routinely used household chemicals. Therefore, the probability of a major hazardous materials incident would be remote. Minor incidents would be more likely, but the consequences of such accidents would probably not be severe due to the types of household chemicals anticipated to be used in residential and commercial uses at the site.

In addition, OFD provides "first response" capabilities to identify and secure access to hazardous materials incidents. Other jurisdictions are available, if necessary, to support Oakland through mutual aid agreements. Any increase in use and storage of hazardous materials would not substantially affect the demand for hazardous materials emergency response services in Oakland or the availability or response times of emergency responders, because the types of hazardous materials used within the Project Area would be limited to routinely used household chemicals.

Hazardous Materials Use and Storage Summary. Although the Project would involve the use of hazardous materials within the Project Area, applicable laws regarding use, storage, and transportation would continue to be implemented. These mechanisms would be expected to minimize the potential for exposure to adverse health or safety effects. Therefore, the Project would not involve the use of materials in a manner that poses any substantial hazards to people, or to animal or plant populations. Furthermore, OFD would continue to provide emergency response services. The Project would not interfere with emergency response plans or emergency evacuation plans relating to hazardous materials because the probability of a major accident is remote. The types of hazardous materials anticipated under all possible development scenarios are limited to routinely used household chemicals. For these reasons, the Project would not result in a significant environmental impact related to the increased storage and use of hazardous materials and would not require mitigation.

Summary of Impact HM-3 by Development Area. None of the proposals in the development areas would be expected to use or store hazardous materials different than any other residential or commercial development. Similarly, hazardous waste generation would not be significant in terms of volumes and would be related to routine household chemicals or landscaping applications. Accordingly, health and safety impacts from routine use or accidental release of hazardous materials during occupancy of residential units or commercial space in each development area would be less than significant.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

Cumulative Analysis

HM-4. The Project, in combination with other related projects and background growth, would not significantly contribute to cumulative impacts associated with hazardous materials use, generation, disposal, transport, or clean-up. (LTS)

The health and safety hazards posed by most hazardous materials are local in nature and generally do not combine in any cumulative sense with the hazards of other projects. Possible exceptions, however, include toxic air contaminant (TAC) emissions, transportation of hazardous materials, hazardous waste disposal, and emergency response. The need to respond to hazardous materials emergencies could also increase as a result of cumulative development.

Compliance with all applicable local, state, and federal laws, and regulations (as described in Applicable Plans and Policies in this section) that regulate, control or respond to hazardous waste, transport, disposal, or clean-up would ensure that development in the region, which includes the Project Area, does not result in significant impacts. Therefore, the following discussion focuses only on those impacts to which the Project could contribute on a cumulative basis.

Toxic Air Contaminant Emissions. Cumulative development in Oakland could increase the overall concentrations of TACs in the San Francisco Bay Area. However, none of the possible development scenarios would emit any TACs and, therefore, the Project would not contribute to cumulative TAC impacts.

Transportation of Hazardous Materials. Hazardous materials are transported on virtually all public roads, particularly since all motor vehicles contain hazardous materials (e.g., fuel),

in addition to any hazardous cargo that may be on board. The cumulative effects of transporting hazardous materials would continue to be addressed by regulatory requirements. Packaging requirements for hazardous materials and wastes established by DOT, USPS, and the EPA minimize the potential consequences of possible accidents during transport. Also, the vehicle accident rate in California is relatively low compared to other states and not all accidents release hazardous materials.[12] For these reasons, the Project's contribution to the cumulative impact of potential transportation-related accidents would be less than significant.

Hazardous Waste Disposal. As cumulative development occurs in Oakland and at the state and regional levels, more hazardous wastes will be generated and in need of disposal. However, Project-related hazardous waste generation would be minimal since most hazardous materials in the Project Area would be consumed by use. Occasionally, old car batteries, computers, paints/solvents, and used motor oil generated from the site would need to be disposed of as hazardous waste. The Alameda County Household Hazardous Waste Program provides locations within Oakland where such hazardous materials can be recycled. Therefore, the Project's contribution would not be cumulatively considerable and its contribution would be considered less than significant.

Emergency Response. Future development in Oakland could cumulatively increase the demand for hazardous materials emergency response services. However, the types of hazardous materials anticipated to be used in all possible development scenarios are associated with routinely used household chemicals, and an accidental release related to these chemicals that would require emergency response services is remote. Therefore, the Project's contribution to the cumulative impact related to emergency response is less than significant because the Project would not be expected to cause an increase in demand for hazardous materials emergency response services.

Summary of Impact HM-4 by Development Area. Since development of the entire Project Area would result in a less-than-significant contribution to cumulative impacts associated with hazardous materials use, generation, disposal, transport, or clean-up, proposals in each of the individual development areas would also result in a less-than-significant contribution to cumulative impacts associated with use, generation, disposal, transport, or clean-up.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

[12] California Department of Transportation, 1996 Accident Data on California State Highways (Road Miles, Travel, Accidents, Accident Rates), 1997.

3.9 SOILS, GEOLOGY, AND SEISMICITY

Introduction

Soils, geology, and seismicity conditions are important aspects of all development projects in the San Francisco Bay Area. Although most projects have little or no effect on geology, any project involving construction will have some effect on soils and topography, and all projects can be affected by certain geologic events, such as earthquakes. While no comments related to soils, geology, or seismicity were received in response to the Notice of Preparation for the Project, the purposes of reviewing the soils, geology, and seismicity conditions with respect to the Project are (1) to identify potentially hazardous conditions; (2) to identify the potential impacts of site planning and development; and (3) to provide techniques to reduce, eliminate, or avoid these conditions and impacts.

This section of the EIR discusses the regional geologic and seismic characteristics influencing the Project Area; the local faulting, soils, and soil resource conditions; the potential effects of seismicity; and the potential effects of planning and development on soil resources. Erosion and sedimentation issues are addressed in Section 3.10, Hydrology and Water Quality, of this EIR, because they are primarily related to turbidity and effects of soil deposits in local and regional water bodies.

The primary sources of information in this section include site observations;[1] maps and tables in the Environmental Hazards Element of the *City of Oakland General Plan;*[2] pertinent data on soils, geology, and seismicity previously compiled for the *OARB Area Redevelopment Plan EIR,* regional studies published by federal, state, and local agencies such as the United States Geological Survey (USGS), the California Geological Survey (formerly the Division of Mines and Geology), and the Association of Bay Area Governments (ABAG), dealing with geotechnical conditions in the Bay Area; the Soil Survey of Alameda County; and environmental site assessment reports provided by various public and private agencies, all of which are cited in the footnotes.

For the evaluation of soils, geology, and seismicity impacts, the Maximum Residential Scenario, Maximum Commercial Scenario, and Maximum Trips Scenario would result in similar impacts, because development in the Project Area would have the potential to be affected by the same soils, geologic, and seismic conditions. Therefore, the analyses in this section apply to all Project development scenarios.

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1 Site inspection by EIP Associates, January 2004.
2 *City of Oakland General Plan*, adopted 1995.

Setting

Regional Characteristics

Geology. The regional geologic framework of the Bay Area (see Figure 3.9-1), and the City of Oakland in particular, can be understood through the theory of plate tectonics. The earth's mantle is composed of several large plates that move relative to each other. The San Andreas Fault Zone is at the junction of two such plates. The Pacific plate, on the west side of the fault zone, is moving north relative to the North American plate on the east side. All of the geologic formations in Oakland are on the North American plate. One of the results of plate movement is the regional rock deformation that is expressed in the general northwest trend of valleys and ridges in the vicinity of the City. This is visible, for example, in the orientation of the Hayward Fault about 5.5 miles northeast of the Project Area, and in the orientation of the East Bay Hills between six and eight miles east of the Project Area. Another result of plate movement, discussed below, is the regional seismicity that Oakland has in common with the rest of the Bay Area.[3]

Seismicity. The City of Oakland, including the Project Area, lies within the San Andreas Fault System, which is approximately 44 miles wide in the Bay Area.[4] The principal active faults, on which there is evidence of displacement during Holocene time (the last 11,000 years), include the San Andreas, San Gregorio, Hayward-Rodgers Creek, West Napa, Calaveras, Concord, and Green Valley Faults.[5] Figure 3.9-1 shows the approximate position of the major fault zones, the general distribution of the major groups of rock units, and the location of the Project Area in relation to these features. Table 3.9-1 contains the estimated maximum parameters for earthquakes on known major faults that could potentially affect the Project Area.

The City of Oakland and the rest of the Bay Area are in one of the most active seismic regions in the United States. Each year, low- and moderate-magnitude earthquakes occurring within or near the Bay Area are felt by residents of the City. Most recently, the Moment Magnitude (M_W) 6.9 Loma Prieta earthquake (M 7.1 on the Richter scale[6]) of October 1989 on the San Andreas Fault caused severe damage throughout the Bay Area, including extensive damage to buildings and bridge approaches in Oakland. The incorporation of earthquake safety design for construction in the City, through the use of

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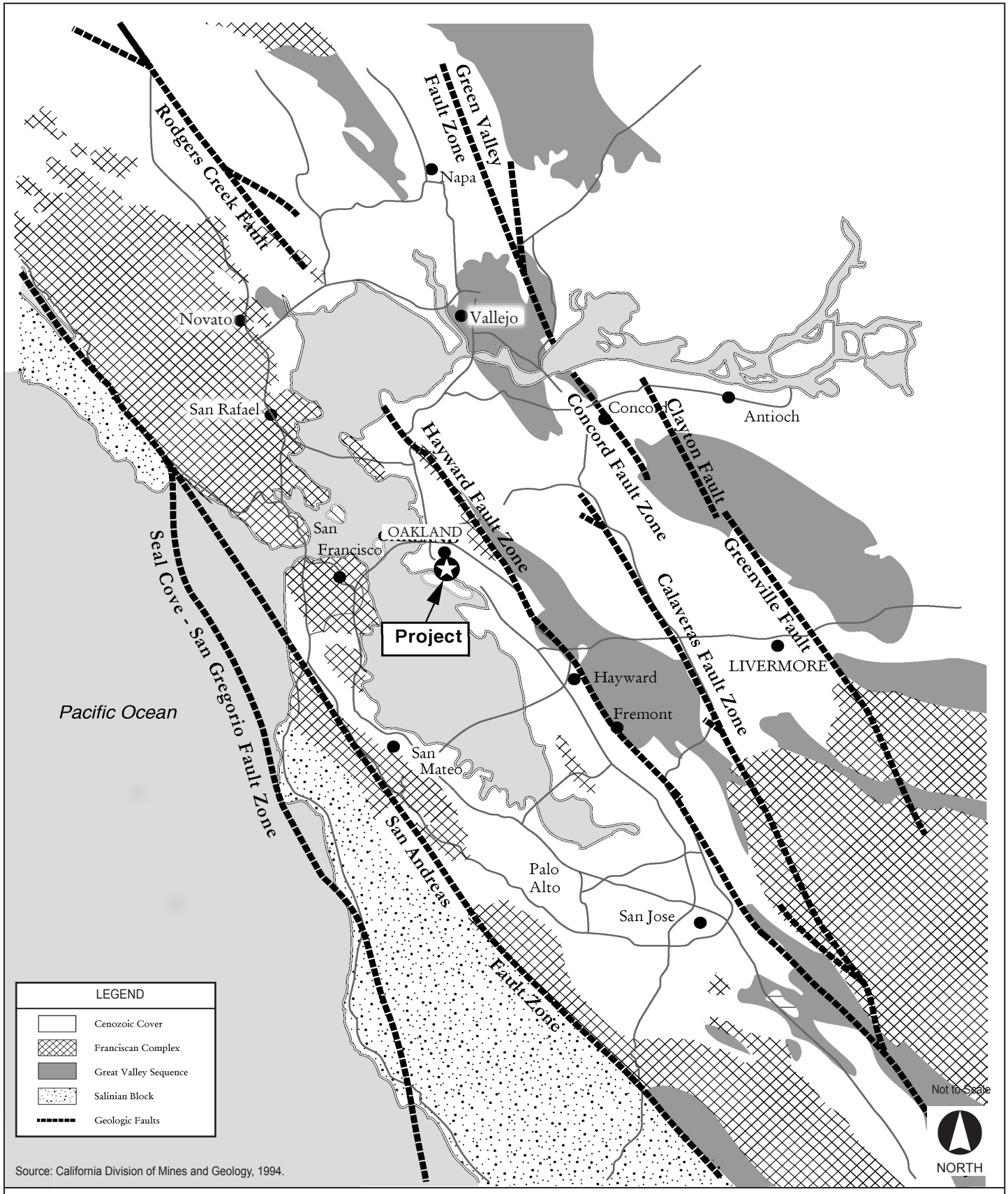
3 G.B Oakeshott, *California's Changing Landscapes, A Guide to the Geology of the State*, 2nd edition, 1978.

4 R.E. Wallace, "General Features", in Wallace, R.E., ed. *The San Andreas Fault System, California*, United States Geological Survey Professional Paper 1515, January 1990, p. 3-12.

5 E.J. Bortugno, R.D. McJunkin, and D.L. Wagner, *Map Showing Recency of Faulting, San Francisco – San Jose Quadrangle, California,* California Geological Survey (formerly the California Division of Mines and Geology), Regional Geologic Map Series, No. 5A, 1991, Sheet 5 of 5, map scale 1:250,000.

6 Richter Magnitude Scale is a logarithmic scale developed in 1935 to 1936 by Dr. Charles F. Richter and Dr. Beno Gutenberg to measure earthquake magnitude (M) by the amount of energy released, as opposed to earthquake intensity as determined by local effects on people, structures, and earth materials (for which, see Modified Mercalli Intensity Scale). Each whole number on the Richter scale represents a 10-fold increase in amplitude of the waves recorded on a seismogram and about a 31-fold increase in the amount of energy released by the earthquake. Because the Richter scale tends to saturate above about M 7.5, it is being replaced in modern seismologic investigations by the moment magnitude (M_W) scale (see Table 3.9-1, footnote a).



EIP ASSOCIATES

FIGURE 3.9-1

Regional Geologic Map

the California Building Code (see discussion of "Applicable Plans and Policies" below) and amendments to the Code, as adopted by the City of Oakland (Title 15 of the City's Municipal Code), substantially reduces the likelihood that new structures in the City would be considered hazardous during an earthquake.[7]

The major fault zones of the San Andreas Fault System were the sources of all the earthquakes listed in Table 3.9-1 and are expected to be the sources of most future earthquakes in the area.[8] Therefore, it is necessary to design structures and facilities in Oakland to withstand the anticipated effects of seismic vibration from distant as well as nearby sources.[9] Recognizing this necessity, the *City of Oakland General Plan* Environmental Hazards Element specifically identifies the Hayward-Rodgers Creek Fault

Table 3.9-1
Estimated Maximum Parameters for
Major Known Faults Affecting the Project Area

Fault	San Gregorio	San Andreas	Hayward-Rodgers Creek	Calaveras
Moment Magnitude[a]	7.1	7.9	7.1	6.8
Duration of Strong Shaking (seconds)[b]	18—30	30—60	30—60	18—30
Maximum Intensity (MMI)[c]	VII	VIII - IX	IX	VII - VIII
Peak Horizontal Accelerations in Rock and Stiff Soil (Gravity)[d]	0.09—0.10	0.10—0.65	0.30—0.60	0.09—0.25
Approximate Distance and Direction from Site to Fault (Miles)	20 SW	14 SW	5.5 NE	16 SE

Source: EIP Associates. 2004.

Notes:

a. For the purposes of describing the size of the design (or scenario) earthquake of a particular fault segment, moment magnitude (M_w) of the characteristic earthquake for that segment has replaced the concept of a maximum credible earthquake of a particular Richter magnitude. This has become necessary because the Richter Scale "saturates" at the higher magnitudes; that is, the Richter scale has difficulty differentiating the size of earthquakes above magnitude 7.5. The M_w scale is proportional to the area of the fault surface that has slipped, and thus, is directly related to the length of the fault segment. Although the numbers appear lower than the traditional Richter magnitudes, they convey more precise (and more usable) information to geologic and structural engineers.

b. Duration of ground motion at 0.5g (50 percent of the force of gravity) within ten miles of the fault. Estimates based on relationships developed by Bolt, 1973.

c. Estimated Modified Mercalli Intensity damage level based on relationships developed by Perkins and Boatwright, 1995, or Richter, 1958 (San Andreas Fault only).

d. Estimates based on relationships developed by Seed and Idriss, 1972, Joyner and Boone, 1981, and Campbell and Sadigh, 1983.

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7 *City of Oakland General Plan*, adopted 1995.

8 a) C.W. Jennings, *Fault Activity Map of California and Adjacent areas, with locations and ages of Recent Volcanic Eruptions*, Geologic Data Map No. 6, California Geological Survey, 1994, scale 1:750,000, accompanied by 92 pages of explanatory text.
b) Association of Bay Area Governments (ABAG), *The San Francisco Bay Area On Shaky Ground*, Publication Number P95001EQK, April 1995.

9 Seismology Committee, Structural Engineers Association of California, *Recommended Lateral Force Requirements and Tentative Commentary*, San Francisco, California, 5th edition, revised June 30, 1998, p. 1.

System as a source of seismic activity that must be taken into consideration in planning and development of the City.

On the basis of research conducted since the 1989 Loma Prieta earthquake, the USGS and other scientists concluded that there is a 62 percent probability of at least one M_w 6.7 or greater earthquake (capable of causing widespread damage) striking the San Francisco Bay region within the next 30 years.[10] The Hayward-Rodgers Creek Fault System has the highest probability (27 percent) of generating a M_w 6.7+ earthquake in this time frame.[11] Earthquakes of this magnitude are sufficient to cause major damage to structures, underground utility lines, and foundations that are not designed specifically to resist the lateral forces generated by earthquakes, or with sufficient flexibility to accommodate expected seismic ground motion.[12]

There are several other active and potentially active fault zones that could affect the Project Area. These include faults that are historically active (during the last 200 years), those that have been active in the geologically recent past (about the last 11,000 years, referred to as the Holocene epoch), and those that have been active at some time during the Quaternary geologic period (the last 1.6 million years). The San Andreas, Hayward-Rodgers Creek, and Calaveras Fault Zones are all at least partially historically active.

Project Area Vicinity Characteristics

Topography. The ground surface in the Project Area is a nearly level plain that slopes very gently to the northwest at an average gradient of less than one percent. The ground elevation is about 10 feet above mean sea level.[13] The ground surface is a mixture of urban land cover made of asphalt, concrete, building materials, and compressed fill. There are no natural or man-made waterways or standing water bodies in the Project Area.[14]

Soils. The soils of western Alameda County, including the Project Area, were mapped most recently in 1981 by the Natural Resources Conservation Service. The soil beneath the Project Area is described as "…mainly heterogeneous fill… covered by buildings, roads, parking lots, and other urban structures."[15] Soil characteristics (such as texture, density, or mineral content) depend on the type of

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10 Working Group on California Earthquake Probabilities, *Earthquake Probabilities in the San Francisco Bay Region: 2002 to 2031 - A Summary of Findings,* United States Geological Survey Open File Report 03-214, Online Version, last modified June 6, 2003.

11 Working Group on California Earthquake Probabilities, 2003.

12 a) R.D. Borderdt, et al., *Maximum Earthquake Intensity Predicted on a Regional Scale*, United States Geological Survey, Miscellaneous Field Investigations Map MF-709, 1975, scale 1:125,000.
b) K.V. Steinbrugge, J.H. Bennett, H.J. Lagorio, J.F. Davis, G.A. Bordardt, and T.R. Toppozada, *Earthquake Planning Scenario for a Magnitude 7.5 Earthquake on the Hayward Fault in the San Francisco Bay Area*, California Geological Survey, Special Publication 78, 1987, scale 1:200,000.

13 United States Geological Survey, *Oakland West Quadrangle, California*, 7.5 Minute Series (Topographic), 1954, photorevised 1980, scale 1:24,000.

14 City of Oakland, *OARB Area Redevelopment Plan EIR,* July 2002, pp. 4.13-2 through 4.13–5.

15 United States Department of Agriculture, Natural Resources Conservation Service (formerly the Soil Conservation Service), *Soil Survey of Alameda County, California, Western Part*, 1981.

material used as fill at any particular location. The *OARB Area Redevelopment Plan EIR* indicates that the fill layer on the Project Area generally is 4 to 8 feet thick, underlain by thin layers of sand and Bay mud.[16] To the extent that Bay mud forms part of the fill, the material can be expected to be expansive and corrosive to untreated steel and concrete. Specific treatments to eliminate the effects of soil expansion include, but are not limited to, grouting, recompaction, and replacement with non-expansive material. In Oakland, construction sites on expansive soil are required to be evaluated to determine the particular treatment that would be most appropriate. Because expansive soils are common throughout the Bay Area, contractors and soil testing firms are familiar with the procedures used to identify and eliminate the problems involved.

Soil characteristics such as permeability, compressibility, and erosion hazard vary with grain size (clay, sand, gravel, etc.), grain-size distribution, and material density, etc., and may change rapidly over very short distances. The California Geological Survey identifies the Project Area as being in a Seismic Hazard Zone for liquefaction.[17]

Geologic Units. The surface and near-surface geologic units described above for the Project Area are underlain by modern fill, geologically young tidal deposits, and older bedrock. The fill consists of an unknown mixture of natural materials (clay, sand, gravel, etc.) and manufactured materials (concrete, brick, rubble, etc.) that is 4 to 8 feet thick. The fill is underlain by a layer of sand of unspecified thickness (apparently between 1 and 9.5 feet) and 1.5 to 2.5 feet of Bay mud. Below the Bay mud is 35 to 50 feet of dense to very dense, fine- to medium-grained silty sand, similar to the Merritt Sand formation.[18] These manufactured and natural unconsolidated sediments are easy to excavate; however, the materials do not provide sufficient strength for deep, unsupported cuts to stand in relatively steep slopes during the entire construction season. The clayey portions of the material are also prone to expansion and do not drain easily. The slightly coarser-grained sediments drain more readily. There is also a possibility of encountering pockets of liquefiable sand on the site.[19]

Geoseismic Hazards and Constraints. The known active fault traces closest to the Project Area are associated with the Hayward Fault, about 5.5 miles northeast of the Project Area (see Figure 3.9-1). This is the only fault in Oakland that is zoned by the state under the Alquist-Priolo Earthquake Fault Zoning Act of 1972. No other earthquake fault zones or known active fault traces cross or trend toward the Project Area. The nearby traces of the Hayward Fault in the earthquake fault zone are historically active and show continuing evidence of ground surface rupture during the historical age (the last 400 years, a very short time in terms of geologic activity). The Hayward Fault is capable of

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16 *OARB Area Redevelopment Plan EIR,* July 2002, p. 4.13-5.

17 California Geological Survey, *State of California Seismic Hazard Zones, Official Map, Oakland West Quadrangle*, February 14, 2003, scale 1:24,000.

18 *OARB Area Redevelopment Plan EIR*, July 2002, pp. 4.13-2 through 4.13–5.

19 D.H. Radbruch, *Areal and Engineering Geology of the Oakland West Quadrangle, California*, United States Geological Survey, Miscellaneous Geologic Investigations Map I-239, 1957, scale 1:24,000.

generating a characteristic earthquake of M_w 7.1 and peak horizontal ground accelerations as high as 0.6g (60 percent of the force of gravity) near the epicenter of the earthquake.[20]

Groundshaking intensities associated with this event are expected to be IX (violent) on the Modified Mercalli Intensity (MMI) Scale.[21] MMI IX will generally cause some damage to specially designed structures, serious damage to structures of good workmanship, and heavy damage to ordinary substantial buildings, foundations, and underground utilities, such as water pipelines. Seismic ground response of this intensity could also cause severe damage to older buildings, roadways, and infrastructure that were not constructed to resist earthquake forces. For new buildings, roads, and infrastructure constructed to current California Building Code Zone 4 seismic-resistance standards and criteria (using site-specific parameters to address the proximity of the fault), the damage potential would be somewhat lower but could still be considerable.[22]

Landslides. No landslide deposits have been mapped within the Project Area or in the immediate vicinity. The average site gradient is less than one percent. There are no slopes in the Project Area.[23]

Applicable Plans and Policies

Alquist-Priolo Earthquake Fault Zoning Act. In 1972, the State of California began delineating earthquake fault zones around active and potentially active faults to reduce fault-rupture risks to structures for human occupancy.[24] The Alquist-Priolo Earthquake Fault Zoning Act resulted in the preparation of maps delineating earthquake fault zones to include, among others, recently active segments of the Hayward-Rodgers Creek Fault. The act provides for special seismic design considerations if developments are planned in areas adjacent to active or potentially active faults.[25] The Project Area is not crossed by any Alquist-Priolo Earthquake Fault Zones.

California Building Code. The major state regulations protecting the public from geoseismic hazards, other than surface faulting, are contained in California Code of Regulations, Title 24, Part 2, the California Building Code; and California Public Resources Code, Division 2, Chapter 7.8, The Seismic

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[20] a) T.C.Smith, *Fault Evaluation Report, Hayward Fault (Oakland Segment)*, California Geological Survey FER-102, December 15, 1980, scale 1:24,000.
b) E.W. Hart, and W.A. Bryant, *Fault-Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps*, California Geological Survey (formerly the Division of Mines and Geology), Special Publication 42, 1997 Edition, Supplements 1 and 2 added 1999, as amended.
c) C.W. Jennings, 1992.

[21] ABAG, Earthquake Hazard Map for North Oakland/Piedmont/Emeryville, Scenario: North Hayward and South Hayward Segments of the Hayward-Rodgers Creek Fault System in *Earthquake Hazard Maps*, http://www.abag.ca.gov/bayarea/eqmaps/pickcity.html, updated October 20, 2003.

[22] ABAG, 1995.

[23] California Geological Survey, 2003.

[24] *Alquist-Priolo Earthquake Fault Zoning Act*, California Public Resources Code, Division 2, "Geology, Mines, and Mining," Chapter 7.5 "Earthquake Fault Zones," Sections 2621 through 2630.

[25] Hart and Bryant, 2003, pp. 9, 11, and 13.

Hazards Mapping Act. Both regulations generally apply to public buildings and a large percentage of private buildings intended for human occupancy.

Surface Mining and Reclamation Act. The major state legislation regarding mineral resource zones is the Surface Mining and Reclamation Act of 1975. One purpose of the act is to classify mineral resources in the state and to transmit the information to local governments, which regulate land use in each region of the state. Local governments are responsible for designating lands that contain regionally significant mineral resources in local general plans to assure resource conservation in areas of intensive competing land uses. The law has resulted in the preparation of mineral land classification maps delineating Mineral Resource Zones (MRZ) 1 through 4 for aggregate resources (sand, gravel, and stone).

The Project Area is in an area zoned as MRZ-1, defined as an area where there is adequate information to indicate that no significant mineral deposits are present. The closest mineral resource sector identified by the MRZ mapping is Sector P, approximately eight miles southeast of the site.[26]

City of Oakland Policies and Regulations. The Environmental Hazards Element of the *City of Oakland General Plan* requires a soils and geologic report be submitted to the Department of Public Works prior to issuance of any building permit. This report must evaluate the potential for lateral spreading, liquefaction, differential settlement, and other types of ground failure.[27]

The 1998 California Building Code is the basis for the City of Oakland Building Code. In addition to state amendments to the Uniform Building Code, jurisdictional authorities such as the City are permitted to develop local amendments, when deemed necessary. As required by law, the City has made findings based on local climatic, geologic, and topographical conditions that allow for the adoption of a number of local code amendments considered necessary because of, among other issues, the existence of the Hayward-Rodgers Creek Fault through the City. These amendments are incorporated in Title 15 of the City's Municipal Code to ensure seismic and soil safety design for construction.

Impacts and Mitigation Measures

Standards of Significance

The Project would have a significant impact on the environment if it would:

- Expose people or structures to potential substantial risk of loss, injury, or death involving:

[26] M.C. Stinson, M.W. Manson, and J.J. Plappert, *Mineral Land Classification: Aggregate Materials in the San Francisco — Monterey Bay Area, Part II: Classification of Aggregate Resource Areas, South San Francisco Bay Production — Consumption Region*, California Geological Survey, Special Report 146, Part II, 1983, p. 32, Plates 2.20 and 2.60 (scale approximately 1:48,000).

[27] *City of Oakland General Plan*, adopted 1995.

  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to California Geological Survey Special Publications 42 and 117 and PRC Section 2690 et seq.);
  - Strong seismic groundshaking;
  - Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, or collapse; or
  - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on expansive soil, as defined in Table 18-1-A of the California Building Code (2001), creating substantial risks to life or property;
- Be located above landfills for which there is no approved closure and post-closure plan, or unknown fill soils, creating substantial risks to life or property; or
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Adverse impacts in any of these categories would be considered significant unavoidable effects of the Project, if they could not be (1) reduced to an acceptable level of risk, (2) eliminated, or (3) avoided by using existing techniques generally recognized by geotechnical consultants in the Bay Area to be applicable and feasible. Based on the Setting description of seismic and topographic conditions in the Project Area, several of these significant thresholds do not apply to the Project. Since the nearest fault is about 5.5 miles from the Project Area, surface rupture due to an earthquake would not be expected within the Project Area. Similarly, the Project Area and surrounding West Oakland community are on level terrain with no potential exposure to landslides. Thus, impacts from fault rupture and landslides are not relevant and will not be further addressed in this EIR.

Finally, the Project Area lies in an urban redevelopment area and would be served by local sewers. Accordingly, the final significance threshold concerning soil suitability to support septic or alternative wastewater disposal systems would not be applicable to the Project and is not discussed further in this EIR.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not diminish potentially significant or significant effects to a less-than-significant level, the impacts are classified as "significant unavoidable effects (SU)." For this section, GE refers to Soils, Geology, and Seismicity.

GE-1. Buildings and infrastructure associated with implementation of the Project could be subject to potentially damaging, seismically induced groundshaking during the life of the Project, but compliance with seismic standards would reduce impacts to a less-than-significant level. (LTS)

Given regional and local geoseismic conditions, the City of Oakland is likely to be subjected to at least one major earthquake during the useful economic life of structures in the Project Area. The design earthquake for the Project Area is estimated by the United States and California Geological Surveys to be a M_w 7.1 earthquake on the Hayward-Rodgers Creek Fault, creating peak horizontal ground accelerations at the site in the range of 0.3g to 0.6g (30 to 60 percent of the force of gravity). The resulting vibration (violent seismically induced groundshaking) could cause damage to buildings, roads, and infrastructure (primary effects), and could cause ground failures such as liquefaction or settlement in alluvium and poorly compacted fill (secondary effects).

Proposed residential and commercial structures in the Project Area would be underlain by fill and tideland materials that, in their natural state, could respond poorly to loading during seismic ground motion. To reduce the primary and secondary risks associated with seismically induced groundshaking, residential, commercial and institutional buildings, and all associated infrastructure are required to conform with Chapter 15, Structural Design Requirements, Division IV, Earthquake Design, of the City of Oakland Building Code. These requirements stipulate the incorporation of seismic-resistant design in proposed structures.

Adherence to the Building Code ensures the maximum practicable protection available for users of building and infrastructure and their associated trenches, slopes, and foundations. The Building Code includes the following structural design requirements:

- Use of CBC Seismic Zone 4 Standards as the minimum seismic-resistant design for all proposed facilities;
- Adherence to seismic-resistant earthwork and construction design criteria, based on the site-specific recommendations of a California Certified Engineering Geologist in cooperation with the Project's California-registered geotechnical and structural engineers;
- Engineering analysis that demonstrates satisfactory performance of manufactured fill or natural unconsolidated sediments where either forms part or all of any foundation support, especially where the possible occurrence of liquefiable soils exists; and
- Analysis of soil expansion potential and appropriate remediation (compaction, removal/replacement, etc.) prior to using any expansive soils for foundation support.

Based on the regulatory framework that exists to address earthquake safety issues, seismically induced groundshaking and ground failure would be considered less than significant for the Project Area.

Summary of Impact GE-1 by Development Area. Since Building Code design requirements exist to address earthquake safety issues for all building and infrastructure development in California, development area proposals would comply with local and state building codes, resulting in a less-than-significant groundshaking impact for each development area.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

GE-2. The Project would be subject to RWQCB requirements that regulate erosion. Conformance with these standards would ensure that erosion would not be a substantial hazard in the Project Area. (LTS)

As described in Section 3.10, Hydrology and Water Quality, of this EIR, erosion and sediment transport controls are required by the City of Oakland in conformance with RWQCB regulations. An erosion and sediment transport control plan must be prepared for each project prior to the commencement of grading. An erosion control professional, landscape architect, or civil engineer specializing in erosion control must design the erosion and sediment transport control plan and be on site during the installation of erosion and sediment transport control structures to supervise the implementation of the designs and the maintenance of facilities throughout the site clearing, grading, and construction periods. These plans would allow individual Project Sponsors to comply with the National Pollutant Discharge Elimination System (NPDES) permit requirements to control stormwater pollution. Implementation of the plans, along with other best management practices, would reduce erosion impacts from Project Area development to less than significant.

Summary of Impact GE-2 by Development Area. Since existing regulations control erosion and sediment transport, construction in each of the development areas would have less-than-significant erosion impacts.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

GE-3. Buildings and infrastructure associated with implementation of the Project would be subject to hazards from development on weak and potentially expansive soils and undocumented fill, but compliance with existing building codes would reduce these hazards to less than significant. (LTS)

The probable existence of expansive, compressible, or corrosive soils and undocumented fill beneath the Project Area makes it necessary to ensure that the soils used for foundation support are sound and that contaminated soil/groundwater would not endanger construction or occupation of the development areas. Using unsuitable soils would have the potential to create future problems of building settlement and utility line disruption. When weak soils are re-engineered specifically for stability prior to use, these potential effects can be reduced or eliminated. Similarly, when contaminated soil/groundwater is identified early in the development process, the exposure of workers, occupants, and visitors in the Project Area to hazardous soil materials can be reduced or eliminated. An acceptable degree of soil stability can be achieved by the required incorporation of soil treatment programs (grouting, compaction, drainage control, etc.) in the excavation and construction plans to address site-specific soil conditions. Through remediation and closure plans, preexisting soil/groundwater contamination can be controlled and removed without endangering people using the site. Site-specific analyses of foundation support conditions and hazardous material conditions are required by the City in areas where unsuitable soil/groundwater conditions are suspected. Such analyses contain recommendations for ground preparation and earthwork specific to the site that become an integral part the construction design.

As part of the construction permitting process, the City requires completed reports of soil conditions at the specific construction sites to identify potentially unsuitable soil conditions. The evaluations must be conducted by registered soil professionals, and measures to eliminate inappropriate soil conditions must be applied, depending on the soil conditions. The design of foundation support must conform to the analysis and implementation criteria described in the City's Building Code, Chapter 16. Adherence to the City's codes and policies ensures the maximum practicable protection available for users of buildings and infrastructure and their associated trenches, slopes, and foundations.

As discussed in Section 3.8, Hazardous Materials, of this EIR, there are contaminated soil and groundwater conditions beneath the Project Area. Mitigation Measures HM-1.1, HM-2.1, and HM-2.2 would address issues of construction-related hazardous materials disturbance (through pre-construction hazardous materials surveys and hazardous materials management) and exposure to contaminated soil and/or groundwater (through preparation of a Site Health and Safety Plan and the implementation of proposed soil remediation standards).

Because there are existing requirements to investigate and address weak and expansive soils, as well as undocumented fill, through site-specific soil reports and this EIR identifies mitigation measures to reduce exposure to contaminated soil and/or groundwater, development in the Project Area would have less-than-significant impacts due to soil conditions.

Summary of Impact GE-3 by Development Area. Since Oakland's Building Code addresses unsuitable soils issues, expansive soil and undocumented fill would not be considered a substantial hazard in any particular development area.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

Cumulative Analysis

GE-4. The Project, in combination with other related projects and background growth, would not significantly contribute to cumulative impacts associated with erosion, seismic groundshaking, or unstable soils. (LTS)

The geographic context for the analysis of impacts resulting from seismic groundshaking is generally site-specific, rather than cumulative, because each development site has unique geologic considerations that would be subject to uniform site development and construction standards.

The Project Area is located in one of the most seismically active regions in the area. With respect to the nature of the fill material located on the Project Area, to the extent that Bay mud forms part of the fill, the material can be expected to be expansive and corrosive to untreated steel and concrete. Specific treatments to eliminate the effects of soil expansion include, but are not limited to, grouting, recompaction, and replacement with non-expansive material. In Oakland, construction sites on expansive soil are required to be evaluated to determine the particular treatment that would be most appropriate. Because expansive soils are common

throughout the Bay Area, contractors and soil testing firms are familiar with the procedures used to identify and eliminate the problems involved.

Soil characteristics, such as permeability, compressibility, and erosion hazards, vary with grain size (clay, sand, gravel, etc.), grain-size distribution, and material density, and may change rapidly over very short distances. The California Geological Survey identifies the Project Area as being in a Seismic Hazard Zone for liquefaction.

The Project's new structures would be subject to more stringent building codes, which would provide a higher level of protection. As part of the construction permitting process, the City requires completed reports of soil conditions at the specific construction sites to identify potentially unsuitable soil conditions. Registered soil professionals must conduct the evaluation, and measures to eliminate inappropriate soil conditions must be applied, depending on the soil conditions. The design of foundation support must conform to the analysis and implementation criteria described in the City's Building Code, Chapter 16. Adherence to the City's codes and policies ensures the maximum practicable protection available for the resident and employee population that would inhabit the new structures and/or necessitate the need for new, expanded, or existing infrastructure.

Potentially adverse environmental effects associated with seismic hazards, as well as those associated with expansive soils, topographic alteration, erosion, and contamination exposure, are site-specific and generally do not combine with similar effects that could occur with other projects in the City. Implementation of the provisions of the City's Building Code and grading ordinances, the National Pollutant Discharge Elimination System permit requirements, and the *City of Oakland General Plan* health and safety policies would ensure that potential site-specific and cumulative impacts would be less than significant.

Summary of Impact GE-4 by Development Area. Since development of the entire Project Area would result in a less-than-significant contribution to cumulative soils, geology, and seismicity impacts, proposals in each of the individual development areas would also result in a less-than-significant contribution to cumulative soils, geology, and seismicity impacts.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

3.10 HYDROLOGY AND WATER QUALITY

Introduction

This section of the EIR discusses existing local and regional hydrologic conditions with respect to the Project Area, including drainage facilities, flood hazards, water quality (particularly as affected by erosion), and groundwater issues, and potential impacts on hydrology and water quality anticipated as a result of the Project. For hydrology and water quality impacts, the Maximum Residential Scenario and the Maximum Commercial Scenario were evaluated. These scenarios were selected because they represent the least and greatest change in surface conditions that could be generated by the Project, respectively, and thus encompass the range of potential impacts on stormwater runoff and water quality conditions.

The primary sources of information for the analysis presented in this section include site observations;[1] maps and tables in the Open Space, Conservation, and Recreation Element (OSCAR) of the *City of Oakland General Plan*;[2] pertinent data on hydrology and water quality previously compiled for the *OARB Area Redevelopment Plan EIR*; and information from the Federal Emergency Management Agency (FEMA), the City of Oakland, and the San Francisco Bay Regional Water Quality Control Board (RWQCB) Region 2. The RWQCB submitted comments in response to the Notice of Preparation issued for the Project regarding the water quality provisions that apply to the Project. Those comments are addressed in this section.

Setting

Project Area Characteristics

Ground Features. The topography, soils, subsurface materials, and geologic features of the Project Area are discussed in Section 3.9, Soils, Geology, and Seismicity, of this EIR. The distribution and relationship of these features influence the location, form, and quality of surface water and groundwater. To a greater or lesser extent, these features are shaped by standing and flowing water on the ground surface or beneath it. In the vicinity of the Project Area, most of the land surface is covered by buildings, roads, and sidewalks. Most of the Project Area is composed of bare dirt, densely compacted from years of use as trucking and storage facilities, and only slowly permeable. The underlying material is manufactured fill on natural sand, Bay mud, and more sand. Permeability of the manufactured fill is highly variable, whereas the Bay mud generally retards percolation because

[1] Site inspection by EIP Associates, January 2004.
[2] *City of Oakland General Plan,* OSCAR Element.

of the fine-grained nature of the sediments. The underlying sand has sufficient medium- to coarse-grained material to allow passage of groundwater.[3]

Surface Water Drainage. The vicinity of the Project Area is a very gently sloping plain, about 10 feet above mean sea level, containing a mix of urban land cover including buildings, roads, parking lots, and other urban structures. The bare ground surface at the Project Area is nearly level and slopes very gently to the northwest at an average gradient of less than one percent. The vicinity of the Project Area receives an average total rainfall of approximately 17.5 inches per year. Runoff from the Project Area is as high as 41 percent of rainfall and is collected by the City's storm drainage system.

Natural overland drainage generally runs toward the northwest through the Project Area and its vicinity, until it is intercepted by City streets and storm drains surrounding each City block. Because the Project Area is urbanized, stormwater runoff drains directly into the City's existing stormwater conveyance system in four designated sub-basins: 64-11, 64-12, 64-13, and 64-X. This stormwater runoff eventually flows into San Francisco Bay. No records indicate any localized drainage problems, complaints, or other known issues associated with stormwater runoff.[4]

According to the FEMA Flood Insurance Rate Map, the Project Area is located in Flood Hazard Zone C. Zone C is described as being outside the 100-year flood hazard boundary and subject to "minimal flooding."[5]

Groundwater. The *San Francisco Bay Water Quality Control Plan* (as further described below), prepared by the San Francisco Bay Region RWQCB, indicates that the Project Area is in the newly defined Oakland Sub-Area of the East Bay Plain, which is "a significant groundwater basin" of the San Francisco Basin, underlain by the East Bay Plain aquifer. This aquifer extends from the vicinity of Alameda northward on the east side of the Bay.[6]

Depth to groundwater in the Bay Area tends to increase with distance from the Bay, but is variable because of the segmented nature of the aquifer. The top of the water table tends to be less than 5 feet below ground surface (bgs) in the filled areas along the shoreline, greater than 10 feet bgs in portions of the City on the lower East Bay Plain, and greater than 20 feet bgs in the hills and upper portions of the East Bay Plain. In the vicinity of the Project Area, shallow groundwater typically occurs at 5 to 9 feet bgs. Groundwater flow generally is to the west and northwest.[7]

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3 State of California, The Resources Agency, Department of Water Resources, Division of Planning and Local Assistance, *California's Groundwater, Update 2003*, Bulletin 118, October 1, 2003.

4 Lorraine Purcell, P.E., Memorandum to Brian Matsumura, City of Oakland Community & Economic Development Agency, April 19, 2004.

5 Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map Panel Number 0650 480015B, Oakland City/Alameda County, September 30, 1982.

6 Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), *San Francisco Bay Basin Water Quality Control Plan*, adopted June 1995.

7 City of Oakland, *OARB Area Redevelopment Plan EIR*, July 2002, pp. 4.14-2 through 4.14-6.

Groundwater is generally recharged through permeable materials. Natural recharge takes place along streams, rivers, and other areas of alluvial deposits within the landscape. Because the ground surface at the Project Area is densely compacted manufactured fill, about 60 percent of rainfall soaks in and is recharged to the shallow groundwater table.

Water Quality. Groundwater in areas where the East Bay aquifer system reaches sea level is reported to be impacted by saltwater intrusion, but is still considered a potential source of drinking water.[8] However, the high probability of saltwater intrusion in the Project Area would mean that groundwater would not be considered a priority drinking water resource.[9]

Groundwater contamination is usually caused by land uses that involve the release of hazardous materials or hazardous wastes into the soil or into sewer systems. Leaking underground storage tanks and sumps are common causes of such contaminated conditions, as are historical industrial activities that routinely included spills of hazardous materials or waste onto soils. In general, groundwater at the Project Area has not been severely impacted by previous activities, although groundwater beneath some portions of the Project Area contains petroleum hydrocarbons above proposed remediation standards. Petroleum hydrocarbons also are present in the soil. There are no volatile organic compound concentrations in the groundwater beneath the Project Area that are significant with respect to indoor air. The RWQCB has approved a list of proposed remediation standards submitted by the Project Sponsors' groundwater/soil consultant (Geomatrix Consultants, Inc.) for chemicals detected in soil.[10] For further discussion of groundwater/soil remediation, see Section 3.8, Hazardous Materials of this EIR.

Generally, for a site such as this one, the factors that affect groundwater quality also affect surface/stormwater quality on and in the vicinity of the Project Area. Constituents found in typical urban runoff vary as a result of differences in rainfall intensity and occurrence, geographic features, the land use of a site, vehicle traffic, and percentage of impervious surface. The EPA estimates that short-term runoff from construction sites without adequate erosion and runoff control measures can contribute more sediment to receiving waters than that deposited by natural processes over a period of several decades.

Normal operations associated with urbanization can result in the generation of or increases in pollutants that can also affect surface water quality. Surface/stormwater quality in the Project Area is typical of most urban areas; it includes a variety of common contaminants, consisting primarily of suspended sediments, limited fertilizers and pesticides used in grounds maintenance, and contaminants that are commonly associated with automobiles (e.g., heavy metals and oil, grease, and other hydrocarbons).

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8 RWQCB, Update to Risk-Based Screening Levels for Impacted Soil and Groundwater as found in City of Oakland OARB Area Redevelopment Plan EIR, April 2002.

9 Brewer, Roger D., RWQCB, telephone conversation with EIP Associates, March 14, 2003.

10 See Appendix E, Letter from RWQCB, May 21, 2004.

Some receiving waters in the vicinity of the Project Area have been listed pursuant to Section 303(d) of the federal Clean Water Act (CWA) as not attaining water quality standards established by the EPA.[11] Impaired beneficial uses include aquatic life support, commercial and sport fishing, estuarine habitat, fish consumption, fish spawning and migration, overall use support, rare and endangered species, shellfish harvesting, swimming, and wildlife habitat.[12] These water bodies include the San Francisco Bay, for which the EPA lists 12 factors impairing the quality of surface waters:

- Metals: selenium, mercury, nickel;
- Polychlorinated biphenyls (PCBs);
- Dioxin-like PCBs;
- Pesticides: diazinon, chlordane, dichloro dipheunyl trichloroethane (DDT), dieldrin;
- Dioxin compounds;
- Furan compounds; and
- Exotic species.

The EPA identifies sources of these pollutants as atmospheric deposition, industrial and municipal point, non-point, natural, resource extraction, urban runoff/storm sewer, agriculture, and ballast water.[13] The RWQCB has determined that the San Francisco Estuary does not have a capacity to assimilate exotic organisms. The RWQCB has committed to working with the State Board and the EPA to promote a national program to effectively address discharges of exotic species.[14]

Applicable Plans and Policies

Water resources are regulated by a variety of statutes. Agencies with jurisdiction over water resources include the EPA, the State Water Resources Control Board (SWRCB), and the RWQCB. The following is a summary of the regulatory context under which issues associated with water quality, drainage, and on- and off-site runoff are managed and regulated at the federal, state, and local levels.

The Clean Water Act. The 1972 amendments to the federal CWA prohibit the discharge of pollutants to navigable waters from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit (see further discussion below). The RWQCB requires that an NPDES permit be obtained for construction grading activities for all projects greater than one acre. This permit requires implementation of non-point source control of stormwater pollution runoff through the application of a number of best management practices (BMPs) designed to reduce the amount of pollutants entering streams and other water bodies.

Section 303 of the CWA requires states to adopt water quality standards for all surface water of the U.S. Water quality standards are typically numeric, although narrative criteria based upon

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[11] City of Oakland, *OARB Area Redevelopment Plan EIR*, July 2002, pp. 4.15-3 through 4.15-5.

[12] University of California, Davis Information Center for the Environment, Geospatial Waterbody System: Database, 2000, http://www.ice.ucdavis.edu/geowbs, accessed August 2, 2004.

[13] RWQCB, 2002 California 303(d) List and TMDL Priority Schedule, approved by the EPA July 25, 2002.

[14] City of Oakland, *OARB Area Redevelopment Plan EIR*, July 2002, p. 4.15-4.

biomonitoring methods may be employed where numerical standards cannot be established or where they are necessary to supplement numerical standards (see the discussion of the Porter-Cologne Water Quality Control Act below). Standards are based on the designated beneficial use(s) of the waterbody. Where multiple uses exist, water quality standards must protect the most sensitive use.

All projects resulting in discharges, whether to land or water, are subject to Section 13263 of the California Water Code and are required to obtain approval of Waste Discharge Requirements (WDRs) by the jurisdictional RWQCB. Land- and groundwater-related WDRs (i.e., non-NPDES WDRs) regulate discharges of process and wash-down wastewater, and privately or publicly treated domestic wastewater. WDRs for discharges to surface waters also serve as NPDES permits, which are further described below.

Porter-Cologne Water Quality Control Act. The state Porter-Cologne Water Quality Control Act authorizes the SWRCB to adopt, review, and revise policies for all waters of the state (including both surface water and groundwater) and directs all RWQCBs to develop regional basin plans. Section 13170 of the California Water Code also authorizes the SWRCB to adopt water quality control plans on its own initiative. Each RWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction. For the San Francisco Bay jurisdiction, water quality objectives for the Bay and its tributaries are specified in the 1995 *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan), prepared by the RWQCB in compliance with the federal CWA and the state Porter-Cologne Water Quality Control Act. The Basin Plan establishes water quality objectives and implementation programs to meet stated objectives and to protect the beneficial uses of water in the East Bay Basin. Because the Project Area is in the San Francisco Bay RWQCB's jurisdiction, all discharges to surface water or groundwater are subject to Basin Plan requirements. In cases where the Basin Plan does not contain a standard for a particular pollutant, other criteria are used to establish a standard. Other criteria may be applied from SWRCB documents (e.g., the Inland Surface Waters Plan and the Pollutant Policy Document) or from water quality criteria developed under Section 304(a) of the Clean Water Act.

National Pollutant Discharge Elimination System (NPDES). The NPDES permit system was established in the CWA to regulate both point source discharges (a municipal or industrial discharge at a specific location or pipe) and non-point source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the U.S. Non-point source pollution often enters receiving water, such as the San Francisco Bay, in the form of overland flow, i.e., surface runoff that is not delivered by pipelines or other discrete conveyances. As defined in the federal regulations, in the Bay Area such non-point sources generally are exempt from federal NPDES permit program requirements, with two exceptions: (1) non-point source discharges caused by general construction activities, and (2) stormwater discharges to municipal stormwater systems (either as part of a combined system or as a separate system in which runoff is carried through a developed conveyance system to specific discharge locations). To meet the goals of the NPDES permit, each local stormwater program and each permittee within a program establishes a stormwater management plan (SWMP). These SWMPs give specific local requirements targeted to meet the environmental needs of each watershed, as well as to reflect the political consensus of each community.

For point source discharges, each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge; however, the Project Area would not be considered a point source for regulatory purposes. For non-point source discharges, the NPDES program establishes a comprehensive stormwater quality program to manage urban stormwater and minimize pollution of the environment to the maximum extent practicable. The NPDES program consists of (1) characterizing receiving water quality, (2) identifying harmful constituents, (3) targeting potential sources of pollutants, and (4) implementing a comprehensive stormwater management program. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the EPA must consider in setting effluent limits for priority pollutants.

The Project Area is located in Alameda County and would therefore be regulated under the Alameda Countywide NPDES Municipal Stormwater Permit (General Permit), NPDES Permit No. CAS0029831 (Order No. R2-2003-0021). Under the General Permit, development would have to comply with the Alameda Countywide Clean Water Program Stormwater Quality Management Plan July 2001–June 2008 (2001). Basic requirements include implementation of post-construction stormwater BMPs and hydrograph modification mitigation (General Permit Provision C.3.).

The reduction of pollutants in urban stormwater discharge through the use of structural and nonstructural BMPs is one of the primary objectives of the water quality regulations. BMPs typically used to manage runoff water quality include controlling roadway and parking lot contaminants by installing oil and grease separators at storm drain inlets, cleaning parking lots on a regular basis, incorporating peak-flow reduction and infiltration features (such as grass swales, infiltration trenches, and grass filter strips) into landscaping, and implementing educational programs.

The 1987 amendments to the CWA direct the EPA to implement the stormwater program in two phases. Phase I addresses discharges from large (population 250,000 or above) and medium (population 100,000 to 250,000) municipalities and certain industrial activities. Phase II addresses all other discharges defined by the EPA that are not included in Phase I, and construction activities that affect one to five acres. The Phase II regulations were published in the Federal Register on December 8, 1999.

To meet this goal, the permittee must implement a stormwater management program that addresses six minimum control measures: (1) public education and outreach, (2) public participation/involvement, (3) illicit discharge detection and elimination, (4) construction site stormwater runoff control for sites greater than one acre, (5) post-construction stormwater management in new development and redevelopment, and (6) pollution prevention/good housekeeping for municipal operations. These control measures would typically be addressed by developing BMPs.

Construction Site Runoff Management. In accordance with NPDES regulations, to minimize the potential effects of construction runoff on receiving water quality, the state requires that any construction activity affecting one acre or more must obtain a General Construction Activity

Stormwater Permit. The Project would be required to comply with the City's NPDES General Permit, Waste Discharge Requirements.

Permit applicants are required to prepare a stormwater pollution prevention plan (SWPPP) and implement BMPs to reduce construction effects on receiving water quality by implementing erosion control measures. Because construction of the Project would disturb more than one acre, it would be subject to these permit requirements. In addition, 2003 revisions to the original general permit clarify that all construction activity, including small construction sites that are part of a larger common plan, must obtain a General Permit.

Required elements of a SWPPP include (1) site description addressing the elements and characteristics specific to the site; (2) descriptions of BMPs for erosion and sediment controls; (3) BMPs for construction waste handling and disposal; (4) implementation of approved local plans; (5) proposed post-construction controls, including a description of local post-construction erosion and sediment control requirements; and (6) non-stormwater management. The SWPPP must include BMPs that address source control, and, if necessary, BMPs that address specific pollutant control.

Examples of typical construction BMPs completed in SWPPPs include scheduling or limiting activities to certain times of year; prohibiting certain construction practices; implementing equipment maintenance schedules and procedures; implementing a monitoring program; other management practices to prevent or reduce pollution, such as using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; installing traps, filters, or other devices at drop inlets to prevent contaminants from entering storm drains; and using barriers, such as straw bales or plastic, to minimize the amount of uncontrolled runoff that could enter drains or surface water.

Construction Dewatering. Clean or relatively pollutant-free construction-generated wastewater that poses little or no threat to water quality may be discharged directly to surface water under certain conditions. Permit conditions for the discharge of these types of wastewaters to surface water are specified in Waste Discharge Requirements General Order for Dewatering and Other Low-Threat Discharges to Surface Waters, Order No. 5-00-175. Discharges may be covered by the permit provided either (1) they are four months or less in duration, or (2) the average dry weather discharge does not exceed 0.25 million gallons per day. Construction dewatering, well development water, pump/well testing, and miscellaneous dewatering/low-threat discharges are among the types of discharges that may be covered by the permit. The General Permit also specifies standards for testing, monitoring and reporting, receiving water limitations, and discharge prohibitions.

Floodplain Development Regulations. FEMA is responsible for determining flood elevations and floodplain boundaries based on U.S. Army Corps of Engineers (Corps) studies. FEMA also is responsible for distributing the Flood Insurance Rate Maps (FIRMs), which are used in the National Flood Insurance Program (NFIP). These maps identify the locations of special flood hazard areas, including the 100-year floodplain. Non-residential development is allowed in floodplains; however, construction activities are restricted within flood hazard areas depending upon the potential for flooding

within each area. No portion of the Project Area is in the 100 year floodplain or a flood hazard area, so floodplain development regulations are not applicable to the Project.

Impacts and Mitigation Measures

Standards of Significance

The Project would have a significant impact to hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements;
- 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 groundwater table;
- Result in substantial erosion or siltation on or off site that would affect the quality of receiving waters;
- Result in flooding on or off site;
- Create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems;
- Create or contribute runoff that would be an additional source of polluted runoff;
- Otherwise substantially degrade water quality;
- 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;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a substantial risk of loss, injury, or death involving flooding;
- Result in inundation by seiche, tsunami, or mudflow; or
- Fundamentally conflict with elements of the City of Oakland's Creek Protection Ordinance intended to protect hydrologic resources. Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of water quality through (1) discharging a substantial amount of pollutants into a creek; (2) significantly modifying the natural flow of the water or capacity; (3) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or (4) substantially endangering public or private property or threatening public health or safety.

Not all of the above significance standards apply to the Project. As noted in the Setting section, there is no flood hazard in the vicinity around the Project Area. In addition, no creeks traverse the Project Area, nor does the Project drain to a creek system. Consequently, significance standards related to

creek flows, bank stability, and the City's Creek Protection Ordinance are not relevant and are not discussed further in this EIR. The first criterion concerning violation of water quality standards is addressed by Impacts HY-2 and HY-3.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not diminish potentially significant or significant effects to a less-than-significant level, the impacts are classified as "significant unavoidable effects (SU)." For this section, HY refers to Hydrology and Water Quality.

HY-1. The Project would not 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 groundwater table. (LTS)

The Project Area is primarily densely compacted, slowly permeable bare dirt. Construction of impervious surfaces in the Project Area would reduce infiltration to the underlying water table. The RWQCB recognizes that although the Project Area has some potential as a groundwater recharge zone, the increasing saltwater intrusion conditions of the aquifers near ground surface has eliminated the shallow groundwater from serious consideration as a long-term source of potable water. For this reason, the Project Area is not considered a major or important recharge zone, even though some recharge does occur to the shallow water table of the surface aquifer. As a result, the Project would not substantially deplete groundwater supplies or diminish the rate of recharge.

Summary of Impact HY-1 by Development Area. Since the Project Area would not significantly deplete groundwater supplies or interfere substantially with groundwater recharge, individual proposals for specific development areas would not by themselves result in significant groundwater impacts.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

HY-2. Implementation of the Project would involve construction activities that could increase amounts of silt and sediment and degrade receiving water quality, resulting in a significant impact. However, compliance with state and federal regulations would reduce potential construction-period water quality impacts to less than significant. (LTS)

Implementation of the Project would involve construction activities such as excavation and trenching for utilities that would disturb soil. Construction site runoff, as well as dust generated from other portions of the Project Area, would contain sediment that could enter receiving waters such as the San Francisco Bay and degrade water quality. Construction activities associated with the Project in all development areas, except Development Areas Five and Nine, would be required to comply with the state General Construction Activity Stormwater Permit (NPDES requirement) because they would disturb more than one acre of land. Development Areas Five and Nine are each less than one acre but may still require a permit, because the construction activity would be part of the larger plan of development.

Compliance with the permit would involve filing a Notice of Intent with the RWQCB and preparing, at minimum, a SWPPP prior to construction activities. The SWPPP would be required to identify the sources of sediment and other pollutants on the Project Area, and to ensure the reduction of sediment and other pollutants in stormwater discharged from the Project Area. A monitoring program is required to aid the implementation of, and assure compliance with, the SWPPP. The RWQCB permit requirements would have to be satisfied prior to construction.

As part of the SWPPP, an erosion and sedimentation control plan would have to be prepared for the Project prior to grading. An erosion control professional, or landscape architect or civil engineer specializing in erosion control, would be required to design the Erosion and Sediment Transport Control Plan. The Association of Bay Area Governments (ABAG) recommends the control plan be designed using concepts similar to those formulated by ABAG, as appropriate, based on the specific erosion and sediment transport control needs of each area in which grading, excavation, and construction is to occur. Critical techniques to be considered include, but are not limited to, the following types of erosion control methods:

- Whenever feasible, confine grading and activities related to grading (excavation, construction, preparation and use of equipment and material storage) to the dry season (April through September).
- Discharge grading and construction runoff into small drainages at frequent intervals to avoid the buildup of large, potentially erosive flows.
- Stabilize disturbed areas as quickly as possible, either by vegetative or mechanical methods.
- Trap sediment before it leaves the site with such techniques as check dams, sediment ponds, or siltation fences.

- Control landscaping activities carefully with regard to the application of fertilizers, herbicides, pesticides, or other hazardous substances. Provide proper instruction to all landscaping personnel on the construction team.

During the installation of the erosion and sediment transport control structures, an erosion control professional would be required to be on site to supervise the implementation of the designs and the maintenance of facilities throughout the site clearing, grading, and construction period.

As part of the SWPPP process, the Project Sponsors would be required to demonstrate to the RWQCB that the Project would comply with the water quality standards established in the Basin Plan and the Alameda County Stormwater Management Plan, and would not result in a degradation of the quality of receiving water (San Francisco Bay). The Project Sponsors would also be required to demonstrate the use of "best practicable treatment or control" for all site discharges, as well as compliance with monitoring, corrective action, and cleanup regulations promulgated by the RWQCB.

Implementation of the SWPPP, as required by California law to comply with construction management procedures stipulated in the RWQCB's General Construction Activity Stormwater Permit, and consistent with federal antidegradation requirements, would ensure that potential water quality effects associated with construction activities would be less than significant. Consequently, development of the Project would not exceed this standard of significance.

Summary of Impact HY-2 by Development Area. Since each development area, except Development Areas Five and Nine, would disturb more than one acre of land, a SWPPP would be required. Implementation of the SWPPP would ensure that potential water quality effects associated with construction activities would be less than significant. In the event that construction in Development Areas Five and Nine also requires a permit because they are part of a larger plan for development or to fulfill federal antidegradation requirements for water quality, the Project Sponsors would be required to obtain such a permit, compliance with which would reduce impacts to less than significant.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

HY-3. Implementation of the Project would involve the development of impervious surfaces and urban uses. Stormwater runoff from these uses would contain silt, sediment, and other pollutants that could degrade receiving water quality. However, existing regulations would require the Project Sponsors to prepare a SWPPP for each development area and implement BMPs to control stormwater runoff. Therefore, water quality impacts from long-term operations of each individual development area would be less than significant. (LTS)

Runoff from impermeable surfaces of the Project Area could lower the quality of stormwater runoff and infiltrating groundwater. The major contributor of contaminants to runoff and infiltrating groundwater is the land surface over which the water passes. In urban areas, driveways, parking lots, sidewalks, streets, and gutters are connected directly to storm drains that collect and guide stormwater runoff. Between rainstorms, materials accumulate on these surfaces from debris dropped or scattered by individuals; street sweepings, debris, and other particulate matter washed into roadways from adjacent areas; wastes and dirt from construction and renovation or demolition; fecal droppings from animals; remnants of household refuse dropped during collection or scattered by animals or wind; oil and various residues contributed by automobiles; and fallout of airborne particles.

During a storm event, stormwater may take several paths when it reaches the ground surface. As water fills surface depressions, it seeps into the ground where the ground is permeable. Where the rate of rain reaching the ground exceeds the rate of infiltration, a film of water builds up on the ground surface. Once this film is of sufficient depth (about 0.1 inch), the water collecting on the ground surface begins to flow. The initial flow of each storm often contains the highest concentrations of pollutants; however, this is not always the case because the phenomenon is dependent on the duration of the preceding dry weather period, rainfall patterns, rainfall intensity, the chemistry of individual pollutants, and other site-specific conditions.

If uncontrolled, the accumulation of urban pollutants could have a detrimental cumulative effect because pollutants are carried in overland flow from paved surfaces to the receiving waterbody(s). Additionally, landscaped areas may contain many of the above-listed contaminants, including pesticides, which can contribute to the water quality degradation of stormwater runoff and infiltrating groundwater. The eventual result could be the deterioration of water quality in downstream receiving waters. Drainageways downstream from the Project Area carry stormwater runoff to the San Francisco Bay, which is already considered water quality impaired, as noted in the Settings section.

Potential existing and Project stormwater constituents of concern (COCs), event mean concentrations (EMCs), and annual loads are listed in Table 3.10-1. Runoff concentrations are based on the Alameda County NPDES Phase I Permit Stormwater Monitoring Program data, extracted from the NPDES National Database. For existing conditions in the Project Area, runoff concentrations reflect average EMCs from sites with primarily industrial land uses, since historically the site was mostly used for industrial purposes. For Project runoff

Table 3.10-1
Constituents of Concern Concentrations in Stormwater and Annual Load from Project Area

Constituent of Concern (COC)	Event Mean Concentration (EMC)			Annual Load		
	Units	Existing	Project	Existing (lbs/yr)	Project (No BMPs) (lbs/yr)	Project Load Increase (No BMPs) (percent)
Oil and Grease	*mg/L*	5.6	2.9	332	260	-22
Total Dissolved Solids	*mg/L*	96.3	65.4	5705	5873	3
Total Suspended Solids	*mg/L*	142	159	8413	14279	70
Biochemical Oxygen Demand	*mg/L*	13	17.6	770	1581	105
Fecal Coliforms	*mpn/100 mL*	9090	4170	2454	1707	-30
Total Nitrogen	*mg/L*	1.13	1.02	66.9	91.6	37
Total Kjeldahl Nitrogen	*mg/L*	0.73	0.78	43.2	70.0	62
Nitrate	*mg/L*	0.9	0.73	53.3	65.6	23
Heavy Metals						
Total Cadmium	*µg/L*	2.16	1.24	0.128	0.111	-13
Dissolved Cadmium	*µg/L*	0.52	0.24	0.031	0.022	-30
Total Chromium	*µg/L*	27.2	26.4	1.61	2.37	47
Dissolved Chromium	*µg/L*	1.98	1.94	0.117	0.174	49
Total Copper	*µg/L*	52	46.3	3.08	4.16	35
Dissolved Copper	*µg/L*	7.27	5.3	0.431	0.476	11
Total Lead	*µg/L*	136	115	8.06	10.3	28
Dissolved Lead	*µg/L*	5.03	3.34	0.298	0.300	1
Total Mercury	*µg/L*	0.12	0.26	0.007	0.023	228
Total Nickel	*µg/L*	20.7	24.4	1.23	2.19	79
Dissolved Nickel	*µg/L*	5.09	6.74	0.302	0.605	101
Total Selenium	*µg/L*	0.54	0.36	0.032	0.032	1
Dissolved Selenium	*µg/L*	0.25	0.26	0.015	0.023	58
Total Zinc	*µg/L*	3850	765	228	68.7	-70
Dissolved Zinc	*µg/L*	1980	91.5	117	8.22	-93
Pesticides	*No data available*					
PCBs	*No data available*					
Dioxins	*No data available*					
Furan Compounds	*No data available*					

Source: EIP Associates, 2004.

Notes:

BMPs = best management practices
mg/L = milligrams per liter
µg/L = micrograms per liter
mpn/100 mL = Most Probable Number for contamination per 100 milliliters

characterization, concentrations were based on monitoring results from mixed residential and commercial sites. No data are available for stormwater concentration of several San Francisco Bay pollutants listed for Total Maximum Daily Load (TMDL) development; consequently, Project impacts on these pollutants cannot be addressed at this time. However, available data indicate that the Project Area may contribute high sediment (total suspended solids), fecal coliforms, and heavy metals (in particular, zinc) to the San Francisco Bay under both existing and Project conditions.

To determine the annual load listed in Table 3.10-1, the following equation was used:

$L = R \times C \times A \times 0.226$

where:

L = annual load (pounds)

R = annual runoff (inches)

C = constituent concentration (mg/L)

A = area (acres)

0.226 = unit conversion factor (0.00103 for fecal coliforms)

Annual runoff used in the above equation is determined by:

$R = Rv \times P \times Pr$

where:

R = annual runoff (inches)

Rv = site-specific runoff coefficient (dimensionless)

P = annual precipitation (inches)

Pr = fraction of precipitation that produces runoff (dimensionless)

The site-specific runoff coefficients are estimated based on infiltration properties of the site and include consideration of such factors as soils, imperviousness, slope, vegetation, and compaction. Table 3.10-2 lists the existing condition and Project runoff coefficients as determined using the Caltrans method.[15]

Table 3.10-2
Runoff Coefficients

Condition	Imperviousness (percent)	Overall Runoff Coefficient (Rv)
Existing	23	0.57
Project	88	0.86

Source: EIP Associates, 2004.

[15] Caltrans, Caltrans Storm Water Quality Handbooks: SWPPP/WPCP Preparation Manual, 2003.

Generally, Project stormwater COC loads, without implementation of required BMPs, are likely to be higher than existing conditions due to more anticipated runoff, rather than higher COC concentrations in stormwater. Implementation of NPDES-required post-construction BMPs, however, would reduce this additional load to less-than-significant levels. According to the NPDES data, Alameda County stormwater heavy metal concentrations are primarily in the particulate fraction (larger particles and attached to sediment) rather than the dissolved form. This implies that targeting removal of sediment would be a successful stormwater BMP strategy for heavy metal mitigation.

Table 3.10-3 lists several potential BMPs and their removal efficiencies for the COCs. Information on removal effectiveness for many COCs has not been reported, and quantification of non-structural BMPs (e.g., codes and ordinances, good housekeeping, spill prevention plans, and public education) is not documented. However, known removal of COCs with similar chemical properties and by similar types of BMPs can provide sufficient information to approximate removal efficiency for other COCs and the overall BMP strategy effectiveness. Additionally, a 20 percent reduction in COC loads, due to implementation of non-structural BMPs, is a reasonable, conservative estimate. Each Project Sponsor would have to identify and design specific BMPs to be used in their development plan for compliance with the NPDES permit for post-construction water quality treatment (General Permit Provision C.3.).

Several strategies can be adopted to maximize water quality treatment using practicable technologies. These include, but are not limited to, using BMPs that are targeted for specific constituents and/or sources (e.g., roof drain downspout filters, targeted drop inlet filters, building material ordinances, and use of porous pavement), and adopting a load reduction strategy for the entire Project Area, such that individual development areas may not meet pollutant load reduction goals, but the cumulative Project Area goals are met. Table 3.10-4 lists potential Project COC loads with implementation of two example multiple BMP scenarios (consistent with the Alameda Countywide Clean Water Program) compared to existing conditions. These results show that compliance with the General Permit, consistent with the Alameda Countywide Clean Water Program, would ensure Project impacts to water quality would be less than significant.

The OSCAR encourages the use of environmentally sensitive drainage improvements to ensure the protection of surface water quality and stream integrity. Moreover, the RWQCB NPDES requirements mandate that the Project complies with the Alameda Countywide Stormwater Quality Management Plan, including compliance with the General Permit Provision C.3. These include, but are not limited to, incorporating such systems as easily cleanable sediment catch basins, debris screens, and grease separators or similar water quality protection devices in the drainage facilities serving the Project, labeling storm drain inlets to educate the public about the water quality implications associated with dumping hazardous liquids and debris into receiving waters, maximizing infiltration potential, and cleaning and/or sweeping of roadways on a regular and frequent basis. Compliance with the required SWPPP and applicable City

Table 3.10-3
BMP Pollutant Removal Efficiencies

Constituent of Concern (COC)	Hydro-dynamic Device (percent)	Swale/ Biofilter (percent)	Basins (percent)	Sand Filter (percent)	Media Filter (percent)	Drop Inlet Filter (percent)	Street Sweep[a] (percent)	Storm-Filter™ (percent)	Vortechs STS (percent)	Storm-ceptor (percent)	Non-Structural (percent)
Oil and Grease	NA	15	NA	NA	30	65	NA	85	NA	35	20
Total Dissolved Solids	NA	-40	NA	NA	NA	NA	NA	NA	NA	NA	20
Total Suspended Solids	20	67	75	70	65	85	80	90	30	60	20
Biochemical Oxygen Demand	15	35	NA	70	NA	NA	60	70	25	30	20
Fecal Coliforms	NA	NA	70	75	NA	NA	NA	NA	NA	NA	20
Total Nitrogen	*5*	*10*	*30*	20	NA	NA	60	30	65	-25	20
Total Kjeldahl Nitrogen	0	10	20	45	NA	NA	*60*	*20*	*65*	-25	20
Nitrate	5	0	30	0	NA	NA	*60*	20	*65*	-25	20
Heavy Metals											
Total Cadmium	0	50	50	*45*	30	80	60	90	*15*	*20*	20
Dissolved Cadmium	-50	35	-35	NA	NA	NA	NA	70	NA	NA	20
Total Chromium	*15*	10	40	*45*	*30*	*80*	*60*	70	*15*	*20*	20
Dissolved Chromium	*5*	0	40	NA	NA	NA	NA	60	NA	NA	20
Total Copper	15	62	52	*45*	25	95	55	80	15	20	20
Dissolved Copper	5	35	0	NA	NA	NA	NA	85	NA	NA	20
Total Lead	30	75	30	45	30	80	60	70	*15*	*20*	20
Dissolved Lead	0	25	0	NA	NA	NA	NA	70	NA	NA	20
Total Mercury	*15*	*60*	*50*	*45*	*25*	*95*	*55*	*80*	*15*	*20*	20
Dissolved Mercury	*5*	*35*	*0*	NA	NA	NA	NA	*85*	NA	NA	20

Table 3.10-3 (Continued)
BMP Pollutant Removal Efficiencies

Constituent of Concern (COC)	Hydro-dynamic Device (percent)	Swale/ Biofilter (percent)	Basins (percent)	Sand Filter (percent)	Media Filter (percent)	Drop Inlet Filter (percent)	Street Sweep[a] (percent)	Storm-Filter™ (percent)	Vortechs STS (percent)	Storm-ceptor (percent)	Non-Structural (percent)
Total Nickel	*15*	40	50	*45*	*15*	*90*	*60*	90	*40*	*75*	20
Dissolved Nickel	*-10*	25	-15	NA	NA	NA	NA	70	NA	NA	20
Total Selenium	*-15*	*75*	*70*	*45*	*15*	*90*	*60*	65	*40*	*75*	20
Dissolved Selenium	*-18*	*55*	*0*	NA	NA	NA	NA	60	NA	NA	20
Total Zinc	-15	75	70	45	15	90	60	80	40	75	20
Dissolved Zinc	-10	55	0	NA	NA	NA	NA	75	NA	NA	20

Sources: NPDES National BMPs Database, California Sites, 2003 (basins, swale/biofilters, hydrodynamic devices); U.S. Dept of Transportation, Federal Highway Administration; Washington State Department of Transportation, 2003; Naval/Facilities Engineering Service Center (NFESC), 2004; Lu, et al, 2003.

Notes:

NA = not available

Italicized removal efficiencies are estimated based on removal of similar particles.

a. Street sweeping removal efficiency is based on the frequency and type of machine; values are for weekly sweeping with a dry vacuum machine.

Table 3.10-4
Project Impacts with Implementation of Example Stormwater Quality BMP Scenarios

	Load		BMP Scenario 1[a]				BMP Scenario 2[b]			
	Existing (lbs/yr)	Project without BMPs (lbs/yr)	Overall BMP Efficiency (percent)	Project with BMPs (lbs/yr)	Project[c] Impact (lbs/yr)		Overall BMP Efficiency (percent)	Project with BMPs (lbs/yr)	Project[c] Impact (lbs/yr)	
Oil and Grease	268	260	20	208	-59	N	54	120	-212	N
Total Dissolved Solids	4604	5873	20	4698	94	LTS	20	4698	-1007	N
Total Suspended Solids	6789	14279	84	2285	-4505	N	56	6283	-2130	N
Biochemical Oxygen Demand	622	1581	68	506	-116	N	48	822	52	LTS
Fecal Coliforms	1981	1707	20	1365	-615	N	20	1365	-1089	N
Total Nitrogen	54.0	91.6	68	29.3	-24.7	N	32	62.3	-4.7	N
Total Kjeldahl Nitrogen	34.9	70.0	68	22.4	-12.5	N	28	50.4	7.2	N
Nitrate	43.0	65.6	68	21.0	-22.1	N	28	47.2	-6.1	N
Heavy Metals										
Total Cadmium	0.103	0.111	68	0.036	-0.068	N	56	0.049	-0.079	N
Dissolved Cadmium	0.025	0.022	20	0.017	-0.008	N	48	0.011	-0.020	N
Total Chromium	1.30	2.37	68	0.759	-0.542	N	48	1.233	-0.379	N
Dissolved Chromium	0.095	0.174	20	0.139	0.045	PS	44	0.098	-0.020	N
Total Copper	2.49	4.16	64	1.50	-0.989	N	52	1.996	-1.08	N
Dissolved Copper	0.348	0.476	20	0.381	0.033	LTS	54	0.219	-0.212	N
Total Lead	6.50	10.3	68	3.30	-3.20	N	48	5.37	-2.69	N
Dissolved Lead	0.240	0.300	20	0.240	-0.001	N	48	0.156	-0.142	N
Total Mercury	0.006	0.023	64	0.008	0.003	N	52	0.011	0.004	LTS
Dissolved Mercury	ND	ND	20	ND	ND	N	54	ND	ND	N
Total Nickle	0.990	2.19	68	0.701	-0.289	N	56	0.964	-0.262	N
Dissolved Nickel	0.243	0.605	20	0.484	0.241	PS	48	0.315	0.013	LTS
Total Selenium	0.026	0.032	68	0.010	-0.015	N	46	0.017	-0.015	N
Dissolved Selenium	0.012	0.023	20	0.019	0.007	PS	44	0.013	-0.002	N
Total Zinc	184	68.7	68	22.0	-162	N	52	33.0	-195	N
Dissolved Zinc	94.7	8.22	20	6.57	-88	N	50	4.11	-113	N

Source: EIP Associates, 2004.

Notes:

a. Scenario 1: Weekly street sweeping with dry vacuum machine and estimated non-structural BMP removal of 20 percent of all constituents.

b. Scenario 2: Targeted StormFilter™, or equivalent filter media, treating 50 percent of constituent loading area, estimated non-structural BMP removal of 20 percent of all constituents, and no street sweeping.

c. Negative loads indicate overall reduction in constituent load with development of the Project. N = no impact, LTS = less-than-significant impact, PS = potentially significant impact.

standards would ensure that development of the Project would not exceed standards of significance related to urban stormwater runoff pollution.

Summary of Impact HY-3 by Development Area. Since existing regulations require the Project Sponsor for each development area to prepare a SWPPP and implement BMPs to control stormwater runoff, water quality impacts from long-term operations of each individual development area would be less than significant.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

HY-4. The Project would increase impervious surface in the Project Area, which could increase surface runoff. However, the Project would comply with the City's flood protection regulations, which require that the Project Sponsors ensure that stormwater collection and drainage systems could accommodate runoff from the developed site. Therefore, the Project would not create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems, and the impact of each development area would be considered less than significant. (LTS)

The 29.2-acre Project Area is mostly bare soil. However, compaction of the ground surface during its use as a trucking and storage area results in a high runoff coefficient for the bare soil area (Rv = 0.46). Implementation of the Project would increase imperviousness to between 86 and 88 percent (with the Maximum Residential and Maximum Commercial Scenarios, respectively). The various proposed developments that constitute the Project would create approximately 3.4 acres of landscaping and open space (12 percent pervious), based on the Maximum Commercial Scenario, which would yield the greatest runoff impact. Assuming a conservative design storm (25-year recurrence, 0.20 inches per hour),[16] using the Rational Method,[17] existing runoff is about 3.4 cubic feet per second (cfs) and Project runoff is expected to be 5.1 cfs. For flood event conditions (100-year recurrence storm, 0.25 inches per hour),[16] existing storm flow is approximately 4.2 cfs and Project flow would be 6.3 cfs. These estimates are conservative because landscaping and pervious areas could be incorporated into

[16] California Stormwater Quality Association, *Stormwater Best Management Practices Handbook*, Appendix D, Oakland WSO Airport (6335) – Alameda County, California Cumulative Frequency Hourly Rainfall Intensity, 2003.

[17] Runoff = Rv x Area x Precipitation Intensity (Chow, 1964).

the design of individual development areas, thereby reducing runoff rate and volume at the source.

The four designated sub-basins of the City's storm drainage system that would receive surface flows from the Project Area have no record of localized drainage problems, complaints, or other known issues associated with stormwater runoff. Based on a review of engineering calculations for the Project, the City of Oakland Public Works Agency has determined that sufficient capacity exists to accommodate flows from the Project Area, and anticipated Project flow is within the anticipated total flow for all of the affected sub-basins.[18] Redevelopment of the Project Area would not require new or expanded storm drains to be constructed and tied into the existing City of Oakland system.[19] Additionally, the City of Oakland is preparing a storm drainage master plan (SDMP) due for completion in 2004. The Project would be required to meet drainage requirements identified in the SDMP. Consequently, because development of the Project would not exceed standards of significance related to the capacity of storm drainage systems, no significant impact to the City storm drainage system is anticipated to result from the Project.

Furthermore, the proposed developments in the Project Area must comply with the policies of the City's General Plan Environmental Health Hazards Element regarding flood protection and the NPDES General Permit Provision C.3. This includes ensuring that the existing and/or proposed stormwater collection and drainage systems have sufficient capacity to accommodate runoff from the developed site and encouraging the use of environmentally sensitive drainage improvements, including flow reduction and flood bypass systems, to ensure protection of surface water quality and stream integrity. Provision C.3. also requires mitigation of any modifications of the stormwater hydrograph in accordance with the local hydrograph modification plan. The 1.7- to 2.1-cfs increase in runoff rate for the 24-hour 25-year and 100-year storm, respectively, would not be hydraulically significant, but could be detained on the site until the storm runoff peak had passed to maintain the predevelopment runoff hydrograph.

Small collection and infiltration strategies, located at the point where runoff initially meets the ground, repeated consistently over the Project Area, would yield the greatest runoff control and water quality improvements for the least cost. This approach assists in detaining a portion of the stormwater generated by impervious surfaces so that the rate and amount of stormwater leaving the Project Area is equal to or less than existing conditions. Additional runoff could be stored or infiltrated on or near the site. The *Bay Area Stormwater Management Agencies Design Guidance Manual* provides methods that could be used to modify roadway, landscaping, and drainage facilities to incorporate design elements such as sediment traps,

[18] Lorraine Purcell, P.E., Memorandum to Brian Matsumura, City of Oakland Community & Economic Development Agency, April 19, 2004.

[19] City of Oakland, *OARB Area Plan Redevelopment EIR*, July 2002.

gravel strips and/or trenches, concave planting areas (vegetated swales), permeable substrate (pavement), and stormwater infiltration basins.[20] This approach is advocated by the RWQCB.

Compliance with these requirements would avoid flooding hazards on, or downstream from, the Project Area. Consequently, development of the Project would not exceed this standard of significance.

Summary of Impact HY-4 by Development Area. Since all proposed development within each development area must comply with the City's General Plan Environmental Health Hazards Element regarding flood protection and NPDES General Permit Provision C.3., Project Sponsors would ensure that existing and/or proposed stormwater collection and drainage systems could accommodate runoff from the developed site. Since the Project would not create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems, none of the proposals for individual development areas would result in a significant impact on stormwater drainage systems. Thus, the impact of each development area would be considered less than significant.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

HY-5. Construction of the Project would not place people and structures in an area that is prone to seiche, tsunami, or mudflow. (NI)

Tsunami are large sea waves generated by submarine earthquakes or similar large-scale, short-duration phenomena, such as volcanic eruptions, that can cause considerable damage to low-lying coastal areas. Seiches are waves, also caused by large-scale, short-duration phenomena that result from the oscillation of confined bodies of water (such as the San Francisco Bay). Seiches may also damage low-lying coastal areas, though not as severely as tsunami. The amount of damage caused by tsunami and seiches in the San Francisco Bay Area in historic times has been small, and there is little reliable data for local prehistoric events, but the potential for damage exists along all of the Bay's waterfronts. Prior to the 1989 Loma Prieta earthquake, tsunami and seiches had been considered phenomena associated only with earthquakes distant from the Bay Area (such as the 1964 Alaska earthquake which generated a

[20] Tom Richman & Associates, Bay Area Stormwater Management Agencies Association, *Start at the Source, Design Guidance Manual for Stormwater Quality Protection,* 1999, Chapter 2.

tsunami that caused moderate damage around San Francisco Bay) because the mode of faulting along California's coast generally did not cause vertical disruptions of the sea floor. The Loma Prieta earthquake did not cause a tsunami, but did create a 6-inch seiche effect in Monterey Bay, demonstrating that these phenomena can be associated with earthquakes on local faults.[21]

Computer models of the height of flooding caused by seismic sea wave (tsunami) run-up for San Francisco Bay have been prepared by the Corps.[22] The Corps' calculations indicate that the Project Area would be subject to as much as 9.1 feet of wave run-up during the 100-year tsunami event, and 17.6 feet of wave run-up during the 500-year tsunami event. The Corps' run-up model was referenced to mean sea level, so an additional 3 feet of wave run-up must be factored into the calculation to estimate the height of worst case flooding during extreme high tide crest conditions, which occur about 30 times each year, and last for less than two hours each time. Therefore, the maximum expected flood elevation from 9.1 feet of wave run-up during the 100-year event would be 12.1 feet above mean sea level (+12 feet msl), during extreme high tide crest conditions. For similar conditions during the 500-year tsunami event, the maximum expected flood elevation would be +20.6 feet msl.

Because the top of the shore protection along the portion of the Bay in the vicinity of the Project Area is at least +12 feet msl, and there is 2,600 feet of developed land between the shore and the Project Area, there is little likelihood that the 0.1 foot (1.2 inches) of projected overtopping by the 100-year tsunami during extreme high tide crest conditions could reach the Project Area. Additionally, attenuation of wave height (caused by the geometry of the Bay that would have to be crossed by the tsunami to reach the Project Area) to approximately 67 percent of the expected height at the Golden Gate would reduce this crest to between 7.5 and 8.1 feet msl, well below the height of the shore protection. Similarly, the height of the 500-year tsunami during extreme high tide crest conditions would be reduced to between 10.7 and 13.8 feet msl.[23] Even the Corps considers these modeled estimates subject to so many other variables that no additional protection from the 500-year tsunami is considered necessary in the Bay Area. In addition, flooding levels from seiches would be lower and even less damaging. Consequently, development of the Project would not exceed this standard of significance.

The Project Area is not near the base of foothills or landforms that could be susceptible to mudflows. Consequently, the Project would not expose people or structures to hazards from mudflows.

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21 Dr. E.B. Thornton, Department of Oceanography, Naval Post-Graduate School, telephone conversation with EIP geologist, October 31, 1997.

22 A.W. Garcia and J.R. Houston, *Type 16 Flood Insurance Study: Tsunami Predictions for Monterey and San Francisco Bays and Puget Sound*, U.S. Army Corps of Engineers Technical Report H-75-17, Hydraulics Laboratory, U.S.A.E. Waterways Experiment Station, Vicksburg, Mississippi, November 1975, pp. 4 through 6 and Figure 33.

23 Garcia and Houston, 1975, pp. 6 through 19, and Figure 240.

Summary of Impact HY-5 by Development Area. Since construction of the Project Area would not place people and structures in an area that is prone to seiche, tsunami, or mudflow, construction on the individual development areas would also not result in any impacts.

Development Area	No Impact	LTS	PS	S
1	✓			
2	✓			
3	✓			
4	✓			
5	✓			
6	✓			
7	✓			
8	✓			
9	✓			

Cumulative Analysis

HY-6. The Project, in combination with other related projects and background growth, would not significantly contribute to cumulative impacts associated with groundwater recharge or groundwater quality; surface water quantity (stormwater), flooding, or other water-related hazards; or surface water quality. (LTS)

The geographic context for the analysis of cumulative hydrology and water quality impacts is the Oakland Sub-Area of the East Bay Plain of the San Francisco Bay Basin.

The cumulative hydrology and water quality analysis accounts for all anticipated cumulative growth within this geographic area, including the related projects and additional regional growth represented by the City of Oakland's Cumulative Growth Scenario, both of which are described in Appendix C.

Groundwater. The *San Francisco Bay Water Quality Control Plan,* prepared by the San Francisco Bay RWQCB, indicates that the Project Area is in the newly defined Oakland Sub-Area of the East Bay Plain, which is "a significant groundwater basin" of the San Francisco Basin, underlain by the East Bay Plain aquifer. This aquifer extends from the vicinity of Alameda northward on the east side of the Bay.[24] Groundwater is generally recharged through permeable materials. Natural recharge takes place along streams, rivers, and other areas of alluvial deposits within the landscape.

According to the *OARB Area Redevelopment Plan EIR,* approximately 40 percent of available yield is extracted annually from the groundwater basin, which is less than 2 percent of the total water used and is well below safe yields. In addition, historic water levels in the aquifer rose

[24] RWQCB, *San Francisco Bay Basin Water Quality Control Plan,* adopted June 1995.

about 5 feet per year between 1965 and 1980; water levels have been rising continuously since then, although at a less rapid rate (California's Groundwater Bulletin 118).

Because the ground surface at the Project Area is densely compacted manufactured fill, only 60 percent of rainfall soaks in and is recharged to the shallow groundwater table. Construction of impervious surfaces in the Project Area would reduce infiltration to the underlying water table. The RWQCB recognizes that, although the Project Area has some potential as a groundwater recharge zone, the increasing saltwater intrusion conditions of the aquifers has eliminated the shallow groundwater table from serious consideration as a long-term source of potable water. For this reason, the Project Area is not considered a major or important recharge zone, even though some recharge does occur. As a result, the Project would not substantially deplete groundwater supplies or diminish the rate of recharge, and the Project's contribution to this cumulative impact would be less than significant.

Stormwater/Flooding Hazards. The City's Municipal Code includes a section that specifically addresses Creek Protection, Storm Water Management, and Discharge Control to ensure the health, safety, and general welfare of the City's citizens and to protect and enhance the water quality of the City's watercourses, water bodies, and wetlands in a manner pursuant to and consistent with the federal Clean Water Act by:

- Eliminating non-stormwater discharges to the municipal separate storm sewer;
- Controlling the discharge to municipal separate storm sewers from spills, dumping, or disposal of materials other than stormwater;
- Reducing pollutants in stormwater discharges to the maximum extent practicable;
- Safeguarding and preserving creeks and riparian corridors in a natural state;
- Preserving and enhancing creekside vegetation and wildlife;
- Preventing activities that would contribute significantly to flooding, erosion, or sedimentation, or that would destroy riparian areas or would inhibit their restoration;
- Enhancing recreational and beneficial uses of creeks;
- Controlling erosion and sedimentation;
- Protecting drainage facilities; and
- Protecting the public health and safety, and public and private property.

The City of Oakland is preparing a storm drainage master plan (SDMP), due for completion in 2004, which will set forth the anticipated storm drain requirements for continued development and/or redevelopment in the City. Furthermore, any proposed development in the City must comply with the policies of the City's General Plan Environmental Health Hazards Element regarding flood protection, which collectively ensures that the existing and/or proposed stormwater collection and drainage systems have sufficient capacity to accommodate runoff

from the developed site and encourages the use of environmentally sensitive drainage improvements, including flow reduction and flood bypass systems, to ensure protection of surface water quality and stream integrity. NPDES General Permit Provision C.3 also requires mitigation of any modifications of the stormwater hydrograph in accordance with the local hydrograph modification plan. The 1.7- to 2.1-cfs increase in runoff rate for the 24-hour 25-year and 100-year storm, respectively, would not be hydraulically significant, and would be detained on the site until the peak stormwater runoff has passed to maintain the predevelopment runoff hydrograph. Compliance with local, state, and federal regulations ensure that cumulative impacts related to surface water (stormwater) quantity would not occur, and the Project's contribution to cumulative surface water quantity (stormwater) impacts would be less than significant.

With respect to flooding, FEMA is responsible for determining flood elevations and floodplain boundaries (based on the Corps' studies). FEMA is also responsible for distributing the Flood Insurance Rate Maps (FIRMs), which are used in the National Flood Insurance Program (NFIP). These maps identify the locations of special flood hazard areas, including the 100-year floodplain. Non-residential development is allowed in floodplains; however, construction activities are restricted within flood hazard areas depending upon the potential for flooding within each area. Development in accordance with the allowances and/or prohibitions of the FIRMs, as well as City ordinances that pertain to floodplain management would ensure that cumulative flooding impacts would not occur. No portion of the Project Area is in the 100-year floodplain or a flood hazard area; therefore, floodplain development regulations do not apply to the Project, and the Project would not contribute to cumulative flood-related impacts. This impact would be considered less than significant.

Seiches, Tsunamis, and Mudflows. Impacts associated with seiches, tsunamis, and mudflows are site specific in nature in that the impact occurs at a particular development site, and increased development in the region does not influence the magnitude of the seiche, tsunami, or mudflow. Computer models of the height of flooding caused by seismic sea wave (tsunami) run-up for San Francisco indicate that

the shore protection that is provided along the portion of the Bay in the vicinity of the Project Area as well as the amount of developed land between the shore and the Project Area, would result in little likelihood that the 1.2 inches of projected overtopping by the 100-year tsunami during extreme high tide crest conditions could reach the Project Area. With respect to the 500-year tsunami, the Corps has stated that no additional protection is considered feasible. Flooding levels from seiches would be lower and even less damaging. Consequently, the Project's contribution to a cumulative impact associated with tsunamis or seiches would be less than significant.

The Project Area is not near the base of foothills or landforms that could be susceptible to mudflows. Consequently, the Project would not affect or be affected by mudflow impact, on a project-specific or cumulative basis.

Surface Water Quality. The quality of area receiving waters, specifically the San Francisco Bay, do not achieve the designated water quality standards, which means that the Bay is designated by the EPA as a "303(d)" water body under the Clean Water Act. The EPA identifies sources of parameters of concern as atmospheric deposition, industrial and municipal point, non-point, natural, resource extraction, urban runoff/storm sewer, and ballast water. In addition, California's Bay Protection and Toxic Cleanup Program classify the entire San Francisco Bay as a High Priority Candidate Toxic Hot Spot. The reason for this classification is the potential risk to human health from consumption of non-migratory aquatic wildlife, primarily due to elevated levels of PCBs and mercury in fish tissue.

Construction site runoff, as well as dust generated from other portions of the site, would contain sediment that could enter receiving waters, such as the San Francisco Bay, and degrade water quality. Construction activities associated with the Project in all development areas, except Development Areas Five and Nine, would be required to comply with the state General Construction Activity Stormwater Permit (NPDES requirement) because they would disturb more than one acre of land. Development Areas Five and Nine are each less than one acre, but may still require a permit because the construction activity would be part of the larger plan of development.

Compliance with the permit would involve, at a minimum, preparing a SWPPP prior to construction activities pursuant to the requirements of the NPDES Program. The SWPPP would be required to identify the sources of sediment and other pollutants on the Project Area and to ensure the reduction of sediment and other pollutants in stormwater discharged from the Project Area. As part of the SWPPP, a Monitoring Program and an Erosion and Sedimentation Control Transport Plan would be prepared for the Project prior to grading. An erosion control professional, or landscape architect or civil engineer specializing in erosion control, would be required to design the Erosion and Sedimentation Transport Control Plan. The Association of Bay Area Governments (ABAG) recommends the control plan be designed using concepts similar to those formulated by ABAG, as appropriate, based on the specific erosion and sediment transport control needs of each area in which grading, excavation, and construction is to occur.

In addition, the Oakland Municipal Code prohibits activities that will result in the discharge of pollutants to Oakland's waterways, including damage to creeks, creek functions, or habitat. This ordinance requires the use of standard BMPs to prevent pollution or erosion to creeks and/or storm drains.

Implementation of all applicable local, state, and federal requirements would ensure that the Project's contribution to this cumulative impact is less than significant.

Summary of Impact HY-6 by Development Area. Since development of the entire Project Area would result in a less-than-significant contribution to cumulative hydrology and water quality impacts, proposals in each of the individual development areas would also result in a less-than-significant contribution to cumulative hydrology and water quality impacts.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

3.11 BIOLOGICAL RESOURCES

Introduction

This EIR section describes the existing biological resources in the Project Area, as well as evaluates the potential impact of the Project on those resources. This analysis is based on an October 7, 2003 site visit by an EIP biologist. The identification of sensitive species is based on the latest California Natural Diversity Database (CNDDB) by the California Department of Fish and Game (CDFG).

For biological resources impacts, the Maximum Residential Scenario, Maximum Commercial Scenario, and Maximum Trips Scenario would result in similar impacts, because development in the Project Area would have the potential to affect the same biological resources. Therefore, the analyses in this section apply to all Project development scenarios.

Setting

The Project Area is located in a heavily industrialized area within the City of Oakland, east of I-880 between West Grand Avenue on the north and 10th Street on the south. Raimondi Park is located across Wood Street from the Project Area. Vegetation along the periphery of the park includes 13 coast live oak (*Quercus agrifolia*) and white poplar trees (*Populus alba*). None of these trees are within the Project Area.

The bulk of the Project Area supports very few plants. Minor amounts of non-native landscaping vegetation were found along the sidewalks throughout the Project Area. Several multiple-stemmed coast live oaks are growing at Wood and 17th Streets, as well as on 12th Street between Wood and Pine Streets on the edge of the Project Area. These trees may be the result of stump sprouts from previously removed trees. The oaks at 17th and Wood Streets have several small 1- to 2-inch diameter stems (at breast height) that have created a dense patch of brush in this location. There are three camphor trees on 12th Street between Wood and Pine Streets on the edge of the Project Area. The edge of Development Areas Seven and Eight along Wood Street north to West Grand Avenue support minor amounts of upland ruderal vegetation. However, most of that site appears to have been used for storage of aggregates and, as a result, is bare dirt. Plant species observed in this ruderal habitat are typical of vegetation found on upland sites with disturbed soils and includes star thistle (*Cirsum* spp), coyote brush (*Baccharis pilularis*), wild oats (*Avena barbata*), pampas grass (*Cortaderia selloana*), mustard (*Brassica* spp), and sweet fennel (*Foeniculum vulgare*). The frontage road between the Project Area and I-880 also supports extensive ruderal vegetation; however, this area does not fall within the boundaries of the Project Area.

The only wildlife observed on site were rock pigeon (*Culumba livia*) and white-crowned sparrows (*Zonotrichia leucophrys*). No sensitive plants, animals, or habitats capable of supporting these species were observed in the Project Area.

Sensitive Species and Habitats

Information on sensitive species and sensitive habitats[1] occurring in the vicinity of the Project Area was obtained from the CDFG's CNDDB[2] for the U.S. Geological Survey Oakland West 7.5-minute quadrangle. The CNDDB contains records for occurrences of 22 sensitive species and habitats within the Oakland West quadrangle. This list includes 11 species of plants, one sensitive habitat, and ten species of animals (Appendix Tables F-1 and F-2). Of the 11 species of sensitive plants, none has been reported more recently than 1916 and these populations are all believed to have been removed or destroyed. The five species of plants reported from within the Project Area and its vicinity are alkali milk vetch (*Astragalus tener* var *tener*), Kellog's horkelia (*Horkelia cuneata* ssp *sericea*), San Francisco Bay spineflower (*Chorizanthe cuspidata* var *cuspidata*), bent flowered fiddleneck (*Amsinckia lunaris*), and water sack (saline) clover (*Trifolium depauperatum* var *hydrophilum*). However, none of these species has been observed since they were initially collected between 1863 and 1881. Further field efforts to locate Kellogg's horkelia in the 1980s or 1990s failed to find this species.[3] The Project Area has been extensively developed since the collections were made, and the habitat elements required to support these species like sand dunes, alkaline swamps, and wetlands are no longer present. The six other sensitive plants reported for the Oakland West quadrangle in the CNDDB are restricted to habitats or soil types not found within the Project Area. No sensitive plant species or habitats capable of supporting these species were observed within the Project Area during the field visit. The sensitive habitat reported, Northern Coastal Salt Marsh, does not occur within the Project Area.

The ten sensitive animals reported from CNDDB for the Oakland West quadrangle are almost exclusively species that are restricted to certain habitats. Most of these are salt marsh or freshwater marsh species such as the California clapper rail (*Rallus longirostris obsoletus*) and salt marsh harvest mouse (*Reithrodontomys raviventris*) found in Crescent Marsh on the north side of the San Francisco-Bay Bridge, or the tidewater goby (*Eucuclogobius newberryi*) reported from Lake Merritt. Other reported species that use a broader range of habitats include white-tailed kite (*Elanus leucurus*) and northern harrier (*Circus cyaneus*). White-tailed kites may fly over the Project Area on occasion, but the grassland and scrub habitats they require for foraging are not present on the Project Area. Similarly, northern harriers require dense shrubby grasslands for nesting, habitat that is not present in the Project Area. No sensitive animals or habitats capable of supporting them were observed during the field visit.

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1 Sensitive species and habitats are those listed as endangered, threatened, or rare under the California or Federal Endangered Species Act. Species of special concern to the U.S. Fish and Wildlife Service (USFWS) or the California Department of Fish and Game (CDFG) or species on List 1 or 2 of the California Native Plant Society (CNPS) are included within the sensitive species category.

2 CDFG, California Natural Diversity Database (CNDDB), 2003. Rarefind, Commercial version information dated May 5, 2003.

3 CDFG, CNDDB, 2003.

Applicable Plans and Policies

Since there are no sensitive plant or animal species in the vicinity of the Project Area nor known sensitive habitats, the Federal Endangered Species Act of 1973 administered by the U.S. Fish and Wildlife Service**,** the state Endangered Species Act administered by the CDFG, and wetland policies and regulations as implemented by the U.S. Army Corps of Engineers and the CDFG would not apply to the Project. However, the Migratory Bird Treaty Act, the California Fish and Game Code, and the City's Tree Preservation Ordinance are relevant since there are trees on site.

Migratory Bird Treaty Act of 1918. The Migratory Bird Treaty Act (MBTA) of 1918 makes it unlawful to "take" any migratory bird listed in 50 CFR 10, including their nests, eggs, or products. Over 800 species of birds are protected by the MBTA. Examples that may occur in the Project Area include American robin (*Turdos migratorius*), red-winged blackbird (*Agelaius phoeniceus*), and white-crowned sparrow. Removal of vegetation that results in destruction of nests, eggs, or mortality of any species listed in 50 CFR 10 is a violation of federal law.

Sections 3503, 3503.5, 3800 of the California Fish and Game Code. Sections 3503, 3503.5, 3800 of the Fish and Game Code prohibit the "take, possession, or destruction of birds, their nests or eggs." Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a "take." As in the case of the MBTA, tree or vegetation trimming or removal activities would be subject to CDFG regulation under the Fish and Game Code if nesting birds were present on a project site.

City of Oakland – Tree Preservation and Protection Ordinance. The City of Oakland recognizes the value of trees in the urban environment and provides for their protection under Title 12, Chapter 12.36 of the Oakland Municipal Code (OMC). This section of the OMC requires that property owners obtain a permit prior to removing protected trees from their property. Protected trees are defined within the code as California or coast live oak (*Quercus agrifolia*) measuring 4 inches diameter at breast height (DBH) or larger (12-inch circumference), and any other tree measuring 9 inches DBH or larger (28-inch circumference) except eucalyptus (*Eucalyptus* spp) and Monterey pine (*Pinus radiata*). Removing or damaging any protected tree without the proper permit constitutes an infraction. Monterey pines are only protected where more than five trees per acre are proposed to be removed.

Impacts and Mitigation Measures

Standards of Significance

The Project would have a significant impact to biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations, or by the CDFG or U.S. Fish and Wildlife Service;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan;
- Fundamentally conflict with the City of Oakland Tree Preservation and Protection Ordinance by removal of protected trees under certain circumstances. Although there are no specific, numeric/quantitative criteria to assess the impacts for loss of protected trees under Oakland's City's Tree Preservation and Protection Ordinance, factors to be considered in determining significance include the number, type, size, location, and condition of (1) the protected trees to be removed and/or impacted by construction, and (2) the protected trees to remain, with special consideration given to native trees; or
- Fundamentally conflict with the City of Oakland Creek Protection Ordinance intended to protect biological resources. Although there are no specific numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of riparian and aquatic habitat through: (1) discharging a substantial amount of pollutants into a creek, (2) significantly modifying the natural flow of the water, (3) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability, or (4) adversely impacting the riparian corridor by significantly altering vegetation or wildlife habitat.

Because the Project Area does not support sensitive species or habitats, most of the significance thresholds presented above are not relevant to the Project Area. As a result, these topics are not discussed further in this document. The only significance thresholds that apply to the Project Area relate to the Oakland Tree Preservation and Removal Ordinance and the use of trees as nesting sites (nursery habitat) for resident and migratory birds.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not diminish potentially significant or significant effects to a less-than-significant level, the impacts are

classified as "significant unavoidable effects (SU)." For this section, BR refers to Biological Resources.

BR-1. Removal of protected trees within the Project Area would be in compliance with the City of Oakland Tree Preservation and Protection Ordinance. Therefore, all potential impacts to trees within the Project Area would be considered less than significant. (LTS)

Trees at 9 inches DBH or greater are considered protected trees by the OMC, and a permit is required for their removal (OMC 13.36.0200). The multiple-stemmed coast live oaks in the Project Area at Wood and 17th Streets are likely to be covered by the Tree Preservation and Protection Ordinance, as are the coast live oaks and camphor trees on 12th Street on the edge of the Project Area. In the case of multiple-stemmed trees, the common practice is to measure each stem and add the diameters to determine the total DBH and therefore the status of each tree. If this is done for these scrubby coast live oaks, the cumulative DBH would likely exceed the 4-inch minimum that determines the protected status of these trees. Removal of protected trees is considered a potentially significant impact for each of the development scenarios of the Project.

Prior to removal of any protected trees, the Project Sponsor must obtain a permit for tree removal from the City of Oakland Office of Parks and Recreation. Coast live oaks with a trunk size measuring 4 inches DBH or larger, or any other tree measuring 9 inches DBH or larger, would require that replacement trees be planted in the development area. Replacement trees must belong to a native tree species (e.g., coast redwood, coast live oak, madrone, California buckeye, California bay laurel, or other appropriate species native to Oakland). At a minimum, each removed tree meeting the above size standards would be replaced with either one replacement tree of 24-inch box size, or three replacement trees of 15-gallon size. The replacement trees would require approval by the City of Oakland Office of Parks and Recreation and would be installed prior to issuance of a certificate of occupancy by the City for any building on an affected lot. As a result, compliance with the City's Tree Preservation and Protection Ordinance would reduce potentially significant effects of the Project to less than significant.

Summary of Impact BR-1 by Development Area. Two of the development areas, Development Areas Three and Six, support trees that would be covered by the City's Tree Preservation and Protection Ordinance. Removal of the protected multiple-stemmed coast live oaks at Wood and 17th Streets and various trees, both camphors and live oaks, along 12th and Wood Streets on the edge of Development Area Three would be required to comply with the City's Tree Preservation and Protection Ordinance. Compliance with the City of Oakland Tree Preservation and Protection Ordinance in Development Areas Three and Six would reduce potentially significant impacts related to the removal of protected trees to a less-than-significant level.

Development Area	No Impact	LTS	PS	S
1	✓			
2	✓			
3		✓		
4	✓			
5	✓			
6		✓		
7	✓			
8	✓			
9	✓			

BR-2. Demolition of structures and removal of vegetation from within the Project Area could result in destruction of bird nests. (PS)

In industrialized areas, the lack of natural nesting habitat results in the placement of nests in landscaping vegetation by resident and migratory birds. Some species, such as swallows, build their nests on the structures within the Project Area. The group of scrubby coast live oaks and the ruderal vegetation along the frontage road and parts of the EBI Aggregates yard, located along Wood Street between 17th and 18th Streets, support suitable habitat for nesting birds. Loss of these trees, which could occur with all development scenarios, would be a potentially significant impact. Most nesting birds are protected by state and federal regulations that prohibit the "take, possession, or destruction of birds, their nests or eggs." Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a "take" under the MBTA. Removal of structures or vegetation that results in the disturbance or destruction of nests is a violation of state (Fish and Game Code of California Sections 3503, 3503.5, and 3800) and federal (50 CFR 10) law and is considered a potentially significant impact.

Summary of Impact BR-2 by Development Area. Potential resident and migratory bird habitats occur on the edges of Development Areas One, Four, and Six along the frontage road and on the other side of Development Area Six along Wood Street between 17th and 18th Streets. Disturbance that cause nest abandonment or destruction would be considered a "take" under the MBTA and would result in a potentially significant impact.

Development Area	No Impact	LTS	PS	S
1			✓	
2	✓			
3	✓			
4			✓	
5	✓			
6			✓	
7	✓			
8	✓			
9	✓			

MITIGATION MEASURE. The following measure would apply to Development Areas One, Four, and Six and would reduce potentially significant impacts related to the disturbance of nesting birds from these areas to less than significant. (LTS)

BR-2.1 *Preconstruction Surveys and Protection Measures for Nesting Birds*. If vegetation is removed outside the nesting season (typically February 1 to August 31), there would be no effect on nesting birds and the following surveys would not be required. Construction activities shall, therefore, be timed to avoid vegetation removal or demolition during the nesting season. If this cannot be accomplished, then a qualified biologist shall conduct preconstruction nesting surveys no more than one week prior to vegetation or building removal to determine if nesting birds are present. If nesting birds are present, an appropriate buffer zone shall be developed by the biologist and construction activities shall be suspended in this zone until future surveys indicate that the chicks have fully fledged (left the nest). Completion of preconstruction surveys and avoidance of bird nests would result in no impacts to nesting birds. Survey results shall be valid for a period of 21 days from the date of the survey. Should vegetation or building removal fail to be conducted within this time frame, a second survey shall be undertaken.

Cumulative Analysis

BR-3. The Project, in combination with other related projects and background growth, would not significantly contribute to cumulative impacts associated with biological resources. (LTS)

The geographic context for the analysis of impacts to biological resources is the City of Oakland, including the related projects and background growth identified in Appendix C. Oakland is a dense, highly urbanized city. Over the years the City has expanded to the limits of San Francisco Bay by placement of fill or other reclamation of historic tidal saltmarsh. This same urban expansion has removed almost all of the native habitats in the flatlands. For example, riparian vegetation along creeks was removed as the creeks were altered for flood control purposes. The once extensive wetlands and coastal scrub habitats have given way to streets, houses, and industry. Currently, areas surrounding the Project Area for over a mile in any direction are all developed with either residential or commercial and industrial uses. The Project Area itself has been subject to extensive industrial and construction-related uses in recent history and is completely lacking in natural habitats. The Project Area is an industrial area characterized by developed and ruderal habitats. As a result, future development in the Project Area would not contribute to the reduction of sensitive biological resources in Oakland, except possibly for the loss of protected trees, which is further discussed below. Because the Project Area and the surrounding land is already fully developed, redevelopment of the area would not result in any effects on sensitive natural resources, such as sensitive habitats, sensitive species, wildlife movement, or interference with a habitat conservation plan or natural community conservation plan. Therefore, the Project would not contribute to cumulative biological impacts, and would result in a less-than-significant cumulative impact.

Development throughout the Project Area would result in the removal of trees that are at least 9 inches DBH or greater, which are considered protected trees by the OMC. Implementation of the Project would result in the removal of various protected trees and/or the destruction of bird nests. Compliance with the City's Tree Preservation and Protection Ordinance and implementation of preconstruction surveys and protection measures for nesting birds during construction would mitigate any biological effects in each development area such that the Project's contribution to this cumulative impact would be considered less than significant.

Summary of Impact BR-3 by Development Area. Since development of the entire Project Area would result in a less-than-significant contribution to cumulative impacts to biological resources, proposals in each of the individual development areas would also result in a less-than-significant contribution to cumulative impacts to biological resources.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

3.12 POPULATION, EMPLOYMENT, AND HOUSING

Introduction

This section of the EIR evaluates the Project's potential population, employment, and housing impacts on the surrounding community. Impacts are discussed in terms of the City of Oakland's significance thresholds for population, employment, and housing and displacing substantial numbers of existing people or housing. To address the greatest potential population, employment, and housing impacts resulting from the Project, the analysis in this section considers the Maximum Residential Scenario and the Maximum Trips Scenario. The former scenario represents the maximum population and household growth, and the latter scenario represents the maximum employment. (Employment under the Maximum Trips Scenario is slightly higher than employment under the Maximum Commercial Scenario.) The Maximum Residential Scenario proposes 1,570 residential units and 27,847 sf of commercial development, with an estimated 150 jobs. The Maximum Trips Scenario proposes 1,213 residential units and 318,847 sf of commercial development, with an estimated 1,201 jobs. Population and job estimates for both scenarios are presented on Appendix G.

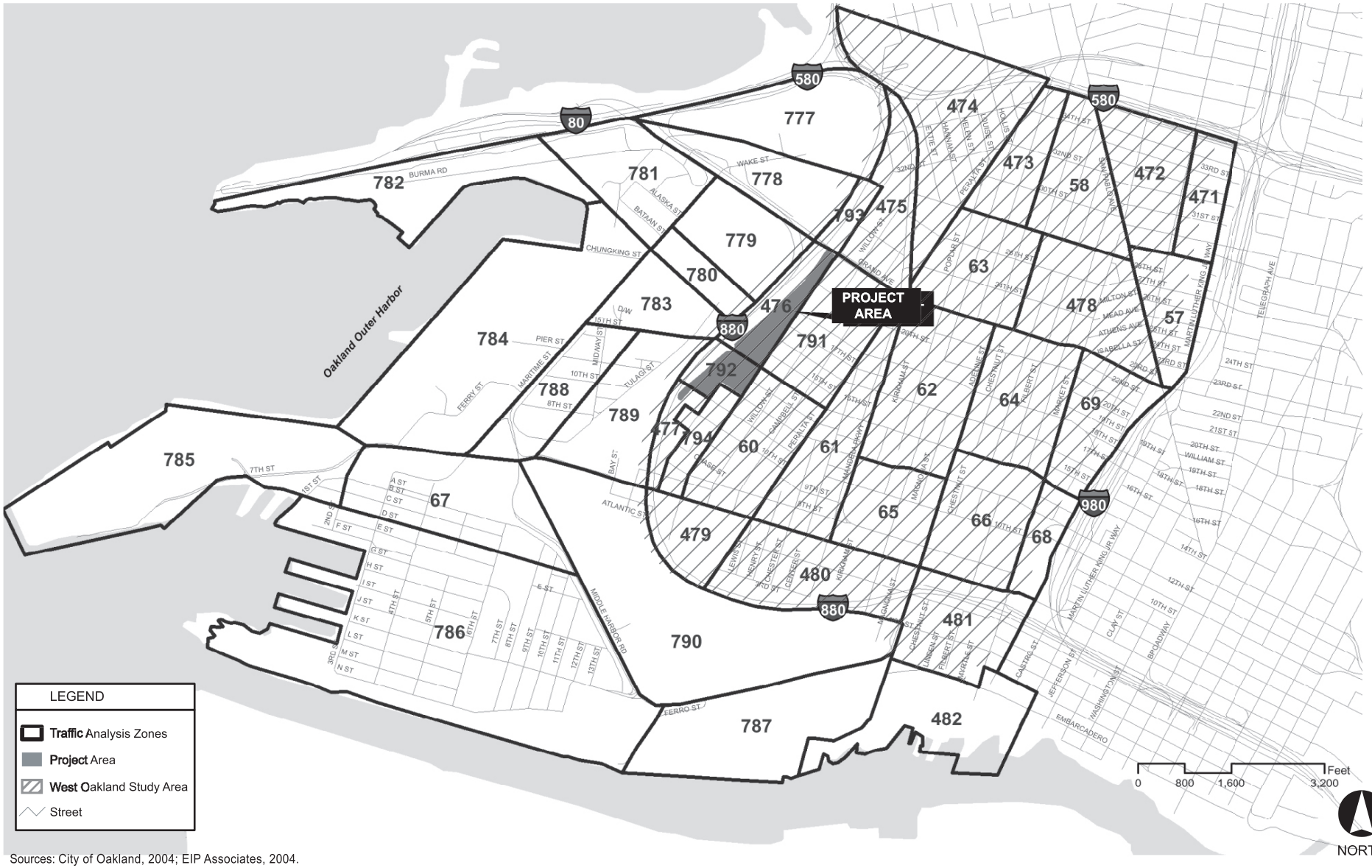
Setting

Population

Existing Demographics. The existing population, number of households, and persons per household for the City of Oakland and the population study area[1] are presented in Table 3.12-1. Figure 3.12-1 shows the boundaries of the population study area. According to the 2000 U.S. Census, the City of Oakland population was approximately 399,480 in 2000. The population study area contained a total population of 23,450 people, or about 5.9 percent of the City's total. In 2000, the population study area households were on average larger than those in other parts of the City (2.92 persons per household compared to the Citywide average of 2.65), reflecting the family orientation of households in the Project Area vicinity.

Projected Growth. A future growth scenario for the population study area and for the City of Oakland was prepared for this analysis using regional forecasts of economic activity and demographic trends (see Appendix C). The growth scenario also considers recent and anticipated future development projects, based on input from the City and Port of Oakland staff. Anticipated future development projects include approved, proposed, and potential development projects reasonably foreseeable over the next 15 to 20 years.

[1] For the purposes of this analysis, data for the population study area include the West Oakland and Harbor areas of Oakland (an area bounded approximately by I-580, Martin Luther King Boulevard, and the San Francisco Bay).



Sources: City of Oakland, 2004; EIP Associates, 2004.

EIP ASSOCIATES

FIGURE 3.12-1

West Oakland Study Area

Table 3.12-1
City of Oakland and Population Study Area
Existing and Future Population and Household Growth
and Persons Per Household (2000–2025)

	Existing	Future	Growth
	2000	2025	2000–2025
Population			
City of Oakland[a]	399,480	443,170	43,690 (10.9%)
Study Area[a] – No Project Scenario	23,450	28,645	5,195 (22.2 %)
Study Area – Maximum Residential Scenario	23,450	32,060	8,610 (36.7%)
Study Area – Maximum Trips Scenario	23,450	31,400	7,950 (33.9%)
Households			
City of Oakland[a]	150,790	169,390	18,600 (12.3%)
Study Area[a] – No Project Scenario	8,040	10,200	2,160 (26.9%)
Study Area – Max Residential	8,040	11,707	3,667 (45.6%)
Study Area – Maximum Trips	8,040	11,420	3,380 (42.0%)
Persons Per Household			
City of Oakland[a]	2.65	2.61	
Study Area – No Project Scenario	2.92	2.81	
Study Area – Maximum Residential Scenario	2.92	2.74	
Study Area – Maximum Trips Scenario	2.92	2.75	

Sources: Bay Area Economics; Hausrath Economic Group, 2004.
Note:
a. Association of Bay Area Governments, *2002 Projections*.

A complete list of projects included in the cumulative growth scenario is shown in Appendix C. As shown in Table 3.12-1, without the Project, the population in the population study area would increase from 23,450 in 2000 to 28,645 in 2025, a 22.2 percent increase. Under the Maximum Residential Scenario, the population in the study area would increase from 23,450 people in 2000 to 32,060 people in 2025, an increase of 8,610 people, or 37 percent. Under the Maximum Trips Scenario, the population in the study area would increase from 23,450 people in 2000 to 31,400 people in 2025, an increase of 7,950 people, or 34 percent. This would exceed the anticipated growth for the rest of the City at 11 percent. However, this growth reflects the population study area's availability of underutilized lands, infill development opportunities, and redevelopment activities. In addition to new household and population growth in the Project Area, substantial residential development is anticipated near the West Oakland BART Station and along Mandela Parkway near the Project Area.

Projections for persons per household for the City and the study area (with and without the Project) would decrease over time. Table 3.12-1 shows that without the Project (No Project Scenario), the number of persons per household would decrease from 2.92 in 2000 to 2.81 in 2025. Under the Maximum Residential Scenario and the Maximum Trips Scenario, the number of persons per household would decrease to 2.74 and 2.75, respectively, by 2025. In 2025, the City is projected to have an average household size of 2.61, which is similar to the 2.62 persons per household figure for the City of Oakland reported by the Association of Bay Area Governments (ABAG) in its *2002 Projections*.

Employment

Existing Jobs Profile. According to the 2000 U.S. Census, there were 185,160 jobs in the City of Oakland in 2000. Of this total, 37 percent of the jobs were in the service industry, 13 percent in retail, and ten percent in manufacturing. Approximately 40 percent of jobs were in the "other" category, which includes construction, transportation, utilities, communication, finance and real estate, and government. Employment by industry for the population study area and the City is presented in Table 3.12-2.

According to the 2000 U.S. Census, there were approximately 18,993 jobs in the population study area, of which 14 percent were in manufacturing, six percent in retail, 23 percent in service and 57 percent in the "other" category. These figures show that the population study area had a higher proportion of "other" related finance and infrastructure jobs than the City of Oakland, and that the study area had a smaller proportion of retail jobs than the City of Oakland.

Projected Growth. The future growth scenario prepared for this environmental analysis also includes future employment growth projections for the City and the population study area (see Appendix C). Similar to population projections, employment growth projections take into account economic, demographic, and real estate market data and trends, as well as recent and anticipated future development projects.

According to the employment growth forecast (see Table 3.12-2), without the Project, jobs in the population study area would increase from 18,993 in 2000 to 29,209 in 2025, a 53.8 percent increase. Under the Maximum Residential Scenario, the jobs in the population study area would increase from 18,933 in 2000 to 29,329 in 2025, a 54.4 percent increase. Under the Maximum Trips Scenario, the jobs in the population study area would increase from 18,933 in 2000 to 30,380 in 2025, a 60 percent increase. The job growth in the population study area (with and without the Project) is anticipated to exceed the City's projected 32 percent growth. Study area employment would be focused in the service industry and other categories, although retail, which would be attributed in part to the Project, would grow by almost 1,000 jobs. Light industrial, retail, and R&D/office development is expected to occur in the population study area, especially in the Mandela Parkway corridor.

As shown in Table 3.12-2, the ratio of total jobs to employed residents in the City of Oakland would remain constant at about 1.1:1 from 2000 to 2025. Without the Project, the ratio of total jobs to employed residents in the population study area would also remain relatively constant, decreasing

Table 3.12-2
City of Oakland and Population Study Area
Existing and Future Employment by Industry (2000–2025)

	Existing	Future	Growth
	2000	2025	2000–2025
City of Oakland[a]			
Employed Residents	174,740	228,250	53,510 (30.6%)
Total Jobs	185,160	244,490	59,330 (32.0%)
Manufacturing	17,790	19,520	1,730 (9.7%)
Retail	23,760	30,830	7,070 (29.8%)
Service	69,590	101,280	31,690 (45.5%)
Other[b]	74,020	92,860	18,840 (25.5%)
Jobs to Employed Residents Ratio	1.1:1	1.1:1	
Project Population Study Area[a]			
Employed Residents	5,795	9,440	3,645 (62.9%)
Total Jobs	18,993	29,209	10,216 (53.8%)
Manufacturing	2,593	3,588	995 (38.4%)
Retail	1,183	2,081	898 (75.9%)
Service	4,332	9,095	4,763 (109.9%)
Other[b]	10,885	14,445	3,560(32.7%)
Jobs to Employed Residents Ratio	3.3:1	3.1:1	
Maximum Residential Scenario			
Employed Residents	5,795	12,018	6,223 (107.4%)
Total Jobs	18,993	29,329	10,336 (54.4%)
Manufacturing	2,593	3,604	1,011 (39.0%)
Retail	1,183	2,128	945 (79.9%)
Service	4,332	9,179	4,847 (111.9%)
Other[b]	10,885	14,418	3,533 (32.5%)
Jobs to Employed Residents Ratio	3.3:1	2.4:1	
Maximum Trips Scenario			
Employed Residents	5,795	11,496	5,701 (98.4%)
Total Jobs	18,993	30,380	11,387 (60.0%)
Manufacturing	2,593	3,742	1,149 (44.3%)
Retail	1,183	2,146	963 (81.4%)
Service	4,332	9,814	5,482 (126.5%)
Other[b]	10,885	14,678	3,793 (34.8%)
Jobs to Employed Residents Ratio	3.3:1	2.6:1	

Source: Hausrath Economic Group, 2004.

Notes:

a. Association of Bay Area Governments, *2002 Projections*.

b. Includes finance, insurance and real estate, transportation and utilities, construction, and government.

slightly from 3.3:1 in 2000 to 3.1:1 in 2025. In contrast, the ratio of total jobs to employed residents in the population study area would vary from 3.3:1 in 2000 to 2.4:1 in 2025 under the Maximum Residential Scenario, and from 3.3:1 in 2000 to 2.6:1 in 2025 under the Maximum Trips Scenario. These figures suggest that by buildout, the population study area would house more employed residents per total jobs than under the existing conditions.

According to the State of California Employment Development Department, the average unemployment rate in the City of Oakland was 10.6 percent in 2003, a significant increase from the 5.5 percent reported in 1999. A rise in unemployment is expected, given the state and national economic downturn over the past few years. However, long-term prospects for the Bay Area's economy are positive, and ABAG anticipates that the City of Oakland will account for about four percent of overall job growth in the Bay Area.

Housing

Housing data available from the 2000 Census and presented in Table 3.12-3 are based on a slightly larger area than the population study area; however, the census tracts identified in this housing discussion are geographically similar to those used for the future growth scenario for the Project Area. The data were obtained at the census tract level (Census Tracts 4014, 4015, 4016, 4017, 4018, 4021, 4022, 4023, 4024, 4025, 4026, and 4027) for those census tracts approximating the West Oakland neighborhoods. Table 3.12-3 shows housing characteristics in the City of Oakland and in the population study area.

The 2000 Census indicates that the City of Oakland had a total of about 157,508 housing units, of which about 96 percent were occupied in 2000. Of the occupied units, 41 percent were owner occupied and 59 percent were renter occupied. In contrast, the population study area included a greater proportion of renters (6,652 rented units, or 79 percent) among its 8,403 occupied units. Of the total housing units in the population study area, about 33 percent were single-family and about 67 percent of the units were multi-family units. The higher proportion of renter-occupied and multi-family housing units suggests that the majority of renter-occupied units in the study area are multi-family housing units.

Approximately 60 percent of the occupied units in the population study area are rental units, and over 80 percent of these rental units are subject to the City's Rent Adjustment Ordinance. The Rent Adjustment Ordinance Program (Ordinance No. 12538) regulates rent increases on most rental units constructed before 1983 and was originally adopted by the City in 1980. The updated version was implemented in 1983. Single-family homes and two- and three-unit buildings in which the owner is a resident are exempt from the restrictions of the ordinance. Rent adjustments are permitted once every twelve months, and limited to the average of the percentage increase in Consumer Price Index for the twelve-month period (starting on March 1st of each calendar year).

Table 3.12-3
City of Oakland and Population Study Area
Existing Housing Characteristics (2000)

	City of Oakland		Project Housing Study Area	
Characteristic	**Number**	**Percent[b]**	**Number**	**Percent[b]**
Total Housing Units	157,508	--	9,651	--
Occupied Housing Units	150,790	--	8,403	--
Owner Occupied	62,489	41.4	1,751	20.8
Renter Occupied	88,301	58.6	6,652	79.2
Single-family[a]	78,069	49.7	3,193	33.3
Multi-family[a]	78,980	50.3	6,391	66.7
Built Before 1950	78,666	50	4,783	49.6
Vacant Units	6,718	--	1,248	--
Vacancy Rate	--	4.3	--	12.9
Median Value Owner-Occupied	$235,500	--	$150,650[c]	--
Median Contract Rent	$696	--	$480[d]	--

Source: U.S. Census, 2000.

Notes:

-- = unknown or not applicable

a. Does not include trailers or mobile homes.

b. Percentages are rounded to the nearest tenths place.

c. Median value of owner-occupied units was calculated using an average of median values for census tracts within the half-mile vicinity of the Project Area.

d. Median contract rent was calculated using an average of median values for census tracts within the half-mile vicinity of the Project Area.

Reflecting the high demand for housing in the Bay Area, the City of Oakland had a vacancy rate of about 4.3 percent in 2000. In contrast, the population study area had a higher vacancy rate of 12.9 percent. The higher vacancy rate could be attributed to blighted conditions in the study area that may deter people from choosing it as a place of residence.[2]

In 2000, the median housing value in the City of Oakland was $235,500. Median housing value in the study area was substantially less at $150,650. Similarly, the median contract rent in 2000 for the City of Oakland was $696, whereas rents in the population study area were $480.[3] These figures show a significant difference in housing values and rents between the City of Oakland and the study area, and

[2] City of Oakland, *West Oakland Redevelopment Plan Draft EIR*, June 2003, p. 3-9. According to the *West Oakland Redevelopment Plan Draft EIR,* the West Oakland area (where the population study area is located) is in need of redevelopment for blight removal, community revitalization, increased affordable housing, and home ownership opportunities.

[3] U.S. Census, 2000.

suggest that households in the study area are generally more affordable to residents with lower incomes.

According to the Draft 2004 Housing Element of the *City of Oakland General Plan,* the City should plan to accommodate 7,773 new housing units between January 1999 and June 2006. On a housing unit basis, 50 to 55 percent of projected housing currently planned for the City would be affordable housing. The General Plan would allow a total of 27,190 additional units to be built in the City.

Impacts and Mitigation Measures

Standards of Significance

The Project would have a significant impact on the environment if it would:

- Induce substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed;
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not diminish potentially significant or significant effects to a less-than-significant level, the impacts are classified as "significant unavoidable effects (SU)." For this section, PH refers to Population, Employment, and Housing.

PH-1. The Project would increase population in the population study area, but the projected growth would not result in direct or indirect effects such that additional infrastructure is required. (LTS)

The Maximum Residential Scenario would result in a residential population in the Project Area of 3,414 residents by buildout. The Maximum Trips Scenario would result in residential population in the Project Area of 2,759 residents by buildout.[4] As shown in Table 3.12-1,

[4] See Appendix G by Bay Area Economics. Residential population was calculated from the 2000 U.S. Census 1-Percent Public Use Microdata Sample for the Oakland/Berkeley Area.

8,610 between 2000 and 2025. Of this growth, the Project would account for 40 percent. Growth in the study area with the Maximum Trips Scenario would be 7,950 persons between 2000 and 2005. Of this growth, the Project would account for 35 percent. Under either scenario, the Project would introduce a substantial population in West Oakland and account for a sizeable proportion of the area's future residential growth. Both development scenarios show more household growth in the study area by 2025 than the ABAG *Projections 2002*. Under the Maximum Residential Scenario, household growth would be 1,507 more than the 10,200 households forecasted by ABAG for the study area; under the Maximum Trips Scenario, households would be 1,220 more than ABAG projections for the study area.

The direct infrastructure demands resulting from this increase in population is examined in Section 3.13, Utilities. The increased population associated with the Project would not result in any substantial new demand that would trigger unplanned infrastructure expansion. In addition, the Project Area is an infill site surrounded by urban uses. Accordingly, its redevelopment would not result in the extension of roads or other infrastructure.

Physical environmental impacts associated with substantial population growth are addressed under each respective environmental topic in this EIR. Anticipated growth would not create new significant land use conflicts, create significant traffic congestion, overextend public services or utilities, or create long-term noise, air quality, or hazardous materials impacts. As a result, there is adequate infrastructure to accommodate the new development without significant impacts or constraints. Given the strong demand for housing in the region and inner East Bay, the relative shortage of land for housing development, and the absence of significant environmental impacts related to the Project, changes in population resulting from the Project would be considered less than significant.

With respect to employment, while not a threshold pursuant to CEQA, jobs are expected to increase by 14,440 between 2000 and 2025, according to ABAG forecasts for the study area. Because of the redevelopment of the Project Area, with an emphasis on housing, the number of jobs in the study area with implementation of the Project would fall short of the ABAG 2025 forecasts. Under the Maximum Residential and the Maximum Trips Scenarios, jobs in the study area would increase to 10,336 and 11,387, respectively. The Project would, therefore, delay West Oakland ABAG forecasts or the forecasts could eventually be adjusted to acknowledge that this level of job growth would no longer occur in the study area. From a larger citywide perspective, the Hausrath Economics Group forecasts indicate that the job shortfall in the study area can readily be offset by increased jobs elsewhere in the City. Both the Maximum Residential and Maximum Trips Scenarios result in more housing than jobs in the study area. As a result, the Project has the effect of increasing the number of employed residents relative to jobs. In the study area, which has substantially more jobs than employed residents, the Project would improve the study area's jobs to employed residents ratio.

Summary of Impact PH-1 by Development Area. Since projected population growth associated with the entire Project Area would not result in significant population effects and would be consistent with Citywide growth forecasts, growth associated with individual development areas would likewise result in a less-than-significant effect on population.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

PH-2. The Project and the associated change in land use from commercial/industrial to residential mixed-use would increase the amount of land designated for residential development in Oakland and would not displace any residents or housing units. (NI)

The Project would substantially change the use and intensity of development in the Project Area from largely vacant to residential uses at urban densities. Given the recent economic downturn in the Bay Area, in particular for technology sectors, there has been an increase in supply of vacant office and research and development (R&D) space in the Bay Area.[5] Comparable to the regional trend, it is expected that the demand for large-scale office/R&D development, similar to earlier development proposals for the Project Area, would likely be limited over the next five to ten years. Therefore, the future growth projections prepared by the Hausrath Economics Group for the City acknowledge that business development and employment growth in Oakland over the longer term by 2025 would be lower than previously anticipated. Thus, the Project's emphasis on residential development reflects current market conditions. Office and R&D development previously assumed for the Project Area could be relocated to other comparable sites/locations in Oakland, including sites that are already identified for R&D development by current City growth projections for 2025, such as downtown Oakland, which has a large supply of potential development sites. Thus, a change in land use designation from commercial and industrial uses to residential use would not affect the potential for commercial development and employment growth in Oakland over the short-term future.

The Project Area does not currently include any residential uses. The Project Area contains one hotel (Bea's Hotel) in Development Area Four, which is a commercial use that has up to

[5] Linda Hausrath, Hausrath Economics Group, memo, Consideration of Cumulative Effects of Changing Land Use Designation for the Central Station Project Area, February 26, 2004.

22 rooms for temporary lodging. If the Project Sponsor of Development Area Four acquires this property, implementation of the Project would eliminate these rooms and produce 1,570 residential units under the Maximum Residential Scenario. The Maximum Commercial Scenario, which would produce the least housing, would still result in 1,084 new units. If the Project Sponsor does not acquire the Bea's Hotel property, it would remain intact.

Given the strong demand for housing in the region and the relative shortage of land available for housing development, a change in land use designation in the Project Area as part of the Project would increase the amount of housing developed in Oakland and the growth of households and population in the City in the future. Thus, over the longer term by 2025, housing developed in the Project Area would add to Oakland's housing supply, which would still be consistent with citywide growth projections as analyzed in the City's General Plan.

Oral comments made during the Notice of Preparation comment period requested that this EIR evaluate the Project's potential housing market effects in the area. However, in accordance with CEQA, this EIR only evaluates a project's potential adverse changes to the physical environment, and not a project's potential social or economic effects. (Public Resources Code Sections 21060.5 and 21068). "For purposes of CEQA, impacts on housing demand are social and economic effects…" *San Franciscans For Reasonable Growth v. City and County of San Francisco*, 209 Cal. App. 3d 1502, 1521 (1989), citing *CEQA Guidelines* Sections 15064(f), 15131(a). "Economic and social changes resulting from a project are not treated as significant environmental effects (Guidelines Section 15064, subd.(f)) and, thus, need not be mitigated or avoided under CEQA." *San Franciscans for Reasonable Growth v. City and County of San Francisco*, 209 Cal. App. 3d at 1516.

Summary of Impact PH-2 by Development Area. Implementation of residential/commercial and public uses within the individual development areas would not displace a substantial number of existing housing units or people. There is no residential use in the Project Area. If the Project Sponsor of Development Area Four acquires the Bea's Hotel property, it would be redeveloped along with the rest of the site with a considerable net increase in housing supply. If the Project Sponsor does not acquire the property, it would remain in its current state. Under either scenario, the Project would result in a substantial increase in housing supply.

Development Area	No Impact	LTS	PS	S
1	✓			
2	✓			
3	✓			
4	✓			
5	✓			
6	✓			
7	✓			
8	✓			
9	✓			

Cumulative Analysis

PH-3. The Project proposes additional housing that would increase the amount of land designated for residential development in Oakland, but would not displace any residents or housing units or contribute to a cumulatively considerable effect on population and housing in Oakland. (LTS)

The geographic context for the analysis of population, employment, and housing impacts is ABAG's nine-county region, which represents what is often referred to as the "Bay Area." The Bay Area region has experienced substantial population growth in the past decade, leading to a cumulative imbalance of effective housing demand versus supply. While most households benefit during times of economic expansion, the displacement of existing households of relatively lesser economic means by those of relatively greater economic means can occur. However, pursuant to Community Redevelopment Law, monies generated though tax increment by proposed redevelopment, including the Project Area, are required to be set aside to increase, improve, and preserve the supply of low-income housing in Oakland, which would counter-balance these effects.

As in-migration to the Bay Area in the late 1990s responded to job generation, the economic expansion resulted in cumulative growth that exceeded planning projections regarding both population and housing. Population grew at a faster rate than household rate, and the demand for Bay Area housing exceeded supply. From 1990 to 2000, the Bay Area region increased population by 12.9 percent, and households (occupied units) increased by 9.8 percent. For the same period, Oakland increased population by 7.3 percent and households by 4.3 percent. Therefore, while Oakland grew during the 1990s, it did not keep pace with the regional rate of either population or household growth. Through 2020, the region is expected to experience more moderate rates of population and household growth than in the recent past, and Oakland is projected to continue to trail the region in its rate of growth of both population and households based on ABAG projections. Also worth noting, the *City of Oakland General Plan*, which was completed in 1998, is based on very similar population estimates to the ABAG projections. For example, year 2005 population estimates completed by ABAG and the City of Oakland in 1998 differ by only 0.4 percent, and estimates for 1995 (also completed in 1998) are practically identical. Therefore, the contribution of redevelopment in the Project Area to population or housing growth would not be cumulatively considerable, and the incremental effect of the Project is considered less than significant.

With respect to employment, while not a threshold pursuant to CEQA, according to the *County Snapshot* prepared by the Labor Market Information Division of the California Employment Development Department for the Oakland Metropolitan Statistical Area (MSA), over the last five years, the Oakland MSA has recorded gains in civilian labor force, and, despite a decline in the year 2002, has recorded cumulative growth in industry employment. From 2001 to 2002, the civilian labor force for the two-county MSA (Alameda and Contra Costa) increased by 24,000, totaling nearly 1.3 million. The area's 2002 unemployment rate, at 6.1 percent,

was lower than California's rate of 6.7 percent for the same year. However, the unemployment rate has been increasing in the Oakland MSA since 2000, largely as the result of a labor force that has grown more than the available employment pool.

However, the long-term prospects for the Bay Area's economy continue to be optimistic. While growth in the number of jobs between 2000 and 2005 is expected to be limited in most of the region, the long-term forecast shows significant change. The region has an unusually high concentration of computer electronics, telecommunications, and computer software jobs. Added to that, the Bay Area is one of the leading regions for biomedical research and development. Some of the nation's top universities and research institutes nurture and support these industries. A varied economy that includes finance, tourism, and government also supports overall employment opportunities.

ABAG expects that the Bay Area will add almost 1,180,000 jobs during the next twenty-five years. Santa Clara County will see the largest increase in jobs over ABAG's forecast period, and Alameda County will see the second largest increase, adding over 262,500 jobs during the next 25 years, with the addition of almost 50,000 jobs in Oakland. ABAG further projects an approximate increase of 14,440 jobs in the study area between 2000 and 2025. Considering these projections, from a cumulative perspective, impacts related to regional employment opportunities are considered less than significant.

Because redevelopment of the Project Area includes an emphasis on housing, the number of jobs in the study area would be less than the ABAG 2025 forecasts. Under the Maximum Residential and the Maximum Trips Scenarios, jobs in the study area would increase to 10,336 and 11,387, respectively, as opposed to the 14,440 jobs otherwise projected. However, from a larger citywide perspective, the Hausrath Economics Group forecasts indicate that the job shortfall in the study area can readily be offset by increased jobs elsewhere in the City, and the overall growth in jobs in the region further supports a healthy employment base. In addition, because the Project includes housing and employment opportunities, the Project has the effect of increasing the number of employed residents relative to jobs. Lastly, as one of the first larger-scale redevelopment projects in the West Oakland Redevelopment Area, this Project is anticipated to encourage additional redevelopment activities, which could further strengthen the employment and housing base in West Oakland.

Summary of Impact PH-3 by Development Area. Since full development of the Project Area would not have a cumulatively considerable effect on population and housing, individual development proposals would have an even smaller contribution. Accordingly, proposals for each development area would not be expected to contribute to a cumulative population and housing impact.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

3.13 UTILITIES

Introduction

This section describes the baseline conditions with respect to utilities within the Project Area and potential impacts on utilities associated with implementation of the Project. The description of the existing utilities system, which includes water, wastewater, storm drainage, solid waste, and energy, is based on project-specific information provided by the potential service providers and documentation in the *West Oakland Redevelopment Plan EIR* and the *Oakland Army Base* (OARB) *Area Redevelopment Plan EIR*.[1] The demand for utilities would result from the proposed transformation of a primarily underutilized industrial area to one that is characterized by mixed-use, commercial, and residential uses at urban densities. This change in demand is evaluated against the available capacity of existing service providers.

For utility impacts, the Maximum Residential Scenario and the Maximum Commercial Scenario were evaluated. These scenarios were selected because they represent the greatest and least demands on utilities that could be generated by the Project, respectively, and thus would encompass the range of potential impacts on utilities.

Setting

Water Supply

The East Bay Municipal Utility District (EBMUD) provides domestic water supply to the City of Oakland, 19 other incorporated cities, and 15 unincorporated communities in Alameda and Contra Costa Counties. EBMUD's water supply includes fresh and recycled water. The primary source of water for EBMUD (about 95 percent) comes from the Mokelumne River, which collects melted snow from Alpine, Amador, and Calaveras Counties and is stored at the Pardee Reservoir. EBMUD maintains five reservoirs within its East Bay service area: Briones, Chabot, Lafayette, San Pablo, and Upper San Leandro reservoirs.[2] In March 2003, EBMUD's average daily water demand was 172.3 million gallons.[3]

In October 1993, EBMUD adopted a long-term Water Supply Management Program (WSMP) that serves as a planning guide to the provision of a reliable, high-quality water supply to the EBMUD service area through year 2020. The WSMP identified that during severe droughts, EBMUD would be unable to meet its customers' needs for water with its existing source of supply, the Mokelumne River,

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1 Section 419 of the *OARB Area Redevelopment Plan* requires that utilities be placed underground whenever physically and economically feasible.

2 East Bay Municipal Utility District (EBMUD), *Urban Water Management Plan 2000*, February 2001.

3 EBMUD, Daily Water Supply Report, http://www.ebmud.com/water &environment/water supply/ daily reports/default.htm, accessed March 11, 2003. Reports a seven-day average demand from February 28 through March 6, 2003.

without imposing extreme rationing measures. This situation will continue until a supplemental water supply project is implemented as part of the WSMP that results in dependable supplies for existing and future customers within EBMUD's service boundary.[4]

EBMUD forecasts that customers within its service area would demand about 277 million gallons per day (mgd) by 2020. With implementation of conservation techniques and the use of recycled water, water demand could be reduced to approximately 229 mgd, and EBMUD would be able to meet water supply projections through 2020 under average climate conditions.[5] However, if EBMUD's service area experiences a series of dry years, there could be a shortage of as much as 154 mgd. Due to the sparse and industrial nature of current uses in the Project Area, existing water demand is estimated at 0.02 mgd.[6]

Water Treatment and Distribution

EBMUD operates six water treatment plants that collectively filter and process more than 505 mgd. Water from the Pardee Reservoir is treated at the water treatment plant in Orinda, which has the largest water output of the six plants, with a capacity of 175 mgd. This plant serves most of Alameda, Albany, Berkeley, El Cerrito, Emeryville, Moraga, Oakland, Orinda, Piedmont, Richmond, and San Leandro. During peak demand periods, water from the Briones Reservoir is also treated at the Orinda plant. Water delivered to customers is filtered through sand and carbon, and has been disinfected and fluoridated.[7]

The Project Area is currently served by a 12-inch pipeline along 14th Street and a 6-inch pipeline along 16th Street that extends into the Project Area.[8]

Recycled Water

EBMUD has used recycled water since the 1960s to offset demand on EBMUD's potable water supply. This water is drawn from wastewater treatment plants or untreated water reservoirs. The level of treatment varies depending on the intended use. EBMUD projects that by 2020, recycled water use throughout its service area will be approximately 14 mgd for landscape irrigation and some industrial and commercial uses.

The Project Area is located within the boundaries of the East Bayshore Recycled Water Project (a Water Reuse Area) that strives to provide 2.3 mgd of recycled water to customers in Alameda, Albany, Berkeley, Emeryville, and parts of Oakland by the year 2005.[9] Furthermore, the City adopted a dual

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4 EBMUD, *Urban Water Management Plan 2000*, February 2001.

5 Normal year assumes that there would be no deficiency in available water supply as a result of a dry year or several dry years.

6 EBMUD, *Water Supply Assessment – Central Station Project*, September 14, 2004.

7 EBMUD, http://www.ebmud.com/water_&_environment/water_quality/water_treatment_plants/default.htm, accessed March 31, 2003.

8 EBMUD, NOP Comment Letter to Claudia Cappio, February 23, 2004. See Appendix A.

9 City of Oakland, *West Oakland Redevelopment Plan Draft EIR*, June 2003, p. 9-3.

plumbing ordinance, requiring new developments within a City-designated Water Reuse Area to use recycled water provided by EBMUD and install separate piping and plumbing systems for appropriate recycled water uses, specifically for landscape irrigation. EBMUD anticipates recycled water delivery to the Project Area within the next ten years.[10] The recommended recycled water pipeline routes would be located along Wood Street adjacent to the Project Area.[11]

Wastewater

The City of Oakland owns, operates, and maintains a wastewater collection system for approximately 39 square miles within the City, including the Project Area. The City's wastewater collection system discharges into EBMUD's sewer interceptor system, which in turn collects domestic, commercial, and industrial wastewater for several East Bay cities.[12] The Project Area is located entirely within the City's Sewer Collection Basin 64, part of the North Oakland collection system. This basin is further subdivided into 15 numbered and one unnumbered sewer collection sub-basins. Each numbered sub-basin encompasses a specific physical area, and its sewer flows are assigned to a single discharge point from the City's collection system into the EBMUD South Interceptor. EBMUD allocates a certain amount of sewer flow that may be discharged into the interceptor system, and flows within a sub-basin normally may not exceed that allocation. Should a sub-basin generate more flow than its allocation, the allocation may be redirected to adjacent sub-basins. This allocation system enables EBMUD to ensure that the capacity of its wastewater transport and treatment system is adequate to serve development. The Project Area is located in sub-basins 64-11, 64-12, 64-13, 6-14, and 64-X.[13] Generally, the existing local sanitary sewer collection system does not experience any capacity overflows.[14]

Once wastewater from the Project Area is conveyed to the South Interceptor, an EBMUD wastewater pumping station pumps the wastewater to the Main Wastewater Treatment Plant west of the Project Area near the entrance of the San Francisco-Oakland Bay Bridge. The Main Wastewater treatment plant provides primary and secondary treatment to collected wastewater. Primary treatment removes floating material, oils and greases, sand and silt, and organic solids heavy enough to settle in water. Secondary treatment biologically removes most of the suspended and dissolved organic and chemical impurities that would rob oxygen from the waters of the Bay if allowed to decompose naturally. The treated effluent is then disinfected, dechlorinated, and discharged one mile off the East Bay shore through a deep-water outfall into San Francisco Bay. The average annual flow is currently 80 mgd.[15] Primary treatment can be provided for up to 320 mgd, and secondary treatment for a maximum flow of 168 mgd. Storage basins provide plant capacity for a short-term hydraulic peak of 415 mgd.

EMBUD accepts waste streams from a variety of sources, including stormwater, which infiltrates to shallow groundwater and leaks into sewer drains or enters sewer drains through cross connections with

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10 EBMUD, NOP Comment Letter to Claudia Cappio, February 23, 2004. See Appendix A.
11 City of Oakland, *OARB Area Redevelopment Plan EIR*, July 2002, p. 4.9-13.
12 City of Oakland, *West Oakland Redevelopment Plan Draft EIR*, June 2003, p. 9-3.
13 City of Oakland, *OARB Area Redevelopment Plan EIR*, July 2002, p. 4.9-13.
14 Brian Matsumura, City of Oakland Public Works Department, electronic mail to Jason Neri, April 19, 2004.
15 EBMUD, http://www.ebmud.com/wastewater/treatment/, accessed April 20, 2004.

storm drains during wet weather events. Wet weather sewer flows, in excess of treatment capacities, are stored and treated in special reservoir tanks at the Main Wastewater Treatment Plant.[16] Inabilities to handle wet weather flows are a concern of EBMUD. The City of Oakland implements an inflow and infiltration correction program (IICP) to reduce wet weather overflows into its sanitary sewer system. The IICP sets a maximum allowable peak wastewater flow from each sub-basin within the City. The IICP is expected to increase the capacity of the collection system to allow an approximately 20 percent increase in wastewater flows. To accommodate the goals of the IICP, EBMUD agreed to design and construct wet weather conveyance and treatment facilities to accommodate peak flows.

Stormwater

The City of Oakland Public Works Department maintains and operates its storm drainage system separate from its existing sewer system. The City's storm drainage system contains approximately 302 miles of stormwater conduit primarily constructed of reinforced concrete. The storm drainage system also contains about 9,400 stormwater inlets and 5,850 manholes. Most of the existing storm drains were built in the 1930s and have reached or passed their serviceable lifespan. Consequently, the City of Oakland is preparing a storm drainage master plan (SDMP) to identify deficiencies in the storm drain system and develop prioritized recommendations for rehabilitating the system in order to reduce localized flooding.[17] The City's storm drains feed into larger facilities owned and maintained by the Alameda County Flood Control and Water Conservation District (ACFCWCD). ACFCWCD facilities in Oakland include drainage channels, pipelines and culverts, flood control dams, erosion control devices, pumping stations, and other facilities such as tide gates.[18]

Due to previous development on site, the Project Area includes bare surfaces with high runoff potential and some impervious surfaces. Runoff flows to Wood Street, where it enters the City storm drain system via a 3-foot by 4-foot, 6-inch elliptical pipe and a 58-inch diameter pipe, both located below Wood Street.

Solid Waste

The City generates approximately 650,000 tons of solid waste per year. In 2002, the City was certified by the California Integrated Waste Management Board as having achieved a 52 percent waste reduction goal due to recycling efforts.[19] Approximately 30 percent of the City's solid waste is generated by residences, 40 percent is generated by commercial uses, and the remaining 30 percent is generated by industrial uses. Within the Project Area, solid waste is collected by Waste Management of Alameda County and is transported to the Davis Street Transfer Station in San Leandro. Waste is then transported to the Altamont Landfill in eastern Alameda County for disposal. The Altamont Landfill is a fully licensed and permitted facility and has a total estimated capacity of 75 million cubic yards of

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16 City of Oakland, *West Oakland Redevelopment Plan Draft EIR*, June 2003, p. 9-4.
17 City of Oakland, Oakland General Plan Safety Element Update: Flooding, May 2003.
18 City of Oakland, *West Oakland Redevelopment Plan Draft EIR*, June 2003, p. 9-6.
19 City of Oakland, Public Works Agency website, http://www.oaklandpw.com/environmental_services.htm, accessed July 15, 2004.

solid waste, of which 43 million cubic yards have been filled as of March 2003. The landfill is estimated to have capacity until approximately 2033.[20] Construction and demolition debris are normally hauled by contractors or construction companies to asphalt and concrete recycling centers in Oakland or to the Vasco Road Landfill north of the City of Livermore.[21] Waste Management of Alameda County implements many programs and maintain facilities to help the cities it serves achieve the 75 percent waste diversion goal (mandated by the California Integrated Waste Management Board) by 2010, including public education/school education, food waste recycling, single stream recycling, a state-of-the-art materials recovery facility located in Alameda County, construction and demolition debris recycling, curbside recycling, and processing at the Recycle America Materials Recovery Facility located in Alameda County.[22]

Energy[23]

Existing development in the Project Area is served by Pacific Gas & Electric Company (PG&E). PG&E serves 94,000 square miles of Northern and Central California. California's natural gas supplies come predominantly from California, the Southwestern U.S., the Rocky Mountains, and Canada. PG&E operates with a grid distribution system that channels all energy produced at the different sources into one large energy pool for distribution throughout the service territory.

California started to experience a number of problems related to energy when the electricity industry was restructured in 1996. Many power plants were sold to privately owned, out-of-state energy companies. Electrical supply and demand problems occurred during the 1990s because of rapid growth in the state's economy, the spread of computer technology, the lack of new power plants built since the mid-1980s, the lack of widespread conservation due to relatively low electricity costs to consumers, and growth in the state's population. Currently, the state uses 265,000 gigawatt-hours of electricity per year. Energy consumption is growing at two percent annually. Over the last decade, between 29 and 42 percent of California's in-state energy supply was generated by natural gas, and 10 to 20 percent was generated by hydroelectric power. Nearly one third of the in-state generation base is over 40 years old. While these in-state power generation resources provide the majority of California's power, 15 to 30 percent of statewide electricity is served from sources outside of the state.[24] California's natural gas supply is also limited; approximately 85 percent of the state's natural gas supply was imported.

Bay Area consumers have recently experienced rising energy costs and uncertainties regarding the supply of electricity. The causes of these conditions are under investigation and are the subject of much debate. Part of the problem is that the state does not generate sufficient energy to meet its

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[20] City of Oakland, *Coliseum Gardens HOPE VI Revitalization Project Final Initial Study/Environmental Assessment*, prepared by EIP Associates, April 2003.

[21] City of Oakland, *West Oakland Redevelopment Plan Draft EIR*, June 2003, p. 10-10; City of Oakland, *OARB Area Redevelopment Plan EIR,* July 2002, p. 4.9-14.

[22] Brian Burke, Waste Management of Alameda County, electronic mail to EIP Associates, April 19, 2004.

[23] City of Oakland, *Coliseum Gardens HOPE VI Revitalization Project Final Initial Study/Environmental Assessment*, prepared by EIP Associates, April 2003.

[24] Consumer Power and Conservation Financing Authority, Energy Resources Conservation and Development Commission, and Public Utilities Commission, *State of California Energy Action Plan*, adopted May 2003.

demands and must import energy from outside sources. Another part of the problem is the lack of cost controls as a result of deregulation. The California Energy Commission is currently considering applications for the development of new power-generating facilities in the Bay Area and elsewhere in the state. *The State of California Energy Action Plan,* adopted in May 2003, outlines specific actions to ensure that adequate, reliable, and reasonably priced power and natural gas supplies will supply additional energy to the power supply grid within the next few years.

Applicable Plan and Policies

Federal Programs. As described in Section 3.10, Hydrology and Water Quality, the 1972 amendments to the federal Clean Water Act (CWA) prohibit the discharge of pollutants to navigable waters from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Industries that have direct stormwater discharges to navigable waters are required to obtain permits. It is within the authority of the Regional Water Quality Control Boards (RWQCB) to issue an NPDES permit for any stormwater outfall to the waters of the U.S., such as the San Francisco Bay. The RWQCB requires that an NPDES permit be obtained for construction grading activities for all projects greater than one acre. This permit requires implementation of non-point source control of stormwater runoff through the application of a number of best management practices meant to reduce the amount of pollutants entering streams and other water bodies.

In the Project Area, the stormwater program is administered by the Alameda Countywide Clean Water Program, which consists of 17 participating agencies, including the City of Oakland. The County's NPDES permit is implemented in accordance with its draft stormwater management plan developed under its Countywide Clean Water Program. Development of the Project is subject to all of the NPDES permit requirements for stormwater management and discharges under the County's NPDES permit. The County's 2002 NPDES permit incorporates recent state and federal requirements related to the quantity and quality of stormwater discharges from new development projects.[25] Additionally, the Project would be required to comply with the NPDES General Permit for Stormwater Discharges (including Provision C.3.), which mandates preparation of a Stormwater Pollution Prevention Plan for the Project. Water quality and hydrograph modification issues associated with the Project are discussed in Section 3.10, Hydrology and Water Quality.

Urban Water Management Planning Act. Section 10610.4 of the California Urban Water Management Planning Act specifies that "Urban Water Suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies."[26] EBMUD prepared an urban water management plan (UWMP) in 2000, which indicates that aggressive conservation and use of recycled water will allow EBMUD to meet its obligation to serve its current and future customers in normal rainfall years through the year 2020. EBMUD studies indicate that with current water supply and the expected water demand in 2020, there could be deficiencies in supply of up to 67 percent during multiple drought years. EBMUD's WSMP identifies options to meet projected water needs and

[25] City of Oakland, *West Oakland Redevelopment Plan Draft EIR*, June 2003, p. 9-16.
[26] EBMUD, *Urban Water Management Plan 2000*, February 2001, p. 1-4.

to increase water reliability. Generally, these options include development of conveyance facilities, groundwater conjunctive use, and additional surface water storage.[27]

Senate Bill 610. Effective January 1, 2002, the State of California, through Senate Bill 610 (SB 610) requires that a water supply assessment (WSA) be prepared by the lead agency for potential public water supplier for all large-scale projects subject to CEQA approval. The WSA that is required as part of the CEQA process must identify existing water supply assessments, water rights, or water service contracts relevant to the Project, and water received in prior years pursuant to those entitlements, rights, and contracts. If the water demand for the proposed development has been accounted for in a recently adopted urban WMP, the water supplier may incorporate information contained in that plan to satisfy certain requirements of a WSA. In addition, the WSA must cover a 20-year planning horizon and should be consistent with the 20-year planning horizon for the City's UWMP. Pursuant to SB 610, a WSA has been prepared for the Project (see Appendix J).

Senate Bill 221. SB 221, which amends the Subdivision Map Act, became effective at the same time as SB 610. It requires that, as a condition of final map approval, an applicant verify that the public water supplier has sufficient water supply available to serve the proposed development. This bill requires the public water supplier to provide written verification of available supplies to the applicant. If the written verification concludes that water supplies are insufficient, the approving agency can either find that water sources not considered by the public water supplier will be available or waive the condition imposed by SB 221. For purposes of this requirement, SB 221 defines subdivision to mean a proposed residential development of more than 500 dwelling units, except that for a public water system that has fewer than 5,000 service connections, "subdivision" means any proposed residential development that would account for an increase of ten percent or more in the number of the public water system's existing service connections. Although none of the development areas proposes more than 500 dwelling units, combined they propose over 1,000 units under all scenarios. Since the Project involves a comprehensive new zoning district for the entire Project Area, it is expected that SB 221 would apply to the Project.

Assembly Bill 939. The Integrated Waste Management Act of 1989 (AB 939) mandates that all cities and counties in California currently divert 50 percent of solid waste from landfills and 75 percent by 2010. Municipalities that do not meet these diversion rates would be penalized with fines. Oakland has prepared a Source Reduction and Recycling Element, which includes source reduction, expanded recycling efforts, composting, and environmentally safe waste disposal. In addition, the Oakland City Council adopted a 75 percent waste reduction goal by the year 2010.

Title 24. Energy Efficient Standards for Residential and Nonresidential Buildings, or Title 24, was established in 1978 by the California Energy Commission (CEC) in response to a legislative mandate to reduce California's energy consumption. The state's Title 24 energy-efficiency standards require the design of new buildings to be energy conserving. The standards are updated periodically to allow consideration and possible incorporation of new energy-efficiency technologies and methods.

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[27] City of Oakland, *West Oakland Redevelopment Plan Draft EIR*, June 2003, p. 9-2.

In 2001, the CEC adopted new energy efficiency building standards as mandated by Assembly Bill 970 to reduce California's electricity demand. AB 970 was enacted in a focused effort to reduce peak electricity consumption and incorporate energy efficiency measures. In response to AB 970, the Building Services of the City of Oakland's Community and Economic Development Agency reviews project design for compliance with Title 24 standards before a building permit is issued.

City of Oakland Regulations. The City of Oakland has adopted a Water Reuse Ordinance that applies to development projects that are located within a Water Reuse Area and where new water hook-ups from EBMUD would be required. The City also adopted a Water Efficient Landscape Requirement Ordinance that describes practices designed to conserve water for landscape irrigation. The City also implements the following ordinances that are intended to protect water quality and water resources:

- Ordinance No. 10312 C.M.S. – the Grading Ordinance, which requires grading permits to have, among other requirements, an erosion and sedimentation control plan;
- Ordinance No. 10446 C.M.S. – the Sedimentation and Erosion Control Ordinance, which requires appropriate preventative measures to control erosion from any grading or clearing operation;
- Ordinance No. 12024 C.M.S. – Creek Protection O.M.C. Chapter 13.16 - the Stormwater Management and Discharge Control Ordinance, which establishes comprehensive guidelines for the regulation of discharge into the City's storm drain system;[28] and
- Ordinance No. 12253 C.M.S. - the Construction and Demolition Debris Waste Reduction and Recycling Ordinance, which requires a project applicant to submit a Waste Reduction and Recycling Plan to divert 50 percent of the solid waste generated by project operation to the City prior to the issuance of a building permit. The ordinance further establishes guidelines for the design, location, and maintenance of recycling collection facilities and storage for new development.

City of Oakland General Plan. The LUTE of the General Plan describes Oakland's services and utilities, identifies providers, and presents an outlook on the long-term provision of services. Technical Report #5 of the LUTE, Oakland Community Services, contains detailed information on water supply resources, wastewater, drainage, and solid waste. The General Plan does not include specific goals or policies regarding service systems or utilities. However, the LUTE does include the following policy that applies to the Project:

> **Policy N7.2:** Infrastructure availability…is among the factors that should be taken into account when developing and mapping zoning designations or determining compatibility. These factors should be balanced with the citywide need for housing.

[28] City of Oakland, *West Oakland Redevelopment Plan Draft EIR*, June 2003, p. 9-17.

The Open Space, Conservation, and Recreation Element of the General Plan includes the following policies and actions that are intended to reduce effects of water consumption in Oakland.

Policy CO-4.1: Emphasize water conservation and recycling strategies in efforts to meet future water demand.

Policy CO-4.2: Require use of drought-tolerant plants to the greatest extent possible, and encourage use of irrigation systems, which minimize water consumption.

Policy CO-4.3: Promote the use of recycled wastewater for irrigating landscape medians, cemeteries, parks, and other areas requiring large volumes of non-potable water.

Policy CO-5.3: Employ a broad range of strategies compatible with the Alameda Countywide Clean Water Program to reduce water pollution associated with stormwater runoff; reduce water pollution associated with hazardous spills, runoff from hazardous material areas, improper disposal of household hazardous waste, illicit dumping…

Impacts and Mitigation Measures

Standards of Significance

The Project would have a significant impact on the environment if it would:

- Exceed wastewater treatment requirements of the San Francisco Bay RWQCB;
- Require or result in construction of new stormwater drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- Exceed water supplies available to serve the Project from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- Result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- Be served by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
- Violate applicable federal, state, and local statutes and regulations related to solid waste;
- Violate applicable federal, state and local statutes and regulations relating to energy standards; or

- Result in a determination by the energy provider which serves or may serve the Project that it does not have adequate capacity to serve the Project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not diminish potentially significant or significant effects to a less-than-significant level, the impacts are classified as "significant unavoidable effects (SU)." For this section, UT refers to Utilities.

UT-1. The Project would not exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board. (LTS)

The Project under both the Maximum Residential and Maximum Commercial Scenarios would not result in violations of water quality requirements established by the RWQCB and regulated under NPDES Permit CA0037702. Wastewater generated by the Project would be transported to EBMUD's Main Wastewater Treatment Plant. Wastewater would then be treated to a primary and/or secondary level before its release into San Francisco Bay. The Project Sponsors have coordinated with the City of Oakland Public Works Department in defining the Project's anticipated contribution to peak wet weather flows. Peak wet weather flows from the Project Area are estimated to be 0.53 mgd and 0.47 mgd under the Maximum Residential and Maximum Commercial Scenarios, respectively. Existing flows to EBMUD's Main Wastewater Treatment Plant are 80 mgd and, as discussed in the Setting, substantial additional capacity exists. Although wet weather flows are of concern to EMBUD, EBMUD's Main Wastewater Treatment Plant is anticipated to have adequate dry weather capacity to treat the proposed wastewater flow from the Project.[29] The City reviewed the Project Sponsors' wastewater discharge calculations and determined that the total wastewater flow generated by the Project is within the anticipated total wastewater flow for all of the affected sub-basins, which include 64-11, 64-12, 64-13, 64-14, and 64-X.[30]

Furthermore, regional or local regulations or policies such as the existing County NPDES permit, provisions of the required Project NPDES permit, and the Project's compliance with local ordinances regulating wastewater and stormwater discharges would monitor and limit potential effects related to wastewater. Consequently, development of the Project would not exceed wastewater treatment requirements of the RWQCB.

[29] EBMUD, NOP Comment Letter to Claudia Cappio, February 23, 2004.
[30] Brian Matsumura, City of Oakland Public Works Department, electronic mail to Jason Neri, April 19, 2004.

Summary of Impact UT-1 by Development Area. Since full development of the Project Area would not result in exceedances of wastewater treatment requirements of the RWQCB, none of the proposals for individual development areas would exceed these requirements, and the impact would be less than significant.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

UT-2. The Project would require the construction of new stormwater drainage facilities within the Project Area. However, the existing drainage pattern would not be altered, extensions of storm drains would connect to existing drains, and construction-related mitigation measures would be imposed. Therefore, impacts would be considered less than significant. (LTS)

The Project is an infill development project that would be constructed on previously developed land. Under either the Maximum Residential or Maximum Commercial Scenarios, development of the Project Area is not expected to result in substantially greater impervious cover that could require the construction of new stormwater drainage facilities or expansion of existing facilities off site. The Project would use all of the existing storm drain facilities within the public roadways. In addition, all proposed storm drain extensions would connect to existing storm drain mains in 3-foot by 4-foot elliptical pipe and 58-inch diameter pipe within Wood Street. Furthermore, the Project Sponsors' adherence to the LUTE Policy N7.2 that calls for balancing infrastructure availability with development during the development process would help to ensure adequate stormwater drainage facilities are present in the Project Area. The above notwithstanding, development in each of the individual development areas would require new storm drain lines to transport stormwater to the existing lines. During the course of installing the storm drain system, the construction activities could cause a number of potential significant impacts, such as emission of fugitive dust, noise, disturbances to unknown cultural resources, or exposure of construction workers to soil and/or groundwater contamination. Since the installation of the lines would occur as part of the overall site preparation, the construction-period mitigation measures identified for each of these issues in the applicable sections of this EIR would apply and reduce the effects of new storm drains to less than significant.

Summary of Impact UT-2 by Development Area. Since full development of the Project Area would not result in the need for expansion of existing storm drainage facilities, none of the proposals for individual development areas would trigger the need to expand the storm drains, and the impact would be less than significant. There would, however, be construction

of new storm drains within the Project Area to the existing lines in the surrounding streets. Construction activities related to storm drain facilities could generate fugitive dust, create noise, disturb unknown cultural resources, and expose construction workers to existing soil and/or groundwater contamination. All of these impacts are acknowledged as potentially significant effects related to construction in the development areas, in earlier sections of this EIR, and mitigation measures are identified in each applicable section to reduce the effects to less than significant. Accordingly, implementation of those construction mitigation measures would reduce potentially significant effects from construction of new storm drains on site to less than significant.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

UT-3. EBMUD would have sufficient water supplies available to serve the Project from existing entitlements and resources. (LTS)

EBMUD's customer demand for potable water in 2000 was estimated to be 216 mgd (adjusted for conservation and use of recycled water). In its 2000 UWMP, EBMUD also predicted that its customer demand for water supply could reach 229 mgd in 2020 with implementation of conservation and recycled water programs. The UWMP indicates that EBMUD would have sufficient water supplies to accommodate this demand.[31] The UWMP includes buildout of the Project Area assuming existing zoning, which is predominantly industrial. Implementation of the Project would result in residential uses at urban densities, as well as mixed-use and commercial uses, that would impose water demands for the Project Area greater that those projected in the UWMP.

The Project would result in increased water demands of 0.35 mgd and 0.27 mgd under the Maximum Residential and Maximum Commercial Scenarios, respectively (see Table 3.13-1). [32] This contribution to the future water demand is estimated to represent between 0.12 percent and 0.15 percent of EBMUD's total projected water demand. Implementation of both the City's General Plan policies and EBMUD's water conservation and water recycling programs to efficiently use both potable and non-potable water supplies would be implemented as part of the Project to minimize effects to water supply during drought conditions. Despite the

[31] EBMUD, *Water Supply Assessment – Central Station Project*, September 14, 2004.

[32] These calculations were prepared by Carlson, Barbee & Gibson (CBG), an independent civil engineering consulting firm that prepared water and wastewater analysis for the Project on behalf of the Project Sponsors.

negligible increase in water demand as compared to EBMUD projections, and coupled with the use of water conservation strategies, the Project would be generally consistent with EBMUD planning assumptions; therefore, sufficient water supplies are anticipated to be available to serve the Project.

Table 3.13-1
Water Demand with Project

Development Scenario	Average Day Demand (mgd)	Maximum Day Demand(mgd)	Peak Hour Demand (mgd)
Maximum Residential	0.35	0.96	1.9
Maximum Commercial	0.27	0.74	1.5

Source: CBG, May 21, 2004.

Notes:

mgd = millions of gallons per day.
Water demand factors used provided by EBMUD; May 21, 2004.
Maximum day demand = 2.7 x average day demand.
Peak-hours demand = 2.0 x maximum day demand.

Summary of Impact UT-3 by Development Area. Since full development of the Project Area as a whole would not result in any significant water supply impacts, implementation of individual development proposals would not by themselves result in significant water supply impacts.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

UT-4. The Project would increase sewer flows to EBMUD facilities, but would not require the construction of new wastewater treatment facilities or expansion of existing facilities. (LTS)

Based on preliminary wastewater generation calculations prepared by CBG,[33] the Project would generate approximately 0.21 mgd and 0.19 mgd of wastewater flows on average under the Maximum Residential and Maximum Commercial Scenarios, respectively. The Project would

[33] Jason Neri, CBG, facsimile memo of sewer and wastewater flows for Project to EIP Associates, April 12, 2004.

generate approximately 0.53 mgd and 0.47 mgd of wastewater flows during peak wet weather conditions under the Maximum Residential and Maximum Commercial Scenarios, respectively. The wastewater flows generated by the Project would be treated at EBMUD's Main Wastewater treatment plant, which currently treats an average flow of 80 mgd. The Public Works Department has stated that it can accommodate these projected increases in sewer flows, both under average dry-weather and peak wet weather conditions, within their existing sewage collection and transport system.[34] There may be improvements required to some segments of the conveyance system, based on age and condition of the pipes. However, no increase in capacity is projected to be required. These improvements will be determined at the time the public improvement plans are submitted as part of the building permit. Similarly, EBMUD has also stated that it can accommodate the projected increases in sewer flow within their wastewater treatment system.[35] Furthermore, the City's implementation of and adherence to the provisions of the IICP would help decrease the amount of inflow and infiltration into the existing wastewater transport system. Therefore, construction of new or physically altered wastewater treatment facilities would not be required.

Summary of Impact UT-4 by Development Area. Since full development of the Project Area as a whole would not result in any significant wastewater collection and treatment impacts, implementation of individual development proposals would not by themselves result in significant wastewater collection and treatment impacts.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

UT-5. The Project would not result in solid waste disposal needs beyond the permitted capacity of the local landfill and would comply with federal, state, and local statutes and regulations related to solid waste. (LTS)

The Project is estimated to generate approximately 1 ton of solid waste per year under the Maximum Residential Scenario, and 2 tons of solid waste per year under the Maximum Commercial Scenario.[36] This amount of solid waste represents less than one percent of the total solid waste generated and transported by the City to the Altamont Landfill. The landfill has the capacity to last until approximately 2033. Additionally, continued implementation of

[34] Brian Matsumura, City of Oakland Public Works Department, electronic mail to Jason Neri, April 19, 2004.
[35] EBMUD, NOP Comment Letter to Claudia Cappio, February 23, 2004.
[36] Brian Burke, Waste Management of Alameda County, electronic mail to EIP Associates, April 19, 2004.

the City's existing recycling and waste diversion programs, in combination with the same programs implemented by Waste Management of Alameda County as part of the Project, would ensure that solid waste generated by the Project would not exceed amounts that can be accommodated by the Altamont Landfill. In addition, Assembly Bill 939 requires that all cities divert 50 percent of their solid waste from landfills by December 31, 2000, and 75 percent by December 31, 2010. The City has complied with this legislation by diverting 52 percent of its waste.

In order to ensure continued City compliance with the requirements of AB 939, the Project would be required to comply with the City's and the County's existing recycling and waste diversion programs. Given the relatively small amount of waste that the Project would generate, coupled with the requirement to comply with local recycling and waste diversion programs, the Project's impacts would be less than significant.

Summary of Impact UT-5 by Development Area. Since full development of the Project Area as a whole would not result in significant solid waste disposal impacts, implementation of individual development proposals would not by themselves result in significant solid waste disposal impacts.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

UT-6. The Project would incrementally increase the demand for energy provided by PG&E. (LTS)

The Project would increase demand for electricity and natural gas because of the proposed intensification of land uses and conversion of vacant land to high density uses. Under all development scenarios, the Project would be required to meet current State and local codes concerning energy consumption, including Title 24 of the California Code of Regulations enforced by the City's Department of Building Inspection. The Project therefore would not violate applicable statutes and regulations related to energy standards. The Project Area is already served by PG&E. In comparison to the regional power grid, the change in demand for energy would be negligible, and would not in and of itself require a major expansion of power facilities. Furthermore, use of modern building materials with insulation capabilities for construction of the proposed structures could further minimize any project-generated demand for energy. As a result, the energy demand associated with the Project would not result in a significant impact.

Summary of Impact UT-6 by Development Area. Since full development of the Project Area as a whole would not result in significant energy demand impacts, implementation of individual development proposals would not by themselves result in significant energy impacts. The City's Building Services staff would ensure that new structures comply with energy conservation standards.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

Cumulative Analysis

UT-7. The Project, in combination with other related projects and background growth, would not significantly contribute to cumulative utilities impacts. (LTS)

The geographic context for the analysis of cumulative water supply, water treatment, and recycled water impacts is the jurisdiction of EBMUD, which provides domestic water supply to the City of Oakland, 19 other incorporated cities, and 15 unincorporated communities in Alameda and Contra Costa Counties. The geographic context for the analysis of cumulative wastewater impacts is the City of Oakland as the jurisdiction that owns, operates, and maintains the wastewater collection system for approximately 39 square miles within the City, including the Project Area. The geographic context for the analysis of cumulative stormwater impacts is the City of Oakland, as the jurisdiction that maintains and operates a storm drainage system separate from its existing sewer system. The City of Oakland also represents the geographic context for the analysis of the solid waste impacts. The service area of PG&E represents the geographic context for energy impacts. In addition, growth associated with the related projects and additional regional growth represented by the City of Oakland's Cumulative Growth Scenario, both of which are described in Appendix C, is also assumed with these geographic areas.

Water Supply, Treatment, and Distribution. Development of cumulative projects would increase demand for water, depending on net increases in population, square footage, and intensity of uses. These projects would contribute to the overall regional water demand, which has been estimated to be 277 mgd by 2020.

In October 1993, EBMUD adopted a WSMP that provides relevant information on water supply and usage, wastewater, recycled water, and conservation programs. The WSMP

identified that during severe droughts, EBMUD would be unable to meet its customers' needs for water with its existing source of supply, the Mokelumne River, without imposing extreme rationing measures. This situation will continue until a supplemental water supply project is implemented as part of the WSMP that results in dependable supplies for existing and future customers within EBMUD's service boundary.[37]

The UWMP describes and evaluates sources of supply, water recycling, and demand management activities, and includes buildout of the Project Area assuming existing zoning, which is predominantly industrial, as well as overall growth in EBMUD's service area through 2020 according to ABAG's 2000 projections. Implementation of the Project, which would result in residential uses at urban densities, as well as mixed-use and commercial uses, would result in water demands for the Project Area greater than those projected in the UWMP. The Project would result in increased water demands of 0.35 mgd and 0.27 mgd under the Maximum Residential and Maximum Commercial Scenarios, respectively. This contribution to the future water demand is estimated to represent between 0.12 percent and 0.15 percent of EBMUD's total projected water demand. Implementation of both the General Plan policies and EBMUD's water conservation and water recycling programs to efficiently use both potable and non-potable water supplies would be implemented as part of the Project to minimize effects to water supply during drought conditions. Therefore, the Project's contribution to a cumulative water supply impact would be considered less than significant.

Wastewater. Development of cumulative projects within the service area of the City of Oakland's wastewater collection system would generate additional quantities of wastewater, depending on net increases in population, square footage, and intensification of uses. These projects would contribute to the overall regional demand for wastewater conveyance and treatment.

The City's wastewater collection system discharges into EBMUD's sewer interceptor system, which in turn collects domestic, commercial, and industrial wastewater for several East Bay cities.[38] The Project Area is located entirely within the City's Sewer Collection Basin 64. This basin is further subdivided into 15 numbered and one unnumbered sewer collection sub-basins. Each numbered sub-basin encompasses a specific physical area, and its sewer flows are assigned to a single discharge point from the City's collection system into the EBMUD South Interceptor. EBMUD allocates a certain amount of sewer flow that may be discharged into the interceptor system, and flows within a sub-basin normally may not exceed that allocation. This allocation system enables EBMUD to ensure that the capacity of its wastewater transport and treatment system is adequate to serve regional development.

Once wastewater from the Project Area is conveyed to the South Interceptor, an EBMUD wastewater pumping station pumps the wastewater to the Main Wastewater Treatment Plant

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[37] EBMUD, *Urban Water Management Plan 2000*, February 2001.
[38] City of Oakland, *West Oakland Redevelopment Plan Draft EIR*, June 2003, p. 9-3.

west of the Project Area near the entrance of the San Francisco-Oakland Bay Bridge. Wet weather sewer flows, in excess of treatment capacities, are stored and treated in special reservoir tanks at the Main Wastewater Treatment Plant.[39] Inabilities to handle wet weather flows are a concern of EBMUD. The City of Oakland implements an inflow and infiltration correction program (IICP) to reduce wet weather overflows into its sanitary sewer system. The IICP sets a maximum allowable peak wastewater flow from each sub-basin within the City. The IICP is expected to increase the capacity of the collection system to allow an approximately 20 percent increase in wastewater flows. Cumulative development is not anticipated to require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities, thereby causing potentially significant environmental effects.

The City's Public Works Department has stated that it can accommodate the Project-related increases in sewer flows, both under average dry-weather and peak wet weather conditions, within their existing sewage collection and transport system.[40] Similarly, EBMUD has also stated that it can accommodate the projected increases in sewer flow within their wastewater treatment system.[41] Furthermore, the City's implementation of and adherence to the provisions of the IICP would help decrease the amount of inflow and infiltration into the existing wastewater transport system. Therefore, the Project's contribution to this cumulative impact would not result in the construction of new or physically altered wastewater treatment facilities, and the impact would be considered less than significant.

Under both development scenarios, the Project is not anticipated to result in violations of water quality requirements established by the RWQCB and regulated under NPDES Permit CA0037702. Wastewater generated by the Project would be transported to EBMUD's Main Wastewater Treatment Plant. The Project Sponsors have coordinated with the City of Oakland Public Works Department in defining the Project's anticipated contribution to peak wet weather flows. Existing flows to EBMUD's Main Wastewater Treatment Plant are 80 mgd and, as discussed in the Setting, substantial additional capacity exists. Although wet weather flows are of concern to EMBUD, EBMUD's Main Wastewater Treatment Plant is anticipated to have adequate dry weather capacity to treat the proposed wastewater flow from the Project.[42] The City reviewed the Project Sponsors' wastewater discharge calculations and determined that the total wastewater flow generated by the Project is within the anticipated total wastewater flow for all of the affected sub-basins. Therefore, the Project's contribution to this cumulative impact would be less than significant.

Solid Waste. Development of cumulative projects would produce additional quantities of solid waste, depending on net increases in population, square footage, and intensity of uses, and quantities of demolition debris generated by redevelopment projects. These projects would

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39 City of Oakland, *West Oakland Redevelopment Plan Draft EIR*, June 2003, p. 9-4.

40 Brian Matsumura, City of Oakland Public Works Department, electronic mail from to Jason Neri, April 19, 2004.

41 EBMUD, NOP Comment Letter to Claudia Cappio, February 23, 2004.

42 EBMUD, NOP Comment Letter to Claudia Cappio, February 23, 2004.

contribute to overall regional solid waste disposal and landfill demand. Within the Project Area, solid waste is collected by Waste Management of Alameda County and is transported to the Davis Street Transfer Station in San Leandro. Waste is then transported to the Altamont Landfill in eastern Alameda County for disposal. The Altamont Landfill is a fully licensed and permitted facility and has a total estimated capacity of 75 million cubic yards of solid waste, of which 43 million cubic yards have been filled as of March 2003. The landfill is estimated to have capacity until approximately 2033.[43] Further, in 2002, the City was certified by the California Integrated Waste Management Board as having achieved a 52 percent waste reduction goal due to recycling efforts.[44]

The Project is estimated to generate approximately 1 ton of solid waste per year under the Maximum Residential Scenario, and 2 tons of solid waste per year under the Maximum Commercial Scenario.[45] This amount of solid waste represents less than one percent of the total solid waste generated and transported by the City to the Altamont Landfill. The landfill has the capacity to last until approximately 2033. Additionally, continued implementation of the City's existing recycling and waste diversion programs, in combination with the same programs implemented by Waste Management of Alameda County as part of the Project, would ensure that solid waste generated by the Project would not exceed amounts that can be accommodated by the Altamont Landfill. Therefore, the Project's contribution to this cumulative impact would be less than significant.

Energy. The State of California uses 265,000 gigawatt-hours of electricity per year, and energy consumption is growing at two percent annually. Over the last decade, between 29 and 42 percent of California's in-state energy supply was generated by natural gas, and 10 to 20 percent was generated by hydroelectric power. Nearly one third of the in-state generation base is over 40 years old. While these in-state power generation resources provide the majority of California's power, 15 to 30 percent of statewide electricity is served from sources outside of the state.[46] California's natural gas supply is also limited; approximately 85 percent of the state's natural gas supply was imported.

The Project would increase demand for electricity and natural gas because of the proposed intensification of land uses and conversion of vacant land to high density uses. Under all development scenarios, the Project would be required to meet current state and local codes concerning energy consumption, including Title 24 of the California Code of Regulations enforced by the City's Department of Building Inspection. The Project therefore would not violate applicable statutes and regulations related to energy standards.

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43 City of Oakland, *Coliseum Gardens HOPE VI Revitalization Project Final Initial Study/Environmental Assessment*, prepared by EIP Associates, April 2003.

44 City of Oakland, Public Works Agency website, http://www.oaklandpw.com/environmental_services.htm, accessed July 15, 2004.

45 Brian Burke, Waste Management of Alameda County, electronic mail to EIP Associates, April 19, 2004.

46 Consumer Power and Conservation Financing Authority, Energy Resources Conservation and Development Commission, and Public Utilities Commission, *State of California Energy Action Plan*, adopted May 2003.

The Project Area is already served by PG&E. In comparison to the regional power grid, the change in demand for energy would be negligible, and would not in and of itself require a major expansion of power facilities. Furthermore, use of modern building materials with insulation capabilities for construction of the proposed structures could further minimize any Project-generated demand for energy. As a result, the Project's contribution to cumulative energy demand would be less than significant.

Summary of Impact UT-7 by Development Area. Since development of the entire Project Area would result in a less-than-significant contribution to cumulative utilities impacts, proposals in each of the individual development areas would also result in a less-than-significant contribution to cumulative utilities impacts.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

3.14 PUBLIC SERVICES

Introduction

This section of the EIR discusses the potential environmental effects of the Project on fire protection, emergency services, police protection, schools, libraries, and parks. Information on existing conditions and service levels was collected from local authorities and service providers. For the evaluation of impacts to public services, the Maximum Residential Scenario and the Maximum Trips Scenario were evaluated. These scenarios were selected because they represent the maximum population and employment that could be generated by the Project, respectively, and thus would encompass the greatest potential impacts due to a change in population.

Public service impacts are assessed in the context of the 1995 appellate court decision *Goleta Union School District v. The Regents of the University of California*. This decision holds that an increase in demand for public services could have a potentially significant environmental impact only if constructing or expanding a new facility is required, and the construction or operation of that facility might adversely affect the air, water, noise, or other aspects of the physical environment. Further, the court held that the agency responsible for service provision would be responsible for selecting the method of responding to increased demand, for constructing the facility if that were the chosen method, and for implementing any required mitigation measures associated with constructing or operating a new facility. These standards of significance have been incorporated into the CEQA Guidelines and provide the basis for assessment of public service impacts in this EIR.

Setting

Fire Protection

The Oakland Fire Department (OFD) currently operates 26 fire stations, which provide comprehensive fire prevention and fire code enforcement, fire suppression, emergency medical services, and community emergency preparedness to the City of Oakland. Each fire station within the OFD is capable of providing fire protection, fire rescue, and emergency medical services 24 hours a day, year-round. The current service ratio for the City is 1.26 sworn personnel per thousand residents. In 2002, the OFD responded to approximately 51,268 calls, which equates to approximately 138 calls per thousand residents citywide.[1] The vast majority of these calls were for emergency medical responses. Other types of response calls included structure, vehicle, and grass fires; utility calls; fire

[1] Association of Bay Area Governments (ABAG) website, "Bay Area Census, City of Oakland 2002 Estimates," http://census.abag.ca.gov/cities/Oakland02.htm, accessed April 7, 2004. According to ABAG, the estimated population for the City of Oakland was 370,736. Therefore, in 2002, the Oakland Fire Department had approximately 138 calls for service per thousand residents.

investigations; vehicle accidents; hydrant shut off; and police assists for commercial and residential alarms, BART, airport, and other emergency service responses.

Station Three, which is located approximately 0.3 mile from the Project Area (1445 14th Street) would serve the Project. This station has one fire engine, one truck, and one hazardous materials van. It has three eight-hour personnel shifts and is staffed with nine on-duty personnel per shift at all times for a total of 27 personnel. The average response time[2] is seven minutes or less for 90 percent of all calls for service. However, this average response time would be expected to increase under certain circumstances, such as when there are multiple responses necessary in the service area or if the hazardous materials unit was in service on a prolonged incident.[3]

Water for fire-fighting purposes is transported by East Bay Municipal Utility District from reservoirs in the Oakland hills through the District's supply system. The minimum required fire flow is 1,500 gallons per minute (gpm) at 20 pounds per square inch (psi) gauge pressure for all structures other than single-family dwellings and duplexes. See Section 3.13, Utilities, for a complete discussion of water supply for fire flow.

Emergency Medical Services

The OFD provides the first emergency response vehicles to respond to code three medical emergencies in the City; i.e., those calls requiring immediate medical attention. Presently, all Oakland fire suppression personnel are Emergency Medical Technician (EMT) certified, and 24 of the 26 engine companies provide advance life support services (firefighter/paramedics). Upon arrival, the OFD provides patient stabilization then, if necessary, a private company called American Medical Response West provides transport to a hospital.[4]

American Medical Response West provides ambulance transportation to hospitals and health care facilities in the Project Area. It operates under an exclusive contract in Alameda County and has approximately 900 employees serving four Bay Area counties. American Medical Response West estimates it receives approximately 4,400 calls per month from within the City of Oakland.[5] The average response time goal for ambulance service is 10.5 minutes or less for 90 percent of all calls for ambulance service; American Medical Response West currently meets this goal.

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2 The response time defined as the time between when the fire dispatcher receives the call until the unit is at the front address.

3 Rebecca Kozak, Executive Assistant to the Fire Chief, Oakland Fire Department, facsimile regarding the Wood Street Project to Rachel Yelo, EIP Associates, March 24, 2004.

4 Rebecca Kozak, 2004.

5 Mike Turay, Director of Alameda County Operations, American Medical Response, electronic mail to Rachel Yelo, EIP Associates, Subject: survey answers, March 31, 2004.

Police Protection[6,7]

The Oakland Police Department (OPD) provides preventive patrol and emergency response services in the City of Oakland. The department is located at 455 7th Street at Broadway in downtown Oakland. The OPD is divided to service three main areas, and is further subdivided into seven police service areas (PSAs) and 57 community policing beats. The Project Area is within Beat 5Y, which is part of PSA I.

Oakland police officers typically work four ten-hour shifts per week. There are three shifts: first watch beginning at 9:00 p.m., second watch beginning at 6:30 a.m., and third watch beginning at 2:00 p.m. The maximum sworn personnel on duty during each shift consists of 37 officers and two wagon drivers (plus a watch commander and several supervising sergeants) for the entire City. In addition, there are 14 officers, which are part of the OPD's crime reduction units, per main area working during the third watch. The OPD's traffic operations unit has six officers on duty in the morning, eight officers on duty at noon, and six officers on duty during mid-afternoon. Eight additional special duty unit officers provide services during special events within the City and work floating schedules depending on current projects and assignments. The OPD's communications division dispatches received a total of 736,495 calls in 2002, or 1,990 calls per thousand residents.[8]

The OPD has approximately 777 authorized sworn personnel positions, which equates to 2.1 officers per thousand residents. Although the California Department of Finance has not established a specific service standard for police services, estimates by the Department of Finance show that the City of Oakland is ranked within the bottom half of the state, with fewer average sworn officers per thousand residents than other cities in Oakland's population range.

The OPD compiles statistics for reported Part I crimes (i.e., murder, rape, robbery, felony assault), which are considered the most violent crimes, and Part II crimes (i.e., kidnapping, vandalism, and drug related offenses). In 2002, a total of 29,874 Part I crimes were reported in Oakland. This was an 8.1 percent increase over the previous year. In Beat 5Y, there were approximately 64 total reported crimes in 2002, which represents less than one percent of the citywide total; this is a decrease over the previous year.

Schools

The Oakland Unified School District (OUSD) operates the City's public school system. OUSD includes 42 childcare centers, 63 elementary schools, 14 middle schools, three alternative middle

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6 William Uber, Management Assistant, Oakland Police Department, letter to Rachel Yelo, EIP Associates, Subject: Central Station project (EIP No. 10817-00), Public Safety Information, September 29, 2003.

7 William Uber, Management Assistant, Oakland Police Department, memorandum to Rachel Yelo, EIP Associates, Subject: Public Safety Information Request re: HOPE VI Project, April 1, 2003.

8 ABAG website, "Bay Area Census, City of Oakland 2002 Estimates," http://census.abag.ca.gov/cities/Oakland02.htm, accessed on April 7, 2004. According to ABAG, the estimated population for the City of Oakland was 370,736. Therefore, in 2002, the Oakland Police Department had approximately 1,990 calls for service per thousand residents.

schools, six high schools, six alternative high schools, and one special education school. OUSD's current capacity is approximately 53,488 students. OUSD enrollment has increased slightly over the last ten years, with a sharper drop off in the last two years. Despite this overall increase in enrollment, the school system is still under capacity. For the 2003–2004 school year, the total enrollment for kindergarten through 12th grade was 50,564 students, or only 95 percent of capacity.[9]

The nearest elementary school to the Project Area is Prescott Elementary School, which is located, approximately a half-mile south of the Project Area (920 Campbell Street). The maximum capacity of Prescott Elementary is 495 students and the current enrollment is 466 students.[10] The nearest middle school to the Project Area, Lowell Middle School (991 14th Street), is located about one mile east of the Project Area. It has a maximum capacity of approximately 700 students.[11] For the 2003–2004 school year, the enrollment at Lowell Middle School was 540 students, which is approximately 77 percent of its capacity. The nearest high school is McClymonds High School at 2607 Myrtle Street, approximately one mile east of the Project Area. McClymonds High School has a maximum capacity of about 1200 students.[12] For the 2003–2004 school year, it was operating at approximately 62 percent of capacity, with 745 students enrolled.

Libraries

The Oakland Public Library system has operated libraries in the City of Oakland since 1878. It operates 15 branches, a Main Library, a Second Start Adult Literacy Program, the Bookmobile, and the new African-American Museum and Library. The nearest library to the Project Area is the West Oakland Library (1801 Adeline Street), approximately 0.7 mile east of the Project Area. The West Oakland Library provides public access to fiction and non-fiction reading materials and media, four public access computers with an internet terminal, a business and career reference area, scheduled small business forums, story-time and art programs for children, and poetry programs for children and adults. The West Oakland Library also is home to the Oakland Public Library's Bookmobile, a moving unit that serves six locations throughout the City.[13]

Parks, Recreation and Open Space

According to the City's Open Space, Conservation, and Recreation Element (OSCAR), the City contains 9,955 total acres in open space land uses. Based on a broad definition of "open space utilized

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[9] Oakland Unified School District, California Basic Educational Data System Enrollments, http://webportal.ousd.k12.ca.us, accessed August 30, 2004.

[10] Tadashi Nakadegawa, Oakland Unified School District, Facilities Department, telephone conversation with Andy Getz, August 10, 2004.

[11] Heather Stanes, Safe Passages Program, Lowell Middle School, telephone conversation with Rachel Yelo, EIP Associates, May 18, 2004.

[12] Anthony McNeal, Attendance Clerk, McClymonds High School, telephone conversation with Rachel Yelo, EIP Associates, April 8, 2004.

[13] Oakland Public Library website, http://www.oaklandlibrary.org, accessed March 25, 2004.

by the OSCAR," this figure includes parkland acreage, school yards, urban infill lots, and other open space land uses.[14]

With respect to parks and recreational areas, the OSCAR proposes a local-serving park acreage standard of four acres per thousand residents. In built out areas, much of the OSCAR's emphasis is on underutilized resources, including those that may not match traditional open space definitions.[15] The OSCAR does not establish absolute standards that must be achieved by new development. Rather, it uses the level of service standards as a means of determining where unmet needs exist and prioritizing future capital investments. While the ultimate goal is to achieve the specified level of service standards, the OSCAR acknowledges that the City's built-out character presents a major obstacle in most cases. Accordingly, the intermediate goal is to make significant inroads in the gap between what exists now and what is ultimately desired.[16]

The City currently falls short of the park acreage goal, having only 1.33 acres of local-serving park acreage per thousand residents.[17] The Project Area is located in the West Oakland planning area. Although still deficient in park acreage, West Oakland tends to be better served than other areas, possessing 2.43 acres per thousand residents.[18]

With respect to parklands, the City of Oakland, Office of Parks and Recreation (OPR), operates more than 100 parks and public grounds and 25 recreation and community centers in the City. In total, there are approximately 2,943 acres of parkland and an additional 131 acres of school property playfields. The OPR, in partnership with nonprofit organizations and the OUSD, provides recreational programs such as sailing, basketball, swimming, summer camps, soccer, tennis, and dances. OPR facilities include six gymnasiums, more than 50 athletic fields, 100 basketball courts, and 45 tennis courts. OPR is also responsible for the management and oversight of City Stables, the Oakland Zoo, Dunsmuir House and Gardens, and Children's Fairyland.[19]

The OSCAR identifies twelve neighborhood planning areas for park, recreation, and open space planning in different areas of Oakland. The Project Area is in the West Oakland planning area, which contains a total of 171 acres of open space, 56.70 acres of which are parks. This planning area contains in total the following; one community park, six neighborhood parks, five active mini-parks, and two athletic field areas. The community park (Raimondi Park), as well as one of the area's neighborhood parks (Willow Street Park) and one of its active mini-parks (Bertha Port Tot Lot) are located within four blocks of the Project Area. Most of the open space in West Oakland consists of storage yards, parking lots, land around vacant buildings and other "functional" uses. There are very few remaining "natural" features such as creeks, forest, and grasslands.[20]

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14 *City of Oakland General Plan,* OSCAR Element, Defining Open Space, p. 2-3.
15 *City of Oakland General Plan*, OSCAR Element, p. 2-3.
16 *City of Oakland General Plan*, OSCAR Element, p. 4-40.
17 *City of Oakland General Plan*, OSCAR Element, p. 4-9.
18 *City of Oakland General Plan*, OSCAR Element, p. 5-6.
19 City of Oakland, Office of Parks and Recreation website, http://www.oaklandnet.com/parks/inside_oakland/, accessed March 14, 2003.
20 *City of Oakland General Plan,* OSCAR Element, June 1996, p. 5-6.

Per the OSCAR, open space is defined broadly including areas that do not match traditional open space definitions. In addition, Technical Report #5 that addresses Community Services for the General Plan states that in regards to park standards, "Proposed service area standards are loosely based on the NRPA guidelines and are useful means of identifying underserved areas. It should be used as a tool for directing future acquisitions and capital improvements. The biggest limitation of such standards is a 'one size fits all approach.'"[21]

The West Oakland planning area has 2.43 acres per thousand residents. Although this is lower than the ultimate goal of 4.0 acres per thousand residents, West Oakland is better served in comparison to the rest of the City, which averages 1.33 acres per thousand residents. In fact, West Oakland had the most park acreage per capita of any other flatland neighborhood in Oakland; it is also the only planning area with two public swimming pools, and it contains the highest concentration of athletic fields and mini-parks in the City. However, according to results of a citizens' survey on public city parks, conducted by the City Auditor's Office in 2002, Raimondi Park is the fourth most frequently visited Oakland city park.[22] The survey was conducted successfully for 682 random interviewees who reside within the City. Survey results indicated that five percent of the respondents visit Raimondi Park most frequently. Assuming the survey is representative of the City's population of 399,480,[23] about 19,974 Oakland residents visit Raimondi Park most frequently. The City-managed Raimondi Park contains 10.2 acres consisting of one softball field and two soccer fields. The Raimondi Park softball field includes lighting fixtures for nighttime use. In general, athletic fields in Oakland are available for public use from April through October and from 3:30 p.m. to 9:30 p.m. on weekdays and 8:30 a.m. to 6:30 p.m. on weekends and holidays.

Applicable Plans and Policies

The following *City of Oakland General Plan* policies would apply to the Project with respect to Public Services:

LUTE Policy N12.1: The development of public facilities and staffing of safety-related services, such as fire stations, should be sequenced and timed to provide a balance between land use and population growth, and public services at all times.

LUTE Policy N12.2: Adequate public school capacity should be available to meet the needs of Oakland's growing community. The City and the Oakland Unified School District (OUSD) should work together to establish a continuing procedure for coordinating and exploring residential and commercial development and exploring the imposition of mutually agreed upon reasonable and feasible strategies to provide for adequate school capacity. The City and OUSD should jointly consider, where feasible and appropriate, funding mechanisms such as assessment districts,

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21 *City of Oakland General Plan*, LUTE, Technical Report #5, October 1995, p. 46.

22 Offices of the Oakland City Auditor, *2002 Survey of Oakland Citizen's Attitudes Concerning Oakland City Parks Exterior Areas*, November, 2002, available at www.oaklandauditor.com/reports/parksurvey.pdf, accessed August 14, 2004.

23 ABAG, *2002 Projections*.

Redevelopment Agency funding (AB 1290), use of surplus, City-owned land, bond issues, and adjacent or shared use of land or school facilities with recreation, libraries, child care, and other public uses.

OSCAR Policy OS-4: Continue to require new multi-family development to provide usable outdoor open space for its residents.

OSCAR Policy OS-4.2: Recognizing the value of residential yards as a component of the City's open space system and discourage excessive coverage of such areas by building or impervious services.

OSCAR Policy OS 4-4: Discourage property owners from allowing vacant land to become a source of neighborhood blight, particularly in residential areas with large numbers of vacant lots.

The Oakland Planning Code generally requires new multi-family residential development to provide private or group usable space.[24] This provision for open space can take the form of landscaping, decks, patios, courtyards, or balconies. These spaces generally would not be accessible to the public and would only serve residents of the development.

Impacts and Mitigation Measures

Standards of Significance

The Project would have a significant impact on the environment if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

- fire protection;
- police protection;
- schools; and
- other public facilities.

Environmental Analysis

As described in Section 3.1, for each impact, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant (S), potentially significant (PS), less than significant (LTS), and no impact (NI). If the mitigation measures would not

[24] Oakland Municipal Code, Section 17.122.110.

diminish potentially significant or significant effects to a less-than-significant level, the impacts are classified as "significant unavoidable effects (SU)." For this section, PS refers to Public Services.

PS-1. Increases in employees and residents as well as increased building density in the Project Area would increase demand for fire and first responder emergency medical services; however, this would not trigger the need for new or expanded facilities. (LTS)

According to population projections for the Project, the Project would create approximately 2,759 new residents and 1,201 jobs under the Maximum Trips Scenario, and approximately 3,414 new residents and 150 jobs under the Maximum Residential Scenario.[25] This increase in residents and employees would increase demand emergency medical services, fire prevention inspection services, fire suppression, and rescues. An additional 138 calls for service per thousand residents could be anticipated for the Project.

In order to maintain its service ratio of 1.26 sworn personnel per thousand residents, approximately three to four new sworn personnel would have to be added with implementation of the Project. This addition represents an increase of less than two percent of sworn personnel and would not create the need to physically alter an existing facility or construct a new one.[26] In addition, future buildings within the Project Area would be required to be constructed with automatic sprinkler systems, fire detection devices, and fire-resistant construction materials in accordance with the California State Fire Code. These requirements would further reduce the need for additional OFD personnel, since these features would make these new building safer than existing buildings in the Project Area and its vicinity and would reduce the number of fire-related emergencies. Therefore, the Project would have a less-than-significant impact on fire protection and emergency medical services.

Summary of Impact PS-1 by Development Area. Since the new population associated with full development of the Project would not trigger the need for new or physically altered facilities, the development of individual development areas would not by themselves trigger the need for expansion of an existing facility or construction of a new facility.

[25] Bay Area Economics, 2004. Residential population was calculated from the 2000 U.S. Census 1 Percent Public Use Microdata Sample for the Oakland/Berkeley Area.

[26] James Williams, Battalion Chief, Oakland Fire Department, telephone conversation with Rachel Yelo, EIP Associates, April 8, 2004.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

PS-2. Increases in residential population as a result of the Project would increase demand for police services. However, implementation of the Project would not require new or altered police facilities in order to maintain acceptable service ratios. As a result, impacts to police services would be considered less than significant. (LTS)

The Project is projected to generate approximately 2,759 new residents under the Maximum Trips Scenario, and approximately 3,414 new residents under the Maximum Residential Scenario. There is no established service standard. However, to maintain the current average ratio of 1.8 sworn officers per thousand residents, approximately five to six new officers (and additional equipment) would be required to serve the increased population for the Project.

Five to six additional officers represent an increase of less than two percent in total sworn personnel; such minor increase in staffing would not require any new or physically altered police facilities.[27] Therefore, this small increase in staffing would not constitute a significant effect on the environment.

Summary of Impact PS-2 by Development Area. Since implementation of the Project would not require new or physically altered police facilities in order to maintain acceptable service ratios or response times with respect to the project as a whole, individual development areas would not by themselves trigger the need for new or altered police facilities.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

[27] William Uber, Management Assistant, Oakland Police Department, letter to Rachel Yelo, EIP Associates, Subject: Central Station project (EIP No. 10817-00), Public Safety Information, September 29, 2003.

PS-3. Increase in residential population as a result of the Project would increase student enrollment in the Oakland Unified School District. (LTS)

The Project would result in 1,084 units under the Maximum Trips Scenario, and 1,570 units under the Maximum Residential Scenario. Using a statewide average student yield factor of 0.7 students the Project is anticipated to generate approximately 856 to 1,056 new students.

Prescott Elementary School, Lowell Middle School, and McClymonds High School have the capacity to accommodate the students that would be generated by the Project.[28] Because construction would be phased over a period of ten years, none of the schools would be deluged by students all at once. Further, Senate Bill (SB) 50, enacted in February 1999, precludes the denial of a land use approval based on public school capacity. SB 50 states that payment of its mandated school impact fees is the exclusive method of mitigating impacts to public schools. Therefore, although development of the Project would result in additional students and increased demand on the school system, payment of the fees mandated under SB 50 is the mitigation measure prescribed by statute, and payment of the fees is deemed appropriate mitigation. Therefore, no additional mitigation measures are required.

Summary of Impact PS-3 by Development Area. An increase in existing student enrollment would occur as new housing units are constructed in the individual development areas. However, Project Sponsors would be required to pay the appropriate amount of school impact fees to offset any impacts to school facilities from individual development areas in accordance with SB 50, thereby reducing the school impact to less than significant. The summary impact ratings below reflect the Maximum Residential Scenario. Under both development scenarios, Development Areas Five and Nine would not involve residential development. Under the Maximum Commercial Scenario, Development Areas Two and Eight would not construct any residential development, so there would be no impact on schools.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5	✓			
6		✓		
7		✓		
8		✓		
9	✓			

[28] Tadashi Nakadegawa, August 10, 2004; Heather Stanes, May 18, 2004; Anthony McNeal, April 8, 2004.

PS-4. Development of the Project would increase the demand for library services; however, because the Project would not require any expansion or construction of new library facilities beyond those already planned, the Project's impacts would be less than significant. (LTS)

The West Oakland Library, approximately 0.7 mile from the Project Area, is the closest library branch and therefore most likely provide services to Project residents.[29] The Oakland Public Library staff is currently developing its Master Facilities Plan. The plan is funded by a bond measure passed in March 2004 to implement library improvements and expansion. The Master Facilities Plan includes a study of the proposed population growth in its West Oakland Library's service area, which includes the Project Area, and anticipates an 18 percent growth in the service area's population by the year 2020.[30] Plans for the West Oakland Library include expansion of its existing 8,000-sf facility to a proposed 16,000 sf to 19,000 sf. The expanded facility would include additional books, seating areas, computers, program rooms, group study areas, and a teen area. Because expansion of the West Oakland Library is already included in the Master Facilities Plan, the Oakland Public Library does not believe that the Project would have a significant impact on services provided to the Project Area and that the proposed physical expansion would be able to accommodate the increased population represented by the Project.[31] The Project increase in residential population to the West Oakland Library's service area would not necessitate any unforeseen expansion or construction of new library facilities beyond that already planned. Therefore, the Project would have a less-than-significant impact on the Oakland Public Library system overall.

Summary of Impact PS-4 by Development Area. Since the Oakland Public Library has sufficient capacity to serve each of the individual development areas within the Project Area, impacts of the individual development areas would be less than significant.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

[29] Gerald Garzon, Oakland Public Library, electronic mail Re: Development Strategies for West Oakland, to Rachel Yelo, EIP Associates, April 2, 2004. In 2000, the service area population of the West Oakland library was 27,287. By 2020, the service area population is expected to reach approximately 32,095, a growth of about 18 percent.

[30] Gerald Garzon, 2004. In 2000, the service area population of the West Oakland library was 27,287. By 2020, the service area population is expected to reach approximately 32,095, a growth of about 18 percent.

[31] Gerald Garzon, 2004.

PS-5. The Project would generate new residents in the Project Area, thereby increasing the demand for park and recreational facilities and other open space. However, this increase in demand would be considered less than significant under CEQA. (LTS)

The physical constraints of the Project Area limit the amount of open space and recreational facilities that may be provided. Project Sponsors propose the creation of the 16th Street Plaza, along with additional Public Open Space through five pocket parks. This totals 1.39 acres (60,670 sf) of publicly accessible open space. In addition, Private Open Space, in the form of private courtyards and group areas for Project residents, would be created, resulting in 122,925 sf of Private Open Space with the Maximum Residential Scenario and 109,725 sf of Private Open Space with the Maximum Trips Scenario. In total, this results in 183,595 sf of open space/parklands under the Maximum Residential Scenario and 149,020 sf under the Maximum Trips Scenario.

The Project Area is located in the West Oakland open space planning area. Although this area is relatively well served as compared to the rest of the City, it still has a shortage of local community-serving facilities. According to the OSCAR, the West Oakland planning area contains 2.43 acres of local-serving parks per thousand residents.

The Project itself would not result in a need for construction of new or physically altered facilities. The Project would create a total of 4.22 acres of open space (public and private) under the Maximum Residential Scenario. This equates to 1.23 acres of local-serving park acres per thousand residents.

While short of the citywide goal of 4.0 acres per thousand residents, West Oakland has the highest ratios among the City's ten neighborhood planning areas.[32] (The next highest area is North Hills at 2.35 acres per thousand residents, and the citywide average is 1.33 acres per thousand residents.)

Although utilization of Raimondi Park is high, open space provisions currently fluctuate throughout the City, and the Project would be located in an area that is better served than the rest of the City. Since the Project would supply open space to meet the demands of its residents, and because the City standards are recommended rather than required, the demand for additional park and recreational facilities would be considered less than significant under CEQA.

Summary of Impact PS-5 by Development Area. The Project as a whole would have a less-than-significant impact on parks/recreational facilities. Accordingly, demand for parks and recreational facilities generated by the individual development areas would also be considered less than significant.

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[32] *City of Oakland General Plan,* OSCAR Element, p. 4-12.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

Cumulative Analysis

The geographic context for the analysis of cumulative impacts associated with police protection, fire protection, emergency services, schools, and parks and recreational facilities is the City of Oakland, including the related projects and additional regional growth represented by the City of Oakland's Cumulative Growth Scenario, both of which are described in Appendix C. The geographic context for the analysis of cumulative impacts to libraries is West Oakland, including the related projects and additional regional growth represented by the City of Oakland's Cumulative Growth Scenario, both of which are described in Appendix C. As a practical matter, while library planning efforts consider the needs of the City, library patrons tend to visit only those libraries that are most proximate to their place of residence. It is unlikely that a resident of West Oakland would travel to more distant parts of Oakland to visit a library; therefore, the cumulative context for libraries is limited to the service area of the West Oakland library.

PS-6. Increases in employees and residents as well as increased building density in the City would increase the cumulative demand for police protection, fire protection, and emergency response services and could result in the need for new or expanded facilities. (S Cumulative, LTS Project Contribution)

Development in the City of Oakland, including related projects and background growth, would increase the need for additional police protection, fire protection, and emergency services and could affect response times, service levels, and the need for additional facilities. While the City monitors staffing levels and facilities on an annual basis as part of the City's budgetary process and on an ongoing basis as individual development projects are proposed, cumulative development could increase the demand for police and fire-related services such that response times or services levels could not be maintained, and/or additional equipment and/or facilities could be required but are not provided due to budgetary or logistical constraints. Therefore, consistent with the conclusion of the *OARB Redevelopment Plan EIR*, this would result in a significant cumulative impact. However, the Project's contribution to this impact would not be considered cumulatively considerable because the number of additional sworn personnel that would be required as a result of the Project would not result in the need to construct new or expanded facilities according to both the OFD and the OPD. In addition, throughout the course of the development review process, the OFD and OPD will review plans and other

physical features which will provide enhanced life safety standards, such as exterior lighting levels, fire hydrants locations, and other facilities.

PS-7. Increases in the residential population of the City would increase the cumulative student enrollment in the Oakland Unified School District and could result in the need for new or expanded facilities. (S Cumulative, LTS Project Contribution)

Development in the City of Oakland, including related projects and background growth, would result in an increased population, which could result in the need for new or expanded school facilities. While the Oakland Unified School District monitors school capacity on an annual basis as part of its budgetary process and on an ongoing basis as individual development projects are proposed, cumulative development could result in overcrowding at a single school or within particular grade ranges (e.g., elementary, junior high, high school). While the Oakland Unified School District implements various measures to reduce overcrowding, if it occurs, such as redistribution of students, addition of portable classrooms, continuation and expansion of year-round schools, and/or construction of new facilities, the available sources of funding may not be adequate to pay for the cost of implementing these measures. Therefore, consistent with the conclusion of the *OARB Redevelopment Plan EIR*, this would result in a significant cumulative impact. However, the Project's contribution to this impact would not be considered cumulatively considerable because the number of additional students that would be generated as a result of the Project could be accommodated within the schools serving the Project Area. Further, Senate Bill 50 affirmatively states that the payment of mandated school impact fees is the exclusive method of mitigation project impacts to public schools. The Project, along with other related projects, would be required to pay such fees.

PS-8. Increases in employees and residents in the City would increase the cumulative demand for library services; however, the City is preparing a Master Facilities Plan to address long-term community needs. Consequently, cumulative library impacts are considered less than significant. (LTS)

Development in West Oakland, including related projects and background growth, would result in an increased population, which could result in the need for new or expanded library facilities. The Oakland Public Library is currently preparing a Master Facilities Plan that will include a needs assessment and long-range strategy to address the community's growing needs for library services, which takes into account the long-term population growth anticipated for the City. The plan is funded by a bond measure passed in March 2004 to facilitate library improvements and expansion. As part of this effort, the library is evaluating ways the West Oakland Branch Library branch could improve the delivery of programs, services, and materials. Thus, library system improvements are underway to address cumulative demand.

The Project would increase the population served by the West Oakland Branch, and thus there would be a greater cumulative demand for books, library programs, and resources. The increased population from the Project would result in a greater utilization of library facilities but would not result in the expansion of the facility beyond what is already being proposed as

part of the Master Facilities Plan. Consequently, the Project would not be expected to have a considerable contribution to a cumulative impact that would require a new or expanded branch library.

PS-9. Increases in the residential population of the City would increase the cumulative demand for park and recreational facilities or other open space areas and could result in the need for new or expanded facilities. (S Cumulative, LTS Project Contribution)

Development in the City of Oakland, including related projects and background growth, would result in an increased population, which could result in the need for new or expanded park and recreational facilities, or open space. The City of Oakland has not yet achieved the goal of 4.0 acres of open space per thousand residents and additional development and growth in the City could either further decrease the open space-to-resident ratio or result in the need for new or expanded facilities or open spaces. Because there currently is a deficit in parkland within the City, this is considered a significant cumulative impact citywide.

However, the West Oakland Planning Area, which contains the Project Area, has the highest park-to-population ratio among the City's twelve neighborhood planning areas, and it is the only planning area with two public swimming pools. The area has the highest concentration of athletic fields and mini-parks in the City. Further, the Project itself would provide 1.39 acres of Public Open Space, which would contribute to the City's supply of open space, and would not result in the need for new or expanded facilities. Therefore, the Project's contribution to this cumulative impact would not be considered cumulatively considerable.

Summary of Impacts PS-6 through PS-9 by Development Area. Since development of the entire Project Area would result in a less-than-significant contribution to cumulative impacts to public services, proposals in each of the individual development areas would also result in a less-than-significant contribution to cumulative impacts on public services.

Development Area	No Impact	LTS	PS	S
1		✓		
2		✓		
3		✓		
4		✓		
5		✓		
6		✓		
7		✓		
8		✓		
9		✓		

Section 4
Other CEQA Considerations

4.1 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL EFFECTS

Public Resources Code Section 21100(b)(2)(A) requires that an EIR identify any significant environmental effects that cannot be avoided if a project is implemented. Accordingly, Project-related and/or cumulative significant and unavoidable impacts are as follows:

Cumulative Traffic Impacts on the W. Grand Avenue/I-880 Frontage Road Intersection. Significant and unavoidable cumulative traffic impacts would occur at the W. Grand Avenue/I-880 frontage road intersection, where the Project in combination with other related projects and background growth would cause the future baseline LOS to degrade to worse than LOS D. This cumulative traffic impact does not result from any one development area, but from the combined development of the entire Project Area, plus other proposed developments assumed to be built by 2025 in the City of Oakland.

Cumulative Traffic Impacts on Northbound I-880. The Maximum Trips Scenario would contribute 5.2 percent of the cumulative traffic increase on northbound I-880 north of I-980 during the AM peak hour. Although mitigation measures would reduce the potentially significant cumulative freeway operations impact, the impact on this freeway segment would remain significant and unavoidable. This cumulative traffic impact does not result from any one development area or from any of the other Project development scenarios, but from the combined development of the entire Project Area under the Maximum Trips Scenario, plus other proposed developments assumed to be built by 2025 in the City of Oakland.

Project-Related and Cumulative BART Fare Gate Capacity Impacts. The Project, both alone and in combination with other related projects and background growth, would increase the peak hour average ridership at the West Oakland BART Station by three percent, where the average waiting time at fare gates could exceed one minute.

Cumulative BART Train Capacity Impacts. The Project, in combination with other related projects and background growth, could increase peak-hour average BART ridership by three percent, where the passenger volumes exceed the standing capacity of BART trains.

Although mitigation measures, such as contributing a fair share of the costs for intersection lane improvements and participating in efforts to ensure adequate BART fare gate and train capacity, would reduce the Project's transportation-related impacts, these measures would be outside the City of Oakland's jurisdiction and may not be feasible. Consequently, these transportation impacts would remain significant and unavoidable.

Project-Related Loss of a Portion of the 16th Street Train Station. The Project would demolish portions of the 16th Street Train Station, a City landmark and designated historic structure. The Baggage Wing and the Elevated Tracks are considered an integral part of the 16th Street Train Station's architecture, as well as its historic use. Demolition of these portions of the 16th Street Train Station would be irreversible and adversely affect the historical and architectural significance of the 16th Street Train Station. This impact would occur as a result of proposed development in Development Areas Four, Five, and Six.

Project-Related Degradation of Historical Setting. The Project would adversely affect the historical setting and views of the 16th Street Train Station and the 16th Street Signal Tower. No mitigation is available to reduce this impact to less than significant. This loss of views and the physical relationship between the 16th Street Train Station and the 16th Street Signal Tower would occur as a result of development in Development Areas Four and Six.

Although mitigation measures such as compliance with the Secretary of the Interior's Standards and Guidelines for rehabilitation of historic structures would reduce the historic resource impact, the loss of portions of the 16th Street Train Station would remain significant and unavoidable.

Because of these significant and unavoidable environmental effects, approval of the Project would require the adoption of a Statement of Overriding Considerations.

4.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Public Resources Code Section 21100(b)(2)(B) requires that an EIR identify any significant environmental effects that would be irreversible if the Project were implemented. Section 15126.2(c) of the CEQA Guidelines identifies irreversible environmental changes as those involving a large commitment of nonrenewable resources or irreversible damage resulting from environmental accidents.

The Project would lead to construction of new structures and roadways and extension of on-site infrastructure. In both the short term and long term, the Project would involve a commitment of non-renewable resources, including building materials and fossil fuels for both construction and long-term operations of the Project. However, when measured against the availability of these resources, the commitment would be minimal. Approximately 29.2 acres of vacant and underutilized industrial land would be committed to more intensive residential and commercial development. This change in uses would involve a General Plan Amendment and Zoning Code Amendments. Because of the level of investment involved in constructing the Project and the demand for housing in the Bay Area, subsequent reversion to less intensive use of the site is unlikely. This change in use and the associated commitment of resources would be an irreversible change. In addition, visual change within the Project Area, as construction progresses, would be irreversible because of the development of building structures, parking, and roads.

Under all development scenarios, the Project would include the construction of residential, commercial, and Public and Private Open Space. As described in Section 3.8,Hazardous Materials,

these uses are not expected to use, handle, or dispose of inordinate amounts of hazardous materials, which could, if improperly managed, result in an accidental release. The use of hazardous materials by residents and commercial enterprises would cause a negligible increase in hazardous materials use, handling, and storage in the Project Area and would not represent a health and safety risk. Moreover, the types and amounts of hazardous material expected to be used are routine household, commercial, and landscaping materials, no different than other residential or commercial developments. State and local safety requirements applicable to the Project would reduce the public health and safety risks to reasonably prudent levels, so that significant irreversible changes from accidental releases would not be anticipated.

4.3 GROWTH-INDUCING IMPACTS

Section 15126.2(d) of the CEQA Guidelines states that an EIR should discuss "…the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Growth can be induced in a number of ways, including through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through precedent setting action. CEQA requires a discussion of how a project could increase population, employment, or housing in the areas surrounding the project as well as analysis of the infrastructure and planning changes that would be necessary to implement the project. Section 3.12, Population, Housing, and Employment, of this EIR includes a discussion of the Project's overall effects on population and housing; Section 3.13, Utilities, addresses the Project's infrastructure effects. This section of the EIR discusses the manner in which the Project could affect growth in the City of Oakland.

In discussing growth inducement, it is useful to distinguish between direct and indirect growth. Direct growth occurs on a project site as a result of new facilities (buildings) being constructed. Secondary effects may result from this direct growth. The direct growth resulting from the Project would create two types of secondary effects. First, the direct spending associated with the increased retail activity would stimulate production of associated products and services in the economy. For example, a new office would purchase office products and, thus, would stimulate production of office supplies. Although this secondary impact would not be substantial in terms of the local economy, existing firms throughout the Bay Area, and in some cases beyond, would increase production. They would increase their purchases for materials and supplies, and at some point, they would hire new workers. Second, the new employees in the Project Area would form households. These new households, through spending, would increase demand for housing and a range of related services. Thus, the direct employment generated by the Project would, in turn, spur indirect employment, spending and growth in the region.

When CEQA refers to induced growth, CEQA means all growth — direct, indirect, or otherwise defined. For purposes of clarity, the discussion below distinguishes between direct growth from the construction and use of Project facilities, and all other induced or secondary growth, labeled as indirect growth.

Population Growth. The Project consists of the construction of various mixed-use commercial and residential developments. At Project buildout, it would result in direct growth by adding approximately 3,414 residents and 150 new employees to the Project Area under the Maximum Residential Scenario, or 2,759 residents and 1,201 employees under the Maximum Trips Scenario. Both development scenarios would result in more household growth in Oakland by 2025 than what was projected by ABAG in *Projections 2002*.[1] The ABAG forecasts generally follow projections discussed in local general plans, and the *City of Oakland General Plan* designates the Project Area primarily for industrial and commercial uses, with no residential units.

Employment Growth. The Project would also result in direct growth by adding approximately 150 to 1,201 new employees to the Project Area. However, the Project would result in fewer jobs in the Project Area than anticipated under the current General Plan classifications and included in the 2002 ABAG growth projections.

The new households associated with the Project would indirectly increase demand for a range of related services. Thus, the direct population increase would, in turn, result in indirect employment and services growth around the Project Area. To estimate the potential "multiplier effect" associated with project-related jobs, ABAG has developed Type I and Type II economic multipliers for the San Francisco Bay Region based on an input-output model.[2] Type I economic multiplier measures the direct and indirect employment caused by a project. Type II economic multiplier measures the direct, indirect, and induced employment caused by a project. Indirect effects represent the impact of the initial stimulus on the economy resulting from business spending. Induced effects are the impacts resulting from the initial stimulus on the economy resulting from changes in personal consumption (resulting from changes in employee spending). One of the economic multipliers measures the direct, indirect, and induced employment caused by a project. The Project would create several types of jobs, including retail and office jobs. If all the jobs that would be generated by the Project are classified as Retail Trade, the Type I and Type II multiplier would be 1.07 and 2.56, respectively. This means that for every job created by the Project, there would be 0.07 indirect jobs created regionally. This means that for every job created by the Project, there would be 1.56 indirect and induced jobs created regionally.

Applying the Type I and Type II employment multipliers to the 150 jobs under the Maximum Residential Scenario, the Project would result in about 11 indirect and 234 indirect and induced jobs, respectively.[3] Applying the Type I and Type II employment multipliers to the 1,201 jobs under the

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1 The Maximum Residential Scenario assumes 1,507 households in the Project Area. The Maximum Trips Scenario assumes 1,220 households in the Project Area. The assumption is based on a 4 percent vacancy rate.

2 Association of Bay Area Governments, Center for Analysis and Information Services, *1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, March 1995, Table 6, 1987 Bay Area Employment Multipliers, p. 48.

3 Maximum Residential Scenario: 150 jobs x 1.07 (Type I multiplier) = 160.5 jobs. 160.5 jobs – 150 direct jobs = 10.5 indirect jobs.
150 jobs x 2.56 (Type II multiplier) = 384 jobs. 384 jobs – 150 direct jobs = 234 indirect and induced jobs.

Maximum Trips Scenario, the Project would result in about 84 indirect and 1,874 indirect and induced jobs, respectively.[4]

If all the jobs that would be generated by the Project are classified as Office, the Type I and Type II multiplier would be 1.55 and 9.36, respectively. This means that for every job created by the Project, there would be 0.55 indirect jobs created regionally and 8.36 indirect and induced jobs created regionally. Applying the Type I and Type II employment multipliers to the 150 jobs under the Maximum Residential Scenario, the Project would result in about 83 indirect and 1,254 indirect and induced jobs, respectively.[5] Applying the Type I and Type II employment multipliers to the 1,201 jobs under the Maximum Trips Scenario, the Project would result in about 661 indirect and 10,040 indirect and induced jobs, respectively.[6]

As the discussion above indicates, retail jobs create less direct and induced employment growth than office jobs. While the Project would most likely create a mix of retail and office jobs, the above analysis presents a range of potential employment impacts. Under the Maximum Residential Scenario, the Project would result in the creation of 11 to 83 indirect jobs and 234 to 1,254 indirect and induced jobs. Under the Maximum Trips Scenario, the Project would result in the creation of 84 to 661 indirect jobs and 1,874 to 10,040 indirect and induced jobs.

The creation of jobs would be consistent with the *OARB Area Redevelopment Plan* objectives of strengthening the economic base and allowing for a sustainable job creation in the area and the General Plan Land Use and Transportation Element policies of expanding and retaining Oakland's job base and economic strength.[7]

Construction of the Project would also directly increase construction employment. Given the relatively limited and standard nature of the construction anticipated, it is to be expected that the demand for construction employment would be met within the existing and future labor market in Oakland and/or Alameda County. Neither a substantial quantity of specialized labor nor construction workers from outside the City or the County would be expected to be induced to relocate temporarily or to commute long distances.

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4 Maximum Trips Scenario: 1,201 jobs x 1.07 (Type I multiplier) =1,285.07 jobs. 1,285.07 jobs – 1,201 direct jobs = 84.07 indirect jobs.
1,201 jobs x 2.56 (Type II multiplier) = 3,074.56 jobs. 3,074.56 jobs – 1,201 direct jobs = 1,873.56 indirect and induced jobs.

5 Maximum Residential Scenario: 150 jobs x 1.55 (Type I multiplier) = 232.5 jobs. 232.5 jobs – 150 direct jobs = 82.5 indirect jobs.
150 jobs x 9.36 (Type II multiplier) = 1,404 jobs. 1,404 jobs – 150 direct jobs =1,254 indirect and induced jobs.

6 Maximum Trips Scenario: 1,201 jobs x 1.55 (Type I multiplier) =1,861.55 jobs. 1,861.55 jobs – 1,201 direct jobs = 660.55 indirect jobs.
1,201 jobs x 9.36 (Type II multiplier) = 11,241.36 jobs. 11,241.36 jobs – 1,201 direct jobs = 10,040.36 indirect and induced jobs.

7 City of Oakland, *OARB Area Redevelopment Plan EIR*, July 2002, p. 1-5 and p. 4.1-17.

Growth in Unserved or Underserved Area. Although the infrastructure in the Project Area would be improved, the Project does not call for the construction of major new roadways or utility systems in undeveloped areas that would stimulate development in those undeveloped areas. Thus, the Project would not induce growth by removing infrastructure barriers, providing new infrastructure, and/or creating new transportation access to a previously inaccessible area.

Change in Land Use. The increase in residential density would be expected to create a demand for local commercial and retail services and, therefore, may place pressure on neighboring uses to convert or redevelop to meet this demand. The increase in demand for local commercial and retail service would encourage economic growth, which is consistent with the objectives of the *OARB Area Redevelopment Plan*.[8] The economic development as a result of the Project is not expected to generate a need to expand public service capacity because the Project is located in an urban area that is served by already established public services.

Summary. In conclusion, growth and the rate of growth shape both the physical and social structure of communities. The Project would facilitate and contribute to growth in the City of Oakland and Alameda County. The direct increase in jobs would be minimal and would be consistent with the City's General Plan that seeks to increase the number of jobs in the City. In accordance with the CEQA Guidelines, Section 15126.2, this discussion of growth inducement is not intended to be characterized as necessarily beneficial, detrimental, or of little significance to the environment. The growth inducement section is provided for information purposes so that the public and local decision-makers have an appreciation of the potential long-term growth implications of the Project.

4.4 CUMULATIVE IMPACTS

CEQA Guidelines (Section 15355) define "cumulative impacts" as "…two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The combination of the Project (under any of the potential development scenarios) combined with related projects and background growth, both of which are described in Appendix C, defines the cumulative scenario. The analysis first considered whether the cumulative impact would be significant, and, if so, then determined whether the Project's contribution to the impact was cumulatively considerable. The detailed discussion of cumulative impacts is provided in Sections 3.2 through 3.14 of this EIR. Where appropriate, these sections identify feasible mitigation measures that would reduce the Project's potential contributions to cumulative impacts

The following cumulative impacts were determined to be significant. Cumulative impacts that remain significant and unavoidable are denoted with an asterisk.

- The Project, in combination with other related projects and background growth, would cause West Grand Avenue/Frontage Road, West Grand Avenue/Mandela Parkway, 7th

[8] City of Oakland, *OARB Area Redevelopment Plan EIR*, , July 2002, pp. 1-5.

Street/Mandela Parkway, West Grand Avenue/Maritime Street, and 3rd Street/Market Street to operate at unacceptable levels of service. The recommended improvements for the West Grand Avenue/Frontage Road intersection may not be feasible. (TR-9)*

- The cumulative impact of the Project in combination with other related projects and background growth would cause some roadway segments on the MTS to operate at LOS F. However, only the Maximum Trips Scenario contribution to I-880 northbound under the AM peak hour has the potential to increase the V/C ratio by more than three percent for a segment that would already operate at LOS F under the future baseline conditions. Therefore, the cumulative contribution of the Project under the Maximum Trips Scenario would be significant. (TR-10)

- The cumulative impact of the Project, in combination with other related projects and background growth, could increase the overall passenger volume such that the passenger volume could exceed the standing capacity of BART trains and could increase peak-hour average ridership by three percent. (TR-12)*

- The cumulative impact of the Project in combination with other related projects and background growth, would increase peak-hour average ridership at the West Oakland BART Station by three percent where average waiting time at fare gates could exceed one minute. (TR-13)*

- Increases in employees and residents as well as increased building density in the City would increase the cumulative demand for police protection, fire protection, and emergency response services and could result in the need for new or expanded facilities. However, the contribution of the Project would be less than cumulatively considerable. (PS-6)

- Increases in the residential population of the City would increase the cumulative student enrollment in the Oakland Unified School District and could result in the need for new or expanded facilities. However, the contribution of the Project would be less than cumulatively considerable. (PS-7)

- Increases in employees and residents in the City would increase the cumulative demand for library services; however, the City is preparing a Master Facilities Plan to address long-term community needs. Consequently, cumulative library impacts are considered less than significant. (PS-8)

- Increases in the residential population of the City would increase the cumulative demand for park and recreational facilities or other open space areas and could result in the need for new or expanded facilities. However, the contribution of the Project would be less than cumulatively considerable. (PS-9)

Section 5
Alternatives

5.1 INTRODUCTION

The following discussion evaluates alternatives to the Project and examines the potential environmental impacts associated with each alternative. Through comparison of these alternatives to the Project, the relative environmental advantages and disadvantages of each are weighed and analyzed. The CEQA Guidelines require that the range of alternatives addressed in an EIR should be governed by a rule of reason. Not every conceivable alternative must be addressed, nor do infeasible alternatives need to be considered (CEQA Guidelines Section 15126.6 [a]). When addressing feasibility, Section 15126.6 of the CEQA Guidelines states that the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, other plans or regulatory limitations, and jurisdictional boundaries. All of the alternatives evaluated in this Section 5 have been selected, because they have been initially determined to meet the criteria of feasibility.

The CEQA Guidelines state that the discussion of alternatives must focus on alternatives capable of either avoiding or substantially lessening any significant environmental effects of the project, even if the alternative would impede, to some degree, the attainment of the project objectives, which are identified in Section 2.3, Project Sponsors' Objectives, of this EIR, or would be more costly. The alternatives discussion should not consider alternatives whose implementation is remote or speculative, and the analysis need not be presented in the same level of detail as the assessment of the project.

5.2 DESCRIPTION OF ALTERNATIVES

Conceptual Framework for Creating Project Alternatives

Based on the CEQA Guidelines, several factors are considered in determining the range of alternatives to be analyzed in an EIR and the level of analytical detail that should be provided for each alternative. These factors include (1) the nature of the significant impacts of the project, (2) the ability of alternatives to avoid or lessen the significant impacts associated with the project, (3) the ability of the alternatives to meet the objectives of the project, and (4) the feasibility of the alternatives. The analysis in this EIR indicates that the Project would result in significant impacts related to consistency with the adopted General Plan land use classification and zoning district, construction and operational traffic, BART operations, construction noise and air emissions, cultural resources, exposure to on-site hazardous materials, and removal of protected trees. Several of these significant impacts would occur regardless of the project alternative. For example, construction noise and air emissions and exposure to on-site hazardous materials would be expected with any alternative involving construction in the Project Area. On the other hand, alternatives that consider a revised site plan may substantially reduce impacts to the 16th Street Train Station or lessen the number of protected trees to be removed.

Similarly, alternatives that substantially reduce the number of dwellings and commercial floor area could reduce significant impacts on traffic and BART operations. In formulating alternatives, opportunities to avoid significant and unavoidable impacts are particularly important. The significant and unavoidable impacts identified in Section 3 and summarized in Section 4.1 include:

- Cumulative traffic impacts on the West Grand Avenue/I-880 frontage road intersection that cause the future baseline LOS to degrade to worse than LOS D.
- Cumulative traffic impacts on northbound I-880 (under the Maximum Trips Scenarios only).
- Project-related and cumulative BART fare gate capacity impacts, where peak-hour average ridership at the West Oakland BART Station could increase by three percent, and where the average waiting time at fare gates could exceed one minute.
- Cumulative BART train capacity impacts, where peak-hour average BART ridership could increase by three percent, and where the passenger volumes exceed the standing capacity of BART trains.
- Project-related loss of portions of the 16th Street Train Station, a City landmark and designated historic structure, in Development Areas Four, Five, and Six.
- Project-related degradation of historical setting, due to loss of views and to the physical relationship between the 16th Street Train Station and the 16th Street Signal Tower would occur as a result of development in Development Areas Four and Six.

Project Alternatives

In Section 3 of this EIR, a number of Project variations were evaluated based on various combinations of proposed land uses for the different development areas. Specifically, Maximum Residential, Maximum Commercial, and Maximum Trips Scenarios were created and analyzed to ensure that full environmental clearance of the Project (and its various options) would be addressed by this document. The following alternatives propose land uses and development intensities different than those considered by the Project in an attempt to substantially reduce the Project's significant impacts. In this section, six alternatives to the Project are defined.

No Project/No Action Alternative

One of the alternatives that must be analyzed is the "No Project" Alternative. The "No Project" analysis discusses the existing conditions (described here as the No Project/No Action Alternative), as well as what would be reasonably expected to occur in the foreseeable future if the Project were not approved (described in the following sections as the No Project/OARB Alternative and the No Project/General Plan Alternative).

Under the No Project/No Action Alternative, all existing structures would remain on site in their current use and location. The Project Area currently contains a 18,276-square-foot (sf) warehouse on

the northwest corner of 14th and Wood, rented to Lodi Trucking; a 7,519-sf commercial building on the southwest corner of 16th and Wood, known locally as Bea's Hotel; a 126,301-sf building at 1111 Pine Street, occupied by two commercial tenants, Ice House and Tilt UPS; and the 94,479-sf Pacific Cannery located at 1199 Pine Street, which is currently vacant. The Project Area also contains the 16th Street Train Station. Under this alternative, none of the Project components within the nine development areas would be constructed and there would be no improvements to the 16th Street Train Station, since there would be no tax increment revenue stream from redevelopment activities elsewhere in the Project Area. Specifically, the Project Area would continue to be used for truck-related activities, including shipping and receiving, truck maintenance, and warehousing and storage; and no improvements would be made to the Project Area circulation and infrastructure system. Total developed floor area under the No Project/No Action Alternative would be the existing 265,700 sf of commercial uses (this amount does not assume reuse of the 16th Street Train Station, which accounts for 23,734 sf).

No Project/OARB Alternative

Under this alternative, the Project Area would be developed with approximately 1.3 million sf of commercial office, research and development (R&D), and retail space; approximately 250 live/work units; about 120,000 sf of light industrial space; and 7.5 acres of container storage/truck terminal uses. This mix of uses is intended to be consistent with the development analyzed in the *OARB Area Redevelopment Plan EIR*. The *OARB Area Redevelopment Plan EIR* evaluated development of the Project Area (designated as the 16th/Wood sub-district) assuming full buildout under existing zoning; the EIR also assumed that the 16th Street Train Station would be restored but was silent regarding whether the entire station and its associated structures would be rehabilitated for reuse. It was further assumed that the port priority use designation on Development Areas Six, Seven, and Eight of the Project Area would be removed.

For purposes of this EIR, the No Project/OARB Alternative assumes that the Main Hall of the 16th Street Train Station and the 16th Street Signal Tower would be preserved, and that other elements of the 16th Street Train Station, such as the Baggage Wing and Elevated Tracks, would be demolished in order to accommodate the projected development. In this respect, treatment of the 16th Street Train Station is similar to the Project. On the other hand, the No Project/OARB Alternative does not include a public plaza and uses in Development Areas Six, Seven, and Eight would be compatible with the port priority use designation (this assumption varies from the assumption made in the *OARB Area Redevelopment Plan EIR*).

The 120,000 sf of light industrial space would generally be occupied by fabrication, processing, assembly, and non-smokestack manufacturing and related uses, as well as port-related storage in Development Areas Six, Seven, and Eight. Office uses would generally consist of business, professional services, administration, medical, non-hazardous laboratory, and non-assembly, non-hazardous R&D uses. R&D uses would consist of data processing, laser technology, communications, medical or biotechnology laboratories, research, testing, design, and development for technology-focused industries. Retail uses would primarily be local serving and consist of restaurants, copy shops,

and other services that support other uses in the Project Area. Live/work uses would be high-density residential-commercial uses. This alternative would not require a General Plan amendment, relying on the existing Business Mix land use designation, nor a change from existing light and general industrial zoning for the proposed light industrial, R&D, and office uses.

No Project/General Plan Alternative

Under this alternative, the Project Area would be built out entirely with Business Mix uses, as specified by the *City of Oakland General Plan*. The Business Mix classification consists of flexible economic development uses that strive to accommodate older industries and anticipate newer technologies, including both commercial and industrial operations. High impact industrial uses, including those that store or process hazardous materials on site, may be allowed under this designation, provided that they are adequately buffered from residential uses. The Project Area is primarily zoned for light and general industrial uses (M-20 and M-30, respectively). To distinguish this alternative from the No Project/OARB Alternative, this alternative assumes buildout of the Project Area with general industrial uses that are likely to be transportation related. Approximately 800,000 sf of general industrial uses would be developed in the Project Area. For the purpose of comparing traffic generation rates, 400,000 sf are assumed to be warehousing or similar uses, and 400,000 sf would be manufacturing uses. Industrial uses would be dispersed across the Project Area. Existing developed space (265,700 sf, excluding the 16th Street Train Station) would remain on site, and an additional 534,300 sf would be added to the currently vacant development areas. The No Project/General Plan Alternative would include uses in Development Areas Six, Seven, and Eight that would be compatible with the port priority use designation.

For purposes of this EIR, the No Project/General Plan Alternative assumes that the Main Hall of the 16th Street Train Station and the 16th Street Signal Tower would be preserved to comply with the City's Historic Preservation Element; however, other elements of the 16th Street Train Station, such as the Baggage Wing and Elevated Tracks, would be demolished, similar to the Project. A 0.75-acre park would be developed in front of the restored 16th Street Train Station. In this respect, treatment of the 16th Street Train Station and the creation of a plaza are similar to the Project.

Preservation Alternative

This alternative proposes avoidance of Project impacts to the 16th Street Train Station by preserving the 16th Street Train Station and its components, their setting, and the relationship among existing elements. The 16th Street Train Station would be restored and all of its floor area, totaling 23,734 sf, would be adaptively reused for commercial/public activities. (This floor area includes 14,847 sf of the Main Hall and 8,887 sf of the Baggage Wing. Of the total floor area preserved, 15,427 sf are in Development Area Five and 8,307 sf are in Development Area Six.) To protect the historical setting, building heights would be decreased and setbacks increased in portions of the development areas (Development Areas Four and Six) immediately adjoining the 16th Street Train Station. This alternative would preserve the Elevated Tracks and Baggage Wing that extend into Development Areas Four and Six. Aside from the features to protect the 16th Street Train Station, development under the Preservation Alternative would occur similarly to the Project. Thus, this alternative proposes 1,570

dwelling units and 36,700 sf of commercial space (13,000 sf in Development Area Four and Six, plus about 23,700 sf associated with the 16th Street Train Station, with about 15,400 sf in Development Area Five and 8,300 sf in Development Area Six).

Key features of this Project alternative are presented below:

- **16th Street Train Station (Development Area Five).** The Preservation Alternative would retain and restore the 16th Street Train Station, including the Main Hall, the Baggage Wing, and the Elevated Tracks, as well as the 16th Street Signal Tower. The interior and exterior of the 16th Street Train Station Main Hall and Baggage Wing would be restored and adaptively reused, and the exterior of the 16th Street Signal Tower and Elevated Tracks would be restored. All restoration of the 16th Street Train Station would occur in accordance with the Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Further structural assessment and any necessary improvements, including seismic retrofit and compliance with the Americans with Disabilities Act (ADA), would be required prior to issuance of building permits. The restored Main Hall and Baggage Wing would be used for exhibit space or other commercial uses that commemorate the historical significance of the site. The Elevated Tracks and 16th Street Signal Tower would be used as a public asset of historic significance. In order to preserve the Elevated Tracks, the extension of 16th Street further west towards the frontage road would not occur.

- **Station Setting (Development Areas Four and Six).** Development immediately adjacent to the 16th Street Train Station would be restricted, and the proposed 16th Street extension to the frontage road would be eliminated. These changes would allow the retention and restoration of the Elevated Tracks in Development Areas Four and Six and the Baggage Wing in Development Area Six. The development restrictions immediately adjacent to the 16th Street Train Station would involve larger setbacks and reduced heights for the proposed structures adjacent to the 16th Street Train Station, which would maintain the visual prominence of the 16th Street Train Station within the Project Area and vicinity, and maintain the visual association between the 16th Street Train Station and the 16th Street Signal Tower. The setbacks would be a minimum of 50 feet from the 16th Street Train Station, and building heights within 50 feet of the setback line would be limited to 35 feet. To ensure that this alternative is as feasible as possible, it has been assumed that the site plans for Development Areas Four and Six would be refined to accommodate the same number of dwelling units and the same commercial floor area as identified for the Project. To achieve this goal, the structures in other portions of these development areas would be taller or more dense (reduced open space).

- **16th Street Plaza (Development Area Nine).** Under the Preservation Alternative, Development Area Nine would be built with the 16th Street Plaza, as proposed under the Project, and would preserve direct views of the 16th Street Train Station from Wood Street.

- **Other Development (Development Areas One, Two, Three, Seven, Eight)**. Under the Preservation Alternative, development of these areas would be designed and built as proposed under the Project (for the Maximum Residential Scenario). Under this alternative,

development would consist of residential uses, including live/work units, commercial uses, and open space.

- **Circulation, Open Space, and Design**. The Preservation Alternative would adhere to the same circulation, open space, and design standards and guidelines as recommended for the Project, except that none of the east–west streets would be extended to the frontage road, including 16th Street.

Reduced Project Alternative

The Reduced Project Alternative proposes a reduction in the Project's development program primarily to preserve historic resources, mitigate traffic impacts, and reduce construction noise impacts by shortening the construction time. This alternative would also include land uses near the California Waste Solutions facility to reduce potential odor nuisances from existing uses. Other aspects of Project development, including the circulation improvements, development standards, and design guidelines, would continue to apply to this alternative.

Changes from the Project and the rationale for reducing the Project development program are identified below.

- **Residential Development.** This alternative proposes residential development according to the minimum density for residential uses allowed under the development standards proposed in the Wood Street Zoning Regulations — 22 dwelling units per acre for Development Areas One and Three, and 44 dwelling units per acre for Development Areas Four, Six, Seven, and Eight — for a total of about 805 dwelling units. Residential uses would consist of a mix of condominium, townhouse, and apartment uses, similar to the Project.

- **Commercial Development.** Commercial development would occur in accordance with the standards and design guidelines in the proposed Wood Street Zoning Regulations. In Development Area Two, the proposed land use would be commercial space in order to reduce the potential land use conflicts with the adjacent California Waste Solutions facility.

- **16th Street Train Station.** This alternative would retain and restore the 16th Street Train Station and associated structures, including the Main Hall, the Baggage Wing, and the Elevated Tracks, as well as the 16th Street Signal Tower. The interior and exterior of the 16th Street Train Station Main Hall and Baggage Wing would be restored and adaptively reused, and the 16th Street Signal Tower and Elevated Tracks would be restored externally. All restoration of the 16th Street Train Station would occur in accordance with the Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Further structural assessment and any necessary improvements, including seismic retrofit and compliance with the Americans with Disabilities Act, would be required prior to issuance of building permits. The restored 16th Street Train Station Main Hall (14,847 sf) and Baggage Wing (8,887 sf), totaling 23,734 sf, would be used for exhibit space or other commercial uses that commemorate the historical significance of the site — no retail or office uses are proposed. The Elevated Tracks and 16th

Street Signal Tower would be used as a public asset of historic significance. Retention of the Baggage Wing and Elevated Tracks would avoid the Project's significant and unavoidable impact to the historical integrity of the 16th Street Train Station.

- **Circulation, Open Space, and Design**. The Reduced Project Alternative would adhere to the same circulation, open space, and design standards and guidelines as recommended for the Project, except that none of the east–west streets would be extended to the frontage road, including 16th Street.

No Redevelopment of Bea's Hotel Alternative

This alternative includes buildout of the Project without redevelopment of the Bea's Hotel property. The analysis of the Project in Section 3 of this EIR reflected the potential for the Project Sponsors to acquire the property and to redevelop the property according to the proposed Wood Street Zoning Regulations. However, the disposition of the Bea's Hotel site remains uncertain, and the ability of the Project Sponsors to gain control of and redevelop the property cannot be ensured. The purpose of this alternative is to present and evaluate an alternative where Bea's Hotel remains as is. Although this alternative may not avoid or substantially reduce significant impacts associated with the Project, this analysis is provided for informational purposes. The majority of development under this alternative, including the 16th Street extension, proposed uses, intensity, height, bulk, and design, would be identical to the Project, with the exception of development in Development Area Four.

Key features of this alternative and the rationale for the development program are presented below.

- **Residential Development.** Under this Project alternative, residential development would be the same as for the Project (under the Maximum Residential Scenario). The Project Area would be developed with 1,570 dwelling units.

- **Commercial Development.** Commercial floor area would be nearly the same as for the Project, but it would be developed differently (see discussion below under Open Space and Design), and would include the 7,519-sf Bea's Hotel. Total floor area would include the 27,800 sf proposed for the Project plus the approximate 7,500 sf of Bea's Hotel, or 35,300 sf.

- **16th Street Train Station.** Under this Project alternative, the 16th Street Train Station would be preserved and restored as proposed under the Project.

- **Open Space and Design.** The same amount, location, and character of open spaces would be provided under the No Redevelopment of Bea's Hotel Alternative as under the Project. Development Area Nine would be developed as a public plaza, fronting the 16th Street Train Station. However, with Bea's Hotel currently located at the southwest corner of 16th and Wood Streets, the proposed uses and design concepts for the land framing the Plaza would be different. Under the Project, this key corner would be subject to the setback and height restrictions of the Plaza Overlay Zone,[1] the purpose of which is to establish a visually

[1] The Plaza Overlay Zone is discussed in detail in Section 2, Project Description.

integrated streetscape and architectural character around the proposed 16th Street Plaza and encourage ground-floor pedestrian-oriented uses. Under the No Redevelopment of Bea's Hotel Project Alternative, Development Area Four would be replanned and either split the proposed commercial retail uses, with a portion facing the Plaza and a portion fronting onto Wood Street, or concentrating the commercial uses at the corner of 14th and Wood Streets.

- **Circulation.** The No Redevelopment of Bea's Hotel Alternative would adhere to the same circulation design and standards and guidelines as recommended for the Project.

Summary of Project Alternatives

As described above and summarized in Table 5-1 below, the Project alternatives collectively span a wide range of development options, including preservation, in whole or in part, of the 16th Street Train Station, a range of residential development from 250 to 1,570 units, a range of commercial development from zero to 1.3 million sf, a range of light industrial development from zero to 120,000 sf, and a range of general industrial development from zero to 800,000 sf.

Table 5-1
Summary Comparison of Alternatives
(New Development)

Alternative	General Industrial Development (sf)	Light Industrial Development (sf)	Commercial Development (sf)	Residential Development (units)
Project (Maximum Residential Scenario)	0	0	27,800	1,570
Project (Maximum Commercial Scenario)	0	0	539,600	1,084
No Action Alternative[a]	0	0	0	0
OARB Alternative	0	120,000	1,300,000	250 (live/work)
General Plan Alternative	800,000	0	0	0
Preservation Alternative	0	0	36,700	1,570
Reduced Project Alternative	0	0	257,500	805
No Redevelopment of Bea's Hotel Alternative	0	0	35,300	1,570

Source: EIP Associates, 2004.

Notes:

a. The No Action Alternative assumes use of the existing 265,700 sf of industrial/commercial uses; this amount of space assumes that the 16th Street Train Station is not used.

5.3 IMPACT ASSESSMENT

The purpose of this impact assessment is to identify whether the above-described alternatives would reduce potentially significant impacts of the Project or would generate other impacts different from those identified for the Project.

No Project/No Action Alternative

Land Use. This alternative, unlike the Project, would maintain current uses in the Project Area and would not conflict with the *City of Oakland General Plan*, the *OARB Area Redevelopment Plan*, or the Oakland Zoning Ordinance. Continuation of light industrial uses of a transportation nature would preserve the industrial land supply and would be consistent with the General Plan land use classification, which calls for a business mix. Thus, this alternative would avoid the Project's potentially significant (less-than-significant with mitigation) impact related to consistency with current land use classifications and zoning districts for the Project Area. However, the No Action Alternative would not support or help fulfill the land use policies that the Project would achieve; for example, the No Action Alternative would not include investment in economically distressed areas of Oakland, consistent with the City's overall economic strategy to promote viable investment in economically distressed areas of the City, as expressed in Policy I/C1.4 of the *City of Oakland General Plan,* Land Use and Transportation Element (LUTE). The No Action Alternative would represent a missed opportunity to support the City's land use and development goals. For all other land use impacts (i.e., physically divide an established community and result in a fundamental conflict with nearby uses), the No Action Alternative would be similar to the Project.

Visual Quality. The No Action Alternative would maintain the existing visual setting of the Project Area, which consists largely of underused and abandoned lots and structures, with several parcels used for open storage. This alternative would have no impacts to the visual quality of the Project Area because there would be no change to the existing structures and no new development. However, because the appearance of the Project Area would not change under this alternative, the Project Area would remain generally blighted in appearance, which would not support the City's desire to enhance the area.

Transportation and Circulation. Under the No Action Alternative, no new development would occur at the Project Area. Consequently, no new vehicle trips (over that which the Project Area currently generates) would be expected, except for the potential reoccupation of up to 94,479 sf of currently vacant commercial space. The No Action Alternative would, therefore, result in less severe project-specific and cumulative impacts to study area intersections and freeway segments than the Project. Also, because this alternative would generate less additional employment than the Project and no new residents in the Project Area, there would be less additional demand for transit compared to the Project. Project conflicts with alternative transportation plans and programs, and increases in AC Transit and BART ridership at the West Oakland station would be avoided under this alternative. The No Action Alternative would also avoid potentially significant increases in waiting time at the West

Oakland BART Station fare gates, as well as cumulative impacts that would affect BART and AC Transit ridership. Finally, this alternative would avoid potentially significant impacts related to hazards resulting from design of the Project Area access and circulation.

Noise. The No Action Alternative would avoid the Project's potentially significant construction noise and vibration impacts. Also, because this alternative would not introduce residents into the Project Area, it would avoid the Project's less-than-significant impact due to introducing residents into an area considered "Conditionally Acceptable" for such uses. Other less-than-significant impacts associated with exposure to existing industrial uses around the Project Area would be less severe than for the Project.

Air Quality. The No Action Alternative would avoid construction activities that would have potentially significant air quality impacts under the Project. The decreased traffic generation under this alternative would result in substantially lower emissions than the under the Project, which would result in less-than-significant impacts related to regional air emissions, carbon monoxide concentrations, and contributions to cumulative regional air emissions.

Cultural Resources. This alternative would not require construction activity that would result in ground disturbance and would, therefore, avoid potentially significant Project impacts to archaeological or paleontological resources that may be present in the Project Area. Because neither demolition nor renovation of the 16th Street Train Station would occur under the No Action Alternative, significant impacts to the 16th Street Signal Tower and significant impacts associated with the historical integrity, setting, and views of the 16th Street Train Station would be avoided. Nonetheless, because the No Action Alternative would not restore the 16th Street Train Station Main Hall, this City landmark and designated historic structure would remain vacant and subject to continuing deterioration from weather and vandalism. Without some form of rehabilitation, the physical decline of the 16th Street Train Station would continue, which would constitute a significant impact of the No Action Alternative.

Hazardous Materials. Because no new development is proposed under this alternative, no cleanup would be required and therefore would not be assumed to occur. Further, as described above under "Cultural Resources," no ground-disturbing activity would be assumed to occur under this alternative. As a result, this alternative would avoid the Project's potentially significant impact related to the direct exposure of workers on the site to contaminated soils or groundwater.

Geology. The No Action Alternative would have no impacts on soils and geology, because the alternative would not entail any new construction in the Project Area.

Hydrology and Water Quality. The No Action Alternative would not involve new construction, and thus would avoid the Project's less-than-significant construction–related impacts to water quality, which could result from increased sedimentation. Since no new impervious surfaces would be added to the Project Area under this alternative, the No Action Alternative would avoid the Project's less-than-significant impacts associated with increased runoff and downstream flooding. Because the No Action Alternative would not result in construction-related sedimentation, would not increase stormwater

runoff, and would not result in downstream flooding, it would also avoid the Project's less than considerable contribution to cumulative groundwater and surface water quality impacts.

Biological Resources. The No Action Alternative would maintain existing trees and vegetation, and would therefore avoid the potentially significant impacts of the Project of removing mature trees and disturbing active birds' nests.

Population, Housing, and Employment. The No Action Alternative would maintain existing employment levels in the Project Area and would avoid the Project's less-than-significant impacts to population and housing and indirect impacts associated with growth in the Project Area.

Utilities. The No Action Alternative would maintain utilities at existing levels of service. Since no new development is proposed under the No Action Alternative, this alternative would avoid the Project's less-than-significant impacts to water supply, wastewater, storm drains, solid waste, and energy supply.

Public Services. Because the No Action Alternative would not result in any new development and would not bring residents to the Project Area, it would avoid the Project's increase in demand for fire, police, schools, libraries, and park service and would, therefore, avoid the Project's less-than-significant impacts to public services.

No Project/OARB Alternative

Land Use. The OARB Alternative would be generally consistent with goals of the LUTE that encourage residential and non-residential development in an economically distressed area, as well as with the Bay Plan and Seaport Plan that promote the port-priority land uses. However, because about one quarter of the Project Area would be devoted to container storage, this alternative would not achieve the goal of economic growth to the same degree as the Project. This alternative would be inconsistent with existing General Plan land use classifications for a portion of the Project Area and would require a General Plan Amendment and rezoning of the site to allow the level of development contemplated in the *OARB Area Redevelopment Plan*. Also, the OARB Alternative could result in internal land use conflicts between industrial or container storage uses and live/work units or park uses, if these uses are placed adjacent to each other. Additionally, the OARB Alternative could introduce high-intensity industrial uses or high-traffic container storage uses into areas adjacent to existing residential uses, which could worsen existing land use compatibility conflicts to a greater degree than under the Project and would be considered potentially significant.

Visual Quality. Because scenic views available from the nearby I-80/I-580 are industrial in character, and because the Project Area contains no scenic resources, such as rock outcroppings, cliffs, or knolls, development in the Project Area under the OARB Alternative would not affect scenic views or scenic resources. As a result, the impact of this alternative on scenic views and resources would be less than significant, similar to the Project.

The OARB Alternative would substantially alter the mass, scale, and intensity of development in the Project Area, as this alternative would accommodate a more intense level of use than the Project. Under the OARB Alternative, the underutilized and vacant industrial lots and large warehousing and trucking operations would be replaced by new industrial, live/work, and office uses, though Development Areas Seven and Eight would be used for container storage which is visually similar to other existing uses in and around the Project Area. The Main Hall of the 16th Street Train Station would be restored and would provide a public visual amenity.

Based on existing zoning, development under the OARB Alternative could be up to 30 feet in height within 30 feet of the Wood Street frontage (i.e., adjacent to existing residential areas), but could reach up to 45 feet in height in other areas. Existing zoning regulations would not allow for full buildout of this alternative, and as described above under "Land Use," development under this alternative would exceed current zoning restrictions and would exceed the development intensity proposed under both scenarios of the Project. Further, the character of the majority of development would be industrial and commercial, rather than residential (as with the Project), making visual compatibility with nearby residential development more difficult than under the Project. Overall, implementation of the OARB Alternative would result in the redevelopment of portions of a generally blighted area into a modern industrial/commercial development and would not be considered to degrade the visual quality of the Project Area.

Sources of light and glare include the interior and exterior lighting of the commercial office, R&D, and retail uses. Without the design guidelines of the Project, these uses could result in potentially significant daytime and nighttime glare. Also, traffic generated under this alternative, as discussed below under "Transportation and Circulation," would exceed the traffic generated by the Project, and could result in greater vehicular headlights impacts. As with the Project, the OARB Alternative would cast shadows; however, the existing zoning height limitations of the OARB Alternative would result in less shade impacts than identified for the Project.

Transportation and Circulation. New truck and automobile traffic generated under the OARB Alternative would exceed traffic generated under the Maximum Trips Scenario of the Project. The OARB Alternative would generate 14,662 daily trips,[2] compared to a high of 11,768 daily trips under the Maximum Trips Scenario and a low of 9,630 daily trips under the Maximum Residential Scenario. These additional vehicle trips would include up to 281 truck trips and would result in more severe project-specific and cumulative traffic impacts than with the Project. Project-specific intersection impacts may become potentially significant with this alternative's additional trip generation; the contribution of this alternative to cumulative intersection and freeway segment impacts would exceed that of the Project and would be considered significant and unavoidable. Under the OARB Alternative, the greater number of truck trips, compared to the Project, could also increase the potential for conflicts between trucks and other vehicles.

[2] While this EIR analyzes impacts based on traffic operations during the PM peak hour, daily trips are presented in the alternatives analysis for the OARB Alternative because that was the metric used in the *OARB Area Redevelopment Plan EIR*.

The land use program which emphasizes office, R&D, and retail space could be supportive of alternative transportation plans and programs depending on the land use plan for the entire Project Area. The greater trip generation of the OARB Alternative, compared to the Project, suggests this alternative would impose greater demand on AC Transit and BART service, but the impact is expected to remain less than significant because the OARB Alternative would not generate enough transit riders to exceed these thresholds. The OARB Alternative would, however, exacerbate the delays at the West Oakland BART Station fare gates, a significant and unavoidable impact under the Project.

Noise. The OARB Alternative would create significant construction noise and vibration impacts, similar to the Project. Operational impacts, such as noise associated with mechanical equipment, is likely to be more severe than with the Project because of the larger proportion of the Project Area allocated to industrial and commercial uses, which typically involve larger heating, ventilation, and air conditioning demands. Additionally, the higher traffic generation and greater number of trucks under this alternative would result in greater vehicular noise along study area roadways, which could affect existing residences adjacent to the Project Area. Consequently, construction and operational noise impacts could be more severe under the OARB Alternative than under the Project.

Air Quality. The OARB Alternative would involve construction activities that would have potentially significant air quality impacts, similar to or potentially more severe than the Project, depending on the duration of construction. Operational air quality impacts and related regional air emissions are likely to be significant under the OARB Alternative, because truck traffic would increase, and light industrial facilities have higher air quality emissions than residential and commercial uses. Since industrial/commercial uses under this alternative would be primarily office and non-smokestack manufacturing uses, the potential to create objectionable odors and to emit toxic air contaminants would not be considered significant. Contributions to cumulative regional air emissions would be potentially significant under this alternative, because operational emissions would likely be significant.

Cultural Resources. As with the Project, the OARB Alternative would involve ground-disturbing site preparation and construction activities, which could result in potentially significant impacts to archaeological or paleontological resources that may be present in the Project Area. This alternative would have significant and unavoidable impacts to the 16th Street Train Station and to its setting. The impacts would be more severe than for the Project, since there would be no public plaza in front of the station to allow direct views of the historic resource.

Hazardous Materials. As with the Project, the OARB Alternative would have potentially significant construction-period impacts regarding the disturbance, exposure, and release of hazardous materials. However, these impacts would be less than significant through adherence to existing regulations and safety procedures.

Geology. The OARB Alternative would have the same potential impacts from rupture of earthquake faults, seismically induced groundshaking, erosion, and expansive soils as the Project. As with the Project, compliance with the applicable provisions of the California Building Code and adherence to City building standards and safety policies would reduce project-related and cumulative geological and seismic impacts from the OARB Alternative to a less-than-significant level.

Hydrology and Water Quality. As with the Project, compliance with existing standards and regulations of the RWQCB would ensure that the OARB Alternative's water quality impacts would be reduced to a less-than-significant level. Impervious surfaces in the Project Area may be greater under the OARB Alternative than under the Project, since commercial office and industrial uses associated with the OARB Alternative typically involve less landscaping than the residential uses of the Project. As a result, impacts associated with stormwater runoff and downstream flooding could be greater than identified for the Project. However, as with the Project, these impacts as well as the contribution to cumulative impacts would be reduced to a less-than-significant level through compliance with City and RWQCB requirements.

Biological Resources. The OARB Alternative would result in the same potentially significant impacts to trees and birds' nests as the Project. Implementation of mitigation measures identified for the Project—including replacement trees, pre-construction surveys and protection of active nests—would apply to this alternative and would reduce these impacts to a less-than-significant level, as with the Project.

Population, Housing, and Employment. The OARB Alternative would result in a greater increase in employment in the Project Area and a smaller increase in residential population and housing opportunities than the Project. Although the employment growth is substantial, this growth is planned for and included in growth projections for the General Plan and the *OARB Area Redevelopment Plan* and would, therefore, result in a less-than-significant impact.

Utilities. The OARB Alternative proposes substantially more intense development than the Project and would result in greater demand for utilities than the Project. The *OARB Area Redevelopment Plan EIR* previously determined that the utility impacts of the entire *OARB Area Redevelopment Plan* (of which this alternative is a part) would be less than significant, with the exception of potable water. However, the *OARB Area Redevelopment Plan EIR* included mitigation measures that were determined to reduce water demand impacts to less than significant. Consequently, this alternative's project-specific and cumulative impacts would be less than significant, as with the Project.

Public Services. The *OARB Area Redevelopment Plan EIR* previously determined that the impact of this alternative upon public services providers would be less than significant, as with the Project.

No Project/General Plan Alternative

Land Use. Under the General Plan Alternative, the Project Area would be built out entirely with approximately 800,000 sf of general industrial uses, primarily manufacturing, warehousing, and other trucking-related uses, consistent with the Business Mix land use classification for the Project Area. However, this alternative would introduce industrial development that could lead to greater conflicts with residential uses adjacent to the Project Area. This potential for land use conflicts would be considered a significant impact and would be more severe than with the Project.

Visual Quality. The General Plan Alternative would substantially alter the mass, scale, and intensity of development in the Project Area, as this alternative would triple the existing level of development. Under this alternative, the underutilized and vacant industrial lots and large warehousing and trucking operations would be more fully developed with warehousing, trucking, and manufacturing businesses. The 16th Street Train Station is assumed to be restored and views of the 16th Street Train Station from Wood Street, through Development Area Nine, are assumed to be preserved, which would provide a public visual amenity.

Based on existing zoning, development under this alternative could be up to 30 feet in height within 30 feet of the Wood Street frontage (i.e., adjacent to existing residential areas), but could reach up to 45 feet in height in other portions of the Project Area. The character of the majority of development would be industrial, rather than residential as with the Project. Without the design guidelines of the Project, industrial development with limited provision for landscaping or pedestrian amenities would visually contrast with adjoining residential development. Nevertheless, implementation of the General Plan Alternative would result in the overall redevelopment of the generally blighted Project Area into a modern industrial complex, which would not be considered a degradation of the visual quality of the Project Area.

Sources of light and glare would be comparable to existing uses and would not be expected to substantially alter daytime and nighttime lighting conditions; however, in the absence of design guidelines as with the Project, there is the potential for buildings to use reflective building material that could create glare effects. As with the Project, this alternative would cast shadows on the view preservation corridor in Development Area Nine. However, building heights under the General Plan Alternative would be lower than under the Project, so that shade effects would also be less and the impact would be less than significant.

Transportation and Circulation. New truck and automobile traffic generated by this alternative would be substantially less than generated by the Project—3,354 daily trips, compared to 9,630 daily trips under the Maximum Residential Scenario and 11,768 daily trips under the Maximum Trips Scenario for the Project. As a result, the General Plan Alternative would not be expected to result in significant traffic impacts, and its contribution to cumulative impacts may be less than cumulatively considerable.

On the other hand, Project Area circulation patterns could include traffic hazards that would be potentially significant, depending upon the proposed site plan, because of the increase in truck trips. The emphasis on warehousing and manufacturing uses under the General Plan Alternative would not suggest conflicts with alternative transportation plans and programs, but neither would these land uses be especially supportive of transit, bicycle, and pedestrian systems. In fact, increases in AC Transit and BART ridership at the West Oakland BART Station would be less under this alternative than under the Project. This alternative would likely avoid potentially significant increases in waiting time at the West Oakland BART fare gates, as well as cumulative impacts on BART capacity.

Noise. The General Plan Alternative would create significant construction noise and vibration impacts, similar to the Project. Operational noise impacts associated with mechanical equipment, loading activities, and trucks would increase over existing conditions with the addition of heavy industrial uses and would be greater than identified for the Project. Further, these heavy activities would occur near residential units adjacent to the Project Area, resulting in potentially significant operational noise impacts.

Air Quality. Depending on the duration of construction, the General Plan Alternative would involve construction activities that would have potentially more severe air quality impacts than the Project. Operational air quality impacts and related regional air emissions are likely to be significant under the General Plan Alternative, due to increased truck traffic. Additionally, heavy industrial facilities have high air quality emissions compared to the residential emphasis of the Project. Given the intensity of development under this alternative, the General Plan Alternative would likely exceed BAAQMD thresholds of significance for operational emissions. On the other hand, localized carbon monoxide concentrations would be less than significant, like the Project, because traffic would be less than projected for the Project.

The potential exposure of neighborhood residents to objectionable odors and toxic air contaminants would increase under the General Plan Alternative, given the types of emissions normally associated with manufacturing facilities. As a result, these impacts would be potentially significant compared to less than significant under the Project. Contributions to cumulative regional air emissions would also be potentially significant under this alternative, given the likely significance of operational emissions.

Cultural Resources. As with the Project, the General Plan Alternative would involve ground-disturbing site preparation and construction activities, which could result in potentially significant impacts to archaeological or paleontological resources that may be present in the Project Area. This alternative would have the same significant and unavoidable impacts to the 16th Street Train Station as identified for the Project.

Hazardous Materials. As with the Project, the General Plan Alternative would have potentially significant construction-period impacts regarding the disturbance, exposure, and release of hazardous materials. However, these impacts would be reduced to less than significant through adherence to existing regulations and safety procedures.

Given the general industrial nature of uses likely to operate under the General Plan Alternative, operations associated with this alternative could result in an accidental release of potentially hazardous or acutely hazardous materials that could expose people or the environment to these materials. Because heavy industrial uses typically make greater use of hazardous materials than residential, commercial, or office uses, in the absence of knowledge of the specific materials used and the specific types of safety measures employed, the risk of accidental release would be considered greater under this alternative than under the Project. Compliance with applicable statutes, regulations, and practices associated with the specific materials used would ensure proper handling, storage, and disposal of such materials, and would reduce the potential risk of release or upset to a less-than-significant level.

Geology. The General Plan Alternative would have the same potential impacts from rupture of earthquake faults, seismically induced groundshaking, erosion, and expansive soils as the Project. The potentially greater use of hazardous materials in the proposed industrial uses could increase the risk of upset from seismic-related hazards. However, as with the Project, compliance with the applicable provisions of the California Building Code and adherence to City building standards and safety policies would reduce geological and seismic impacts to a less-than-significant level.

Hydrology and Water Quality. As with the Project, compliance with existing standards and regulations of the City and the RWQCB would ensure that water quality impacts of the General Plan Alternative would be reduced to a less-than-significant level. Impervious surfaces in the Project Area may be greater under this alternative than under the Project, for the same reasons identified earlier for the OARB Alternative. As a result, impacts associated with stormwater runoff and downstream flooding could be greater than for the Project. However, as with the Project, these impacts and contributions to cumulative impacts would be reduced to a less-than-significant level through compliance with City and RWQCB requirements.

Biological Resources. The General Plan Alternative would result in the same potentially significant impacts to trees and birds' nests as the Project. Implementation of mitigation measures identified for the Project—including replacement trees, pre-construction surveys, and protection of active nests—would apply to this alternative and would reduce these impacts to a less-than-significant level, as with the Project.

Population, Housing, and Employment. The General Plan Alternative would result in a greater increase in employment in the Project Area than under the Project, and no increase in housing opportunities or population. Although the employment growth is substantial, this growth is planned for and included in growth projections for the General Plan and would, therefore, result in a less-than-significant impact.

Utilities. As described above for the OARB Alternative, the *OARB Area Redevelopment Plan EIR* previously determined that the utility impacts of the entire *OARB Area Redevelopment Plan,* which assumed more intensive uses in the Project Area than the General Plan Alternative, would be less than significant, with the exception of potable water. Because the General Plan Alternative is consistent with the growth projections of the General Plan and the utilities demand projections derived therefrom, water demand is also expected to be less than significant.

Public Services. The General Plan Alternative would increase public service demand in the Project Area, particularly fire protection and solid waste disposal services. This alternative could also increase the need for police and emergency services, but would not directly increase demand for schools, libraries, and park services since there is no increase in residential population under this alternative. Because demand for public services under the General Plan Alternative would be less than under the Project, the impact of the General Plan Alternative would be less than significant, as with the Project.

Preservation Alternative

Because this alternative proposes the same amount of residential dwelling units and commercial square footage as the Project, the impacts are essentially the same with the exception of cultural resources, visual quality, and emergency access.

Land Use. The Preservation Alternative, like the Project, would include a mix of commercial and residential uses. This alternative proposes 1,570 dwelling units and 36,700 sf of commercial space, and would result in land use impacts that are essentially identical to the Project. The principal differences would occur in Development Areas Four and Six where buildings would either be taller or constructed more densely because the same number of residential units as for the Project would be built on less land area. There would be less land available under this alternative because of preservation of components of the 16th Street Station and greater setbacks around these components.

Visual Quality. The Preservation Alternative would have the same less-than-significant impacts on scenic views and resources as the Project. Notably, this alternative would include development restrictions immediately adjacent to the 16th Street Train Station that would involve larger setbacks and reduced heights to maintain the visual prominence of the 16th Street Train Station within the Project Area and vicinity while maintaining the visual association between the Station and the Signal Tower.

This alternative would change the existing visual setting of the Project Area in much the same way as the Project, with a similar mix of uses, a similar urban form, and similar height and setback restrictions, with the exception of greater setback requirements and lower building heights near the Station in Development Areas Four and Six. To maintain the same development potential in Development Area Four and Six, however, residential buildings in these areas would likely be taller or occupy areas that would be Private Open Space under the Project. As with the Project, this alternative would substantially reduce the blighted appearance of the Project Area, and would replace underused and vacant industrial lots that currently exist in the Project Area. Less-than-significant light and glare impacts identified for the Project would apply to the Preservation Alternative. However, shadow impacts on Raimondi Park and the public plaza in Development Area Nine could be greater since development in Development Areas Four and Six would be taller as explained above. Further design and massing studies to site and refine the building envelope in Development Areas Four and Six would be required to reduce potential shadow effects to less than significant.

Transportation and Circulation. Under the Preservation Alternative, traffic generation would be essentially identical to the Project and, therefore, this alternative would contribute the same amount of traffic to potential cumulative intersection and freeway segment impacts as the Project. As with the Project, the Preservation Alternative would result in significant increases in waiting time at the West Oakland BART fare gates, and significant cumulative BART fare gate and standing capacity impacts.

Potential hazards related to site circulation would be more severe under this alternative than under the Project. Preservation of the Elevated Tracks in their entirety prevents implementation of the 16th Street extension to the frontage road, which would not allow adequate emergency vehicle access to the

western portions of Development Areas Four and Six. This impact would be significant and would not occur under the Project.

Noise. The Preservation Alternative would create significant construction noise and vibration impacts, similar to the Project. Other less-than-significant operational noise impacts, such as noise associated with mechanical equipment and increased traffic, would also occur under this alternative, as with the Project.

Air Quality. The Preservation Alternative would have the same air quality impacts as the Project. As with the Project, the Preservation Alternative would involve construction activities that would not result in short-term increases in PM_{10} emissions that could violate City and BAAQMD air quality standards. Operational air quality impacts and related regional air emissions would be less than significant under this alternative and would not exceed BAAQMD thresholds of significance for operational emissions. Carbon monoxide concentrations would also be less than significant, as under the Project. Contributions to cumulative regional air emissions would be less than significant under this alternative, because operational emissions would be less than significant.

Cultural Resources. The Preservation Alternative would create potentially significant, but mitigable, impacts to archaeological resources or paleontological resources that may be present in the Project Area, because this alternative would involve ground-disturbing construction activities. Unlike the Project, historic impacts would be reduced to less than significant as the entire 16th Street Train Station complex would be preserved and restored, consistent with the Secretary of the Interior's Standards and Guidelines. This alternative would also result in less-than-significant impacts to the historical setting of the 16th Street Train Station, because adjacent structures on Development Areas Four and Six would be set back from the 16th Street Train Station at least 50 feet and the height of the structures would not exceed 35 feet within 50 feet of the setback line. Project impacts to historical resources would thus be avoided under the Preservation Alternative.

Hazardous Materials. The Preservation Alternative would have the same hazardous materials impacts as the Project.

Geology. The Preservation Alternative would introduce new buildings and infrastructure that would be subject to impacts from seismically induced groundshaking, erosion, or expansive soils. As discussed for the Project, building codes and safety policies would reduce seismic- and soils-related impacts to a less-than-significant level.

Hydrology and Water Quality. The Preservation Alternative would have the same hydrologic and water quality impacts as the Project.

Biological Resources. This alternative would result in the same potentially significant impacts to trees and bird's nests as the Project. Mitigation measures identified for the Project, including replacement trees, pre-construction surveys, and protection measures, would reduce these impacts of the Preservation Alternative to a less-than-significant level.

Population, Housing, and Employment. This alternative would increase employment and residential population at the Project Area. However, the increase in employment and population would be consistent with current cumulative growth forecasts for the City as a whole, and it would be essentially the same as anticipated under the Project. As with the Project, a less-than-significant impact would result.

Utilities. The Preservation Alternative would generate a demand for utilities that would be essentially the same as that of the Project. As with the Project, impacts to water supply, wastewater, storm drains, solid waste disposal, and energy supply would be less than significant.

Public Services. The Preservation Alternative results in the same need for fire and police services, schools, libraries, and park services as the Project. This increased demand would be considered less than significant, given the current capacity of these service providers. The one notable difference from the Project is the lack of the 16th Street extension under this alternative, which would result in inadequate emergency access for portions of Development Areas Four and Six. This would constitute a significant impact that would not occur under the Project.

Reduced Project Alternative

As compared to the Project, this alternative assumes more commercial development (about 257,500 sf versus 27,800 sf under the Project) and less residential development (805 units versus 1,570 units under the Project), while preserving the 16th Street Train Station and all associated structures.

Land Use. The Reduced Project Alternative would include residential uses and exhibit-related or commercial uses associated with reuse of the 16th Street Train Station Main Hall and Baggage Wing (the 16th Street Signal Tower and Elevated Tracks would be used as public assets of historic significance). The development program of 805 dwelling units would be less than under the Maximum Residential Scenario of the Project, and the provision of about 257,500 sf of commercial uses would similarly be less than under the Maximum Commercial Scenario of the Project. This alternative would be consistent with the minimum residential development intensities specified for each development area in the Project Area.

The Reduced Project Alternative would be generally consistent with policies of the LUTE and would be more consistent with policies of the Historic Preservation Element than the Project, since this alternative would include restoration of the 16th Street Train Station and associated structures. This alternative would also be more consistent with the Open Space, Conservation, and Recreation Element of the General Plan than the Project, because the same amount of open space as the Project would be provided but with fewer residents in the Project Area, yielding a slightly higher open space-to-population ratio and slightly improving the availability of open space compared to the Project. Overall, land use impacts of this alternative would be less than the less-than-significant impacts described for the Project.

Visual Quality. The Reduced Project Alternative would have the same less-than-significant impacts on visual quality as the Project. Future building envelopes which were substantially larger than the surrounding built environment under the Project would be less pronounced with the Reduced Project Alternative, since residential densities and building heights would be considerably less in Development Areas One, Three, Four, Six, Seven, and Eight.

Transportation and Circulation. Under this alternative, traffic generation would be expected to be less than under either the Maximum Residential Scenario (9,646 daily trips, 792 AM peak-hour trips, 839 PM peak hour trips) or the Maximum Trips Scenario (11,766 daily trips) of the Project, because the alterative includes fewer residential units (805) than the Project. The commercial space, which includes reuse of the existing buildings in Development Area Two for storage and restoration of the 16th Street Train Station, would have negligible peak-hour traffic impacts. Total trip generation under the Reduced Project Alternative would be about 50 to 60 percent of that estimated for the Project, a substantial reduction compared to the Project. Project-specific impacts to study area roadway intersections and freeway segments would be less than significant under the Project; this alternative would further reduce these impacts. The Reduced Project Alternative would also reduce the contribution of Project Area traffic to cumulative traffic impacts at West Grand Avenue/I-880 frontage road and along freeway segments. Cumulative traffic impacts at the intersection would remain significant and unavoidable, but the cumulative considerable contribution to I-880 northbound congestion identified for the Project would not occur with the Reduced Project Alternative.

The Reduced Project Alternative would not include the Project's proposed extension of 16th Street to the frontage road, because this extension would require the demolition of the portion of the Elevated Tracks that extends south of the Main Hall. The elimination of the 16th Street extension would result in inadequate emergency access to the western portions of Development Areas Four and Six, a significant impact that would not occur under the Project.

This alternative would also reduce AC Transit and BART ridership at the West Oakland BART Station, compared to the Project, but the increases in waiting time at the West Oakland BART Station fare gates due to the Reduced Project Alternative, and cumulative impacts on BART fare gate and train capacity would still exist and would remain significant and unavoidable since the mitigation would be out of the City's jurisdiction.

Noise. The Reduced Project Alternative would create significant construction noise and vibration impacts, similar to the Project, although the reduction in scope of this alternative compared to the Project has the potential to reduce this impact by shortening the duration of construction. Other less-than-significant operational noise impacts of the Project, such as noise associated with mechanical equipment and increased traffic, would be less under the Reduced Project Alternative as a result of the substantial decrease in vehicle trip generation.

Air Quality. The Reduced Project Alternative would have the same air quality impacts as the Project. As with the Project, the Reduced Project Alternative would involve construction activities that would not result in short-term increases in PM_{10} emissions that could violate City and BAAQMD air quality standards. Operational air quality impacts and related regional air emissions would be less than

significant under the Reduced Project Alternative, because this alternative proposes less development than the Project, which did not exceed BAAQMD thresholds of significance for operational emissions. Carbon monoxide concentrations would also be less than significant, since this alternative results in fewer peak hour trips. Contributions to cumulative regional air emissions would be less than significant under this alternative, as with the Project, because operational emissions would be lower than under the Project.

Cultural Resources. The cultural resources impacts of the Reduced Project Alternative would be identical to those described for the Preservation Alternative and would avoid the significant unavoidable historic impacts identified for the Project, because the entire 16th Street Train Station complex would be preserved and restored, consistent with the Secretary of the Interior's Standards and Guidelines. This alternative would also result in less-than-significant impacts to the historical setting of the 16th Street Train Station, because adjacent structures on Development Areas Four and Six would be set back from the 16th Street Train Station at least 50 feet, and the height of the structures would not exceed 35 feet within 50 feet of the setback line.

Hazardous Materials. The Reduced Project Alternative would involve the same mitigable hazardous materials impacts as the Project.

Geology. The Reduced Project Alternative would have the same less-than-significant soils, geologic, and seismic impacts as the Project.

Hydrology and Water Quality. The Reduced Project Alternative would result in the same hydrologic and water quality impacts as the Project, since this alternative would not substantially alter the impervious conditions, pollutant loading, or drainage characteristics from those associated with the Project.

Biological Resources. The Reduced Project Alternative would have the same potentially significant impacts to protected trees and active birds' nests as the Project. As with the Project, mitigation measures, including replacement trees, pre-construction surveys for birds' nests, and protection measures for active nests if they are observed, would reduce these impacts to a less-than-significant level.

Population, Housing, and Employment. This alternative would result in a smaller increase in employment and residential population in the Project Area than under the Project and would be consistent with citywide cumulative growth forecasts for both population and employment. As with the Project, this alternative would not displace existing residents or eliminate existing housing units and would, in fact, increase the amount of land classified for residential development, and would help to meet the strong existing demand for housing supply, though not to the degree of the Project.

Utilities. The Reduced Project Alternative would result in less demand for water, sewer transport and treatment, storm drainage, solid waste disposal, and energy than the less-than-significant impacts identified for the Project.

Public Services. The Reduced Project Alternative would result in less demand for fire, police, emergency medical services, schools, libraries, and parks than the less-than-significant impacts identified for the Project.

No Redevelopment of Bea's Hotel Alternative

This alternative proposes the same development program as the Project; however, in preserving Bea's Hotel, Development Area Four would be replanned to either split the proposed commercial retail uses, with a portion facing the Plaza and a portion fronting onto Wood Street, or concentrating the commercial uses at the corner of 14th and Wood Streets. Therefore, impacts would be essentially the same with the exception of land use and visual compatibility.

Land Use. The land use impacts of this alternative are largely identical to those described for the Project; however, retention of the Bea's Hotel would not support creating a pedestrian-oriented commercial area framing the public plaza. The site contributes to the perception of blight in portions of the neighborhood.

This alternative would not promote coordinated development across the Project Area, as Bea's Hotel would be inconsistent in scale and design with adjacent structures in Development Area Four. This alternative would prevent an integrated mix of residential uses and neighborhood-serving commercial uses, and detract from the quality of the Public Open Space proposed as part of the 16th Street extension and the plaza. In fact, the loss of some commercial development opportunities on Development Area Four may prevent the inclusion of a grocery store in the proposed development.

This alternative would, in effect, represent a missed opportunity to support the City's land use and development policies by providing a coordinated redevelopment effort for the Project Area, as envisioned in the *OARB Area Redevelopment Plan*. As a result, the land use impacts of this alternative would be more severe than under the Project and would be considered significant and unavoidable.

Visual Quality. The No Redevelopment of Bea's Hotel Alternative would have the same visual impacts as the Project; the primary difference would be the ability to achieve the goals of visual integrated development.

The Bea's Hotel site would not be redeveloped under this alternative and would continue to contribute to the perception of blight in portions of the neighborhood. With the Bea's Hotel left as is, efforts to achieve a high architectural quality, a consistency in building streetscape, and special design considerations of the Plaza Overlay Zone would not be possible at this key location at 16th and Wood Streets. Specifically, improvements to sidewalks, utilities, street trees, and street lights may not be made. While Project Area development would result in an overall visual improvement, the inability to integrate this key site with the rest of the Project Area would be noticeable and would be considered a significant and unavoidable impact.

Summary of Impact Assessment

Table 5-2 at the end of this section provides a comparison of the relative severity of key environmental impacts for the Project and each project alternative. Cumulative impacts are only presented for those issue areas that are affected by future traffic conditions (e.g., Transportation, Air Quality, Noise).

5.4 ATTAINMENT OF PROJECT SPONSORS' OBJECTIVES

In addition to comparing the alternatives for their environmental impacts, alternatives are evaluated in terms of how well they satisfy the Project Sponsors' objectives. Table 5-3 summarizes whether the alternative fulfills, partially fulfills, is unlikely to fulfill, or does not fulfill the objective.

The No Project Alternatives are not satisfactory at achieving the Project Sponsors' objectives since they emphasize industrial and/or commercial use of the Project Area; whereas, the Project Sponsors intend to pursue a mixed use project with a predominance of residential development and more open space. The OARB Alternative and General Plan Alternative would partially meet the objective of protecting and enhancing the 16th Street Station, because they would restore and reuse the Main Hall and a portion of the Elevated Tracks, the same as the Project. These two alternatives, unlike the No Action Alternative, would likely fulfill the objective of pursuing feasible development that can respond to market conditions. In general, the No Project Alternatives would not fulfill a majority of the Project Sponsors' objectives.

The Preservation Alternative and the Reduced Project Alternative have in common the full preservation, rehabilitation, and reuse of the 16th Street Station and its associated structures. However, in rehabilitating the entire 16th Street Train Station, there is a significant capital investment beyond that assumed by the Project. Since the rehabilitation of the 16th Street Train Station is dependent on tax increment financing, the ability to protect and enhance the resource in an economically viable manner, as called for by the objectives, and the feasibility of the Preservation Alternative are questionable. The issue of economic viability is even more serious for the Reduced Project Alternative, which calls for a substantial reduction in the Project Area's development program, and thus tax increment revenues. The shortfall may also make it more difficult to create the 16th Street Plaza. As a result, neither alternative is expected to restore the train station fully in an economically viable manner. Both alternatives place an emphasis on residential development at urban densities, so that they would satisfy the Project Sponsors' objectives regarding the development of housing, although the Reduced Project Alternative would only partially satisfy this objective because of the fewer number of dwellings. Since these alternatives would also follow the same design guidelines as contained in the proposed Wood Street Zoning Regulations, they could also successfully result in vibrant pedestrian-oriented, mixed use, residential and commercial developments. However, the Preservation Alternative may need to sacrifice some Private Open Space to achieve the same development program as the Project, which means this alternative may only partially achieve the open space objective. The Reduced Project Alternative may not generate sufficient revenues to make the desired design and open space

Table 5-3
Project Alternative Attainment of Project Sponsors' Objectives

Objective	No Action	OARB	General Plan	Preser-vation	Reduced Project	No Redevel-opment of Bea's Hotel
Developing market-rate residential units at urban densities, which provide rental and ownership opportunities with a variety of housing types (including live/work units) and unit sizes that would be available to a range of market-rate household income levels	No	No	No	Yes	Partially	Yes
Expanding West Oakland's market-rate occupied housing stock to encourage local-serving retail development and to attract private construction and mortgage lenders to this sub-market	No	No	No	Yes	Yes	Yes
Developing urban infill housing with convenient transportation access near the center of the Bay Area, which would serve to divert housing from outlying areas and reduce long-distance commute traffic and related pollution	No	No	No	Yes	Yes	Yes
Redeveloping and revitalizing underutilized or vacant land within the Oakland Army Base Redevelopment Project Area to create vibrant pedestrian-oriented, mixed-use, residential and commercial developments while providing for flexible land uses	No	Partially	No	Yes	Yes	Partially
Protecting and enhancing, in an economically viable manner, the historically, culturally and architecturally significant elements of the 16th Street Train Station through their restoration, rehabilitation and reuse	No	Partially	Partially	Unlikely	Unlikely	Partially
Creating publicly accessible open space directly in front of the 16th Street Train Station in the form of a plaza to facilitate the community's enjoyment of the Station as an important historic asset	No	No	No	Yes	Unlikely	Unlikely
Providing additional open space throughout the Project Area in order to give a sense of visual and spatial relief to the residents and the community	No	No	No	Partially	Yes	Yes
Providing for the undergrounding of utilities and also providing extensive off-site improvements to existing, old infrastructure with respect to the streetscape, sidewalks, lighting and parking	No	Yes	No	Yes	Yes	Partially
Constructing financially feasible developments with sufficient flexibility to adjust to market needs and provide reasonable returns on investments so as to secure construction and long-term financing	No	Yes	Yes	Unlikely	Unlikely	Yes

Source: EIP Associates, 2004.

improvements such as the public plaza. In general, the Preservation Alternative and the Reduced Project Alternative attain most of the Project Sponsors' objectives, but they are questionable in the areas of economic viability and financial feasibility.

The No Redevelopment of Bea's Hotel Alternative is similar to the Project in terms of overall layout, design, and development program, except at the southwest corner of 16th and Wood Streets where the Bea's Hotel is located. Thus, for most objectives, this alternative would achieve the Project Sponsors' objectives. However, the retention of the Bea's Hotel compromises the objective of creating a vibrant pedestrian-oriented development, because the hotel would preclude the desired streetscape, ground-floor retail, and pedestrian-oriented development along Wood Street and surrounding the 16th Street Plaza. These effects also make it unlikely that the Project would achieve the design concepts intended for the public plaza in front of the 16th Street Train Station.

5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

No Project/No Action Alternative

As discussed above and summarized in Table 5-2, the No Project/No Action Alternative would avoid or substantially reduce many of the Project's significant impacts. It would also avoid significant and unavoidable impacts associated with cumulative intersection and freeway segment levels of services. In light of these results, the No Project/No Action Alternative could be considered environmentally superior to the Project. However, the No Project/No Action Alternative suffers on three counts: continued deterioration of the 16th Street Train Station, inconsistency with certain General Plan policies, and failure to achieve any of the Project Sponsors' objectives, as shown on Table 5-3. Impacts to cultural resources would be significant and unavoidable because the 16th Street Train Station and associated structures (Baggage Wing and Elevated Tracks) would continue to deteriorate, which would compromise its historic significance and setting. The No Project/No Action Alternative would not achieve Goal 1 of the Historic Preservation Element (HPE), which strives to use historic preservation to foster the economic vitality and quality life in Oakland. None of the following elements of Goal 1 of the HPE would be met by the No Project/No Action Alternative:

1. Stressing the positive community attributes expressed by well-maintained older properties;

2. Maintaining and enhancing throughout the city the historic character, distinct charm, and special sense of place provided by older properties;

3. Establishing and retaining positive continuity with the past thereby promoting pride, a sense of stability and progress, and positive feelings for the future;

4. Stabilizing neighborhoods, enhancing property values, conserving housing stock, increasing public and private economic and financial benefits, and promoting tourist trade and interest through preservation and quality maintenance of significant older properties;

5. Preserving and encouraging a city of varied architectural styles and environmental character reflecting the distinct phases of Oakland's cultural, social, ethnic, economic, political, and architectural history; and

6. Enriching the quality of human life in its educations, spiritual, social, and cultural dimensions through continued exposure to tangible reminders of the past.

Preservation Alternative and Reduced Project Alternative

Implementation of the Preservation Alternative or the Reduced Project Alternative could reduce impacts to historic resources to a less-than-significant level, but would result in a new significant impact related to emergency access to Development Areas Four and Six. By retaining the 16th Street Train Station and associated structures, the extension of 16th Street would not be possible and emergency access to Development Areas Six and Nine could be compromised. In order to provide adequate emergency access under the Preservation Alternative and Reduced Project Alternative, a portion of Development Areas Four and Six would be used for emergency access. In order to maintain the same development program as that of the Project since a goal of the Preservation Alternative is to make it as economically viable as possible, the Preservation Alternative would need to further intensify development and/or reduce Private Open Space in these areas. The Reduced Project Alternative offers the added benefit of avoiding cumulative traffic impacts on northbound I-880 and reducing potential land use incompatibilities with nearby development. Both the Preservation Alternative and the Reduced Project Alternative could potentially be environmentally superior to the Project. Nevertheless, issues of feasibility face both of these alternatives.

Restoration and reuse of the entire 16th Street Train Station, including the Elevated Tracks and Baggage Wing, would be difficult, although not impossible, given the available tax increment funds needed to finance the restoration and the operational logistics of adaptive reuse. Supplemental funds in the form of historic preservation tax credits (HPTCs) would likely be necessary. Further, to be successful, adaptive reuse of the 16th Street Train Station requires that a user of the structure be found, a viable plan for tenant improvements be formulated, and that true building costs be consistent with restoration and reuse estimates. Given the size of the structure and the availability of potential tenants, it is possible that rents in the rehabilitated structure would not cover expenses beyond operation of the building, and therefore no income would be available to support capital improvements (including tenant improvements and renovation). Even assuming the presence of funding from outside sources, the critical questions of timing of the available funds and requisite security of finances for the renovation are too speculative to be relied upon. As noted above, restoration and reuse of the 16th Street Train Station as called for by the Preservation Alternative and Reduced Project Alternative face a number of challenging hurdles which affect the economic feasibility of their implementation.

In addition, redevelopment activities are funded through a concept known as "Tax Increment Financing" (TIF). When a redevelopment area is formed, the property tax assessments on the tax roll at the time of formation become a property tax "base" for redevelopment funding purposes. Presumably, through the efforts of a redevelopment agency to improve economic, environmental,

social, and structural conditions in the area, property values increase. As these values increase, the portion of the value in excess of the "base year" becomes the incremental assessed value. Property tax from the incremental assessed values is used exclusively by a redevelopment agency to fund its activities. In this way, a redevelopment agency receives funding for further activities only if it is successful in improving the area's overall economic health and vitality. These funds are typically used to make areawide circulation, infrastructure, and beautification improvements. The cost of restoring and adaptively reusing the 16th Street Train Station could absorb the tax increment funds to the point that other improvements in the redevelopment project area are compromised. With the large demand for tax increment revenues to fund the 16th Street Train Station rehabilitation, the Reduced Project Alternative may not propose sufficient new development to generate the necessary tax increment revenue stream. Detailed financing plans would be needed to assure that the Preservation and Reduced Project Alternatives do not make financially infeasible infrastructure, design, and open space improvements sought by the *OARB Area Redevelopment Plan*.

To accomplish the Preservation Alternative's objective of preserving the 16th Street Train Station in full and maintaining the amount of development allowed by the Maximum Residential Scenario of the Project, buildings must be taller or construction must occur on property that would otherwise be developed as Private Open Space under the Project. Taller structures would involve different housing construction techniques, life-safety requirements, and other code requirements, all of which would be more costly and may not allow for the provision of reasonable returns on investment to secure construction and long-term financing. The alternative to taller structures would be to eliminate much of the Private Open Space in Development Area Six.

No Redevelopment of Bea's Hotel Alternative

With respect to the No Redevelopment of Bea's Hotel Alternative, this alternative would impair the ability for the Project Area to function as a unified and connected set of land uses. While other elements of the Project would be developed and/or rehabilitated, Bea's Hotel would continue to be a blighting influence to an otherwise revitalized area. In addition, as a prime corner lot within the Project Area, the Bea's Hotel site provides an important physical connection to the remainder of the Project Area, which would be underutilized as long as the hotel remains in its existing location. Finally, if the Bea's Hotel precludes the development of retail space in Development Area Four, there may not be sufficient private funds to improve the 16th Street Plaza or underground utilities along its frontage.

Table 5-2
Summary of Key Impacts: Project and Alternatives

Impact[a]	Project	No Action Alternative	OARB Alternative	General Plan Alternative	Preservation Alternative	Reduced Project Alternative	No Redevelopment of Bea's Hotel Alternative
		265,700 sf commercial use	**250 live/work units; 1.3 million sf commercial office; 120,000 sf of light industrial**	**800,000 sf general industrial**	**1,570 dwelling units; 36,700 sf commercial space**	**805 dwelling units; 257,500 sf commercial space**	**1,570 dwelling units; 35,300 sf commercial space**
Land Use							
Physically divide an established community.	NI	NI	NI	NI	NI	NI	NI
Introduce land uses that could potentially result in land use compatibility impacts.	LTS	LTS	PS/LTS	PS/LTS	LTS	LTS	LTS
Consistency with current land use classifications and zoning districts for the Project Area.	PS/LTS	NI	PS/LTS	LTS	PS/LTS	PS/LTS	PS/LTS
Conflict with applicable land use plans, policies, or regulations.	LTS	LTS	LTS	LTS	LTS	LTS	S/SU
Visual Quality							
Substantial effect on a scenic vista or scenic resources within a state scenic highway.	LTS	NI	LTS	LTS	LTS	LTS	LTS
Substantially degrade the existing visual character or quality of the Project Area and its surroundings.	LTS	NI	PS/LTS	PS/LTS	LTS	LTS	LTS
Alter the existing nighttime light and glare characteristics of the Project Area with the introduction of building, parking, and landscaping elements.	LTS	NI	PS/LTS	PS/LTS	LTS	LTS	LTS
Cast shadows that could result in a long-term change in the shadow effects in the area.	LTS	NI	LTS	LTS	PS/LTS	LTS	LTS

Table 5-2 (Continued)
Summary of Key Impacts: Project and Alternatives

Impact[a]	Project	No Action Alternative	OARB Alternative	General Plan Alternative	Preservation Alternative	Reduced Project Alternative	No Redevelopment of Bea's Hotel Alternative
Consistent with General Plan policies concerning design and visual resources.	LTS	LTS	LTS	LTS	LTS	LTS	S/SU
Transportation							
Adversely affect local circulation when adding construction-related traffic.	PS/LTS	NI	PS/LTS	PS/LTS	PS/LTS	PS/LTS	PS/LTS
Substantially impact access or traffic load and capacity of the street system.	LTS	NI	LTS	LTS	LTS	LTS	LTS
Cause freeway segments on the Metropolitan Transportation System to operate at LOS F, or increase the V/C ratio by more than three percent for segments that would operate at LOS F without Project traffic.	LTS	NI	S/SU	LTS	LTS	LTS	LTS
Substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature.	PS/LTS	NI	PS/LTS	PS/LTS	S/SU[b]	S/SU[b]	PS/LTS
Fundamentally conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).	PS/LTS	NI	PS/LTS	PS/LTS	PS/LTS	PS/LTS	PS/LTS
Increase the average ridership on AC Transit lines by more than three percent on transit lines serving the Project Area, but the average load factor with the Project would not exceed 125 percent over a peak 30-minute period.	LTS	NI	LTS	LTS	LTS	LTS	LTS
Increase the passenger volume such that passenger volume could exceed the standing capacity of BART trains, but the increase would not raise peak-hour average ridership by three percent.	LTS	NI	LTS	LTS	LTS	LTS	LTS

Table 5-2 (Continued)
Summary of Key Impacts: Project and Alternatives

Impact[a]	Project	No Action Alternative	OARB Alternative	General Plan Alternative	Preservation Alternative	Reduced Project Alternative	No Redevelopment of Bea's Hotel Alternative
Increase peak-hour average ridership at the West Oakland BART station by three percent where average waiting time at fare gates could exceed one minute.	S/SU	NI	S/SU	LTS	S/SU	S/SU	S/SU
In combination with other foreseeable and background growth cause signalized intersections to operate at unacceptable levels of service.	S/SU	LTS	S/SU	S/SU	S/SU	S/SU	S/SU
In combination with other foreseeable and background growth cause roadway segments on the MTS to operate at LOS F.	S/SU[c]	NI	S/SU	LTS	LTS	LTS	LTS
In combination with other foreseeable and background growth, increase average ridership on AC Transit lines serving the Project Area by more than three percent. However, the average load factor with the Project would not exceed 125 percent over a peak 30-minute period.	LTS	NI	LTS	LTS	LTS	LTS	LTS
In combination with other related projects and background growth, increase the overall passenger volume such that the passenger volume could exceed the standing capacity of BART trains and could increase peak-hour average ridership by three percent.	S/SU	LTS	LTS	LTS	S/SU	S/SU	S/SU
In combination with other related projects and background growth, would increase peak-hour average ridership at the West Oakland BART Station by three percent where average waiting time at fare gates could exceed one minute.	S/SU	LTS	S/SU	LTS	S/SU	S/SU	S/SU
Noise							
Short-term increases in noise and vibration levels due to construction.	S/LTS	NI	S/LTS	S/LTS	S/LTS	S/LTS	S/LTS
Increase ambient noise levels greater than 5 dBA.	LTS	LTS	PS/LTS	PS/LTS	LTS	LTS	LTS

Table 5-2 (Continued)
Summary of Key Impacts: Project and Alternatives

Impact[a]	Project	No Action Alternative	OARB Alternative	General Plan Alternative	Preservation Alternative	Reduced Project Alternative	No Redevelopment of Bea's Hotel Alternative
Contribute to cumulative noise impacts.	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Air Quality							
Short-term increases in PM_{10} emissions that could violate City and BAAQMD air quality standards.	PS/LTS	NI	PS/LTS	PS/LTS	PS/LTS	PS/LTS	PS/LTS
Increase in regional air emissions resulting in violation of City or BAAQMD air quality standard or contribute substantially to an existing air quality problem.	LTS	LTS	PS/SU	PS/SU	LTS	LTS	LTS
Contribute to CO concentrations exceeding the State Ambient Air Quality Standard.	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Create objectionable odors affecting a substantial number of people.	LTS	LTS	LTS	PS/LTS	LTS	LTS	LTS
Be a significant source of Toxic Air Contaminants.	NI	NI	LTS	PS/LTS	NI	NI	NI
Conflict with the applicable air quality plan or result in a fundamental conflict with the General Plan.	LTS	LTS	S	PS/SU	LTS	LTS	LTS
Cultural Resources							
Directly impact previously unknown archaeological resources, including human burials, or paleontological resources in the Project Area by disturbing both surface and subsurface soils. Such disturbance could result in the loss of integrity of cultural deposits.	PS/LTS	NI	PS/LTS	PS/LTS	PS/LTS	PS/LTS	PS/LTS
Involve demolition of portions of the 16th Street Train Station or result in its continued deterioration.	S/SU	S/SU	S/SU	S/SU	LTS	LTS	S/SU
Adversely affect the historical setting and views of the 16th Street Train Station and the 16th Street Signal Tower.	S/SU	LTS	S/SU	S/SU	LTS	LTS	S/SU

Table 5-2 (Continued)
Summary of Key Impacts: Project and Alternatives

Impact[a]	Project	No Action Alternative	OARB Alternative	General Plan Alternative	Preservation Alternative	Reduced Project Alternative	No Redevelopment of Bea's Hotel Alternative
Hazardous Materials							
Disturb hazardous materials in existing building components and thereby could cause adverse health or safety effects.	PS/LTS	PS/LTS	PS/LTS	PS/LTS	PS/LTS	PS/LTS	PS/LTS
Expose construction personnel and the public to existing contaminated soil and/or groundwater.	PS/LTS	NI	PS/LTS	PS/LTS	PS/LTS	PS/LTS	PS/LTS
Accidental release of hazardous materials during operations.	LTS	LTS	PS/LTS	PS/LTS	LTS	LTS	LTS
Soils, Geology, and Seismicity							
Subject buildings and infrastructures to potentially damaging, seismically induced groundshaking during the life of the Project.	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Increase erosion or geo-seismic hazards.	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Hydrology and Water Quality							
Increase amounts of silt and sediment and degrade receiving water quality.	LTS	NI	LTS	LTS	LTS	LTS	LTS
Develop impervious surfaces resulting in greater stormwater runoff and pollutant loadings.	LTS	NI	LTS	LTS	LTS	LTS	LTS
Biological Resources							
Removal of protected trees and potential birds' nests within the Project Area.	PS/LTS	NI	PS/LTS	PS/LTS	PS/LTS	PS/LTS	PS/LTS

Table 5-2 (Continued)
Summary of Key Impacts: Project and Alternatives

Impact[a]	Project	No Action Alternative	OARB Alternative	General Plan Alternative	Preservation Alternative	Reduced Project Alternative	No Redevelopment of Bea's Hotel Alternative
Population, Employment, and Housing							
Increase population in the population study area, such that growth is inconsistent with cumulative growth forecasts for the City.	LTS	NI	LTS	LTS	LTS	LTS	LTS
Displace residents or housing units.	NI	NI	NI	NI	NI	NI	NI
Utilities							
Exceed the available capacity for wastewater, storm drainage, water, solid waste disposal, or energy.	LTS	NI	LTS	LTS	LTS	LTS	LTS
Public Services							
Increase demand for public services triggering the need for new or expanded facilities.	LTS	NI	LTS	LTS	LTS	LTS	LTS

Comparison to Setting
LTS = Less-than-significant impact after mitigation
S = Significant
SU = Significant and unavoidable
NI = No impact

a Significance levels for the project and the alternatives reflect the levels of significance before and after mitigation. Thus, for example, S/LTS signifies the impact is significant before mitigation but less than significant after mitigation. S/SU signifies the impact is significant before mitigation and significant and unavoidable after mitigation. Symbols indicate maximum impact during buildout and operation, unless otherwise specified.

b. This significant and unavoidable impact relates to inadequate emergency access.

c. This significant and unavoidable impact identified for the Project occurs only under the Maximum Trips Scenario. The Preservation, Reduced Project, and No Redevelopment of Bea's Hotel Alternatives all have development programs similar to or less than the Maximum Trips Scenario. Accordingly, these alternatives would have less-than-significant cumulative freeway impacts.

Section 6
List of Preparers

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Jason Neri, P.E., B.S. Civil Engineering: Utilities

Dowling Associates, responsible for transportation and traffic analysis.

Mark Bowman, B.A. Mathematics, M.S.C.E.: Transportation
Alice Chen, AICP, M.S. Transportation Engineering: Transportation

Hausrath Economics Group, responsible for cumulative growth analysis.

Linda Hausrath, M.B.A. Urban Economics and Real Estate: Project Manager
Andrew Delaney, M.C.P. Urban and Regional Planning and Policy: Economic Analyst

Alan Dreyfuss, responsible for historic evaluation of 16th Street Train Station.

Alan Dreyfuss, AIA, B.A. Architecture

Square One Productions, responsible for visual simulations and shadow diagrams.

Hartmut H. Gerdes, AICP, M.R.P., M. Arch.: Principal

Angela Lin, B.A., Liberal Arts: Visual Simulations

Summary

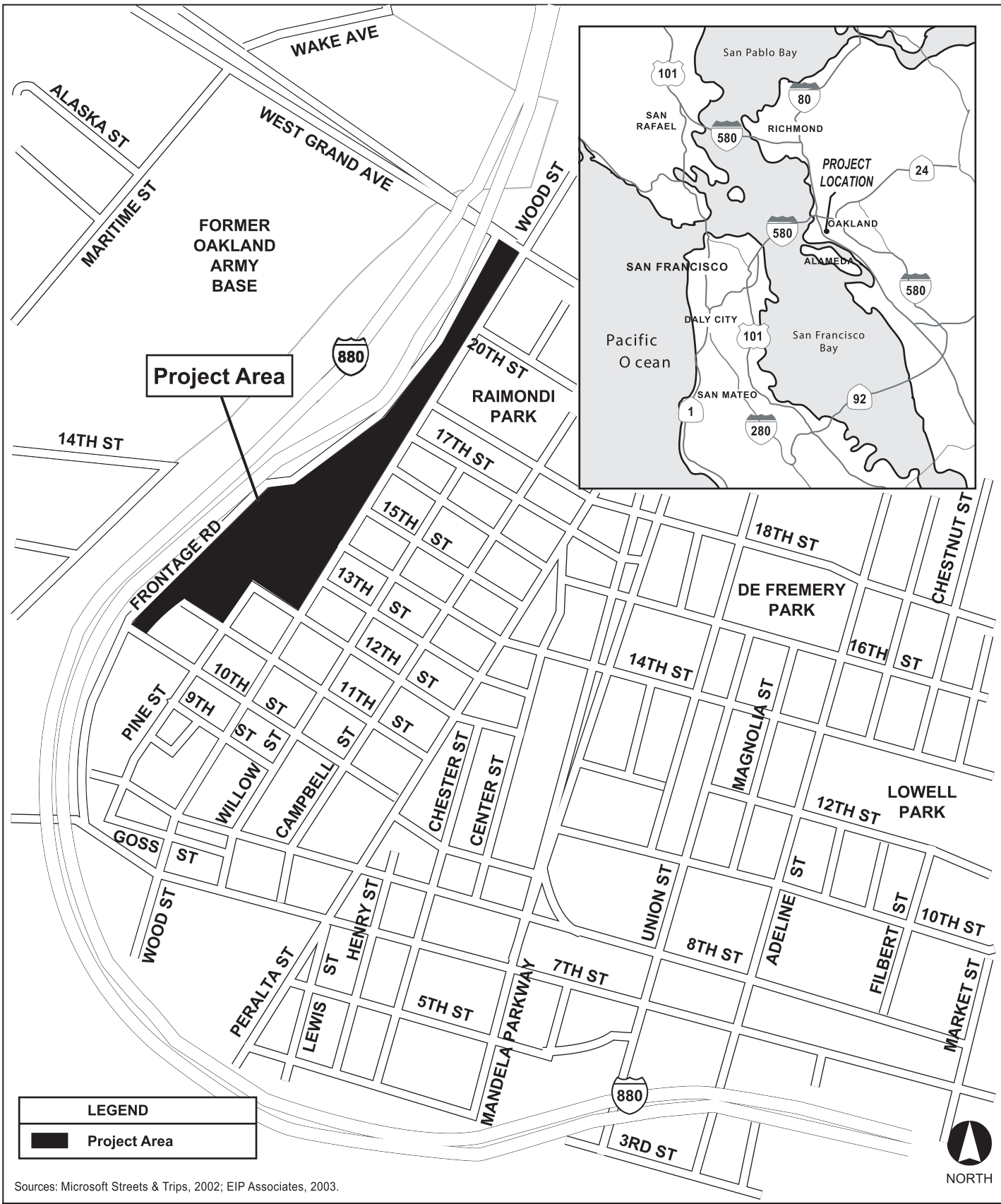
S.1 PROJECT DESCRIPTION

In response to the increasing demand for flexible residential uses in the urban area near downtown Oakland and within reach of major transit facilities, a project has been proposed to redevelop the underutilized industrial land around the vacant, historic Southern Pacific 16th Street Train Station (16th Street Train Station) to pedestrian-oriented, mixed-use, residential, live-work and commercial developments. These developments are collectively referred to as the Wood Street Project (the Project). The Project was previously known as the "Central Station Project" (as referred to in the Notices of Preparation that were issued). This name change is merely definitional and does not in any way reflect a change in the substance or scope of the Project. Any reference to the "Central Station Project" in this EIR, its appendices, or other related documents that are a part of the administrative record for this Project shall be construed the same as if the term "Wood Street Project" were used.

The Project Sponsors for this proposed revitalization project in West Oakland are BUILD West Oakland, LLC; Central Station Land, LLC; PCL Associates LLC; and HFH Central Station Village, LLC. Each Project Sponsor owns portions of land within a 29.2-acre site (the Project Area; see Figure S-1) and proposes to construct a separate development within the Project Area on individual timelines. Individual developments would be visually and functionally integrated through application of proposed Wood Street Zoning District Regulations (Wood Street Zoning Regulations) that would be incorporated into a new zoning district proposed to implement the Project. Thus, although the individual Project Sponsors will develop individual properties, each property must be developed according to these regulations and other requirements established for the entire Project Area.

For purposes of this EIR, the Project Area has been divided into nine development areas (see Figure S-2) proposing in aggregate over 1,000 residential units, retail and office space, and rehabilitation of the interior and exterior of the 16th Street Train Station Main Hall and nearby Signal Tower. The 16th Street Train Station consists of (1) a central, approximately 15,000-square-foot (sf) main section (Main Hall); (2) a large L-shaped baggage wing extending to the north and west of the north wing (Baggage Wing); (3) elevated tracks running along the entire west side of the station, extending beyond the station building to the north and south (Elevated Tracks); and (4) a signal tower north of the station building, along the line of the original tracks (16th Street Signal Tower).

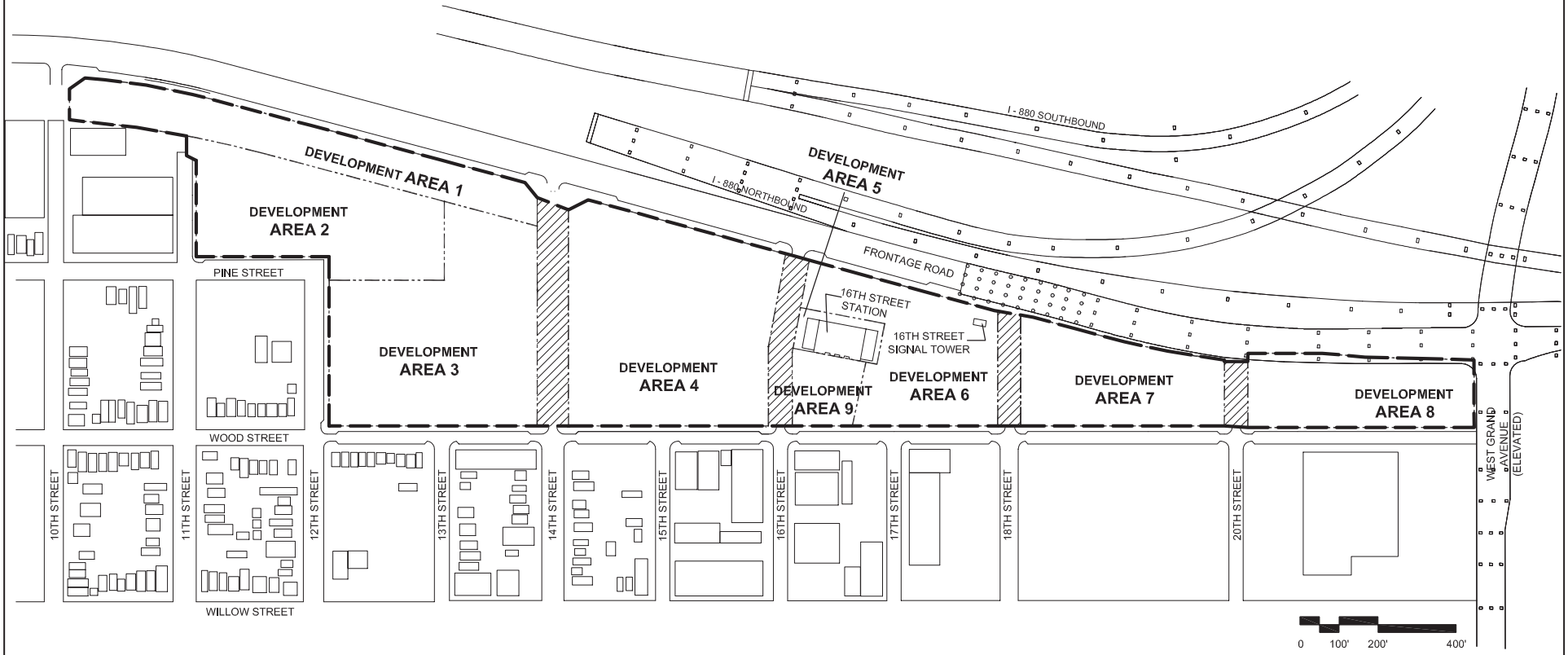
Reuse of the Main Hall would incorporate exhibit space commemorating the site as the end of the Trans-continental Railroad and the gateway arrival point in the West, and its historical significance to the organization of the Brotherhood of Sleeping Car Porters, the first Black workers' union in the United States. The Project proposes to demolish the Baggage Wing and the majority of the Elevated Tracks. The 16th Street Signal Tower would be preserved, restored, and rehabilitated as a historic structure. To encourage public access to the restored 16th Street Train Station, the Project also proposes to create an approximate 0.75-acre public plaza in front of the Main Hall.



Sources: Microsoft Streets & Trips, 2002; EIP Associates, 2003.

EIP ASSOCIATES

FIGURE S-1
Project Location



EIP ASSOCIATES

FIGURE S-2

Proposed Development Areas

The Project Area is located in West Oakland and consists of approximately 29.2 acres. Generally bounded by 10th Street, Wood Street, West Grand Avenue, and the frontage road and I-880, the Project Area lies within the 16th/Wood sub-district of the Oakland Army Base Redevelopment Project Area. Currently zoned for industrial uses, the Project Area is largely vacant and underutilized with the exception of a commercial building at 16th and Wood Streets (Bea's Hotel), and several warehouses (at Pine and 11th Streets, 14th and Wood Streets, and 17th and Wood Streets), along with railroad spurs, and truck and empty rail car storage.

In order for the Project to be implemented as proposed, the following approvals or permits may be required:

- General Plan Amendment to change land use classification from Business Mix to Urban Residential
- Zoning Code Amendment and Rezoning to replace industrial zoning with the Wood Street Zoning District
- Redevelopment Plan Amendment to change the land use designations in the Oakland Army Base Area Redevelopment Plan and to permit housing
- San Francisco Bay Conservation Development Commission Bay Plan and Seaport Plan Amendments to remove the port priority use designation on a portion of the Project Area
- Accommodation of port priority use designation in the remainder of the Oakland Army Base Area Redevelopment Area or other appropriate sites
- Vesting Tentative Parcel Maps
- Final Design Review
- Preliminary and Final Development Plans
- Tree Removal Permits

Land Use Designations

All lands within the Project Area would be classified into one of three land use designations: Development Areas, Public Open Space, or Public Streets:

- Development Areas are privately owned lots that are intended for development. Nine distinct areas are identified, each permitting a different range of land uses in accordance with the proposed Wood Street Zoning Regulations specific to each area (see Figure S-2).
- Public Open Space is land where buildings would not be permitted and Public Open Space improvements would be made. Public Open Space in the Project Area is proposed to be

developed as pocket parks and plazas for the enjoyment by Project Area residents and the general public. In addition to Public Open Space, portions of the site are set aside to serve the open space needs of Project Area residents and workers. These "private" open space areas are included within the broader Development Area designation, identified above.

- Public Streets are lands intended for pedestrian and bicycle access between Wood Street and the frontage road, generally as extensions of 14th, 16th, and 18th Streets. The Project Sponsors will make an irrevocable offer for dedication of these areas to the City. Through vehicular access would not be permitted but the Public Streets would permit through emergency vehicle, bicycle, and pedestrian access.

An Illustrative Concept Plan (Figure S-3) shows a conceptual arrangement of land uses, open space, and circulation. The largely vacant and underutilized industrial Project Area would be redeveloped with residential uses at densities consistent with the Urban Residential land use designation in the City of *Oakland General Plan* Land Use and Transportation Element, a public plaza in front of the 16th Street Train Station (16th Street Plaza), extensive landscaping and other public improvements along the Project Area perimeter, and pocket parks dispersed throughout the Project Area. Commercial/retail uses would be encouraged on the north and south sides of the 16th Street Plaza, and at other locations in accordance with the proposed Wood Street Zoning Regulations.

Overlay Zones

The proposed Wood Street Zoning Regulations define three overlay zones that would modify or replace otherwise applicable regulations in portions of the Project Area. The overlay zones would not be stand-alone zones; rather, they would provide further refinement and modification for the underlying development area regulations in response to specific adjoining conditions, such as compatibility with existing neighborhood development. The three overlay zones are:

- *Wood Street Overlay Zone* would be established to assure that there is a transition in scale from the existing neighborhood east of Wood Street to the proposed mixed-use development within the Project Area, and to promote an active and pedestrian-scaled street frontage along Wood Street. The Wood Street Overlay Zone would encompass an approximate 30-foot-wide band along Wood Street between 12th and 20th Streets.

- *Plaza Overlay Zone* would be established to encourage new development around the 16th Street Plaza that: (1) creates a well-defined urban space fronting the 16th Street Train Station; (2) ensures that the scale and heights of new buildings are complimentary to those of the 16th Street Train Station; and (3) provides for ground-floor commercial uses fronting the 16th Street Plaza to the north and south.

- *Frontage Road Overlay Zone* would be established to allow greater flexibility for development facing the frontage road that runs along the Project Area's western boundary. The Frontage

Road Overlay Zone would encompass an approximate 20-foot-wide band along the frontage road between 10th Street and the extension of 16th Street.

Wood Street Zoning Regulations

The proposed Wood Street Zoning Regulations set forth the zoning standards, guidelines, regulations, and other requirements governing the development and use of property within the Project Area. Among other things, these regulations would specify maximum and minimum density, floor area ratio, minimum street setbacks, minimum interior setbacks, and maximum heights for each development area. The complete set of draft regulations is attached to this EIR as Appendix H.

Land Uses and Development Program. Based on the defined development areas and the proposed Wood Street Zoning Regulations applicable thereto, the Project Sponsors have developed specific proposals for their respective properties within the Project Area. The aggregated residential, commercial, and open space development is presented in Table S-1. For purposes of this EIR, open space consists of two categories: Public Open Space and Private Open Space. Public Open Space consists of uses accessible to the general public; these include the 16th Street Plaza in Development Area Nine and five pocket parks. Private Open Space consists of land within the development areas that serves the needs of Project Area residents and workers; these include both group usable open space and private usable open space, as defined in the Oakland Planning Code. Specific land uses for some development areas would remain flexible in order to respond to future market conditions, and three development areas show the potential for increased commercial uses rather than residential uses, as shown in Table S-1.

The various developments proposed within the Project Area would consist primarily of residential development, totaling 1,570 dwelling units, 186 of which would be live-work units. The Project would result in an increase in the residential population at the Project Area by 3,414 residents by buildout. Commercial space would include 13,000 sf of neighborhood-serving commercial uses plus 14,847 sf associated with the 16th Street Train Station. The Main Hall of the Station between 16th and 17th Streets and the Signal Tower would be restored. Public Open Space, consisting of the 16th Street Plaza and the five pocket parks, would total 1.39 acres (60,670 sf). Private Open Space would total 2.82 acres (122,925 sf). This land use program, which emphasizes residential development, is referred to as the "Maximum Residential Scenario."

As discussed above, three development areas (Development Areas Two, Four, and Eight) may increase commercial rather than residential uses. For the purpose of analyzing impacts, this EIR examines the possibility that all three development areas develop with the increased commercial uses, resulting in a "Maximum Commercial Scenario." Under this scenario, the Project would consist of 1,084 dwelling units, 142 of which would be live-work units; this would result in an increase in the residential population at the Project Area by 2,759 residents at buildout. Commercial space would include a total



Source: Pyatok Architects, Inc., 2004.

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FIGURE S-3

Illustrative Concept Plan

Table S-1
Project Area Land Use and Development Program by Development Area

Development Area	Owner	Size (acres)	Existing Use (sf)	Maximum Residential Scenario: Proposed Residential (units)	Maximum Residential Scenario: Proposed Commercial (sf)	Maximum Residential Scenario: Proposed Private Open Space[b] (sf)	Maximum Commercial Scenario[a]: Proposed Residential (units)	Maximum Commercial Scenario[a]: Proposed Commercial (sf)	Maximum Commercial Scenario[a]: Proposed Private Open Space[b] (sf)
One	BUILD West Oakland, LLC	2.89	0	82	0	8,200	82	0	8,200
Two	PCL Associates LLC	3.67	220,779 commercial	189	0	18,900	0	220,779	0
Three	BUILD West Oakland, LLC	5.59	0	200	0	20,000	200	0	20,000
Four[c]	HFH Central Station Village, LLC	6.33	25,756 commercial	450	7,000	33,750	417	40,000	31,275
Five	BUILD West Oakland, LLC	0.52	15,427 train station	0	14,847	0	0	14,847	0
Six	BUILD West Oakland, LLC	3.04	27,472 commercial; train station	215	6,000	16,125	215	6,000	16,125
Seven	Central Station Land, LLC	2.65	0	170	0	12,750	170	0	12,750
Eight	Central Station Land, LLC	2.01	0	264[d]	0	13,200	0	258,000	0
Nine	BUILD West Oakland, LLC	0.75	0	0	0	0	0	0	0
TOTAL		**27.45[e]**	**289,434**	**1,570**	**27,847**	**122,925**	**1,084**	**539,626**	**88,350**

Source: Project Sponsors, August 2004.

Notes:
sf = square feet

a. As noted in the text, three of the development areas include optional land uses (Development Areas Two, Four, and Eight), which increase the amount of commercial uses. If all three development areas were to be developed with the optional commercial uses, the resulting land use program would define the maximum commercial development potential for the entire Project Area. This combination of land use options is referred to as the Maximum Commercial Scenario.

b. The open space figures do not include Public Open Space. The addition of the 16th Street Plaza and the five pocket parks (totaling 60,670 sf) to the Private Open Space figures reported in this table yields a total of 183,595 sf of open space for the Maximum Residential Scenario and 149,020 sf of open space for the Maximum Commercial Scenario.

c. The existing commercial floor area includes 7,519 sf associated with the Bea's Hotel on a parcel not owned by HFH Central Station Village, LLC. The Project proposes to include the parcel and redevelop the land to achieve the land development program indicated in this table. This EIR evaluates the impacts of the Project assuming the desired incorporation of the Bea's Hotel parcel. An alternative is presented in Section 5 to address the event that this parcel remains separate.

d. The actual number of units to be constructed in Development Area Eight is 251 units based on the proposed maximum density. The analyses in this EIR are based on 264 units for the development area and 1,570 units for the entire Project Area, which reflect an earlier assumption about the potential density for this development area. The difference in residential units of 13 dwellings does not materially affect the impact assessment; in fact, the analyses based on 264 units in Development Area Eight are conservative (greater impacts would result), since the actual number of units would be less than assumed in the analyses.

e. In addition to the acreage reported here, there are 1.75 acres proposed for dedication to the City. Thus, the total Project Area acreage is 29.2 acres.

of 539,626 sf. Public Open Space would be the same as for the Maximum Residential Scenario (60,670 sf), but Private Open Space would be less at 88,350 sf. The remaining development areas would not change uses from the Maximum Residential Scenario.

The proposed developments that make up the Project are expected to be constructed on independent schedules over an approximate ten-year period. Construction is anticipated to occur in four phases. Phase One from 2005–2006 would include Development Areas One, Two, Three, Four, and Nine, generally the portion of the Project Area south of the 16th Street Train Station, plus the 16th Street Plaza. Phase Two from 2006–2007 would include development of residential and commercial portions of Development Area Six. Phase Three from 2008–2013 would include restoration work on the 16th Street Train Station in Development Area Five. The final phase, Phase Four, from 2008 to 2015, would include construction in Development Areas Seven and Eight. The proposed Wood Street Zoning Regulations also include a master phasing plan. This EIR assumes that the sequencing of development projects would follow this phasing plan.

Circulation and Access

The Project Area currently has vehicular access from Wood Street and from a frontage road owned and controlled by Caltrans. The frontage road is a service road linking two half interchanges of the I-880 freeway system. The Project Area is currently accessible from surrounding neighborhood streets including Wood Street (running north-south), 10th through 20th Streets (running east-west), and Pine Street (also running north-south). Although the Project Area is bounded by West Grand Avenue, there is no direct access to the Project Area from this street, since West Grand Avenue is elevated on a structure along the edge of the Project Area.

The Project proposes to improve Wood Street between 12th Street and West Grand Avenue, as well as 12th Street between Wood and Pine Streets, and Pine Street between 12th and 11th Streets and 11th Street to the west of Pine Street. Improvements would include roadway resurfacing, new curbs and gutters (as necessary), new sidewalks, street trees, and lighting along the edge of the Project Area. The existing streets that currently serve the Project Area would continue to be the principal means of accessing the site. Private access roads are proposed parallel to the frontage road to offer internal access to some of the development areas, and for emergency access purposes.

To further improve access to each of the various development areas, the following east-west streets that currently terminate at Wood Street, or just west of Wood Street, would be extended farther into the Project Area and offered for dedication as public streets to the City of Oakland: 14th Street, 16th Street, 18th Street, and 20th Street.

To improve pedestrian access, the Project proposes to minimize the number of driveways on Wood Street. Pedestrian and bicycle circulation would be provided along all Public Streets. Pedestrian access through the Project Area would occur along all east-west streets and along the Public Streets

bordering the Project Area. Bicycle traffic would share the Public Streets in the Project Area. Emergency access would be provided at street frontages along all Public Streets, and emergency vehicles would be the only vehicles that would have through access on streets throughout the Project Area.

Design Features and Amenities

The proposed Wood Street Zoning Regulations set forth detailed design guidelines, which establish the qualitative design parameters for the Project Area, and address aspects of building and site design not otherwise regulated by the proposed development standards. The design guidelines seek to create a cohesive architectural character for the Project Area. This character would be accomplished by requiring each development's use of massing, articulation, materials, and detail to establish a coherent and integrated set of architectural elements that is complementary throughout the Project Area. All built aspects of each development would contribute to the architectural character of the development, including, but not limited to, site structures and furnishings, exterior lighting, paving, and signage. Buildings in the Project Area would not follow any specific architectural style. Instead, within the overall scope of the proposed Wood Street Zoning Regulations, a variety of architectural styles would be encouraged as a means of enhancing the mixed urban character of the Project Area. Each project within a development area would be evaluated in terms of the degree to which it satisfies the design guidelines, in accordance with provisions in the proposed Wood Street Zoning Regulations governing Final Development Plans and Final Design Review.

Specifically, the design guidelines recommend each development to:

- Create patterns of ground-level pedestrian connections.
- Promote visibility for pedestrians and residents from adjoining street areas.
- Encourage building massing that is consistent with a neighborhood-oriented mixed-use character.
- Encourage building articulation that is consistent with a neighborhood-oriented mixed-use character.
- Discourage parking garage facades that are utilitarian in character, allow extensive views of parked cars, or do not relate to the architectural character of the occupied space served.
- Promote the design of balconies, where provided, which are consistent with the architectural character of each development and do not result in a cluttered appearance.
- Encourage use of awnings and canopies, where provided, which are consistent with the development's architectural character.
- Encourage selection and design of windows that enhance the development's architectural character and assist in establishing compatible scale and quality of construction.

- Ensure that vehicular entries to parking garages do not detract from the street front pedestrian environment or the development's architectural character.
- Ensure that service access floors and gates do not detract from the development's architectural character.
- Encourage the design of all construction to incorporate mechanical equipment and extensions as part of the overall design and architectural character.
- Ensure that exterior mechanical equipment is located and/or screened to avoid detracting from the development's architectural character.
- Ensure that waste handling areas are located and designed to provide adequate capacity, have secure and convenient access for residents, and avoid adverse impacts on the street frontage, common areas, and the surrounding neighborhood.
- Promote the selection of high-quality exterior materials that enhance the development's architectural character.
- Promote the selection of exterior colors that enhance the development's architectural character.
- Ensure that exterior lighting provides for adequate visibility and security at all paths of travel, and enhances the development's architectural character.
- Ensure that exterior signage is integrated with the development's architectural character.
- Promote planting that enhances the livability and neighborhood-oriented character of the development.

Open Space

Open space would include the creation of the 16th Street Plaza and additional Public Open Space developed as pocket parks, along with private courtyards or group areas for Project residents. Public Open Space (i.e., the Plaza and pocket parks) would total 60,670 sf. Private Open Space for Project residents would total 122,925 sf under the Maximum Residential Scenario and 88,350 sf under the Maximum Commercial Scenario. The distribution of Private Open Space across the Project Area is indicated earlier in Table S-1.

S.2 PROJECT SPONSORS' OBJECTIVES

In pursuit of redevelopment of the Project Area, specific objectives of the Project Sponsors include:

- Developing market-rate residential units at urban densities, which provide rental and ownership opportunities with a variety of housing types (including live-work units) and unit sizes that would be available to a range of market-rate household income levels;

- Expanding West Oakland's market-rate occupied housing stock to encourage local-serving retail development and to attract private construction and mortgage lenders to this sub-market;
- Developing urban infill housing with convenient transportation access near the center of the Bay Area, which would serve to divert housing from outlying areas and reduce long-distance commute traffic and related pollution;
- Redeveloping and revitalizing underutilized or vacant land within the Oakland Army Base Redevelopment Project Area to create vibrant pedestrian-oriented, mixed-use, residential and commercial developments while providing for flexible land uses;
- Protecting and enhancing, in an economically viable manner, the historically, culturally, and architecturally significant elements of the 16th Street Train Station through their restoration, rehabilitation and reuse;
- Creating publicly accessible open space directly in front of the 16th Street Train Station in the form of a plaza to facilitate the community's enjoyment of the Station as an important historic asset;
- Providing additional open space throughout the Project Area in order to give a sense of visual and spatial relief to the residents and the community;
- Providing for the undergrounding of utilities and also providing extensive off-site improvements to existing, old infrastructure with respect to the streetscape, sidewalks, lighting, and parking; and
- Constructing financially feasible developments with sufficient flexibility to adjust to market needs and provide reasonable returns on investments so as to secure construction and long-term financing.

S.3 PROJECT'S RELATIONSHIP TO THE OAKLAND ARMY BASE AREA REDEVELOPMENT PLAN

In July 2000, the City of Oakland approved the *Oakland Army Base Area Redevelopment Plan*, establishing a redevelopment project area and a program of redevelopment, rehabilitation and revitalization for this area. The redevelopment project area is approximately 1,800 acres and is divided into three sub-districts: (1) the approximate 470-acre Oakland Army Base sub-district (OARB sub-district), (2) the approximate 1,290 acre Port of Oakland industrial maritime area (Maritime sub-district), and (3) an approximate 41-acre area south of West Grand Avenue between I-880 and Wood Street in West Oakland (16th/Wood sub-district) (collectively, OARB Redevelopment Project Area). The 29.2-acre Project Area is contained within the 16th/Wood sub-district of the OARB Redevelopment Project Area. The Project Sponsors are proposing mixed use, commercial and residential development of the Project Area with an emphasis on creating more housing in West Oakland. These uses vary from those presented in the *OARB Area Redevelopment Plan*, which provides the adopted policy basis

and direction for the revitalization of this area and designates the area for more non-residential uses. However, the Project advances the fundamental goal of the *OARB Area Redevelopment Plan* by helping to eliminate blight and blighting influences in the area and restoring the 16th Street Train Station.

The *OARB Area Redevelopment Plan* recognizes that industrial lands and maritime-related activities should be focused west of I-880. The Redevelopment Plan's goals also include:

- The elimination of physical and economic blighting influences;
- The subdivision of land into parcels suitable for modern, integrated development with improved pedestrian and vehicular circulation; and
- The replanning, redesign, and development of portions … which are improperly utilized.

In keeping with these goals, the *OARB Area Redevelopment Plan* redirects the land use focus for the 16th/Wood sub-district from the existing warehousing and distribution uses to office, research and development, light industry, and live/work uses. The Project supports the vision of office and live/work uses, but would still require an amendment to the *OARB Area Redevelopment Plan* to allow for the residential uses proposed. The EIR for the *OARB Area Redevelopment Plan* identifies potential impacts associated with redevelopment of the OARB Redevelopment Project Area. Mitigation measures for significant impacts were adopted by the Port of Oakland and the City and some are directly relevant to the Project that is the subject of this EIR. The complete Mitigation Monitoring and Reporting Program for the *OARB Area Redevelopment Plan* is reproduced in this EIR as Appendix I and allows readers to conveniently review the mitigation measures adopted for the Redevelopment Plan.

S.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table S-2 at the end of this section summarizes environmental impacts of the Project. For each impact, a level of significance is determined using the following classifications:

- Significant (S) impacts include effects that exceed established or defined thresholds. For example, a violation of the Bay Area Air Quality Management District's quantitative air quality standards would be considered a significant adverse impact.
- Potentially significant (PS) impacts include those cases where it is not precisely clear whether a significant effect would occur. The analysis in these instances conservatively assesses the credible worst-case conditions, but the discussion acknowledges that there is some uncertainty regarding the credible extent of the impact, particularly with respect to certain final design-level details of a project, which cannot be known at this stage.
- Less-than-significant (LTS) impacts include effects that are noticeable but do not exceed established or defined thresholds. For example, traffic congestion caused by an increase in the development and density of population as a result of a project may be perceptible, but may not

exceed acceptable thresholds or standards for traffic delays. Therefore, the effect would not be considered significant.

- No impact (NI) includes situations where there is no adverse effect on the environment.

The Project, either alone or in combination with cumulative development, would result in the following significant and unavoidable impacts:

Cumulative Traffic Impacts on the W. Grand Avenue/I-880 Frontage Road Intersection. Significant and unavoidable cumulative traffic impacts would occur at the W. Grand Avenue/I-880 frontage road intersection, where the Project in combination with other related projects and background growth would cause the future baseline LOS to degrade to worse than LOS D. This cumulative traffic impact does not result from any one development area, but from the combined development of the entire Project Area, plus other proposed developments assumed to be built by 2025 in the City of Oakland.

Cumulative Traffic Impacts on Northbound I-880. The Maximum Trips Scenario would contribute 5.2 percent of the cumulative traffic increase on northbound I-880 north of I-980 during the AM peak hour. Although mitigation measures would reduce the potentially significant cumulative freeway operations impact, the impact on this freeway segment would remain significant and unavoidable. This cumulative traffic impact does not result from any one development area or from any of the other Project development scenarios, but from the combined development of the entire Project Area under the Maximum Trips Scenario, plus other proposed developments assumed to be built by 2025 in the City of Oakland.

Project-Related and Cumulative BART Fare Gate Capacity Impacts. The Project, both alone and in combination with other related projects and background growth, would increase the peak hour average ridership at the West Oakland BART Station by three percent, where the average waiting time at fare gates could exceed one minute.

Cumulative BART Train Capacity Impacts. The Project, in combination with other related projects and background growth, could increase peak-hour average BART ridership by three percent, where the passenger volumes exceed the standing capacity of BART trains.

Although mitigation measures, such as contributing a fair share of the costs for intersection lane improvements and participating in efforts to ensure adequate BART fare gate and train capacity, would reduce the Project's transportation-related impacts, these measures would be outside the City of Oakland's jurisdiction and may not be feasible. Consequently, these transportation impacts would remain significant and unavoidable.

Project-Related Loss of a Portion of the 16th Street Train Station. The Project would demolish portions of the 16th Street Train Station, a City landmark and designated historic structure. The Baggage Wing and the Elevated Tracks are considered an integral part of the 16th Street Train Station's

architecture, as well as its historic use. Demolition of these portions of the 16th Street Train Station would be irreversible and adversely affect the historical and architectural significance of the 16th Street Train Station. This impact would occur as a result of proposed development in Development Areas Four, Five, and Six.

Project-Related Degradation of Historical Setting. The Project would adversely affect the historical setting and views of the 16th Street Train Station and the 16th Street Signal Tower. No mitigation is available to reduce this impact to less than significant. This loss of views and the physical relationship between the 16th Street Train Station and the 16th Street Signal Tower would occur as a result of development in Development Areas Four and Six.

Although mitigation measures such as compliance with the Secretary of the Interior's Standards and Guidelines for rehabilitation of historic structures would reduce the historic resource impact, the loss of portions of the 16th Street Train Station and its historical setting would remain significant and unavoidable.

Because of these significant and unavoidable environmental effects, approval of the Project would require the adoption of a Statement of Overriding Considerations.

S.5 PROJECT ALTERNATIVES

Based on the CEQA Guidelines, several factors need to be considered in determining the range of alternatives to be analyzed in an EIR and the level of analytical detail that should be provided for each alternative. These factors include (1) the nature of the significant impacts of the proposed project, (2) the ability of alternatives to avoid or lessen the significant impacts associated with the project, (3) the ability of the alternatives to meet the objectives of the project, and (4) the feasibility of the alternatives. The analysis in this EIR indicates that the Project would result in significant and unavoidable impacts, with respect to operational traffic, BART operations, and cultural resources (16th Street Train Station). Thus, the alternatives examined in this document represent alternatives that would minimize or avoid these significant and unavoidable impacts as well as other significant impacts. In addition, CEQA requires the evaluation of a No Project Alternative to describe the physical environment with the Project not implemented.

This EIR evaluates six alternatives to the Project, including three No Project alternatives and three Project alternatives that were designed to avoid or substantially reduce the significant effects of the Project. These alternatives are:

- No Project/No Action Alternative – essentially leaving the Project Area in its present conditions.

- No Project/Oakland Army Base Redevelopment Plan Alternative – redeveloping the Project Area in accordance with the *OARB Area Redevelopment Plan*, generally for light industrial, commercial office, research and development, and live/work units.
- No Project/General Plan Alternative – redeveloping the Project Area in accordance with the *City of Oakland General Plan*, generally for a mix of industrial uses.
- Preservation Alternative – redeveloping the Project Area similarly to the Project but preserving all of the 16th Street Train Station and its associated existing structures.
- Reduced Project Alternative – redeveloping the Project Area with an emphasis on reducing traffic and historic resources impacts.
- No Redevelopment of Bea's Hotel Alternative – redeveloping the Project Area similarly to the Project except that Bea's Hotel is left in its present condition.

A detailed discussion of the components of these alternatives, as well as the alternatives analysis, is provided in Section 5, Alternatives, of this document. Table S-3 summarizes the development program for each alternative compared to the Project.

Table S-3
Summary Comparison of Alternatives
(New Development)

Alternative	General Industrial Development (sf)	Light Industrial Development (sf)	Commercial Development (sf)	Residential Development (units)
Project (Maximum Residential Scenario)	0	0	27,800	1,570
Project (Maximum Commercial Scenario)	0	0	539,600	1,084
No Action Alternative[a]	0	0	0	0
OARB Alternative	0	120,000	1,300,000	250 (live/work)
General Plan Alternative	800,000	0	0	0
Preservation Alternative	0	0	36,700	1,570
Reduced Project Alternative	0	0	257,500	805
No Redevelopment of Bea's Hotel Alternative	0	0	35,300	1,570

Source: EIP Associates, 2004.

Notes:

a. The No Action Alternative assumes use of the existing 265,700 sf of industrial/commercial uses; this amount of space assumes that the 16th Street Train Station is not used.

The No Project/No Action Alternative would result in the fewest significant environmental impacts and, thus, is considered environmentally superior to the Project. However, this Project alternative would result in continued deterioration of the 16th Street Train Station and would fail to fulfill the Project objectives. Moreover, CEQA requires the designation of another Project alternative if the No Project Alternative is considered environmentally superior.

Both the Preservation Alternative and the Reduced Project Alternative would avoid loss of the historic 16th Street Train Station and impacts to its setting. As well, the Reduced Project Alternative would avoid significant and unavoidable cumulative traffic impacts on I-880. Both of these alternatives would result in a new emergency access significant impact that would not exist under the Project. From an environmental perspective both of these alternatives are environmentally superior to the Project; however, as discussed in Section 5, neither alternative is feasible nor satisfies the Project objectives to the same extent as the Project.

S.6 Issues Raised in Response to the Notice of Preparation

Public agencies and members of the public raised a number of issues in response to the issuance of the Notices of Preparation for the Project, including, but not limited to the following:

- Future use of the restored historic 16th Street Train Station;
- The appropriateness of the scale and density of the future residential development;
- The amount of local-serving commercial retail space;
- The amount of open space and public amenities proposed by the Project;
- The level of affordability of the proposed residential units; and
- The suitability of the Project Area for residential uses given the on-site hazardous materials contamination from past land uses.

S.7 Issues to be Resolved by the Decision Makers

As part of its consideration of the Project, including this EIR, a number of key policy issues have been identified that need to be addressed by the City. These issues include, but are not limited to, the following:

- Whether to amend the General Plan, the Zoning Code, and the *OARB Area Redevelopment Plan* to allow for the conversion of the Project Area from its current mixed business and industrial orientation to a mixed use development with a residential emphasis;
- Whether to approve the proposed Wood Street Zoning Regulations;

- Whether any of the other Project alternatives are feasible and whether other alternatives need to be explored;
- Whether the proposed mitigation measures reduce the impacts to less than significant and whether other measures should be considered; and
- If overriding considerations exist that outweigh the identified significant and unavoidable environmental impacts.

Table S-2
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
3.2 Land Use, Plans, and Policies			
LU-1. The Project would not physically divide an established community.	NI	None required.	NI
LU-2. Proposed higher-density land uses associated with the Project could potentially result in land use compatibility impacts on existing low-density units relating to increased noise, light and glare, and traffic, and to visual encroachment/loss of views. However, provisions of the proposed Wood Street Zoning Regulations would reduce these potential land use conflicts to less than significant.	LTS	None required.	LTS
LU-3. The Project would not be consistent with the current General Plan land use classification and zoning districts for the Project Area.	PS	*LU-3.1 General Plan Amendment*. The Project Sponsors shall apply for a General Plan Amendment (GPA) to apply the Urban Residential (UR) land use classification to the Project Area for approval by the City. According to the General Plan, this classification allows multi-unit, mid-rise, or high-rise residential structures and allows ground-floor commercial uses and public facilities of compatible character. The GPA, if approved, would eliminate any inconsistencies with the existing General Plan land use classification. *LU-3.2 Zoning Code Amendment*. The Project Sponsors shall apply for a Zoning Code Amendment to add the Wood Street Zoning District and to rezone the Project Area to this new zoning district. The Project would be required to adhere to the Wood Street Zoning Regulations, which set forth land use regulations, development standards, design guidelines, and other requirements, including allowable uses, requirements for circulation, open space, streets and public improvements, building heights, massing, maximum densities, setbacks, landscaping, and parking. The change in zoning from the existing industrial and industrial/residential combining districts to the Wood Street Zoning District, if approved, would eliminate any inconsistencies with the existing zoning.	LTS

Legend: (S) Significant Adverse Impact (PS) Potentially Significant Impact (LTS) Less-than-significant Impact (NI) No Impact (SU) Significant and Unavoidable Impact

Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
LU-4. The Project would conflict with applicable land use plans, policies, or regulations in certain respects. However, these inconsistencies would not result in a significant physical environmental effect and, therefore, the impact would be less than significant.	LTS	None required.	LTS
Cumulative Land Use Impacts			
LU-5. Implementation of the Project, in combination with other related projects, would not result in a cumulative impact associated with physically dividing an established community.	NI	None required.	NI
LU-6. Implementation of the Project, in combination with other related projects, would not result in cumulative land use incompatibility impacts.	LTS	None required.	LTS
LU-7. Implementation of the Project, in combination with other related projects, would not result in cumulative inconsistencies with the City's General Plan or zoning districts.	LTS	None required.	LTS
LU-8. Implementation of the Project, in combination with other related projects, would not result in conflicts with applicable plans, policies, or regulations in a manner that would result in a significant physical environmental effect.	LTS	None required.	LTS
3.3 Visual Quality			
VQ-1. Implementation of the Project would not result in a substantial adverse effect on a scenic vista.	LTS	None required.	LTS
VQ-2. Implementation of the Project would not substantially damage scenic resources within a state scenic highway.	LTS	None required.	LTS
VQ-3. Implementation of the Project would not substantially degrade the existing visual character or quality of the Project Area and its surroundings.	LTS	None required.	LTS

Legend: (S) Significant Adverse Impact (PS) Potentially Significant Impact (LTS) Less-than-significant Impact (NI) No Impact (SU) Significant and Unavoidable Impact

Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
VQ-4. Since construction of the Project would be implemented in phases, parts of the Project Area could be visually fragmented as construction occurs, and as individual development areas serve as staging or storage areas for construction equipment and materials. However, because portions of the Project Area are currently vacant or used for storage, views of construction activities or zones would not constitute a substantial degradation in visual quality.	LTS	None required.	LTS
VQ-5. Implementation of the Project would alter the existing nighttime light and glare characteristics of the Project Area with the introduction of building, parking, and landscaping elements. However, the proposed Wood Street Zoning Regulations include guidelines that ensure that potential light and glare impacts would not adversely affect nighttime views or visibility in the area and would be less than significant.	LTS	None required.	LTS
VQ-6. Implementation of the Project would alter existing daytime glare characteristics of the Project Area with the introduction of building elements. However, design features incorporated as part of the Project would ensure that these impacts would be less than significant.	LTS	None required.	LTS
VQ-7. Implementation of the Project would cast shadows that could result in a long-term change in the shade effects in the area. However, shadows cast by proposed development would not impair the beneficial use of the 16th Street Train Station, Raimondi Park, or solar collectors in the area, and would result in a less-than-significant impact.	LTS	None required.	LTS
VQ-8. The Project would be consistent with General Plan policies concerning design and visual resources.	LTS	None required.	LTS
VQ-9. The Project would not result in adverse wind effects.	LTS	None required.	LTS

Legend: (S) Significant Adverse Impact (PS) Potentially Significant Impact (LTS) Less-than-significant Impact (NI) No Impact (SU) Significant and Unavoidable Impact

Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
Cumulative Visual Impact			
VQ-10. Implementation of the Project, in combination with related projects, would not result in a substantial adverse cumulative effect on a scenic vista.	LTS	None required.	LTS
VQ-11. Implementation of the Project, in combination with related projects, would not result in substantial cumulative scenic resource impacts within a state scenic highway.	LTS	None required.	LTS
VQ-12. Implementation of the Project, in combination with related projects, would not substantially contribute to cumulative loss of visual character or quality of the Project Area and its surroundings.	LTS	None required.	LTS
VQ-13. Implementation of the Project, in combination with related projects, would not result in cumulative visual impacts during construction.	NI	None required.	NI
VQ-14. Implementation of the Project, in combination with related projects, would alter the existing nighttime light and glare characteristics of the area with the introduction of building, parking, and landscaping elements. However, the proposed Wood Street Zoning Regulations include guidelines that ensure that potential cumulative light and glare impacts would be less than significant.	LTS	None required.	LTS
VQ-15. Implementation of the Project, in combination with related projects, would alter existing daytime glare characteristics of the Project Area with the introduction of building elements. However, design features would ensure that these cumulative impacts would be less than significant.	LTS	None required.	LTS
VQ-16. Implementation of the Project, in combination with related projects, would cast shadows that could result in a long-term change in the shade effects in the area. However, shadows cast by proposed development would not impair the beneficial use of the 16th Street	LTS	None required.	LTS

Legend: (S) Significant Adverse Impact (PS) Potentially Significant Impact (LTS) Less-than-significant Impact (NI) No Impact (SU) Significant and Unavoidable Impact

Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
Train Station, Raimondi Park, or solar collectors in the area, and would result in a less-than-significant cumulative impact.			
VQ-17. The Project, in combination with related projects, would be consistent with General Plan policies concerning design and visual resources.	LTS	None required.	LTS
VQ-18. The Project, in combination with related projects, would not result in cumulative adverse wind effects.	NI	None required.	NI
3.4 Transportation, Circulation, and Parking			
TR-1. Construction would generate a maximum of 3,300 trips daily. Construction-related traffic delays, detours, utility improvements, and activities could adversely affect local circulation. As a result, construction-related transportation impacts would be considered potentially significant.	PS	*TR-1.1 Construction Traffic Management Plan.* The Project Sponsors shall prepare and implement a construction phasing plan and traffic management plan that defines how traffic operations would be managed and maintained during each phase of construction. The plan shall be developed with the direct participation of the City of Oakland. In addition, the property owners of all businesses adjacent to the construction areas shall be consulted. To the maximum practical extent, the plan shall: a. Detail how access will be maintained to individual businesses where construction activities may interfere with ingress and egress. Any driveway closures shall take place during non-business hours. b. Specify predetermined haul routes from staging areas to construction sites and to disposal areas of agreement with the City prior to construction. The routes shall follow streets and highways that provide the safest route and have the least impact on traffic. c. During construction, require the contractor to provide information to the public using signs, press releases, and other media tools of traffic closures, detours or temporary displacement of left-turn lanes.	LTS

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
		d. Identify a single phone number that property owners and businesses can call for construction scheduling, phasing, and duration information, as well as for complaints. e. Identify construction activities that must take place during off-peak traffic hours or result in temporary road closures due to concerns regarding traffic safety or traffic congestion. Any road closures will be done at night under ordinary circumstances. If unforeseen circumstances require road closing during the day, the City of Oakland shall be consulted.	
TR-2. The Project would increase traffic at study area intersections but would not substantially impact access or traffic load and capacity of the street system.	LTS	None required.	LTS
TR-3. The Project would add traffic to some roadway segments on the Metropolitan Transportation System (MTS), but would not cause any freeway segments on the MTS to operate at LOS F, or increase the V/C ratio by more than three percent for segments that would operate at LOS F without Project traffic.	LTS	None required.	LTS
TR-4. The Project could substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature.	PS	*TR-4.1 Turn-Arounds at 11th Street and the 18th and 20th Street Extensions*. The Project Sponsor for Development Areas Two, Six, Seven, and Eight shall incorporate the design of a cul-de-sac or other appropriate turn-around at the end of 11th Street and at the end of the 18th and 20th Street extensions and construct these extensions in compliance with City of Oakland Design Standards. Appropriate turn-around designs would allow vehicles to return along 11th Street and enter Wood Street in a front-end-first manner.	LTS
TR-5. Development of the Project could fundamentally conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).	PS	*TR-5.1 Bicycle Parking*. The Project Sponsors shall incorporate into the final design plans the number of bicycle parking spaces specified by the parking space requirements in Table 3.4-7 and install the bicycle parking in compliance with City standards.	LTS

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
TR-6. The Project would increase the average ridership on AC Transit lines by more than three percent on transit lines serving the Project Area, but the average load factor with the Project would not exceed 125 percent over a peak 30-minute period.	LTS	None required.	LTS
TR-7. The Project would increase the passenger volume such that passenger volume could exceed the standing capacity of BART trains, but the increase would not raise peak-hour average ridership by three percent.	LTS	None required.	LTS
TR-8. The Project would increase peak-hour average ridership at the West Oakland BART Station by three percent where average waiting time at fare gates could exceed one minute.	S	*TR-8.1 Fare Gate Capacity*. The Project Sponsors for all development areas except Development Areas Five and Nine shall participate in efforts to provide adequate fare gate capacity at the West Oakland BART Station to accommodate the Project. The City and the Project Sponsors shall provide detailed information regarding development to BART to enable BART to conduct a comprehensive fare gate capacity assessment at the West Oakland BART Station. Based on the results of that assessment, the Project Sponsors shall fund their fair share for adding one or more new fare gates at the West Oakland BART Station.	SU
Cumulative Transportation Impacts			
TR-9. The Project, in combination with other related projects and background growth, would cause some signalized intersections to operate at unacceptable levels of service.	S	*TR-9.1 West Grand Avenue/Frontage Road*. The Project Sponsors shall fund, on a fair share basis, the following improvements that would reduce the cumulative operations impact at the intersection of West Grand Avenue/frontage road:[1]	

[1] The mitigation measure from the *OARB Area Redevelopment Plan EIR* for the intersection of West Grand Avenue/frontage road would not result in less-than-significant impacts under the PM peak-hour conditions.

Legend: (S) Significant Adverse Impact (PS) Potentially Significant Impact (LTS) Less-than-significant Impact (NI) No Impact (SU) Significant and Unavoidable Impact

Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
		• Revise the northbound frontage road lanes to provide: - one left-turn lane - one combination left-through lane - one through lane - one right-turn lane with overlap signal phasing (green arrow) • Revise the southbound I-80 East Ramp lanes to provide: - one left-turn lane - one combination left-through lane - one through lane - one right-turn lane with overlap signal phasing (green arrow) • Revise the eastbound West Grand Avenue lanes to provide: - one left-turn lane - one through lane - one combination through-right lane • Revise the westbound West Grand Avenue lanes to provide: - one left-turn lane - two through lanes - one right-turn lane While these improvements would reduce the cumulative operations impacts at the West Grand Avenue/frontage road intersection to an acceptable level of service, improvements would be outside the City of Oakland's jurisdiction and would require Caltrans approvals. As a result, the improvements may not be feasible, and the impact at this intersection would remain significant and unavoidable.	SU

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
		TR-9.2 West Grand Avenue/Mandela Parkway Intersection. The Project Sponsors shall contribute their fair share of modifications at the West Grand Avenue/Mandela Parkway intersection. The modifications at the intersection shall include providing protected left-turn signal phasing (left-turn green arrows) for the West Grand Avenue approaches to the intersection.	LTS
		TR-9.3 7th Street/Mandela Parkway Intersection. The Project Sponsors shall contribute their fair share of modifications at the 7th Street/Mandela Parkway intersection. The modifications at the intersection shall include adding a northbound lane on the 3rd Street extension to provide one left-turn lane, one combination through-right turn lane, and protected left-turn signal phasing (left-turn green arrows) for all four approaches to the intersection.	LTS
		TR-9.4 West Grand Avenue/Maritime Street and 3rd Street/Market Street Intersections. As part of the cumulative growth of the *OARB Area Redevelopment Plan*, the Project Sponsors shall contribute their fair share, as defined in the *OARB Area Redevelopment Plan EIR*, 2002, to future improvements at these locations.	LTS
TR-10. The cumulative impact of the Project in combination with other related projects and background growth would cause some roadway segments on the MTS to operate at LOS F. However, only the Maximum Trips Scenario contribution to I-880 northbound under the AM peak hour has the potential to increase the V/C ratio by more than three percent for a segment that would already operate at LOS F under the future baseline conditions. Therefore, the cumulative contribution of the Project under the Maximum Trips Scenario would be significant.	S	*TR-10.1 Transportation Demand Management*. The Project Sponsors shall participate in a transportation demand management program developed by the City to reduce the dependence on the single occupant vehicle. The program shall include Project Sponsor fair share participation in providing financial incentives for use of alternate modes and in the Alameda County CMA's Guaranteed Ride Home Program.	SU

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
		TR-10.2 Shuttle Service. The Project Sponsors shall provide a shuttle service between the Project Area and the West Oakland BART Station and incorporate shuttle stops into the final design plans. The shuttle stops shall be located within the Project Area and would be dispersed such that Project residents would be no more than one-quarter mile from a shuttle stop. Shuttle stops at the existing AC transit bus stop on Wood Street by Development Area Three, in front of the 16th Street Plaza (Development Area Nine), and on Wood Street at 20th Street by Development Area Seven should be considered. The shuttle service would operate at 15-minute peak-hour headways during commute hours. The shuttle service shall be designed to meet City of Oakland standards, link with pedestrian access, and be reviewed for approval by the City.	
TR-11. The cumulative impact of the Project in combination with other related projects and background growth would increase average ridership on AC Transit lines serving the Project Area by more than three percent. However, the average load factor with the Project would not exceed 125 percent over a peak 30-minute period.	LTS	None required.	LTS
TR-12. The cumulative impact of the Project, in combination with other related projects and background growth, could increase the overall passenger volume such that the passenger volume could exceed the standing capacity of BART trains and could increase peak-hour average ridership by three percent.	S	*TR-12.1 BART Train Capacity*. The Project Sponsors shall participate in efforts to ensure that adequate BART train capacity will be available for riders to and from the Project Area, and fund BART train capacity improvements on a fair share basis.	SU
TR-13. The cumulative impact of the Project in combination with other related projects and background growth, would increase peak-hour average ridership at the West Oakland BART Station by three percent where average waiting time at fare gates could exceed one minute.	S	See Mitigation Measure TR-8.1.	SU

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
3.5 Noise			
NO-1. The Project would result in short-term increases in noise and vibration levels due to construction over the course of multiple years. This would be considered a significant impact.	S	*NO-1.1 City Council-Adopted Best Management Practices to Reduce Construction Noise.* The Project Sponsors shall incorporate the following practices into the construction documents to be implemented by the Project's contractor, and these practices shall be provided to the Department of Building Inspection for approval prior to the issuance of building permits: a. The Project Sponsors shall require construction contractors to limit standard construction activities as required by the City Building Department. Such activities are generally limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, with pile driving and/or other extreme noise generating activities greater than 90 dBA limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday, with no extreme noise generating activity permitted between 12:30 and 1:30 p.m. No construction activities shall be allowed on weekends, without prior authorization of the Building Services Division, and no extreme noise-generating activities shall be allowed on weekends and holidays. b. Equipment and trucks used for construction shall utilize the best available noise control techniques (improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts. c. The physical separation between noise generators and noise receptors shall be maximized as feasible. Such separation includes, but is not limited to, the following measures: – Use shields, impervious fences, or other physical sound barriers to inhibit transmission of noise to sensitive receptors;	LTS

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
		– Locate stationary equipment to minimize noise impacts on the community; and – Minimize backing movements of equipment. d. Impact equipment (e.g., jack hammers and pavement breakers) used for Project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Compressed air exhaust silencers shall be used on other equipment. Other quieter procedures, such as drilling rather than impact equipment, shall be used whenever feasible. e. Prohibit unnecessary idling of internal combustion engines. f. Schedule construction activity that produces higher noise levels during less noise-sensitive hours (normally 8:00 a.m. to 4:00 p.m. on weekdays). Minimize noise-intrusive impacts during the most noise-sensitive hours by planning noisier operations during times of highest ambient noise levels. g. Select routes for movement of construction-related vehicles and equipment so that noise-sensitive areas, including residences, hotels, and outdoor recreation areas, are avoided as much as possible. Include these routes in materials submitted to the Department of Building Inspection for approval prior to the issuance of building permits. h. Designate a noise disturbance coordinator who will be responsible for responding to complaints about noise during construction. The telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site and shall be provided to the Department of Building Inspection. Copies of the construction schedule shall also be posted at nearby noise-sensitive areas.	

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
		NO-1.2 Pile Driving Noise and Vibration Effects on Structures. To mitigate potential pile driving or other extreme noise-generating impacts, a set of site-specific noise attenuation measures shall be completed under the supervision of a qualified acoustical consultant. This plan shall be submitted for review and approval by the Department of Building Inspection to ensure that feasible noise attenuation is achieved to satisfy the City's standards contained in Section 17.120.050 of the Planning Code. These attenuation measures shall include as many of the following control strategies as feasible and shall be implemented prior to any required pile driving activities: a. Implement "quiet" pile driving technology (e.g., vibratory pile driving or pre-drilled pile holes), where feasible, in consideration of geotechnical and structural requirements and conditions; b. Erect temporary plywood noise barriers around the entire construction site; c. Adjust the scheduling and duration of pile driving; d. Utilize noise control blankets on the building structures as the building is erected to reduce noise emissions from the site; e. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings; and f. Monitor the effectiveness of noise attenuation measures by taking noise measurements during pile driving activities. *NO-1.3 Proper Noticing Procedures.* Prior to the issuance of each building permit, along with the submission of construction documents, the Project Sponsors shall submit to the City Building Department a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include:	

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
		a. A procedure for notifying the City Building Division staff and Oakland Police Department; b. A plan for posting signs on site pertaining to permitted construction days and hours, complaint procedures, and who to notify in the event of a problem; c. A listing of telephone numbers (during regular construction hours and off hours); d. The designation of an on-site construction complaint manager for the Project; and e. Notification of neighbors within 300 feet of the Project construction area at least 30 days in advance of pile-driving activities about the estimated duration of the activity. A preconstruction meeting to be held with the job inspectors and the general contractor/on-site project manager to confirm that noise mitigation and practices (including construction hours, neighborhood notification, and posted signs) are completed.	
NO-2. The Project would introduce residential land uses in an area where noise levels would be "Conditionally Acceptable" for such uses. Existing regulations would ensure that these new uses would not substantially contribute to existing ambient noise levels. Consequently, changes in the acceptable noise levels for land use compatibilities would be less than significant.	LTS	None required.	LTS
NO-3. Under all of the development scenarios for the Project, increased traffic noise levels due to implementation of the Project would not result in an increase in ambient noise levels of an amount greater than 5 dBA.	LTS	None required.	LTS

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
Cumulative Noise Impacts			
NO-4. The Project, in combination with related projects, could result in short-term cumulative increases in noise and vibration levels due to construction; however, compliance with the controls imposed under the City's Noise Ordinance would reduce significant cumulative construction noise impacts to less than significant.	LTS	None required.	LTS
NO-5. Traffic generated from either the Maximum Residential Scenario or the Maximum Trips Scenario in combination with other related projects and background growth would not significantly contribute to cumulative noise impacts.	LTS	None required.	LTS
3.6 Air Quality			
AQ-1. Construction activities for the Project could result in short-term increases in PM_{10} emissions that could violate City and BAAQMD air quality standards.	PS	*AQ–1.1 Construction Dust Control Measures*. The Project Sponsors shall require that the following practices be implemented by including them in the contractor construction documents: a. Water all active construction areas at least twice daily. b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard. c. Pave, apply water three times daily, or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at the construction sites. d. Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at the construction sites. e. Sweep public streets adjacent to construction sites daily (with water sweepers) if visible soil material is carried onto the streets. f. Hydroseed or apply non-toxic soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).	

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
		g. Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.). h. Limit traffic speeds on unpaved roads to 15 miles per hour. i. Install sandbags or other erosion control measures to prevent silt runoff to public roadways. j. Replant vegetation in disturbed areas as soon as possible. k. Install wheel washers for all exiting trucks or wash off the tires or tracks of all trucks and equipment leaving the construction site. l. Install wind breaks at the windward sides of the construction areas. m. Suspend excavation and grading activities when wind (as instantaneous gusts) exceeds 25 miles per hour.	LTS
AQ-2. The regional air emissions due to the Project would not violate any City or BAAQMD air quality standard or contribute substantially to an existing air quality problem.	LTS	None required.	LTS
AQ-3. The Project would not contribute to CO concentrations exceeding the State Ambient Air Quality Standard.	LTS	None required.	LTS
AQ-4. The Project would not create objectionable odors affecting a substantial number of people. Accordingly, the Project would have less than significant odor impacts.	LTS	None required.	LTS
AQ-5. The Project would not be a significant source of Toxic Air Contaminants.	NI	None required.	NI
Cumulative Air Quality Impact			
AQ-6. The Project would not conflict with the applicable air quality plan or result in a fundamental conflict with the General Plan, and, therefore, would not have cumulatively considerable air quality impacts.	LTS	None required.	LTS

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
3.7 Cultural Resources			
CR-1. Ground-disturbing activities have the potential to directly impact previously unknown archaeological resources, including human burials, or paleontological resources in the Project Area by disturbing both surface and subsurface soils. Such disturbance could result in the loss of integrity of cultural deposits.	PS	*CR-1.1 Archaeological Monitoring*. The Project Sponsors shall retain a qualified archaeologist, upon any discovery of prehistoric remains or buried historic features. The archaeol***o***gist shall prepare a preliminary evaluation to assess the archaeological sensitivity of the specific site(s) under consideration and shall recommend actions to protect archaeological resources. If the archaeologist's evaluation indicates a more detailed site assessment is warranted, a testing program shall be initiated under the supervision of the qualified archaeologist. If, after testing, the archaeologist determines that the discovery is not significant as defined in CEQA, no further investigations or precautions are necessary to safeguard the find. The archaeologist shall prepare a final report to be sent to the responsible agency, the Oakland Landmarks Advisory Board, and the California Historical Resources Information System Northwest Information Center. If, however, after testing, the archaeologist determines that the discovery is significant as defined in CEQA, ground-disturbing activities in the immediate vicinity of the discovery shall remain suspended until an appropriate mitigation plan can be agreed upon by the archaeologist and the City and implemented by the Project Sponsors as discussed in Mitigation Measure CR-1.2. *CR-1.2 Cultural Resources Management/Mitigation Plan*. If further investigations or precautions are necessary or appropriate, as determined by Mitigation Measure CR 1.1, the City of Oakland and the archaeologist shall jointly determine the additional procedures necessary to protect the resource and/or mitigate any significant impacts. Additional measures to be implemented by the Project Sponsors might include a redesign of the Project, data recovery excavations, or a program to monitor all site excavation, during which the archaeologist shall record observations in a permanent log. The archaeologist shall prepare a final report to be	LTS

Legend: (S) Significant Adverse Impact (PS) Potentially Significant Impact (LTS) Less-than-significant Impact (NI) No Impact (SU) Significant and Unavoidable Impact

Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
		sent to the responsible agency, the Oakland Landmarks Advisory Board, and the California Historical Resources Information System Northwest Information Center. *CR-1.3 Discovery of Human Remains*. Should any human remains be encountered, work in the vicinity shall halt and the County Coroner notified immediately. If the remains are determined to be Native American, the coroner shall contact the California Native American Heritage Commission (NAHC) pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code. The NAHC in Sacramento would identify a Most Likely Descendant (MLD) pursuant to subdivision (a) of Section 5097.98 of the Public Resources Code. The City of Oakland and the archaeologist shall consult with the MLD. The MLD may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendations within 24 hours of their notification by the NAHC. The recommendation may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Work may not commence until the coroner's approval has been received.	
CR-2. The Project would involve demolition of portions of the 16th Street Train Station, a City landmark and a designated historic structure, which would be considered a significant impact.	S	*CR-2.1 HABS Recordation of the 16th Street Train Station*. Prior to any construction-related activities in Development Areas Four, Five, and Six, the Project Sponsors for those development areas shall record the 16th Street Train Station in accordance with the procedures of the Historical American Building Survey (HABS). In accordance with the HABS recordation process, the Project Sponsors shall consult with the National Park Service (NPS) to determine the appropriate level of documentation, and all documentation shall be subject to review and approval by NPS.	SU

Legend: (S) Significant Adverse Impact (PS) Potentially Significant Impact (LTS) Less-than-significant Impact (NI) No Impact (SU) Significant and Unavoidable Impact

Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
		CR-2.2 Salvage and Reuse of Original Building Materials from Structures Proposed for Demolition. Prior to any construction-related activities in Development Areas Four, Five or Six, the Project Sponsors for those development areas shall submit a study to the City of Oakland detailing those portions of the 16th Street Train Station's structure that can be feasibly salvaged. Following City approval of the study, the Project Sponsor shall salvage architectural elements and materials from the portion of the building to be demolished, including terra-cotta cladding, windows, doors and hardware. These salvaged materials shall be reused to the extent feasible and in accordance with the *Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* in the rehabilitation of the Main Hall. Salvaged materials that cannot be reused shall be incorporated into an interpretive display in or near the Main Hall.	
CR-3. The Project would adversely affect the historical setting and views of the historic 16th Street Train Station and the 16th Street Signal Tower.	S	No mitigation is available to reduce the impact on the views of the 16th Street Train Station and Signal Tower, the physical relationship between the two, and the loss of Bea's Hotel. Thus, this impact would remain significant and unavoidable.	SU
CR-4. The Project would not adversely affect the historical setting and views of other historic resources in the vicinity of the Project Area.	LTS	None required.	LTS
Cumulative Cultural Impact			
CR-5. The Project, in combination with other related development and background growth, would not result in a significant cumulative loss of the City's historic fabric.	LTS	None required.	LTS

Legend: (S) Significant Adverse Impact (PS) Potentially Significant Impact (LTS) Less-than-significant Impact (NI) No Impact (SU) Significant and Unavoidable Impact

Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
3.8 Hazardous Materials			
HM-1. Project-related demolition or renovation could disturb hazardous materials in existing building components and thereby could cause adverse health or safety effects.	PS	*HM-1.1 Pre-Construction Hazardous Materials Surveys and Management of Hazardous Materials Properly if Identified*. Prior to demolition or renovation of any structures, the Project Sponsor of Development Areas Two, Four, Five, and Six shall retain a qualified environmental specialist (e.g., a certified consultant or lead inspector/assessor or similarly qualified individual) to inspect existing buildings subject to demolition or renovation for the presence of as yet unidentified asbestos, PCBs, mercury, lead, or other hazardous materials. If after inspection and analytical testing, hazardous building materials are found at levels that require special handling (e.g., special packaging prior to transport, separation from other non-hazardous solid waste, keeping material damp with water, etc.), the Project Sponsors and their contractors shall manage these materials as required by law and according to federal and state regulations and guidelines, including those of DTSC, RWQCB, BAAQMD, Cal/OSHA, and any other agency with jurisdiction over these hazardous materials. The Project Sponsors shall obtain permits for demolition and show proof that the building materials have been tested and/or removed by a certified environmental professional.	LTS
HM-2. Site grading and landscaping, excavation, and construction of proposed building foundations, utility trenches, and roadwork for the Project could expose construction personnel and the public to existing contaminated soil and/or groundwater if approved remediation cleanup levels have not been achieved.	PS	*HM-2.1 Site Health and Safety Plan*. Because historic uses at the Project Area have led to soil and groundwater contamination, the Project Sponsor and its contractors shall comply with the *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* regulatory requirements for hazardous materials/waste health and safety plans. The site health and safety plan shall establish policies and procedures to protect workers and the public from potential hazards posed by residual contamination in the development area. The plan shall identify contaminants, potential hazards, material handling procedures, dust suppression measures, personal protection clothing and devices, access controls	LTS

Legend: (S) Significant Adverse Impact (PS) Potentially Significant Impact (LTS) Less-than-significant Impact (NI) No Impact (SU) Significant and Unavoidable Impact

Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
		to the site, health and safety training requirements, monitoring equipment used during construction to verify health and safety of workers and the public, measures to protect public health and safety, and emergency response procedures. If petroleum hydrocarbons or VOCs are present in the soil and/or groundwater proposed for the use of backfill or disposal, the handling and disposal of the contaminated soil and groundwater shall be in accordance with applicable local and federal hazardous materials regulations. *HM-2.2 Compliance with Soil Remediation Standards*. Since the RWQCB and DTSC have already approved the soil remediation standards, the Project Sponsor and its contractors shall be responsible for ensuring that potentially exposed soils containing concentrations exceeding TTLCs and soils above the proposed remediation standards shall be removed or treated on site prior to development. The soil remediation standards are included in a May 18, 2004, letter from Geomatrix to the RWQCB. Successful completion of remediation activities cannot be confirmed until closure reports have been submitted to and approved by RWQCB that the development areas have been satisfactorily remediated.	
HM-3. Routine use or accidental release of hazardous materials during operations of the Project could expose people or the environment to these materials. However, management of hazardous materials shall comply with applicable laws so that the impact from accidental releases is considered less than significant.	LTS	None required.	LTS
Cumulative Hazardous Materials Impacts			
HM-4. The Project, in combination with other related projects and background growth, would not significantly contribute to cumulative impacts associated with hazardous materials use, generation, disposal, transport, or clean-up.	LTS	None required.	LTS

Legend: (S) Significant Adverse Impact (PS) Potentially Significant Impact (LTS) Less-than-significant Impact (NI) No Impact (SU) Significant and Unavoidable Impact

Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
3.9 Soils, Geology, and Seismicity			
GE-1. Buildings and infrastructure associated with implementation of the Project could be subject to potentially damaging, seismically induced groundshaking during the life of the Project, but compliance with seismic standards would reduce impacts to a less-than-significant level.	LTS	None required.	LTS
GE-2. The Project would be subject to RWQCB requirements that regulate erosion. Conformance with these standards would ensure that erosion would not be a substantial hazard in the Project Area.	LTS	None required.	LTS
GE-3. Buildings and infrastructure associated with implementation of the Project would be subject to hazards from development on weak and potentially expansive soils and undocumented fill, but compliance with existing building codes would reduce these hazards to less than significant.	LTS	None required.	LTS
Cumulative Soils, Geology, and Seismicity Impact			
GE-4. The Project, in combination with other related projects and background growth, would not significantly contribute to cumulative impacts associated with erosion, seismic groundshaking, or unstable soils.	LTS	None required.	LTS
3.10 Hydrology and Water Quality			
HY-1. The Project would not 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 groundwater table.	LTS	None required.	LTS

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
HY-2. Implementation of the Project would involve construction activities that could increase amounts of silt and sediment and degrade receiving water quality, resulting in a significant impact. However, compliance with state and federal regulations would reduce potential construction-period water quality impacts to less than significant.	LTS	None required.	LTS
HY-3. Implementation of the Project would involve the development of impervious surfaces and urban uses. Stormwater runoff from these uses would contain silt, sediment, and other pollutants that could degrade receiving water quality. However, existing regulations would require the Project Sponsors to prepare a SWPPP for each development area and implement BMPs to control stormwater runoff. Therefore, water quality impacts from long-term operations of each individual development area would be less than significant.	LTS	None required.	LTS
HY-4. The Project would increase impervious surface in the Project Area, which could increase surface runoff. However, the Project would comply with the City's flood protection regulations, which require that the Project Sponsors ensure that stormwater collection and drainage systems could accommodate runoff from the developed site. Therefore, the Project would not create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems, and the impact of each development area would be considered less than significant.	LTS	None required.	LTS
HY-5. Construction of the Project would not place people and structures in an area that is prone to seiche, tsunami, or mudflow.	NI	None required.	NI
Cumulative Hydrology and Water Quality Impact			
HY-6. The Project, in combination with other related projects and background growth, would not significantly contribute to cumulative impacts associated with groundwater recharge or groundwater quality; surface water quantity (stormwater), flooding, or other water-related hazards; or surface water quality.	LTS	None required.	LTS

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
3.11 Biological Resources			
BR-1. Removal of protected trees within the Project Area would be in compliance with the City of Oakland Tree Preservation and Protection Ordinance. Therefore, all potential impacts to trees within the Project Area would be considered less than significant.	LTS	None required.	LTS
BR-2. Demolition of structures and removal of vegetation from within the Project Area could result in destruction of bird nests.	PS	*BR-2.1 Preconstruction Surveys and Protection Measures for Nesting Birds*. If vegetation is removed outside the nesting season (typically February 1 to August 31), there would be no effect on nesting birds and the following surveys would not be required. Construction activities shall, therefore, be timed to avoid vegetation removal or demolition during the nesting season. If this cannot be accomplished, then a qualified biologist shall conduct preconstruction nesting surveys no more than one week prior to vegetation or building removal to determine if nesting birds are present. If nesting birds are present, an appropriate buffer zone shall be developed by the biologist and construction activities shall be suspended in this zone until future surveys indicate that the chicks have fully fledged (left the nest). Completion of preconstruction surveys and avoidance of bird nests would result in no impacts to nesting birds. Survey results shall be valid for a period of 21 days from the date of the survey. Should vegetation or building removal fail to be conducted within this time frame, a second survey shall be undertaken.	LTS
Cumulative Biological Resources Impact			
BR-3. The Project, in combination with other related projects and background growth, would not significantly contribute to cumulative impacts associated with biological resources.	LTS	None required.	LTS

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
3.12 Population, Employment, and Housing			
PH-1. The Project would increase population in the population study area, but the projected growth would not result in direct or indirect effects such that additional infrastructure is required.	LTS	None required.	LTS
PH-2. The Project and the associated change in land use from commercial/industrial to residential mixed-use would increase the amount of land designated for residential development in Oakland and would not displace any residents or housing units.	NI	None required.	NI
Cumulative Population, Employment, and Housing Impact			
PH-3. The Project proposes additional housing that would increase the amount of land designated for residential development in Oakland, but would not displace any residents or housing units or contribute to a cumulatively considerable effect on population and housing in Oakland.	LTS	None required.	LTS
3.13 Utilities			
UT-1. The Project would not exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board.	LTS	None required.	LTS
UT-2. The Project would require the construction of new stormwater drainage facilities within the Project Area. However, the existing drainage pattern would not be altered, extensions of storm drains would connect to existing drains, and construction-related mitigation measures would be imposed. Therefore, impacts would be considered less than significant.	LTS	None required.	LTS
UT-3. EBMUD would have sufficient water supplies available to serve the Project from existing entitlements and resources.	LTS	None required.	LTS

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
UT-4. The Project would increase sewer flows to EBMUD facilities, but would not require the construction of new wastewater treatment facilities or expansion of existing facilities.	LTS	None required.	LTS
UT-5. The Project would not result in solid waste disposal needs beyond the permitted capacity of the local landfill and would comply with federal, state, and local statutes and regulations related to solid waste.	LTS	None required.	LTS
UT-6. The Project would incrementally increase the demand for energy provided by PG&E.	LTS	None required.	LTS
Cumulative Utilities Impact			
UT-7. The Project, in combination with other related projects and background growth, would not significantly contribute to cumulative utilities impacts.	LTS	None required.	LTS
3.14 Public Services			
PS-1. Increases in employees and residents as well as increased building density in the Project Area would increase demand for fire and first responder emergency medical services; however, this would not trigger the need for new or expanded facilities.	LTS	None required.	LTS
PS-2. Increases in residential population as a result of the Project would increase demand for police services. However, implementation of the Project would not require new or altered police facilities in order to maintain acceptable service ratios. As a result, impacts to police services would be considered less than significant.	LTS	None required.	LTS
PS-3. Increase in residential population as a result of the Project would increase student enrollment in the Oakland Unified School District.	LTS	None required.	LTS

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Table S-2 (Continued)
Summary of Impacts and Mitigation Measures

Impacts	Impact Significance Without Mitigation	Mitigation/Improvement Measures	Impact Significance With Mitigation
PS-4. Development of the Project would increase the demand for library services; however, because the Project would not require any expansion or construction of new library facilities beyond those already planned, the Project's impacts would be less than significant.	LTS	None required.	LTS
PS-5. The Project would generate new residents in the Project Area, thereby increasing the demand for park and recreational facilities and other open space. However, this increase in demand would be considered less than significant under CEQA.	LTS	None required.	LTS
Cumulative Public Services Impact			
PS-6. Increases in employees and residents as well as increased building density in the City would increase the cumulative demand for police protection, fire protection, and emergency response services and could result in the need for new or expanded facilities.	S - Cumulative, LTS - Project Contribution	None required.	LTS
PS-7. Increases in the residential population of the City would increase the cumulative student enrollment in the Oakland Unified School District and could result in the need for new or expanded facilities.	S - Cumulative, LTS - Project Contribution	None required.	LTS
PS-8. Increases in employees and residents in the City would increase the cumulative demand for library services; however, the City is preparing a Master Facilities Plan to address long-term community needs. Consequently, cumulative library impacts are considered less than significant.	LTS - Cumulative, LTS - Project Contribution	None required.	LTS
PS-9. Increases in the residential population of the City would increase the cumulative demand for park and recreational facilities or other open space areas and could result in the need for new or expanded facilities.	S - Cumulative, LTS - Project Contribution	None required.	LTS

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Appendix A
Notices of Preparation and Comment Letters

Notice of Preparation (December 2, 2003)

CITY OF OAKLAND

Community and Economic Development Agency, Planning & Zoning Services Division
250 Frank H. Ogawa Plaza, Suite 3330, Oakland, California, 94612-2032

NOTICE OF PREPARATION
OF AN ENVIRONMENTAL IMPACT REPORT

The Oakland Community and Economic Development Agency, Planning Division, has found that an Environmental Impact Report (EIR) must be prepared concerning the development of a series of individual mixed use projects below, which will be considered together for the purpose of evaluating environmental impacts (collectively, Project). We are requesting your comments on the scope and content of the EIR. To date, we have identified several areas of probable environmental effects, which are summarized below. Under the California Environmental Quality Act (CEQA), an Lead Agency may proceed directly with EIR preparation, without further initial review of the project, if it is clear that an EIR will be required. The City has made such a determination for the project

The City of Oakland is the Lead Agency for the Project, which means that we are the public agency with the greatest responsibility for either approving it or carrying it out. We are sending this notice to Responsible Agencies and other interested parties. Responsible Agencies are those public agencies, besides the City of Oakland, that may also have a role in approvals related to the Project. When the Draft EIR is published, it will be sent to all Responsible Agencies and to others who respond to this Notice of Preparation or who otherwise indicate that they would like to receive a copy.

Please send us any response you may have within 30 days from the date you receive this notice, or by Monday, January 5, 2004. Your response, and any questions or comments, should be directed to Claudia Cappio, City of Oakland, Community and Economic Development Agency, 250 Frank H. Ogawa Plaza, Suite 3330, Oakland, CA 94612, (510) 238-2229 or ccappio@oaklandnet.com.

Two scoping meetings have been scheduled to review this project and solicit preliminary comments during the Notice of Preparation comment period:

Monday, December 8, 2003: 6:00 PM	Councilmember Nancy Nadel will hold a Town Meeting at the North Oakland Senior Center, 5714 Martin Luther King Jr. Way, 2nd Floor.
Wednesday, December 17, 2003: 6:30 PM	Planning Commission Scoping Session held at City Hall, Hearing Room 1, 1 City Hall Plaza.

PROJECT TITLE: Central Station Project

PROJECT LOCATION: The Project site consists of a series of separate parcels, which total approximately 28.6 acres, and is located in West Oakland between 10th Street to the south and West Grand Avenue to north, Wood Street to the east and the I-880/Frontage Road to the west.

PROJECT SPONSORS: BUILD West Oakland LLC; Central Station Land LLC; and HFH Central Station Village LLC; Oakland Icehouse LLC.

PROJECT DESCRIPTION: The Project would involve development of each parcel into individual mixed-used projects, which would consist of residential units, live/work and retail space, and non-retail commercial space around the historic Amtrak/Southern Pacific station at 16th and Wood Streets. The existing abandoned building at the corner of 17th and Wood Streets would be demolished and the truck yards, storage sites for empty rail cars, rocks and gravel would be removed from the site. Development of the approximately 28.6-acre group of properties would include construction of residential units ranging from studios to three-bedroom units, live/work units, and commercial spaces ranging from 40 feet in height to a maximum height of approximately 90 feet.

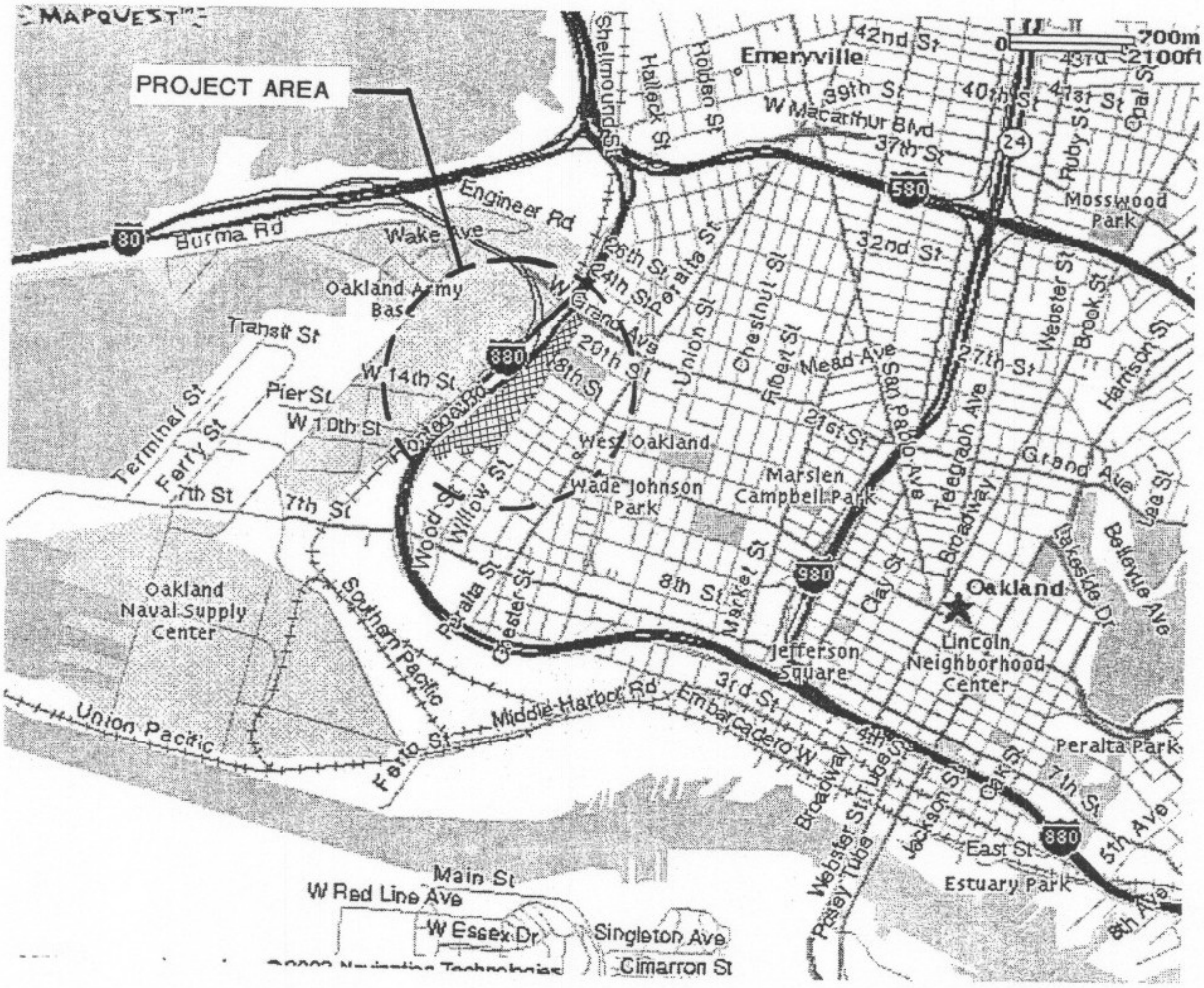
Two project variants are being considered by the project sponsors, one emphasizing more commercial development and the second emphasizing more residential development. Under the first variant, the development program would consist of approximately 1,084 dwelling units and 537,000 gross square feet of commercial space. Under the second variant, the development program would consist of about 1,570 units and 25,000 gross square feet of commercial space. Both of these variants will be studied at an equal level of detail in the EIR. At the center of the site plan is the historic Union Pacific Railroad station, which will be restored and rehabilitated for regional event uses, along with the creation of publicly accessible open space; in the area immediately in front of the train station. Additional site planning improvements would include a new internal pedestrian and street system to serve the residential and commercial development, site landscaping, other improvements and proposed open space. Development would occur in phases over a period of up to ten-years. Construction of the proposed project will require consideration of amendments to the City of Oakland General Plan and a Rezoning of the property because it is not currently designated for residential uses. A Zoning Code Amendment, Vesting Tentative Map, and Design Review from the City are also required, along with a Planned Unit Development (PUD).

PROBABLE ENVIRONMENTAL EFFECTS: It is anticipated that the proposed project may result in environmental effects in the following issues areas: traffic, parking and circulation; air quality; noise; aesthetics/visual quality; cultural/historic resources; land use/planning; and hazardous materials.

DATE: December 2, 2003

CLAUDIA CAPPIO
Development Director

Attachments: Location Map and Table of Proposed Development Variants



Location Map

December 2, 2003

Application for Development Review: Central Station Projects Master Plan

Exhibit D1: Data for Maximum Residential Scenario

Proposed Parcel Number		Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5	Parcel 6	Parcel 7	Parcel 8	Total
Property Owner [1]		BUILD West Oakland LLC	Oakland Icehouse LLC	BUILD West Oakland LLC	HFH Central Station Villag LL	BUILD West Oakland LLC	BUILD West Oakland LLC	Central Station Land LLC	Central Station Land LLC	
Parcel Size (Acres)		2.93	3.64	5.48	6.14	1.81	2.43	2.73	2.32	27.49
Residential Units	Studio						75	55	108	238
	1-Bedroom		169	60	204		75	55	90	653
	2-Bedroom			80	216					296
	3-Bedroom			60	6		51	38	42	197
Subtotal		0	169	200	426	0	201	148	240	1,384
										0
Live/Work Units	1-Bedroom	14	20							34
	2-Bedroom	68			24		14	22	24	152
Subtotal		82	20	0	24	0	14	22	24	186
										0
Total Dwelling Units		**82**	**189**	**200**	**450**	**0**	**215**	**170**	**264**	1,570
Units/Acre		28	52	36	73	0	88	62	114	57
Commercial (SF)		0	0	0	7,000	12,000 [6]	6,000	0	0	25,000
Parking Spaces [2]		87	189	345	823	TBD	260	205	323	2,232
Parking Ratio		1.1	1.0	1.7	1.8	n/a	1.2	1.2	1.2	
Group Usable Open Space (SF) [3]		60,000	42,000	21,000	68,000	58,000	33,000	23,000	41,000	346,000
Group Usable Open Space per Unit		732	222	105	151	n/a	153	135	155	220
Maximum Building Height (FT)		40	45	40/50 [4]	50/65 [5]	62	65	50/65 [7]	90	

[1] BUILD West Oakland LLC currently owns a portion of proposed Parcel 4, which is under contract with HFH Central Station Village LLC

[2] Additional spaces are available on streets, within the site, and along Frontage Road. Numbers to be determined.

[3] Group usable open space with a minimum dimension of 15 feet. Off-street parking and loading areas, driveways, service areas and streets are not counted as usable open space.

[4] Site perimeter along Wood and 12th Streets will be at 40 feet and the remainder will be 50 feet

[5] Building height along Wood, 14th and 16th Streets will not exceed 50 feet, and will rise to a maximum height of 65 feet in the interior

[6] Special Events space

[7] Site perimeter along Wood Street will be at 50 feet and the remainder will be 65 feet

December 2, 2003

Application for Development Review: Central Station Projects Master Plan

Exhibit D2: Data for Maximum Commercial Scenario

Proposed Parcel Number		Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5	Parcel 6	Parcel 7	Parcel 8	Total
Property Owner [1]		BUILD West Oakland LLC	Oakland Icehouse LLC	BUILD West Oakland LLC	HFH Central Station Villag LL	BUILD West Oakland LLC	BUILD West Oakland LLC	Central Station Land LLC	Central Station Land LLC	
Parcel Size (Acres)		2.93	3.64	5.48	6.14	1.81	2.43	2.73	2.32	27.49
Residential Units	Studio						75	55		130
	1-Bedroom			60	197		75	55		387
	2-Bedroom			80	190					270
	3-Bedroom			60	6		51	38		155
Subtotal		0	0	200	393	0	201	148	0	942
										0
Live/Work Units	1-Bedroom	14								14
	2-Bedroom	68			24		14	22		128
Subtotal		82	0	0	24	0	14	22	0	142
										0
Total Dwelling Units		**82**	**0**	**200**	**417**	**0**	**215**	**170**	**0**	1,084
Units/Acre		28	0	36	68	0	88	62	0	39
Commercial (SF)		0	221,000	0	40,000	12,000 [6]	6,000	0	258,000	537,000
Parking Spaces [2]		87	6 [3]	345	823	TBD	260	205	430	2,156
Parking Ratio		1.1		1.7	2.0	n/a	1.2	1.2	1/600 sf	
Group Usable Open Space (SF) [4]		60,000	42,000	21,000	68,000	58,000	33,000	23,000	41,000	346,000
Group Usable Open Space per Unit		732	n/a	105	163	n/a	153	135	n/a	319
Maximum Building Height (FT)		40	45	40/50 [5]	50/65 [6]	62	65	50/65 [8]	90	

[1] BUILD West Oakland LLC currently owns a portion of proposed Parcel 4, which is under contract with HFH Central Station Village LLC

[2] Additional spaces are available on streets, within the site, and along Frontage Road. Numbers to be determined.

[3] To be finalized based on employment numbers

[4] Group usable open space with a minimum dimension of 15 feet. Off-street parking and loading areas, driveways, service areas and streets are not counted as usable open space.

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[6] Building height along Wood, 14th and 16th Streets will not exceed 50 feet, and will rise to a maximum height of 65 feet in the interior

[7] Special Events space

[8] Site perimeter along Wood Street will be at 50 feet and the remainder will be 65 feet

Revised Notice of Preparation (January 21, 2004)

CITY OF OAKLAND

Community and Economic Development Agency, Planning & Zoning Services Division
250 Frank H. Ogawa Plaza, Suite 3330, Oakland, California, 94612-2032

NOTICE OF PREPARATION
OF AN ENVIRONMENTAL IMPACT REPORT
Reissued Notice of Preparation

The Oakland Community and Economic Development Agency, Planning Division, has found that an Environmental Impact Report (EIR) must be prepared concerning the development of a series of individual mixed use projects below, which will be considered together for the purpose of evaluating environmental impacts (collectively, Project). We are requesting your comments on the scope and content of the EIR. To date, we have identified several areas of probable environmental effects, which are summarized below. Under the California Environmental Quality Act (CEQA), a Lead Agency may proceed directly with EIR preparation, without further initial review of the project, if it is clear that an EIR will be required. The City has made such a determination for the project.

The City of Oakland is the Lead Agency for the Project, which means that we are the public agency with the greatest responsibility for either approving it or carrying it out. We are reissuing this notice because the original NOP, dated December 2, 2003, was not received by the State Clearinghouse (OPR) and other Responsible Agencies. Responsible Agencies are those public agencies, besides the City of Oakland, that may also have a role in approvals related to the Project. When the Draft EIR is published, it will be sent to all Responsible Agencies and to others who respond to this Notice of Preparation or who otherwise indicate that they would like to receive a copy.

This re-issued NOP is now being re-circulated for public comments. Please send us any response you may have within 30 days from the date you receive this notice, or by Monday, February 23, 2004. Any public testimony or other correspondence received as part of the first NOP, including the two public scoping sessions held on December 8 and December 17, 2003, does not have to be resent; it has already been incorporated into the environmental review process for the project. Your response, and any questions or comments, should be directed to Claudia Cappio, City of Oakland, Community and Economic Development Agency, 250 Frank H. Ogawa Plaza, Suite 3330, Oakland, CA 94612, (510) 238-2229 or ccappio@oaklandnet.com.

PROJECT TITLE: Central Station Project

PROJECT LOCATION: The Project site consists of a series of separate parcels, which total approximately 28.6 acres, and is located in West Oakland between 10th Street to the south and West Grand Avenue to north, Wood Street to the east and the I-880/Frontage Road to the west.

PROJECT SPONSORS: BUILD West Oakland LLC; Central Station Land LLC; and HFH Central Station Village LLC; Oakland Icehouse LLC.

PROJECT DESCRIPTION: The Project would involve development of each parcel into individual mixed-used projects, which would consist of residential units, live/work and retail space, and non-retail commercial space around the historic Amtrak/Southern Pacific station at 16th and Wood Streets. The existing abandoned building at the corner of 17th and Wood Streets would be demolished and the truck yards, storage sites for empty rail cars, rocks and gravel would be removed from the site. Development of the approximately 28.6-acre group of properties would include construction of residential units ranging from studios to three-bedroom units, live/work units, and commercial spaces ranging from 40 feet in height to a maximum height of approximately 90 feet.

Two project variants are being considered by the project sponsors, one emphasizing more commercial development and the second emphasizing more residential development. Under the first variant, the development program would consist of approximately 1,084 dwelling units and 537,000 gross square feet of commercial space. Under the second variant, the development program would consist of about 1,570 units and 25,000 gross square feet of commercial space. Both of these variants will be studied at an equal level of detail in the EIR. At the center of the site plan is the historic Union Pacific

Railroad station, which will be restored and rehabilitated for regional event uses, along with the creation of publicly accessible open space; in the area immediately in front of the train station. Additional site planning improvements would

include a new internal pedestrian and street system to serve the residential and commercial development, site landscaping, other improvements and proposed open space. Development would occur in phases over a period of up to ten-years. Construction of the proposed project will require consideration of amendments to the City of Oakland General Plan and a Rezoning of the property because it is not currently designated for residential uses. A Zoning Code Amendment, Vesting Tentative Map, and Design Review from the City are also required, along with a Planned Unit Development (PUD).

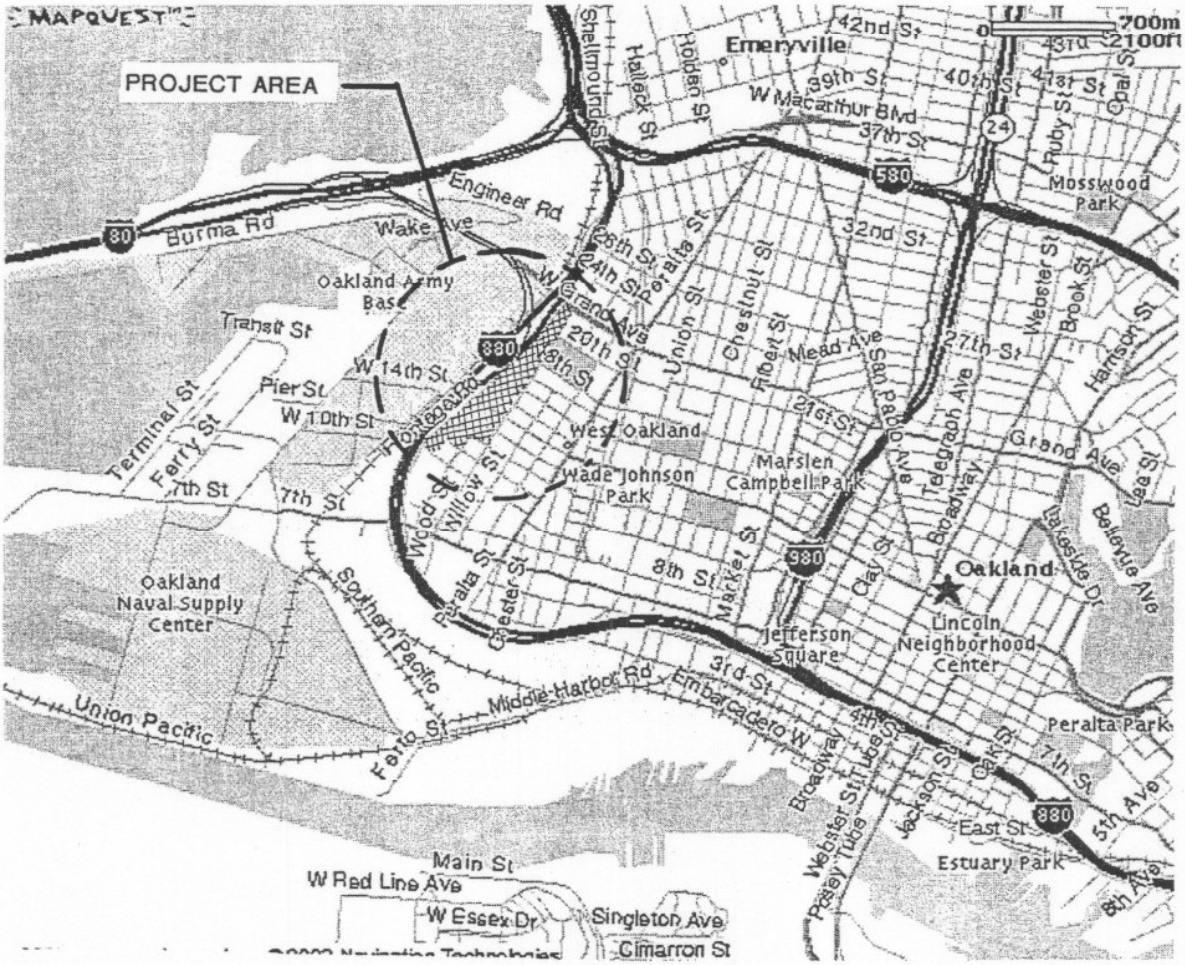
Certain parcels within the project area may contain hazardous waste sites listed under Government Code Section 65962.5.

PROBABLE ENVIRONMENTAL EFFECTS: It is anticipated that the proposed project may result in environmental effects in the following issues areas: traffic, parking and circulation; air quality; noise; aesthetics/visual quality; cultural/historic resources; land use/planning; and hazardous materials.

DATE: January 21, 2004

CLAUDIA CAPPIO
Development Director

Attachments: Location Map and Table of Proposed Development Variants



Location Map

December 2, 2003

Application for Development Review: Central Station Projects Master Plan

Exhibit D1: Data for Maximum Residential Scenario

Proposed Parcel Number		Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5	Parcel 6	Parcel 7	Parcel 8	Total
Property Owner [1]		BUILD West Oakland LLC	Oakland Icehouse LLC	BUILD West Oakland LLC	HFH Central Station Villag LL	BUILD West Oakland LLC	BUILD West Oakland LLC	Central Station Land LLC	Central Station Land LLC	
Parcel Size (Acres)		2.93	3.64	5.48	6.14	1.81	2.43	2.73	2.32	27.49
Residential Units	Studio						75	55	108	238
	1-Bedroom		169	60	204		75	55	90	653
	2-Bedroom			80	216					296
	3-Bedroom			60	6		51	38	42	197
Subtotal		0	169	200	426	0	201	148	240	1,384
										0
Live/Work Units	1-Bedroom	14	20							34
	2-Bedroom	68			24		14	22	24	152
Subtotal		82	20	0	24	0	14	22	24	186
										0
Total Dwelling Units		**82**	**189**	**200**	**450**	**0**	**215**	**170**	**264**	**1,570**
Units/Acre		28	52	36	73	0	88	62	114	57
Commercial (SF)		0	0	0	7,000	12,000 [6]	6,000	0	0	25,000
Parking Spaces [2]		87	189	345	823	TBD	260	205	323	2,232
Parking Ratio		1.1	1.0	1.7	1.8	n/a	1.2	1.2	1.2	
Group Usable Open Space (SF) [3]		60,000	42,000	21,000	68,000	58,000	33,000	23,000	41,000	346,000
Group Usable Open Space per Unit		732	222	105	151	n/a	153	135	155	220
Maximum Building Height (FT)		40	45	40/50 [4]	50/65 [5]	62	65	50/65 [7]	90	

[1] BUILD West Oakland LLC currently owns a portion of proposed Parcel 4, which is under contract with HFH Central Station Village LLC

[2] Additional spaces are available on streets, within the site, and along Frontage Road. Numbers to be determined.

[3] Group usable open space with a minimum dimension of 15 feet. Off-street parking and loading areas, driveways, service areas and streets are not counted as usable open space.

[4] Site perimeter along Wood and 12th Streets will be at 40 feet and the remainder will be 50 feet

[5] Building height along Wood, 14th and 16th Streets will not exceed 50 feet, and will rise to a maximum height of 65 feet in the interior

[6] Special Events space

[7] Site perimeter along Wood Street will be at 50 feet and the remainder will be 65 feet

December 2, 2003

Application for Development Review: Central Station Projects Master Plan

Exhibit D2: Data for Maximum Commercial Scenario

Proposed Parcel Number		Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5	Parcel 6	Parcel 7	Parcel 8	Total
Property Owner [1]		BUILD West Oakland LLC	Oakland Icehouse LLC	BUILD West Oakland LLC	HFH Central Station Villag LL	BUILD West Oakland LLC	BUILD West Oakland LLC	Central Station Land LLC	Central Station Land LLC	
Parcel Size (Acres)		2.93	3.64	5.48	6.14	1.81	2.43	2.73	2.32	27.49
Residential Units	Studio						75	55		130
	1-Bedroom			60	197		75	55		387
	2-Bedroom			80	190					270
	3-Bedroom			60	6		51	38		155
Subtotal		0	0	200	393	0	201	148	0	942
										0
Live/Work Units	1-Bedroom	14								14
	2-Bedroom	68			24		14	22		128
Subtotal		82	0	0	24	0	14	22	0	142
										0
Total Dwelling Units		**82**	**0**	**200**	**417**	**0**	**215**	**170**	**0**	1,084
Units/Acre		28	0	36	68	0	88	62	0	39
Commercial (SF)		0	221,000	0	40,000	12,000 [6]	6,000	0	258,000	537,000
Parking Spaces [2]		87	6 [3]	345	823	TBD	260	205	430	2,156
Parking Ratio		1.1		1.7	2.0	n/a	1.2	1.2	1/600 sf	
Group Usable Open Space (SF) [4]		60,000	42,000	21,000	68,000	58,000	33,000	23,000	41,000	346,000
Group Usable Open Space per Unit		732	n/a	105	163	n/a	153	135	n/a	319
Maximum Building Height (FT)		40	45	40/50 [5]	50/65 [6]	62	65	50/65 [8]	90	

[1] BUILD West Oakland LLC currently owns a portion of proposed Parcel 4, which is under contract with HFH Central Station Village LLC

[2] Additional spaces are available on streets, within the site, and along Frontage Road. Numbers to be determined.

[3] To be finalized based on employment numbers

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Notice of Preparation Comment Letters

Responses to Comments Received
Regarding the Notices of Preparation

Commenter	Date of Comment	Reference EIR Page Number(s)
California Regional Water Quality Control Board	Feb. 9, 2004	3.13-3-5; 3.13-8-10
Department of Toxic Substances Control	February 11, 2004	3.8-2-4; 3.8-9-14
Bay Area Air Quality Management District	February 23, 2004	3.4-22; 3.6-1-14 3.8-14
East Bay Municipal Utilities District	February 23, 2004	3.8-2-4; 3.13-2-4; 3.13-6-11;
CALTRANS	December 19, 2003	3.4-1 thru 3.4-40
Governor's Office of Planning and Research	January 23, 2004	N/A
CMA		3.4-4 thru 3.4-40

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Jan Boel
Acting Deputy Director

Notice of Preparation

January 23, 2004

Review 2/4

To: Reviewing Agencies

Re: Central Station Project
SCH# 2004012110

Attached for your review and comment is the Notice of Preparation (NOP) for the Central Station Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Claudia Cappio
City of Oakland
250 Frank H. Ogawa Plaza, Suite 3330
Oakland, CA 94612

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Associate Planner, State Clearinghouse

Attachments
cc: Lead Agency

RECEIVED
JAN 28 2003
BY:

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
(916)445-0613 FAX(916)323-3018 www.opr.ca.gov

State Clearinghouse Data Base

SCH# 2004012110
Project Title Central Station Project
Lead Agency Oakland, City of

Type NOP Notice of Preparation

Description The project would involve development of each parcel into individual mixed-use projects, which would consist of residential units, live/work and retail space, and non-retail commercial space around the historic Amtrak/Southern Pacific Station at 16th and Wood Streets. Development of the approximately 28.6-acre group of properties would include construction of residential units ranging from studios to three-bedroom units, live/work units, and commercial spaces ranging from 40 feet in height to a maximum height of approximately 90 feet.

Lead Agency Contact

Name Claudia Cappio
Agency City of Oakland
Phone 510.238.2229 **Fax**
email ccappio@oaklandnet.com
Address 250 Frank H. Ogawa Plaza, Suite 3330
City Oakland **State** CA **Zip** 94612

Project Location

County Alameda
City Oakland
Region
Cross Streets 10th Street, West Grand Avenue, Wood Street, Frontage Road
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways I-880
Airports
Railways Union Pacific Railroad
Waterways
Schools
Land Use

Project Issues Traffic/Circulation; Air Quality; Noise; Aesthetic/Visual; Landuse; Toxic/Hazardous

Reviewing Agencies Resources Agency; Office of Historic Preservation; Department of Parks and Recreation; San Francisco Bay Conservation and Development Commission; Department of Water Resources; Native American Heritage Commission; Department of Fish and Game, Region 3; Public Utilities Commission; State Lands Commission; California Highway Patrol; Department of Housing and Community Development; Caltrans, District 4; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 2

Date Received 01/23/2004 **Start of Review** 01/23/2004 **End of Review** 02/23/2004

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: Alameda SCH# [illegible]

Resources Agency

- [x] Resources Agency — Nadel Gayou
- [ ] Dept. of Boating & Waterways — Suzi Betzler
- [ ] California Coastal Commission — Elizabeth A. Fuchs
- [ ] Colorado River Board — Gerald R. Zimmerman
- [ ] Dept. of Conservation — Roseanne Taylor
- [ ] California Energy Commission — Environmental Office
- [ ] Dept. of Forestry & Fire Protection — Allen Robertson
- [x] Office of Historic Preservation — Hans Kreutzberg
- [x] Dept of Parks & Recreation — B. Noah Tilghman, Environmental Stewardship Section
- [ ] Reclamation Board — Lori Buford
- [ ] Santa Monica Mountains Conservancy — Paul Edelman
- [x] S.F. Bay Conservation & Dev't. Comm. — Steve McAdam
- [x] Dept. of Water Resources — Resources Agency, Nadell Gayou

Fish and Game

- [ ] Dept. of Fish & Game — Scott Flint, Environmental Services Division
- [ ] Dept. of Fish & Game 1 — Donald Koch, Region 1
- [ ] Dept. of Fish & Game 2 — Banky Curtis, Region 2
- [x] Dept. of Fish & Game 3 — Robert Floerke, Region 3
- [ ] Dept. of Fish & Game 4 — William Laudenslik, Region 4
- [ ] Dept. of Fish & Game 5 — Don Chadwick, Region 5, Habitat Conservation Program
- [ ] Dept. of Fish & Game 6 — Gabrina Gatchel, Region 6, Habitat Conservation Program
- [ ] Dept. of Fish & Game 6 I/M — Tammy Allen, Region 6, Inyo/Mono, Habitat Conservation Program
- [ ] Dept. of Fish & Game M — George Isaac, Marine Region

Other Departments

- [ ] Food & Agriculture — Steve Shaffer, Dept. of Food and Agriculture
- [ ] Dept. of General Services — Robert Sleppy, Environmental Services Section
- [ ] Dept. of Health Services — Wayne Hubbard, Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] Delta Protection Commission — Debby Eddy
- [ ] Office of Emergency Services — John Rowden, Manager
- [ ] Governor's Office of Planning & Research — State Clearinghouse
- [x] Native American Heritage Comm. — Debbie Treadway

Public Utilities Commission

- [x] Public Utilities Commission — Ken Lewis

State Lands Commission

- [x] State Lands Commission — Jean Sarino

Tahoe Regional Planning Agency (TRPA)

- [ ] Tahoe Regional Planning Agency (TRPA) — Cherry Jacques

Business, Trans & Housing

- [ ] Caltrans - Division of Aeronautics — Sandy Hesnard
- [ ] Caltrans - Planning — Ron Helgason
- [x] California Highway Patrol — John Olejnik, Office of Special Projects
- [x] Housing & Community Development — Cathy Creswell, Housing Policy Division

Dept. of Transportation

- [ ] Dept. of Transportation 1 — Mike Eagan, District 1
- [ ] Dept. of Transportation 2 — Don Anderson, District 2
- [ ] Dept. of Transportation 3 — Jeff Pulverman, District 3
- [x] Dept. of Transportation 4 — Tim Sable, District 4
- [ ] Dept. of Transportation 5 — David Murray, District 5
- [ ] Dept. of Transportation 6 — Marc Birnbaum, District 6
- [ ] Dept. of Transportation 7 — Stephen J. Buswell, District 7
- [ ] Dept. of Transportation 8 — Linda Galmee, District 8
- [ ] Dept. of Transportation 9 — Gayle Rosander, District 9
- [ ] Dept. of Transportation 10 — Tom Dumas, District 10
- [ ] Dept. of Transportation 11 — Bill Figge, District 11
- [ ] Dept. of Transportation 12 — Bob Joseph, District 12

Cal EPA

Air Resources Board

- [ ] Airport Projects — Jim Lerner
- [ ] Transportation Projects — Kurt Karperos
- [ ] Industrial Projects — Mike Tollstrup
- [ ] California Integrated Waste Management Board — Sue O'Leary
- [ ] State Water Resources Control Board — Jim Hockenberry, Division of Financial Assistance
- [ ] State Water Resources Control Board — Student Intern, 401 Water Quality Certification Unit, Division of Water Quality
- [ ] State Water Resources Control Board — Steven Herrera, Division of Water Rights
- [x] Dept. of Toxic Substances Control — CEQA Tracking Center

Regional Water Quality Control Board (RWQCB)

- [ ] RWQCB 1 — Cathleen Hudson, North Coast Region (1)
- [x] RWQCB 2 — Environmental Document Coordinator, San Francisco Bay Region (2)
- [ ] RWQCB 3 — Central Coast Region (3)
- [ ] RWQCB 4 — Jonathan Bishop, Los Angeles Region (4)
- [ ] RWQCB 5S — Central Valley Region (5)
  - [ ] RWQCB 5F — Central Valley Region (5), Fresno Branch Office
  - [ ] RWQCB 5R — Central Valley Region (5), Redding Branch Office
- [ ] RWQCB 6 — Lahontan Region (6)
  - [ ] RWQCB 6V — Lahontan Region (6), Victorville Branch Office
- [ ] RWQCB 7 — Colorado River Basin Region (7)
- [ ] RWQCB 8 — Santa Ana Region (8)
- [ ] RWQCB 9 — San Diego Region (9)

- [ ] Other _____

Last Updated on 01/12/04

Sent By: Holliday Development; 5105472125; Aug-9-04 10:00AM; Page 4

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGEN

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-5505
FAX (510) 286-5513
TTY (800) 735-2929

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 3

To M. Kay	From P. Maurice
Co.	Co.
Dept.	Phone #
Fax #	Fax #

December 19, 2003

ALA880610
ALA-880-33.8

Ms. Claudia Cappio
City of Oakland Planning Division
250 Frank Ogawa Plaza, Suite 3330
Oakland, CA 94612

Dear Ms. Cappio:

CENTRAL STATION PROJECT – NOTICE OF PREPARATION

Thank you for including the California Department of Transportation (Department) in the early stages of the environmental review process for the Central Station Project. The following comments are based on the Notice of Preparation.

Traffic Analysis

Please include the information detailed below in the Traffic Study to ensure that project-related impacts to State roadway facilities are thoroughly assessed. We encourage the City to coordinate preparation of the study with our office, and we would appreciate the opportunity to review the scope of work. The Department's *"Guide for the Preparation of Traffic Impact Studies"* should be reviewed prior to initiating any traffic analysis for the project; it is available at the following website:
http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf

The Traffic Study should include:

1. Site plan clearly showing project access in relation to nearby state roadways. Ingress and egress for all project components should be clearly identified. State right-of-way (ROW) should be clearly identified.

2. Project-related trip generation, distribution, and assignment. The assumptions and methodologies used to develop this information should be detailed in the study, and should be supported with appropriate documentation.

3. Average Daily Traffic, AM and PM peak hour volumes and levels of service (LOS) on all significantly affected roadways, including crossroads and controlled intersections for existing, existing plus project, cumulative and cumulative plus project scenarios. Calculation of cumulative traffic volumes should consider all traffic-generating

developments, both existing and future, that would affect study area roadways and intersections. *The analysis should clearly identify the project's contribution to area traffic and degradation to existing and cumulative levels of service. Lastly, the Department's LOS threshold, which is the transition between LOS C and D, and is explained in detail in the Guide for Traffic Studies, should be applied to all state facilities.*

4. Schematic illustration of traffic conditions including the project site and study area roadways, trip distribution percentages and volumes as well as intersection geometrics, i.e., lane configurations, for the scenarios described above.

5. The project site building potential as identified in the General Plan. The project's consistency with both the Circulation Element of the General Plan and the Alameda County Congestion Management Agency's Congestion Management Plan should be evaluated.

6. *Mitigation should be identified for any roadway mainline section or intersection with insufficient capacity to maintain an acceptable LOS with the addition of project-related and/or cumulative traffic.* The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should also be fully discussed for all proposed mitigation measures.

7. Special attention should be given to the following trip-reducing measures:
   - Encouraging mixed-use,
   - Maximizing density through offering bonuses and/or credits,
   - Coordinating with AC Transit and BART to increase transit/rail use by expanding routes and emphasizing express service to regional rail stations, and by providing bus shelters with seating at any future bus pullouts,
   - Providing transit information to all future project employees, and
   - Encouraging bicycle- and pedestrian-friendly design.

While the 2000 Highway Capacity Manual (HCM) may not be the preferred level of service methodology, it should be used for analyzing impacts to state facilities, particularly where previous analysis employing alternative methodologies has identified impacts. The residual level of service, assuming mitigation has been implemented, should also be analyzed with HCM 2000.

Right of Way

Please be advised that work that encroaches onto the State right-of-way (ROW) requires an encroachment permit that is issued by the Department. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans, clearly indicating State ROW, must be submitted to the address below. Traffic-related mitigation measures will be incorporated into the construction plans during the encroachment permit process.

See the following website link for more information:
http://www.dot.ca.gov/hq/traffops/developserv/permits/

Sean Nozzari, District Office Chief
Office of Permits
California DOT, District 4
P.O. Box 23660
Oakland, CA 94623-0660

Please forward a copy of the environmental document, along with the Traffic Study and Technical Appendices, and staff report to the address below as soon as they are available.

Patricia Maurice, Associate Transportation Planner
Office of Transit and Community Planning, Mail Station 10D
California DOT, District 4
111 Grand Avenue
Oakland, CA 94612-3717

Please feel free to call or email Patricia Maurice of my staff at (510) 622-1644 or patricia_maurice@dot.ca.gov with any questions regarding this letter.

Sincerely,

Timothy C. Sable

TIMOTHY C. SABLE
District Branch Chief
IGR/CEQA

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

ALAMEDA COUNTY
Roberta Cooper
Scott Haggerty
(Chairperson)
Nate Miley
Shelia Young

CONTRA COSTA COUNTY
Mark DeSaulnier
Mark Ross
Gayle Uilkema
(Secretary)

MARIN COUNTY
Harold C. Brown, Jr.

NAPA COUNTY
Brad Wagenknecht

SAN FRANCISCO COUNTY
Willie Brown, Jr.
Chris Daly
Jake McGoldrick

SAN MATEO COUNTY
Jerry Hill
Marland Townsend
(Vice-Chairperson)

SANTA CLARA COUNTY
Liz Kniss
Patrick Kwok
Julia Miller
Dena Mossar

SOLANO COUNTY
John F. Silva

SONOMA COUNTY
Tim Smith
Pamela Torliatt

Jack P. Broadbent
EXECUTIVE OFFICER/APCO

February 23, 2004

Claudia Cappio
Community and Economic Development Agency
City of Oakland
250 Frank H. Ogawa Plaza, Suite 3330
Oakland, CA 94612

RECEIVED
FEB 23 2003
BY:

Subject: Central Station Project

Dear Ms. Cappio:

The Bay Area Air Quality Management District (District) has received your agency's Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Central Station Project. The project proposes the redevelopment of a series of parcels in West Oakland near the historic Union Pacific Railroad station, totaling approximately 28.6 acres, into individual mixed-use projects. Two project alternatives will be evaluated in the DEIR: one would consist of approximately 1,084 new residential units and 537,000 square feet of commercial space; and the second would consist of approximately 1,570 new residential units and 25,000 square feet of commercial space.

We agree with the NOP's conclusion that the DEIR should include an analysis of the project's potential impacts upon air quality. The Bay Area is currently a non-attainment area for national and state ambient air quality standards for ground level ozone, and state standards for particulate matter. The air quality standards are set at levels to protect public health and welfare. Toxic air contaminants are also a serious concern in the Bay Area. Any project that exposes the public to substantial levels of criteria air pollutants or toxic air contaminants would be deemed by the District to have a significant impact. We recommend that significant air quality impacts be mitigated to a level less than significant. As general background for readers, the DEIR should provide quantitative summaries of the region's attainment status with regard to ambient air quality standards, discuss the health effects of air pollution, and identify the contribution of mobile and stationary sources to air pollution emissions.

We recommend that new development be consistent with existing adjacent land uses and that buffer zones be established to separate incompatible land uses. New housing/retail built adjacent to existing industrial facilities has the potential to cause air quality impacts on future residents. The DEIR should include an evaluation of whether the proposed project creates or exacerbates land use conflicts that would result in adverse air quality impacts and propose mitigation measures to prevent significant air quality impacts.

As part of the Regional Agencies Smart Growth Strategy/Regional Livability Footprint Project, Alameda County residents expressed a strong preference for more infill and mixed use development that provides a range of

travel options. We believe that development that supports transit, walking and cycling helps reduce vehicle miles traveled and improve local and regional air quality. As long as potential land use conflicts with nearby industrial uses can be mitigated, this project supports these goals by redeveloping a variety of land uses on urban infill sites near transit, and we commend the City for these efforts.

In addition, we recommend that the City be more aggressive in reducing vehicle trips associated with the project. Motor vehicles constitute the largest source of air pollution in the Bay Area; therefore, promoting alternative less polluting modes of transportation can significantly help reduce air pollution. The project site is located within walking and biking distance of a number of AC Transit lines, and the West Oakland BART station. The DEIR should include mitigation measures for motor vehicle emissions by strengthening linkages between the project site and these mass transit nodes. In addition, the City can maximize the benefits of the project's location by incorporating as many appropriate transportation demand management (TDM) measures as possible, including: reduced or shared parking; transit subsidies such as the Commuter Check program for employees; parking cash-out program and bicycle/pedestrian facilities and access.

The DEIR should include an analysis of the potential impacts on air quality from project construction and project operation at buildout. The DEIR should also include an evaluation of potential nuisance impacts, such as odors and dust that could result from project implementation. Odors may not necessarily cause physical harm, but may be unpleasant and motivate citizen complaints. Particulate matter (PM) is a pollutant of concern for both nuisance and health-related reasons. PM larger than ten microns diameter is more likely to be a public nuisance than a serious health hazard. Research shows a correlation among high levels of fine PM (ten microns diameter or less), increased mortality rates, and high incidences of chronic respiratory illness.

The NOP indicates that abandoned buildings, rail storage sites and uses associated with the existing railroad station will be demolished as part of the project. The short-term exposure of people to hazardous materials such as asbestos, lead-based paint and/or contaminated soil can result in a significant air quality impact. Demolition activity, soil remediation, and storage/handling of fuels and solvents require careful mitigation planning and may require prior approval and/or a permit from the District. For more information on District regulations regarding these activities, please contact our Compliance and Enforcement Division at (415) 749-4795.

For more details on our agency's guidance regarding environmental review, we recommend that the City refer to the *BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans (1999)*. This document provides information on best practices for assessing and mitigating air quality impacts related to projects and plans, including construction emissions, land use/design measures, project operations, motor vehicles, and nuisance impacts. If you do not already have a copy of our guidelines, we recommend that you obtain it by calling our Public Information Division at (415) 749-4900 or downloading the online version from the District's web site at http://www.baaqmd.gov/pln/CEQA/ceqaguide.asp.

If you have any questions regarding these comments, please contact Suzanne Bourguignon, Environmental Planner, at (415) 749-5093.

Sincerely,

Jack P. Broadbent
Executive Officer/APCO

JPB:SB

cc: BAAQMD Director Roberta Cooper
BAAQMD Director Scott Haggerty
BAAQMD Director Nate Miley
BAAQMD Director Sheila Young

EAST BAY MUNICIPAL UTILITY DISTRICT

RECEIVED
FEB 2 3 2003
BY:

February 23, 2004

Claudia Cappio
City of Oakland
Community and Economic Development Agency
250 Frank H. Ogawa Plaza, Suite 3330
Oakland, CA 94612

Dear Ms. Cappio:

Re: Notice of Preparation of an Environmental Impact Report – Central Station Project Oakland

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to review the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the Central Station Project in Oakland. As a responsible agency, EBMUD would like to ensure that the EIR would be of sufficient detail and quality to evaluate how development and changes in land use within the project area could impact EBMUD's interests as detailed in the following paragraphs.

WATER SERVICE

Pursuant to Sections 10910-10915 of the California Water Code, the proposed project meets the threshold requirement for an assessment of water supply because the entire scope of the project includes at least 500 dwelling units. The project sponsor should contact EBMUD and request a Water Supply Assessment (WSA). EBMUD requires the project sponsor to provide future water demand data and estimates for the project site for the analysis of the WSA. Please be aware that the WSA can take up to 90 days to complete from the day on which the request is received.

EBMUD's Central Pressure Zone, with a service elevation range between 0 and 100 feet, will serve the project site. The project site is bounded by four-, six-, and twelve-inch water pipelines with a twelve-inch pipeline in 14th Street and a six-inch pipeline in 16th Street that traverse the project site. Modifications to existing streets that require pipeline and fire hydrant relocations or replacements will be at the project sponsor's expense. Main extensions and/or off-site pipeline improvements, also at the project sponsor's expense, may be required depending on EBMUD metering requirements and fire flow requirements set by the local fire department. When development plans are finalized, the project sponsor should contact EBMUD's New Business Office and request a water service estimate to determine costs and conditions of providing water service to the development. Engineering and installation of new and relocated pipelines and services

often require substantial lead-time, which should be provided for in the project sponsor's development schedule.

EBMUD's Standard Site Assessment Report, and the project's NOP, indicates the potential for contaminated soils or groundwater to be present within the project site boundaries. The project sponsor should be aware that EBMUD will not install piping in contaminated soil or groundwater (if groundwater is present at any time during the year at the depth piping is to be installed) that must be handled as a hazardous waste, or that may be hazardous to the health and safety of construction and maintenance personnel wearing Level D personal protective equipment. Nor will EBMUD install piping in areas where groundwater contaminant concentrations exceed specified limits for discharge to the sanitary sewer system and sewage treatment plants. The project must submit copies to EBMUD of all known information regarding soil and groundwater quality within or adjacent to the project boundary and a legally sufficient, complete and specific written remediation plan establishing the methodology, planning and design of all necessary systems for the removal, treatment, and disposal of contaminated soil and groundwater. EBMUD will not design piping until soil and groundwater quality data and remediation plans have been received and reviewed, and will not start underground work until remediation has been carried out and documentation of the effectiveness of the remediation has been received and reviewed. If no soil or groundwater quality data exists, or the information supplied by the applicant is insufficient, EBMUD may require the project to perform sampling and analysis to characterize the soil and groundwater that may be encountered during excavation or EBMUD may perform such sampling and analysis at the project's expense. If evidence of contamination is discovered during EBMUD work on the project site, work may be suspended until such contamination is adequately characterized and remediated to EBMUD standards.

WATER CONSERVATION

The proposed project presents an opportunity to incorporate many water conservation measures. EBMUD would request that the City of Oakland (City) include in its conditions of approval a requirement that the project sponsor comply with the Landscape Water Conservation Section of the Municipal Code of the City, Article 10, Chapter 7. EBMUD staff would appreciate the opportunity to meet with the project sponsor to discuss water conservation programs and best management practices applicable to the project area. A key objective of this meeting will be to explore timely opportunities to expand conservation via early consideration of EBMUD's conservation programs and best management practices applicable to the project.

WASTEWATER PLANNING

EBMUD's Main Wastewater Treatment Plant is anticipated to have adequate dry weather capacity to treat the proposed wastewater flow from this project, provided this wastewater meets the standards of EBMUD's Source Control Division. However, the City of Oakland's Infiltration/Inflow (I/I) Correction Program sets a maximum allowable peak wastewater flow from each subbasin within the City and EBMUD agreed to design and construct wet weather conveyance and treatment facilities to accommodate these flows. EBMUD prohibits discharge of wastewater flows above the allocated peak flows for a subbasin because conveyance and treatment capacity for wet weather flows may be adversely impacted by flows above this agreed limit. The project sponsor should contact the City of Oakland Public Works Department and verify that there is available capacity within the subbasin flow allocation and that the capacity has not been allocated to other developments. The projected peak wet weather wastewater flows from this project need to be determined and compared to the available capacity within the subbasin and the confirmation of capacity then included in the EIR. Suggested language to include in the EIR is as follows: "The City of Oakland Public Works Department has confirmed that there is available wastewater capacity within Subbasin *(insert subbasin number here)* for this project."

In general, the project should address the replacement or rehabilitation of the existing sanitary sewer collection system to prevent an increase in I/I. Please include a provision to control or reduce the amount of I/I in the environmental documentation for this project. The main concern is the increase in total wet weather flows, which could have an adverse impact if the flows are greater than the maximum allowable flows from this subbasin.

The project should address the alignment of the wastewater interceptor located on Wood Street and assure the protection of these facilities. EBMUD can provide drawings upon request.

WATER RECYCLING

EBMUD's Policy 73 requires "...that customers ...use non-potable water for non-domestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health and not injurious to plant life, fish and wildlife" to offset demand on EBMUD's limited potable water supply. In January 2002, the City of Oakland adopted a dual plumbing ordinance, requiring new developments within a City-Designated Water Reuse Area to use recycled water provided by EBMUD and install dual plumbing systems for appropriate recycled water uses if recycled water will be available. The Central Station Project is located within the service area boundary of EBMUD's East Bayshore Recycled Water Project and within a City-Designated Water Reuse Area. EBMUD anticipates recycled water delivery to the project area within the next 10 years. The City ordinance requires new development projects located within a

City-Designated Water Reuse Area to install separate piping systems to permit the appropriate use of recycled water for landscape irrigation.

If you have any questions concerning this response, please contact David J. Rehnstrom, Senior Civil Engineer, Water Service Planning, at (510) 287-1365.

Sincerely,

WILLIAM R. KIRKPATRICK
Manager of Water Distribution Planning

WRK:JBH:sb
sb04_034.doc

2/24/04

Department of Toxic Substances Control

Terry Tamminen
Agency Secretary
Cal/EPA

Edwin F. Lowry, Director
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

Arnold Schwarzenegger
Governor

February 11, 2004

Claudia Cappio
City of Oakland
Community and Economic Development Agency
250 Frank H. Ogawa Plaza, Suite 3330
Oakland, CA 94612

Dear Ms. Cappio:

Thank you for the opportunity to comment on the reissued Notice of Preparation (NOP) for the Central Station Project Environmental Impact Report (EIR) [SCH#20004012110]. As you may be aware, the California Department of Toxic Substances Control (DTSC) oversees the cleanup of sites where hazardous substances have been released pursuant to the California Health and Safety Code, Division 20, Chapter 6.8. While the San Francisco Regional Water Quality Control Board was designated the lead environmental agency pursuant to California Health and Safety Code Section 25260 et seq. for this site, DTSC is a supporting agency.

The project proposes land use changes for parcels that were formerly used for the historic Amtrak/Southern Pacific Station at 16th and Wood Streets. The NOP states that the abandoned building at the corner of 17th and Wood Streets would be demolished and the truck yards, storage sites for empty rail cars, and rocks and gravel would be removed. The 28.6 acre property would then be developed for residential and commercial uses, including construction of residential units ranging from studios to three-bedroom units, live/work units and commercial spaces ranging from 40 to 90 feet tall.

According to the description of the project, these changes involve the redevelopment of industrial property for residential and commercial uses. Because the project parcels involve residential development, it is important that groundwater and soil meet applicable remediation standards for residential use. The EIR should not only address existing conditions at the project site, but also give historical background information for all parcels at the site. The discussion should address hazardous materials that were used, stored or handled in significant quantities at the project sites and adjacent facilities, and mention any releases and/or contamination that occurred or currently exists. The EIR should also discuss the results of environmental investigations that have been conducted at the site and the additional sampling needed in order to fully characterize the site. At this time, the property owner has not proposed an environmental remedy; however, an analysis of potential impacts will need to be addressed in this document or a separate document once a remedy has been selected.

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addressed in this document or a separate document once a remedy has been selected.

We are aware that projects such as this one are typically on a compressed schedule, and in an effort to use the available review time efficiently, we request that DSC be included in any meetings where issues relevant to our statutory authority are discussed.

Please contact Lynn Nakashima of my staff at (510) 540-3839 if you have any questions or would like to schedule a meeting. Thank you in advance for your cooperation in this matter.

Sincerely,

Barbara J. Cook, P.E., Chief
Northern California - Coastal Cleanup Operations Branch

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

Guenther Moskat
CEQA Tracking Center
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mr. Mark Johnson
Regional Water Quality Control Board
San Francisco Bay
1515 Clay Street, Suite 1400
Oakland, California 94612

California Regional Water Quality Control Board

San Francisco Bay Region

Terry Tamminen
Secretary for Environmental Protection

Internet Address: http://www.swrcb.ca.gov
1515 Clay Street, Suite 1400, Oakland, California 94612
Phone (510) 622-2300 – FAX (510) 622-2460

Arnold Schwarzenegger
Governor

2/20/04

Date: FEB 0 9 2004
File No. 2198.09 (BKW)

Claudia Cappio
City of Oakland
250 Frank Ogawa Plaza, Suite 3330
Oakland, CA 94612-2032

Re: Notice of Preparation of an Environmental Impact Report for the Central Station Project
SCH Number: 2004012110

Dear Ms. Cappio:

Regional Water Quality Control Board (Water Board) staff have reviewed the Notice of Preparation (NOP) of an *Environmental Impact Report* (EIR) for the Central Station Project. The EIR will evaluate the potential environmental impacts that might reasonably be anticipated to result from the proposed action, which includes the redevelopment of a 28.6-acre project site around the historic Amtrak/Southern Pacific Station at 16th and Wood Streets in Oakland. Development would include residential units, live/work units, and commercial spaces. Water Board staff have the following comment on the NOP for the EIR.

Comment 1
The list of probable environmental effects in the NOP does not include impacts to water quality. The EIR should evaluate the project with respect to the requirements of Alameda County's National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges. Under the terms of the NPDES permit, post-construction best management practices (BMPs) at new development and significant redevelopment projects are to meet the maximum extant practicable (MEP) definition of treatment specified in the Clean Water Act (CWA). Alameda County is implementing the current NPDES permit for discharges of stormwater under the *Alameda Countywide Clean Water Program, Stormwater Management Plan* (SMP) (EOA, Inc., February 1997). New Development and Construction Goals are discussed in Section 7 of the SMP. These goals include the following:

- Incorporate stormwater quality controls into the planning and permitting of new development/significant redevelopment projects;
- Continue to promote implementation of the *Regional Board Staff Recommendations for New and Redevelopment Controls for Stormwater Programs*.

Tables 2 and 4 of the *Regional Board Staff Recommendations for New and Redevelopment Controls for Stormwater Programs* state that residential and commercial projects with more than five acres of directly coupled impervious area are to implement Tier 3 post-construction stormwater best management practices (BMPs). Tier 3 BMPs are required to

be treatment controls that are based on performance goals, including a reduction by 80 percent of the annual total suspended solid loadings expected from the site in its developed condition. Appropriate Tier 3 controls are specified as: wet ponds; constructed wetlands; swales and vegetated filter strips; extended detention basins; and sand filters.

The Alameda County NDPES permit was re-issued on February 19, 2003. New development and significant redevelopment Projects that are constructed after February of 2005, and that create or replace more than 1 acre of impervious surfaces, will be required to comply with the numeric standards for post-construction stormwater BMPs in the re-issued permit. Treatment BMPs are to be constructed that incorporate, at a minimum, the following hydraulic sizing design criteria to treat stormwater runoff. As appropriate for each criterion, local rainfall data are to be used or appropriately analyzed for the design of the BMPs.

Volume Hydraulic Design Basis: Treatment BMPs whose primary mode of action depends on volume capacity, such as detention/retention units or infiltration structures, shall be designed to treat stormwater runoff equal to:

1. the maximized stormwater quality capture volume for the area, based on historical rainfall records, determined using the formula and volume capture coefficients set forth in *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice No. 87, (1998)*, pages 175-178 (e.g., approximately the 85th percentile 24-hour storm runoff event); or
2. the volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Appendix D of the *California Stormwater Best Management Practices Handbook,* (1993), using local rainfall data.

Flow Hydraulic Design Basis: Treatment BMPs whose primary mode of action depends on flow capacity, such as swales, sand filters, or wetlands, shall be sized to treat:

1. 10% of the 50-year peak flow rate; or
2. the flow of runoff produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths; or
3. the flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity.

Water Board staff strongly encourage the use of landscape-based stormwater treatment measures, such as biofilters and vegetated swales, to manage runoff from project sites. Since landscape-based stormwater treatment measures require that some of the site surface area be set aside for their construction, the proper sizing and placement of these features should be evaluated early in the design process to facilitate incorporation of the features into the site landscaping. Water Board staff discourage the use of inlet filter devices for stormwater management. Filtration systems require a maintenance program that is adequate to maintain the functional integrity of the systems and to ensure that improperly maintained filtration devices do not themselves become sources of stormwater contaminants or fail to function. Water Board staff have observed problems with the use of inlet filter inserts, since these devices require high levels of maintenance and are easily clogged by leaves or other commonly occurring debris, rendering them ineffective. Research conducted by the California Department of Transportation has demonstrated that inlet filters can be clogged by a single storm event. The study found that these devices required maintenance before and after storm events as small as 0.1 inch of rain. In addition, trash, debris, and sediment in the catchment had a significant impact on the frequency of maintenance[1]. Therefore, adequate maintenance of inlet filters to provide MEP water quality treatment would be prohibitively expensive and impractically time consuming.

Water Board staff recommend that the project proponents refer to *Start at the Source*, a design guidance manual for storm water quality protection, for a fuller discussion of the selection of stormwater management practices. This manual provides innovative procedures for designing structures, parking lots, drainage systems, and landscaping to mitigate the impacts of stormwater runoff on receiving waters. This manual may be obtained from the Santa Clara Valley Urban Runoff Pollution Prevention Program's website (www.scvurppp.org) or by e-mailing a request to the e-mail address in the last paragraph of this letter. Additional innovative techniques for incorporating structural stormwater best management practices (BMPs) into urban design, such as infiltration planter boxes, can be found in Portland, Oregon's *2002 Stormwater Management Manual*, which can be obtained at www.cleanrivers-pdx.org/tech_resources/2002_swmm.htm.

[1] Othmer, Friedman, Borroum and Currier, November 2001, *Performance Evaluation of Structural BMPs: Drain Inlet Inserts (Fossil Filter™ and StreamGuard™) and Oil/Water Separator*, Sacramento, Caltrans.

If you have any questions, please contact me at (510) 622-5680 or by e-mail at bkw@rb2.swrcb.ca.gov.

Sincerely,

Brian Wines
Water Resources Control Engineer, South/East Bay Section

cc State Clearinghouse, Attn: Katie Shulte Joung, P.O. Box 3044, Sacramento, CA 95812-3044

Appendix B
Transportation (Dowling Associates)

- Alameda County Congestion Management Agency CMP Analysis
- Live/Work Units Trip Generation and Parking Survey
- Alternative Passby-Trips Reduction
- Intersection Peak-Hour Traffic Volumes – Existing, Project, 2025 Cumulative
- Summary of Freeway Operations
- Project Contribution to Significant Cumulative Traffic Impacts
- Parking Survey

Alameda County
Congestion Management Agency CMP Analysis

CMP Analysis for Central Station Project EIR

Alameda County Congestion Management Agency Analysis

Significance Criteria

The project as defined for this analysis consists of two variants: one emphasizing more commercial development and the second emphasizing more residential development. Both of these project variants have been studied at an equal level.

The roadway impacts of the project were considered significant if the addition of project-related traffic would result in a level of service (LOS) value worse than LOS E, except where the roadway link was already at LOS F under no project conditions. For those locations where this Baseline condition is LOS F, the impacts of the project were considered significant if the contribution of project-related traffic is at least three percent (3%) of the total traffic. This criterion has been included to address impacts along roadway segments currently operating under unacceptable levels and was developed based on professional judgment using a "reasonableness test" of daily fluctuations of traffic. Also a change of "volume to capacity" (V/C) ratio of 3% has been found to be the threshold for which a perceived change in congestion is observed (the V/C ratio is calculated by comparing the peak hour link volume to the peak hour capacity of the road link). This change is equivalent to about one-half of the change from one level of service to the next.

Level of service (LOS) is a measure of the traffic characteristics of a road segment under different traffic conditions, and is assigned a letter from "A" to "F", with LOS A representing uncongested, high speed and minimum delay, conditions, while LOS F represents highly unstable congested conditions with low speeds and high delay.

This CMP analysis focuses on roadway links on MTS and CMP highway segments and transit corridors, and does not extend to intersections. This is consistent with the guidelines of the 2003 Congestion Management Program.

Congestion Management Program Land Use Analysis

Since the proposed project, as defined above, would generate more than 100 peak hour trips, the impacts of the project on the regional transportation system were assessed using the Alameda County Congestion Management Agency (ACCMA) Countywide Travel Demand Model. The impact analysis for roadways includes all MTS roadways and CMP-designated roadways, plus several local MTS roadways in the vicinity of the project area.

The traffic forecasts were based on the most recent version (during the period when the comments on the NOP were issued) of the Countywide Model, which uses Association of Bay Area Government's (ABAG) *Projections 2002* (P'02) socio-economic forecasts. The socio-economic data for the project area was added into the model for the 2010 and 2025 forecasts for all traffic analysis zones within the project area. The table below summarizes the changes in land use for the commercial and residential project variants.

TAZ	Households	Jobs
Commercial Variant		
476	769	1160
477	453	11
Total	1222	1171
Residential Variant		
476	1054	109
477	453	11
Total	1507	120

Source: Hausrath Economics Group 2003.

For the CMP analysis, traffic estimates were calculated for the proposed project using the model and then compared against 2010 and 2025 baseline volumes. The model was used to calculate trip generation, trip distribution, mode choice, and trip assignment of project trips from/to the OARB. The results were summarized for both highway and transit impacts. Highway impacts were summarized at the designated link locations identified based on discussions with ACCMA staff (these link locations are generally similar to those identified in the Notice of Preparation letter). Transit impacts were addressed for AC Transit and BART.

CMP and MTS Highway Segments

The levels of service (LOS) for the designated links were analyzed in a spreadsheet using the Florida Department of Transportation LOS methodology,[1] which provides a planning level analysis based on *Highway Capacity Manual* methods. As a planning level analysis, the level of service is based on forecasts of traffic and assumptions for roadway and signalization control conditions, such as facility type (freeway, expressway, and arterial classification), speeds, capacity and number of lanes. The assumption for the number of lanes at each link location was extracted from the model and confirmed through field observations.

The traffic baseline forecasts for 2010 & 2025 were extracted at the required CMP and MTS highway segments from the ACCMA Countywide Travel Model, for the PM peak hour. The PM peak hour was evaluated in compliance with ACCMA requirements. The tables compare the Baseline results to the With-Project results for each model horizon year. The PM peak hour volumes, V/C ratios and the LOS for Baseline and With-Project conditions represent both directions of flow. Detailed tables are provided at the end of the analysis and include all data for 2010 and 2025 forecast years.

[1] Florida Department of Transportation. Level of Service Standards and Guidelines Manual for Planning, 1995.

2010 Cumulative Impacts on the Regional and Local Roadways

The project would contribute to the 2010 cumulative impacts on the regional and local roadways; however, this results is a less-than-significant-impact.

The addition of project-generated traffic to the regional and local roadways **would result in a change in LOS** for both the commercial and residential project variants when compared to the 2010 Baseline condition (**see Tables 1 and 2**).

Under 2010 cumulative conditions with the project, one link (northbound I-880 south of 7th Street) would change in terms of level of service (i.e.: changes from C to D), but all analysis roadways would continue to operate at LOS "E" or better (i.e.: no roadway reaches LOS F with the project).

There are two roadways that exhibit LOS F conditions with either project variant under the 2010 cumulative scenario. These roadways include eastbound I-580 east of the I-980/SR24 interchange and southbound San Pablo Avenue north of 40th Street. However, at both these locations, the Baseline conditions (without project-generated traffic) exhibit LOS F conditions. Based on the significance criteria of a 3% increase for project-generated traffic described previously, this is not considered significant for either project variant.

2025 Cumulative Impacts on the Regional and Local Roadways

The project would contribute to the 2025 cumulative impacts on the regional and local roadways; however, this results in a less than significant impact.

The addition of project-generated traffic to the regional and local roadways **would result in a change in LOS** for both the commercial and residential project variants when compared to the 2025 Baseline condition (**see Tables 3 and 4**).

Under 2025 cumulative conditions with the project, one link (southbound I-880 north of I-980) would change in terms of level of service (i.e.: changes from C to D), but all analysis roadways would continue to operate at LOS "E" or better (i.e.: no roadway reaches LOS F with the project).

There are three roadways that exhibit LOS F conditions with either project variant under the 2025 cumulative scenario. These roadways include eastbound I-580 east of the I-980/SR24 interchange, northbound I-980 north of 27th Street, and southbound San Pablo Avenue north of 40th Street. However, at all three of these locations, the Baseline conditions (without project-generated traffic) exhibit LOS F conditions. Based on the significance criteria of a 3% increase for project-generated traffic described previously, this is not considered significant for either project variant.

MTS Transit Corridors

The impact of the proposed project on the transit system was assessed using the latest version of the ACCMA Countywide Model. The transit trips generated by baseline and both proposed

project conditions have been forecast using the ACCMA Countywide Model and are compared in **Tables 5 and 6**. The model generates daily home-based work and non-work trips, but does not generate peak hour transit trips. Therefore to estimate the number of transit trips occurring during the peak period, it is conservatively assumed that half of the daily home based work trips occur during the PM peak hour. The ACCMA Countywide model predicts transit ridership for all operators, including AC Transit and BART.

For the purposes of the CMP analysis, the proposed Central Station project area is located within the service area of AC Transit and BART. The frequency of transit service in the project area vicinity meets or exceeds the performance measures proposed in Table 8 of the 2001 *Congestion Management Program*. The project area is located within an area well served by BART trains but poorly served by AC Transit. The site is located within a mile of the West County BART station and the project sponsor has proposed to implement a system of shuttle buses from the site to the West Oakland BART station.

Ridership on AC Transit Buses

Future growth and development within the project area would provide a nominal increase in ridership on AC Transit buses; however, this would be a less than significant impact.

The impacts of both project variants on the baseline AC Transit bus system were assessed based on the ridership derived from the Countywide Model. For analysis purposes, a conservative assumption has been made that half of all daily project-related trips would occur during the peak hour. Based on this conservative assumption, the commercial project variant has the potential to generate **42 new AC Transit peak hour bus trips,** while the residential variant would generate **43 new AC Transit peak hour trips** (**See Tables 7 and 8**). These trips are for both inbound and outbound directions (i.e.: departing and arriving).

Today there is a limited service provided by AC Transit in the project area and buses during the peak hour have sufficient capacity to accommodate this nominal increase in bus trips. Therefore, the project is not expected to require a change of the transit service standard of 15-30 minute bus frequencies.

Ridership on BART

The project would increase ridership on BART; however, this would be a less than significant impact.

The impacts of the project on the baseline BART system were assessed based on the ridership derived from the Countywide Model at the West Oakland and 12th Street BART stations. For analysis purposes, a conservative assumption was made that half of all daily project-related trips would occur during the peak hour. Based on this assumption, the commercial project variant has the potential to generate **372 new BART peak hour trips** in 2010 and 2025, while the residential variant would generate **480 new BART peak hour trips** (**See Tables 9 and 10**). The trips are for both inbound and outbound directions (i.e.: boardings and alightings) and most of these new trips would primarily access the West Oakland BART Station.

BART operates four major transbay lines, all accessing the West Oakland BART station. The trains in the peak hour operate every 4.5 minutes. This represents a total of 13 trains per hour. With an approximate capacity of 1,000 seated and standing passengers per 10 car train, this amounts to a maximum of 13,000 passengers per hour. Based on this maximum peak hour capacity, **the project variants would increase the demand between 2.9 % for the commercial project variant and 3.7% for the residential project variant.** This increase in demand would not require a change in the current BART headway of 4.5 minutes during peak hours. Due to the increased ridership, there may be an impact at the turnstiles gates during the peak hours.

Table 1: 2010 - PM Peak Hour Traffic Volumes

Project: Central Station Commercial Alternative - Segment Evaluation for CMP Analysis

2005 PM Peak Hour	Northbound/Eastbound								Southbound/Westbound						
	Traffic Volume		Difference		Level of Service		Change	Change	Traffic Volume		Difference		Level of Service		Change
Link Location	No Project	Project	Vol	%	No Project	Project	in V/C > 3%	in LOS	No Project	Project	Vol	%	No Project	Project	in V/C > 3%
Interstate/State Highways															
I-580 - east of I-980/SH-24	9,099	9,149	50	*0.5%*	F	F	no	no change	5,503	5,545	42	*0.8%*	C	C	no
I-580 - west of I-980/SH-24	9,703	9,703	0	*0.0%*	E	E	no	no change	7,677	7,677	0	*0.0%*	D	D	no
I-880 - south of 7th St.	4,121	4,152	31	*0.7%*	C	D	no	change	4,893	4,955	62	*1.3%*	D	D	no
I-880 - north of I-980	4,657	4,736	79	*1.7%*	D	D	no	no change	3,941	4,036	95	*2.4%*	C	C	no
I-880 - south of I-980	7,326	7,405	79	*1.1%*	E	E	no	no change	7,636	7,731	95	*1.2%*	E	E	no
I-980 - north of 27th St.	6,247	6,323	76	*1.2%*	E	E	no	no change	3,358	3,421	63	*1.8%*	C	C	no
SR 24 - east of I-580	7,749	7,774	25	*0.3%*	E	E	no	no change	4,468	4,489	21	*0.5%*	C	C	no
Arterials															
San Pablo Ave. - north of 40th St.	1,592	1,595	3	*0.2%*	D	D	no	no change	2,145	2,148	3	*0.1%*	F	F	no
San Pablo Ave - south of W. Grand Ave.	627	627	0	*0.0%*	C	C	no	no change	192	192	0	*0.0%*	B	B	no
Broadway - north of 14th St	108	112	4	*3.6%*	B	B	no	no change	169	173	4	*2.3%*	B	B	no
Broadway - south of 14th St	113	117	4	*3.4%*	B	B	no	no change	136	140	4	*2.9%*	B	B	no
W. Grand Ave. - west of Mandela Pkwy.	604	653	49	*7.5%*	C	C	no	no change	680	745	65	*8.7%*	C	C	yes
W. Grand Ave. - west of Adeline St.	1,198	1,343	145	*10.8%*	C	C	yes	no change	792	913	121	*13.3%*	C	C	yes
Brush St - south of 14th St									161	163	2	*1.2%*	B	B	no
Castro St - south of 14th St	102	104	2	*1.9%*	B	B	no	no change							
Martin Luther King, Jr. Way - north of 27th St.	232	234	2	*0.9%*	B	B	no	no change	252	254	2	*0.8%*	C	C	no
Telegraph Avenue - north of Grand Ave	148	150	2	*1.3%*	B	B	no	no change	160	162	2	*1.2%*	B	B	no
	53,626	***54,177***	***551***	*1.0%*					***42,163***	***42,744***	***581***	*1.4%*			

Table 2: 2010 - PM Peak Hour Traffic Volumes

Project: Central Station Residential Alternative - Segment Evaluation for CMP Analysis

2005 PM Peak Hour	Northbound/Eastbound								Southbound/Westbound						
	Traffic Volume		Difference		Level of Service		Change	Change	Traffic Volume		Difference		Level of Service		Change
Link Location	No Project	Project	Vol	%	No Project	Project	in V/C > 3%	in LOS	No Project	Project	Vol	%	No Project	Project	in V/C > 3%
Interstate/State Highways															
I-580 - east of I-980/SH-24	9,099	9,126	27	*0.3%*	F	F	no	no change	5,503	5,543	40	*0.7%*	C	C	no
I-580 - west of I-980/SH-24	9,703	9,703	0	*0.0%*	E	E	no	no change	7,677	7,677	0	*0.0%*	D	D	no
I-880 - south of 7th St.	4,121	4,152	31	*0.7%*	C	D	no	change	4,893	4,915	22	*0.4%*	D	D	no
I-880 - north of I-980	4,657	4,732	75	*1.6%*	D	D	no	no change	3,941	3,990	49	*1.2%*	C	C	no
I-880 - south of I-980	7,326	7,402	76	*1.0%*	E	E	no	no change	7,636	7,686	50	*0.7%*	E	E	no
I-980 - north of 27th St.	6,247	6,287	40	*0.6%*	E	E	no	no change	3,358	3,418	60	*1.8%*	C	C	no
SR 24 - east of I-580	7,749	7,762	13	*0.2%*	E	E	no	no change	4,468	4,488	20	*0.4%*	C	C	no
Arterials															
San Pablo Ave. - north of 40th St.	1,592	1,595	3	*0.2%*	D	D	no	no change	2,145	2,148	3	*0.1%*	F	F	no
San Pablo Ave - south of W. Grand Ave.	627	627	0	*0.0%*	C	C	no	no change	192	192	0	*0.0%*	B	B	no
Broadway - north of 14th St	108	112	4	*3.6%*	B	B	no	no change	169	173	4	*2.3%*	B	B	no
Broadway - south of 14th St	113	117	4	*3.4%*	B	B	no	no change	136	140	4	*2.9%*	B	B	no
W. Grand Ave. - west of Mandela Pkwy.	604	646	42	*6.5%*	C	C	no	no change	680	739	59	*8.0%*	C	C	yes
W. Grand Ave. - west of Adeline St.	1,198	1,275	77	*6.0%*	C	C	no	no change	792	907	115	*12.7%*	C	C	yes
Brush St - south of 14th St									161	163	2	*1.2%*	B	B	no
Castro St - south of 14th St	102	104	2	*1.9%*	B	B	no	no change							
Martin Luther King, Jr. Way - north of 27th St.	232	234	2	*0.9%*	B	B	no	no change	252	254	2	*0.8%*	C	C	no
Telegraph Avenue - north of Grand Ave	148	150	2	*1.3%*	B	B	no	no change	160	162	2	*1.2%*	B	B	no
	53,626	***54,024***	***398***	*0.7%*					***42,163***	***42,595***	***432***	*1.0%*			

Table 3: 2025 - PM Peak Hour Traffic Volumes

Project: Central Station Commercial Alternative - Segment Evaluation for CMP Analysis

2025 PM Peak Hour	Northbound/Eastbound								Southbound/Westbound						
	Traffic Volume		Difference		Level of Service		Change	Change	Traffic Volume		Difference		Level of Service		Change
Link Location	No Project	Project	Vol	%	No Project	Project	in V/C > 3%	in LOS	No Project	Project	Vol	%	No Project	Project	in V/C > 3%
Interstate/State Highways															
I-580 - east of I-980/SH-24	9,102	9,152	50	*0.5%*	F	F	no	no change	5,940	5,982	42	*0.7%*	D	D	no
I-580 - west of I-980/SH-24	9,753	9,753	0	*0.0%*	E	E	no	no change	8,248	8,248	0	*0.0%*	D	D	no
I-880 - south of 7th St.	4,228	4,259	31	*0.7%*	D	D	no	no change	5,260	5,322	62	*1.2%*	D	D	no
I-880 - north of I-980	5,013	5,092	79	*1.6%*	D	D	no	no change	4,126	4,221	95	*2.3%*	C	D	no
I-880 - south of I-980	7,877	7,956	79	*1.0%*	E	E	no	no change	8,361	8,456	95	*1.1%*	E	E	no
I-980 - north of 27th St.	6,814	6,890	76	*1.1%*	F	F	no	no change	3,660	3,723	63	*1.7%*	C	C	no
SR 24 - east of I-580	8,099	8,124	25	*0.3%*	E	E	no	no change	4,916	4,937	21	*0.4%*	C	C	no
Arterials															
San Pablo Ave. - north of 40th St.	1,705	1,708	3	*0.2%*	D	D	no	no change	2,442	2,445	3	*0.1%*	F	F	no
San Pablo Ave - south of W. Grand Ave.	636	636	0	*0.0%*	C	C	no	no change	281	281	0	*0.0%*	C	C	no
Broadway - north of 14th St	124	128	4	*3.1%*	B	B	no	no change	183	187	4	*2.1%*	B	B	no
Broadway - south of 14th St	130	134	4	*3.0%*	B	B	no	no change	146	150	4	*2.7%*	B	B	no
W. Grand Ave. - west of Mandela Pkwy.	820	869	49	*5.6%*	C	C	no	no change	873	938	65	*6.9%*	C	C	yes
W. Grand Ave. - west of Adeline St.	1,610	1,755	145	*8.3%*	C	C	yes	no change	1,049	1,170	121	*10.3%*	C	C	yes
Brush St - south of 14th St									211	213	2	*0.9%*	B	B	no
Castro St - south of 14th St	123	125	2	*1.6%*	B	B	no	no change							
Martin Luther King, Jr. Way - north of 27th St.	312	314	2	*0.6%*	C	C	no	no change	313	315	2	*0.6%*	C	C	no
Telegraph Avenue - north of Grand Ave	180	182	2	*1.1%*	B	B	no	no change	186	188	2	*1.1%*	B	B	no
	56,526	***57,077***	***551***	*1.0%*					***46,195***	***46,776***	***581***	*1.2%*			

Table 4: 2025 - PM Peak Hour Traffic Volumes

Project: Central Station Residential Alternative - Segment Evaluation for CMP Analysis

2025 PM Peak Hour	Northbound/Eastbound								Southbound/Westbound						
	Traffic Volume		Difference		Level of Service		Change	Change	Traffic Volume		Difference		Level of Service		Change
Link Location	No Project	Project	Vol	%	No Project	Project	in V/C > 3%	in LOS	No Project	Project	Vol	%	No Project	Project	in V/C > 3%
Interstate/State Highways															
I-580 - east of I-980/SH-24	9,102	9,129	27	*0.3%*	F	F	no	no change	5,940	5,980	40	*0.7%*	D	D	no
I-580 - west of I-980/SH-24	9,753	9,753	0	*0.0%*	E	E	no	no change	8,248	8,248	0	*0.0%*	D	D	no
I-880 - south of 7th St.	4,228	4,259	31	*0.7%*	D	D	no	no change	5,260	5,282	22	*0.4%*	D	D	no
I-880 - north of I-980	5,013	5,088	75	*1.5%*	D	D	no	no change	4,126	4,175	49	*1.2%*	C	D	no
I-880 - south of I-980	7,877	7,953	76	*1.0%*	E	E	no	no change	8,361	8,411	50	*0.6%*	E	E	no
I-980 - north of 27th St.	6,814	6,854	40	*0.6%*	F	F	no	no change	3,660	3,720	60	*1.6%*	C	C	no
SR 24 - east of I-580	8,099	8,112	13	*0.2%*	E	E	no	no change	4,916	4,936	20	*0.4%*	C	C	no
Arterials															
San Pablo Ave. - north of 40th St.	1,705	1,708	3	*0.2%*	D	D	no	no change	2,442	2,445	3	*0.1%*	F	F	no
San Pablo Ave - south of W. Grand Ave.	636	636	0	*0.0%*	C	C	no	no change	281	281	0	*0.0%*	C	C	no
Broadway - north of 14th St	124	128	4	*3.1%*	B	B	no	no change	183	187	4	*2.1%*	B	B	no
Broadway - south of 14th St	130	134	4	*3.0%*	B	B	no	no change	146	150	4	*2.7%*	B	B	no
W. Grand Ave. - west of Mandela Pkwy.	820	862	42	*4.9%*	C	C	no	no change	873	932	59	*6.3%*	C	C	yes
W. Grand Ave. - west of Adeline St.	1,610	1,687	77	*4.6%*	C	C	no	no change	1,049	1,164	115	*9.9%*	C	C	yes
Brush St - south of 14th St									211	213	2	*0.9%*	B	B	no
Castro St - south of 14th St	123	125	2	*1.6%*	B	B	no	no change							
Martin Luther King, Jr. Way - north of 27th St.	312	314	2	*0.6%*	C	C	no	no change	313	315	2	*0.6%*	C	C	no
Telegraph Avenue - north of Grand Ave	180	182	2	*1.1%*	B	B	no	no change	186	188	2	*1.1%*	B	B	no
	56,526	***56,924***	***398***	*0.7%*					***46,195***	***46,627***	***432***	*0.9%*			

Table 5: Mode Choice - Central Station Commercial Alternative
Home-Based Work Trips

	NO-PROJECT		PROJECT		Trips Increase between No-project and Project		Percent Growth between No-project and Project	
Mode	**2010**	**2025**	**2010**	**2025**	**2010**	**2025**	**2010**	**2025**
Transit	309	325	1,184	1,184	875	859	283.2%	264.3%
Auto	3,701	3,495	6,657	6,657	2,956	3,162	79.9%	90.5%
Total	**4,010**	**3,820**	**7,841**	**7,841**	**3,831**	**4,021**	**95.5%**	**105.3%**

Table 6: Mode Choice - Central Station Residential Alternative
Home-Based Work Trips

	NO-PROJECT		PROJECT		Trips Increase between No-project and Project		Percent Growth between No-project and Project	
Mode	**2010**	**2025**	**2010**	**2025**	**2010**	**2025**	**2010**	**2025**
Transit	309	325	1,269	1,269	960	944	310.7%	290.5%
Auto	3,701	3,495	6,025	6,025	2,324	2,530	62.8%	72.4%
Total	**4,010**	**3,820**	**7,294**	**7,294**	**3,284**	**3,474**	**81.9%**	**90.9%**

Note: Transit and auto trips in Tables 5 and 6 include the total daily home-based work trips

Table 7: AC Transit Ridership - Central Station Commercial Alternative
Home-Based Work Trips

	NO-PROJECT		PROJECT		Increase between No-project and Project		Percent Growth between No-project and Project	
Operator	**2010**	**2025**	**2010**	**2025**	**2010**	**2025**	**2010**	**2025**
AC Transit	56,389	76,870	56,475	76,956	86	86	0.2%	0.1%

Table 8: AC Transit Ridership - Central Station Residential Alternative
Home-Based Work Trips

	NO-PROJECT		PROJECT		Increase between No-project and Project		Percent Growth between No-project and Project	
Operator	**2010**	**2025**	**2010**	**2025**	**2010**	**2025**	**2010**	**2025**
AC Transit	56,389	76,870	56,472	76,953	83	83	0.1%	0.1%

Note: Transit trips in Tables 7 and 8 include the total daily home-based work trips on AC Transit – some of which may include trips linked to BART.

Table 9: BART Boardings & Alightings - Central Station Commercial Alternative
Home-Based Work Trips

	NO-PROJECT		PROJECT		Increase between No-project and Project		Percent Growth between No-project and Project	
BART Station	**2010**	**2025**	**2010**	**2025**	**2010**	**2025**	**2010**	**2025**
12th Street	15,192	20,620	15,252	20,680	60	60	0.4%	0.3%
West Oakland	5,616	11,075	6,299	11,758	683	683	12.2%	6.2%
Sum	**20,808**	**31,695**	**21,551**	**32,438**	**743**	**743**	**3.6%**	**2.3%**

Table 10: BART Boardings & Alightings - Central Station Residential Alternative
Home-Based Work Trips

	NO-PROJECT		PROJECT		Increase between No-project and Project		Percent Growth between No-project and Project	
BART Station	**2010**	**2025**	**2010**	**2025**	**2010**	**2025**	**2010**	**2025**
12th Street	15,192	20,620	15,296	20,724	104	104	0.7%	0.5%
West Oakland	5,616	11,075	6,471	11,930	855	855	15.2%	7.7%
Sum	**20,808**	**31,695**	**21,767**	**32,654**	**959**	**959**	**4.6%**	**3.0%**

Note: Transit trips in Tables 9 and 10 include the total daily home-based work trips on BART at the stations indicated – some of which may include trips linked to AC Transit. Some BART trips may be served at other BART Stations.

Table A1: 2010 No-Project
Segment Evaluation for CMP Analysis
PM Peak Hour

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-580 - east of I-980/SH-24	9,099	8,978	1.01	4	F	5,503	8,978	0.61	4	C	FWY
I-580 - west of I-980/SH-24	9,703	11,225	0.86	5	E	7,677	11,225	0.68	5	D	FWY
I-880 - south of 7th St.	4,121	6,584	0.63	3	C	4,893	6,584	0.74	3	D	FWY
I-880 - north of I-980	4,657	6,584	0.71	3	D	3,941	6,584	0.60	3	C	FWY
I-880 - south of I-980	7,326	8,978	0.82	4	E	7,636	8,978	0.85	4	E	FWY
I-980 - north of 27th St.	6,247	6,584	0.95	3	E	3,358	6,584	0.51	3	C	FWY
SR 24 - east of I-580	7,749	8,978	0.86	4	E	4,468	8,978	0.50	4	C	FWY
Arterials											
San Pablo Ave. - north of 40th St.	1,592	1,810	0.88	2	D	2,145	1,810	1.19	2	F	Class 2
San Pablo Ave - south of W. Grand Ave.	627	1,810	0.35	2	C	192	1,810	0.11	2	B	Class 2
Broadway - north of 14th St	108	1,810	0.06	2	B	169	1,810	0.09	2	B	Class 2
Broadway - south of 14th St	113	1,810	0.06	2	B	136	1,810	0.08	2	B	Class 2
W. Grand Ave. - west of Mandela Pkwy.	604	1,810	0.33	2	C	680	1,810	0.38	2	C	Class 2
W. Grand Ave. - west of Adeline St.	1,198	2,730	0.44	3	C	792	1,810	0.44	2	C	Class 2
Brush St - south of 14th St						161	2,730	0.06	3	B	Class 2
Castro St - south of 14th St	102	2,730	0.04	3	B	0					Class 2
Martin Luther King, Jr. Way - north of 27th St.	232	1,810	0.13	2	B	252	1,810	0.14	2	C	Class 2
Telegraph Avenue - north of Grand Ave	148	1,810	0.08	2	B	160	1,810	0.09	2	B	Class 2
	53,626					***42,163***					

Table A2: 2010 Project

Project: Central Station Commercial Alternative - Segment Evaluation for CMP Analysis

PM Peak Hour

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-580 - east of I-980/SH-24	9,149	8,978	1.02	4	F	5,545	8,978	0.62	4	C	FWY
I-580 - west of I-980/SH-24	9,703	11,225	0.86	5	E	7,677	11,225	0.68	5	D	FWY
I-880 - south of 7th St.	4,152	6,584	0.63	3	D	4,955	6,584	0.75	3	D	FWY
I-880 - north of I-980	4,736	6,584	0.72	3	D	4,036	6,584	0.61	3	C	FWY
I-880 - south of I-980	7,405	8,978	0.82	4	E	7,731	8,978	0.86	4	E	FWY
I-980 - north of 27th St.	6,323	6,584	0.96	3	E	3,421	6,584	0.52	3	C	FWY
SR 24 - east of I-580	7,774	8,978	0.87	4	E	4,489	8,978	0.50	4	C	FWY
Arterials											
San Pablo Ave. - north of 40th St.	1,595	1,810	0.88	2	D	2,148	1,810	1.19	2	F	Class 2
San Pablo Ave - south of W. Grand Ave.	627	1,810	0.35	2	C	192	1,810	0.11	2	B	Class 2
Broadway - north of 14th St	112	1,810	0.06	2	B	173	1,810	0.10	2	B	Class 2
Broadway - south of 14th St	117	1,810	0.06	2	B	140	1,810	0.08	2	B	Class 2
W. Grand Ave. - west of Mandela Pkwy.	653	1,810	0.36	2	C	745	1,810	0.41	2	C	Class 2
W. Grand Ave. - west of Adeline St.	1,343	2,730	0.49	3	C	913	1,810	0.50	2	C	Class 2
Brush St - south of 14th St						163	2,730	0.06	3	B	Class 2
Castro St - south of 14th St	104	2,730	0.04	3	B						Class 2
Martin Luther King, Jr. Way - north of 27th St.	234	1,810	0.13	2	B	254	1,810	0.14	2	C	Class 2
Telegraph Avenue - north of Grand Ave	150	1,810	0.08	2	B	162	1,810	0.09	2	B	Class 2
	54,177					***42,744***					

Table A3: 2010 Project

Project: Central Station Residential Alternative - Segment Evaluation for CMP Analysis

PM Peak Hour

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-580 - east of I-980/SH-24	9,126	8,978	1.02	4	F	5,543	8,978	0.62	4	C	FWY
I-580 - west of I-980/SH-24	9,703	11,225	0.86	5	E	7,677	11,225	0.68	5	D	FWY
I-880 - south of 7th St.	4,152	6,584	0.63	3	D	4,915	6,584	0.75	3	D	FWY
I-880 - north of I-980	4,732	6,584	0.72	3	D	3,990	6,584	0.61	3	C	FWY
I-880 - south of I-980	7,402	8,978	0.82	4	E	7,686	8,978	0.86	4	E	FWY
I-980 - north of 27th St.	6,287	6,584	0.95	3	E	3,418	6,584	0.52	3	C	FWY
SR 24 - east of I-580	7,762	8,978	0.86	4	E	4,488	8,978	0.50	4	C	FWY
Arterials											
San Pablo Ave. - north of 40th St.	1,595	1,810	0.88	2	D	2,148	1,810	1.19	2	F	Class 2
San Pablo Ave - south of W. Grand Ave.	627	1,810	0.35	2	C	192	1,810	0.11	2	B	Class 2
Broadway - north of 14th St	112	1,810	0.06	2	B	173	1,810	0.10	2	B	Class 2
Broadway - south of 14th St	117	1,810	0.06	2	B	140	1,810	0.08	2	B	Class 2
W. Grand Ave. - west of Mandela Pkwy.	646	1,810	0.36	2	C	739	1,810	0.41	2	C	Class 2
W. Grand Ave. - west of Adeline St.	1,275	2,730	0.47	3	C	907	1,810	0.50	2	C	Class 2
Brush St - south of 14th St						163	2,730	0.06	3	B	Class 2
Castro St - south of 14th St	104	2,730	0.04	3	B						Class 2
Martin Luther King, Jr. Way - north of 27th St.	234	1,810	0.13	2	B	254	1,810	0.14	2	C	Class 2
Telegraph Avenue - north of Grand Ave	150	1,810	0.08	2	B	162	1,810	0.09	2	B	Class 2
	54,024					***42,595***					

Table A4: 2025 No-Project
Segment Evaluation for CMP Analysis
PM Peak Hour

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-580 - east of I-980/SH-24	9,102	8,978	1.01	4	F	5,940	5,940	1.00	4	D	FWY
I-580 - west of I-980/SH-24	9,753	11,225	0.87	5	E	8,248	11,225	0.73	5	D	FWY
I-880 - south of 7th St.	4,228	6,584	0.64	3	D	5,260	6,584	0.80	3	D	FWY
I-880 - north of I-980	5,013	6,584	0.76	3	D	4,126	6,584	0.63	3	C	FWY
I-880 - south of I-980	7,877	8,978	0.88	4	E	8,361	8,978	0.93	4	E	FWY
I-980 - north of 27th St.	6,814	6,584	1.04	3	F	3,660	6,584	0.56	3	C	FWY
SR 24 - east of I-580	8,099	8,978	0.90	4	E	4,916	8,978	0.55	4	C	FWY
Arterials											
San Pablo Ave. - north of 40th St.	1,705	1,810	0.94	2	D	2,442	1,810	1.35	2	F	Class 2
San Pablo Ave - south of W. Grand Ave.	636	1,810	0.35	2	C	281	1,810	0.16	2	C	Class 2
Broadway - north of 14th St	124	1,810	0.07	2	B	183	1,810	0.10	2	B	Class 2
Broadway - south of 14th St	130	1,810	0.07	2	B	146	1,810	0.08	2	B	Class 2
W. Grand Ave. - west of Mandela Pkwy.	820	1,810	0.45	2	C	873	1,810	0.48	2	C	Class 2
W. Grand Ave. - west of Adeline St.	1,610	2,730	0.59	3	C	1,049	1,810	0.58	2	C	Class 2
Brush St - south of 14th St						211	2,730	0.08	3	B	Class 2
Castro St - south of 14th St	123	2,730	0.05	3	B	0					Class 2
Martin Luther King, Jr. Way - north of 27th St.	312	1,810	0.17	2	C	313	1,810	0.17	2	C	Class 2
Telegraph Avenue - north of Grand Ave	180	1,810	0.10	2	B	186	1,810	0.10	2	B	Class 2
	56,526					***46,195***					

Table A5: 2025 Project

Project: Central Station Commercial Alternative - Segment Evaluation for CMP Analysis

PM Peak Hour

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-580 - east of I-980/SH-24	9,152	8,978	1.02	4	F	5,982	8,978	0.67	4	D	FWY
I-580 - west of I-980/SH-24	9,753	11,225	0.87	5	E	8,248	11,225	0.73	5	D	FWY
I-880 - south of 7th St.	4,259	6,584	0.65	3	D	5,322	6,584	0.81	3	D	FWY
I-880 - north of I-980	5,092	6,584	0.77	3	D	4,221	6,584	0.64	3	D	FWY
I-880 - south of I-980	7,956	8,978	0.89	4	E	8,456	8,978	0.94	4	E	FWY
I-980 - north of 27th St.	6,890	6,584	1.05	3	F	3,723	6,584	0.57	3	C	FWY
SR 24 - east of I-580	8,124	8,978	0.90	4	E	4,937	8,978	0.55	4	C	FWY
Arterials											
San Pablo Ave. - north of 40th St.	1,708	1,810	0.94	2	D	2,445	1,810	1.35	2	F	Class 2
San Pablo Ave - south of W. Grand Ave.	636	1,810	0.35	2	C	281	1,810	0.16	2	C	Class 2
Broadway - north of 14th St	128	1,810	0.07	2	B	187	1,810	0.10	2	B	Class 2
Broadway - south of 14th St	134	1,810	0.07	2	B	150	1,810	0.08	2	B	Class 2
W. Grand Ave. - west of Mandela Pkwy.	869	1,810	0.48	2	C	938	1,810	0.52	2	C	Class 2
W. Grand Ave. - west of Adeline St.	1,755	2,730	0.64	3	C	1,170	1,810	0.65	2	C	Class 2
Brush St - south of 14th St						213	2,730	0.08	3	B	Class 2
Castro St - south of 14th St	125	2,730	0.05	3	B						Class 2
Martin Luther King, Jr. Way - north of 27th St.	314	1,810	0.17	2	C	315	1,810	0.17	2	C	Class 2
Telegraph Avenue - north of Grand Ave	182	1,810	0.10	2	B	188	1,810	0.10	2	B	Class 2
	57,077					***46,776***					

Table A6: 2025 Project

Project: Central Station Residential Alternative - Segment Evaluation for CMP Analysis

PM Peak Hour

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-580 - east of I-980/SH-24	9,129	8,978	1.02	4	F	5,980	8,978	0.67	4	D	FWY
I-580 - west of I-980/SH-24	9,753	11,225	0.87	5	E	8,248	11,225	0.73	5	D	FWY
I-880 - south of 7th St.	4,259	6,584	0.65	3	D	5,282	6,584	0.80	3	D	FWY
I-880 - north of I-980	5,088	6,584	0.77	3	D	4,175	6,584	0.63	3	D	FWY
I-880 - south of I-980	7,953	8,978	0.89	4	E	8,411	8,978	0.94	4	E	FWY
I-980 - north of 27th St.	6,854	6,584	1.04	3	F	3,720	6,584	0.57	3	C	FWY
SR 24 - east of I-580	8,112	8,978	0.90	4	E	4,936	8,978	0.55	4	C	FWY
Arterials											
San Pablo Ave. - north of 40th St.	1,708	1,810	0.94	2	D	2,445	1,810	1.35	2	F	Class 2
San Pablo Ave - south of W. Grand Ave.	636	1,810	0.35	2	C	281	1,810	0.16	2	C	Class 2
Broadway - north of 14th St	128	1,810	0.07	2	B	187	1,810	0.10	2	B	Class 2
Broadway - south of 14th St	134	1,810	0.07	2	B	150	1,810	0.08	2	B	Class 2
W. Grand Ave. - west of Mandela Pkwy.	862	1,810	0.48	2	C	932	1,810	0.51	2	C	Class 2
W. Grand Ave. - west of Adeline St.	1,687	2,730	0.62	3	C	1,164	1,810	0.64	2	C	Class 2
Brush St - south of 14th St						213	2,730	0.08	3	B	Class 2
Castro St - south of 14th St	125	2,730	0.05	3	B						Class 2
Martin Luther King, Jr. Way - north of 27th St.	314	1,810	0.17	2	C	315	1,810	0.17	2	C	Class 2
Telegraph Avenue - north of Grand Ave	182	1,810	0.10	2	B	188	1,810	0.10	2	B	Class 2
	56,924					***46,627***					

Live/Work Units Trip Generation and Parking Survey

Trip Generation and Parking Survey
Live/Work Units
Location: Summary of three locations
Total Units 237
Number of Owned Units 226

Trip Generation Survey
Survey Date: July 17 - 24, 2003

	AM Peak Hour Trips					
	In	Out	Total	% In	% Out	Total
Person Trips						
Auto - On Site	19	91	110			47%
Auto - Off Site	30	37	67			29%
Auto - Subtotal	49	128	177			76%
Transit	3	21	24			10%
Walk	14	17	31			13%
Bike	0	2	2			1%
Other	0	0	0			0%
Total	66	168	234	28%	72%	100%
Auto Trips						
Auto - On Site	19	80	99			60%
Auto - Off Site	30	35	65			40%
Auto - Subtotal	49	115	164	30%	70%	100%
Auto Occupancy			1.0793			
Trip Generation Rate	30%	70%	0.726			

	PM Peak Hour Trips					
	In	Out	Total	% In	% Out	Total
Person Trips						
Auto - On Site	44	35	79			42%
Auto - Off Site	34	41	75			40%
Auto - Subtotal	78	76	154			82%
Transit	8	8	16			9%
Walk	10	5	15			8%
Bike	1	0	1			1%
Other	0	1	1			1%
Total	97	90	187	52%	48%	100%
Auto Trips						
Auto - On Site	36	33	69			50%
Auto - Off Site	30	38	68			50%
Auto - Subtotal	66	71	137	48%	52%	100%
Auto Occupancy			1.1241			
Trip Generation Rate	48%	52%	0.606			

Other persons trip is one pedestrian whose ultimate travel mode was unknown.

On-Site Parking Survey
Survey Date: July 30, 2003
Time of Day: Varies
Time of Day Factor: Varies (from ULI Shared Parking)

Spaces	130
Occupied Spaces	64
Maximum Occupied	66
Parking Demand Rate	0.772 [1]

[1] Notes: Does not include 1500 Park.
Offsite parking appears roughly equal to on-site parking.

Alternative Passby-Trips Reduction

180 Grand Avenue, Suite 250
Oakland, CA 94612
www.dowlinginc.com

510.839.1742
510.839.0871 fax
traffic@dowlinginc.com

Dowling Associates, Inc.

Memorandum

Date: September 20, 2004

To:	Rod Jeung/Dorney Burgdorf	**Company:**	EIP Associates
Fax:	415.362.1954	**Pages:**	5
Phone:	415.362.1500		
From:	Alice Chen	**Reference:**	P03036
Subject:	Central Station EIR – Response to Comments on Administrative Draft EIR		

☐ Urgent ☒ For Review ☐ Reply ASAP ☐ For your Information ☐ As Requested ☐ Original will follow by mail

☐ Fax ☐ USPS ☐ Fed-Ex Overnight ☐ Fed-Ex Two-Day ☐ Courier/Hand Delivery ☐ Pick-up

This memorandum has been prepared in response to comments received on the Administrative Draft EIR for the Central Station project. Specifically, it addresses the concern that the City of Oakland has with the pass-by reduction applied to the trip generation for retail uses. The analysis in the ADEIR was conducted assuming that 65% of the trips for the commercial uses would be traffic already on the adjacent street. The 65% reduction was based on the pass-by trip percentages for Shopping Centers in the Institute of Transportation Engineer *Trip Generation Handbook* (See attached Figure 5.5) and assumed that the 40,000 square feet of retail would be separated into several smaller spaces. The potential effects of a more conservative pass-by reduction of 15% were quantified in terms of trip generation and the potential effects at the intersection level are qualitatively discussed.

Trip Generation

The trip generation was recalculated assuming the more conservative 15% pass-by reduction. By reducing the pass-by percentage from 65% to 15%, the overall trip generation of the project increases for both the Maximum Residential Scenario and the Maximum Trips Scenario. A comparison of these trip generation differences is summarized in Table 1.

Under the Maximum Residential Scenario, the daily and PM peak hour trip generation increases by 1,174 trips (12%), while the AM peak hour trip generation increase by only 31 trips (4%) and the PM peak hour trips increase by 104 trips (12%). Under the Maximum Trips Scenario, the daily trip generation increases by 1,891 trips (16%), the AM peak hour by 46 trips (4%), and the PM peak hour by 171 trips (15%). The increased trip generation during the AM peak hour is minimal, while the increase in PM peak hour trips may affect the results of the intersection analysis.

Table 1 Trip Generation Comparison

Land Use		Amount	Daily	Trips Generated					
				AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
65% Pass-by Reduction									
Maximum Residential Scenario									
	Commercial	25KSF							
Total	Residential	1,570Units	**9,646**	**168**	**624**	**792**	**507**	**332**	**839**
Maximum Trips Scenario									
	Commercial	316KSF							
Total	Residential	1,273Units	**11,766**	**503**	**575**	**1,078**	**529**	**630**	**1,160**
15% Pass-by Reduction									
Maximum Residential Scenario									
	Commercial	25KSF							
Total	Residential	1,570Units	**10,820**	**187**	**637**	**823**	**556**	**386**	**943**
Maximum Trips Scenario									
	Commercial	316KSF							
Total	Residential	1,273Units	**13,657**	**531**	**593**	**1,124**	**612**	**720**	**1,331**
15% Pass-by Reduction and 33,000 sf Office									
Maximum Trips Scenario									
	Commercial	316KSF							
Total	Residential	1,273Units	**12,057**	**568**	**582**	**1,151**	**536**	**712**	**1,248**

Source: *Trip Generation, 6th Edition,* Institute of Transportation Engineers, 1997.

In addition, trip generation for the Maximum Trips Scenario was also recalculated assuming that 33,000 square feet of the commercial space were used as office rather than retail space, leaving only 7,000 square feet of retail space. The Maximum Residential Scenario was not modified. As shown in Table 1, the office use results in 12,057 daily trips, which is less than with retail uses. The AM peak hour trips increase by 27 trips with the office use, while the PM peak hour trips decrease by 83 trips.

Trip Distribution

When this increase in trip generation is distributed to the roadway network, the incremental increase in peak hour trips is minimal. As shown in Table 2, along most routes the incremental increase in traffic is less than normal daily fluctuations in peak hour traffic volumes on the roadways.

Table 2. Trip Distribution – Additional Trips with 15% Pass-by Assumption

Route	Percent of Project Trips	Maximum Residential Scenario – Trip Increment		Maximum Trips Scenario – Trip Increment	
		AM	PM	AM	PM
I-80 West	8%	2	8	4	14
I-80 East	19%	6	20	9	32
SR 24	4%	1	4	2	7
I-880 South	15%	5	16	7	26
Mandela North of 32nd	6%	2	6	3	10
40th East of Hollis	3%	1	3	1	5
I-580 East (local)	8%	2	8	4	14
Grand East of Adeline	6%	2	6	3	10
Grand East of Northgate	5%	2	5	2	9
7th East of Market	4%	1	4	2	7
Powell Street	1%	0	1	0	2
14th East of Market	6%	2	6	3	10
18th East of Mandela	5%	2	5	2	9
West Oakland BART	5%	2	5	2	9
Estuary	5%	2	5	2	9
Total	**100%**	**31**	**104**	**46**	**171**

Sources: Dowling Associates, Inc., 2003; Alameda Countywide Model, 2003.

Potential Effect on Intersection Operations

The potential effects on intersection operations of the increased trip generation during the AM and PM peak hour were qualitatively assessed. Detailed technical analysis was not conducted. However, the proportional increase in traffic was compared to the increased delays due to the project at critical intersections where the level of service (LOS) is close to the significance threshold.

Under Existing Conditions with the Proposed Project, all intersections operated at LOS D or better. Only three intersections would operate at LOS D. For these intersections, a proportional increase to the project delay of 4% during the AM peak hour and up to 16% during the PM peak hour would not result in a change in LOS or any significant impacts.

Under the Cumulative (2025) Conditions with the Proposed Project, the ADEIR found that significant cumulative impacts would occur at the following intersections:

- West Grand Avenue / Maritime Street
- West Grand Avenue / I-880 frontage road
- West Grand Avenue / Mandela Parkway
- 7th Street / Mandela Parkway

- 3rd Street / Market Street

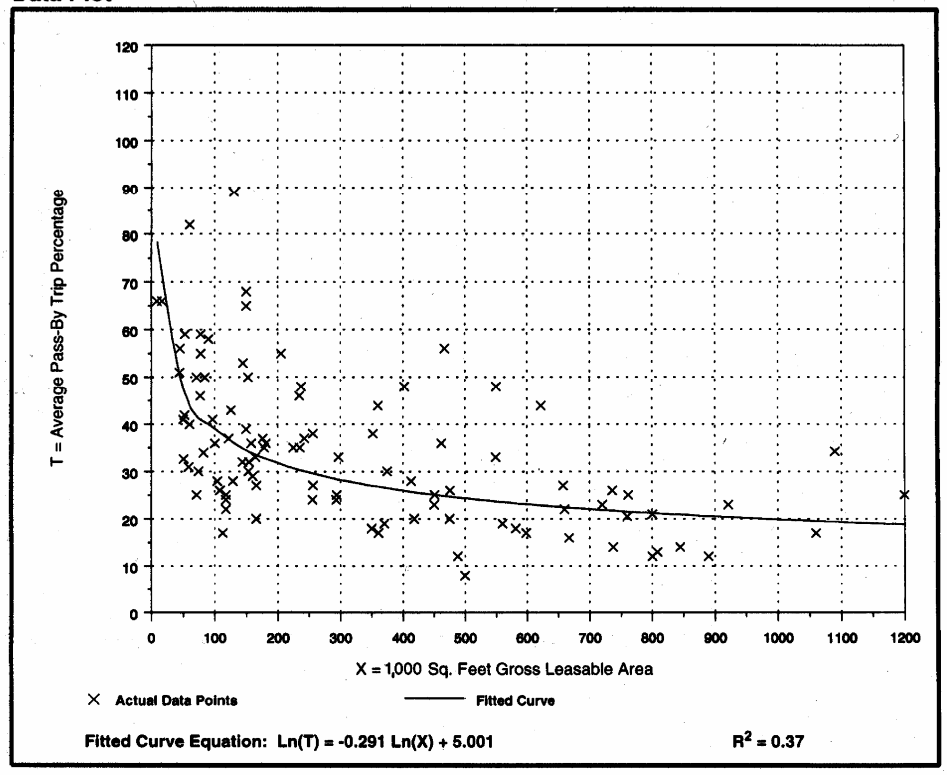
In addition to these locations, several intersections are approaching the LOS significance threshold under the cumulative 2025 condition described in the ADEIR. However, a review of the change in delay with either Project scenario described in the ADEIR is minimal. The incremental increase in trips associated with the more conservative 15% pass-by reduction is not expected to significantly increase the delays at these intersections.

With the incremental increase in Project traffic due to the more conservative 15% pass-by trip reduction, the intersection operations would be similar to that shown in the ADEIR. The overall findings in the ADEIR are not expected to change.

Figure 5.5 Shopping Center (820)

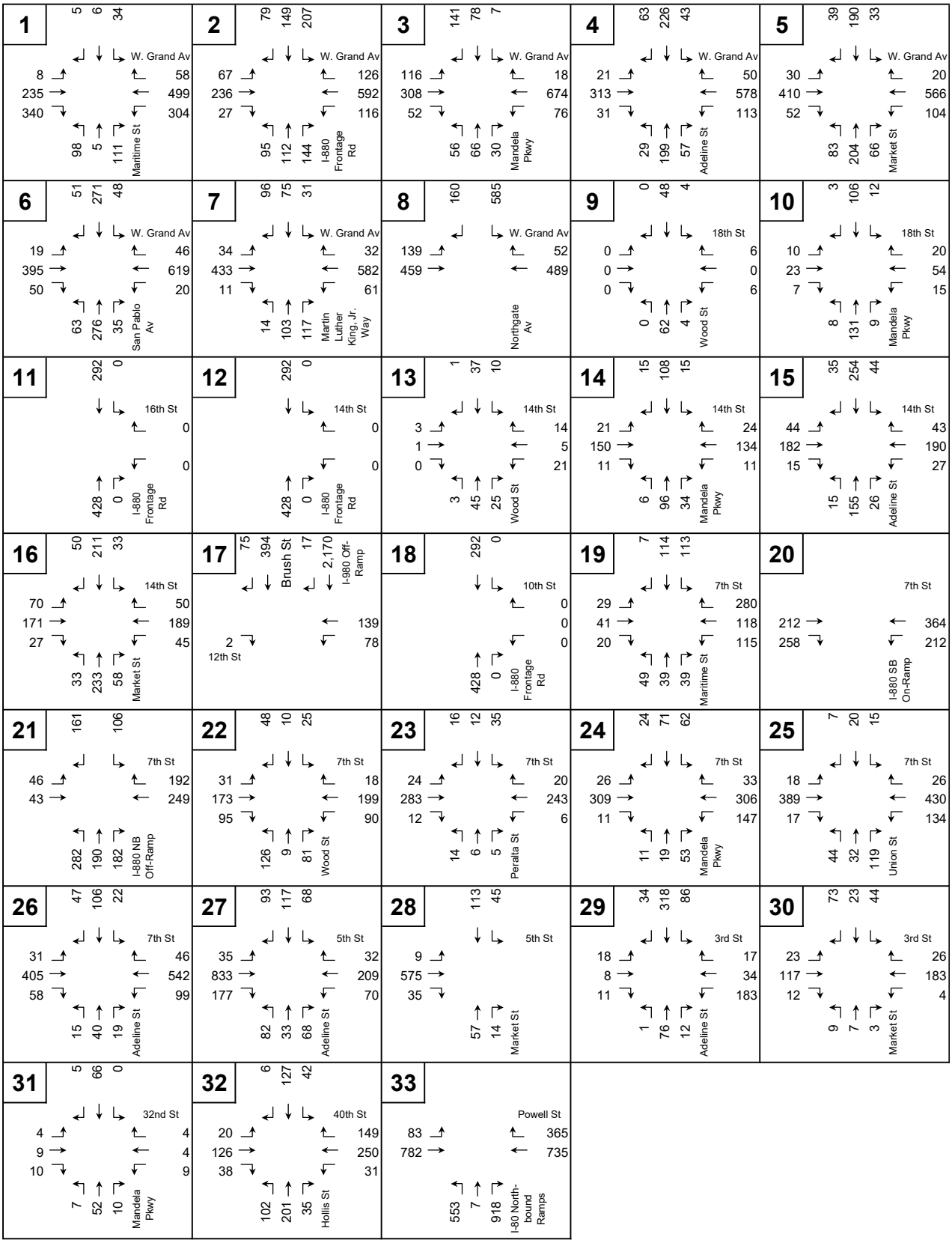
Average Pass-By Trip Percentage vs: **1,000 Sq. Feet Gross Leasable Area**
On a: **Weekday, P.M. Peak Period**
Number of Studies: 100
Average 1,000 Sq. Feet GLA: 329

Data Plot

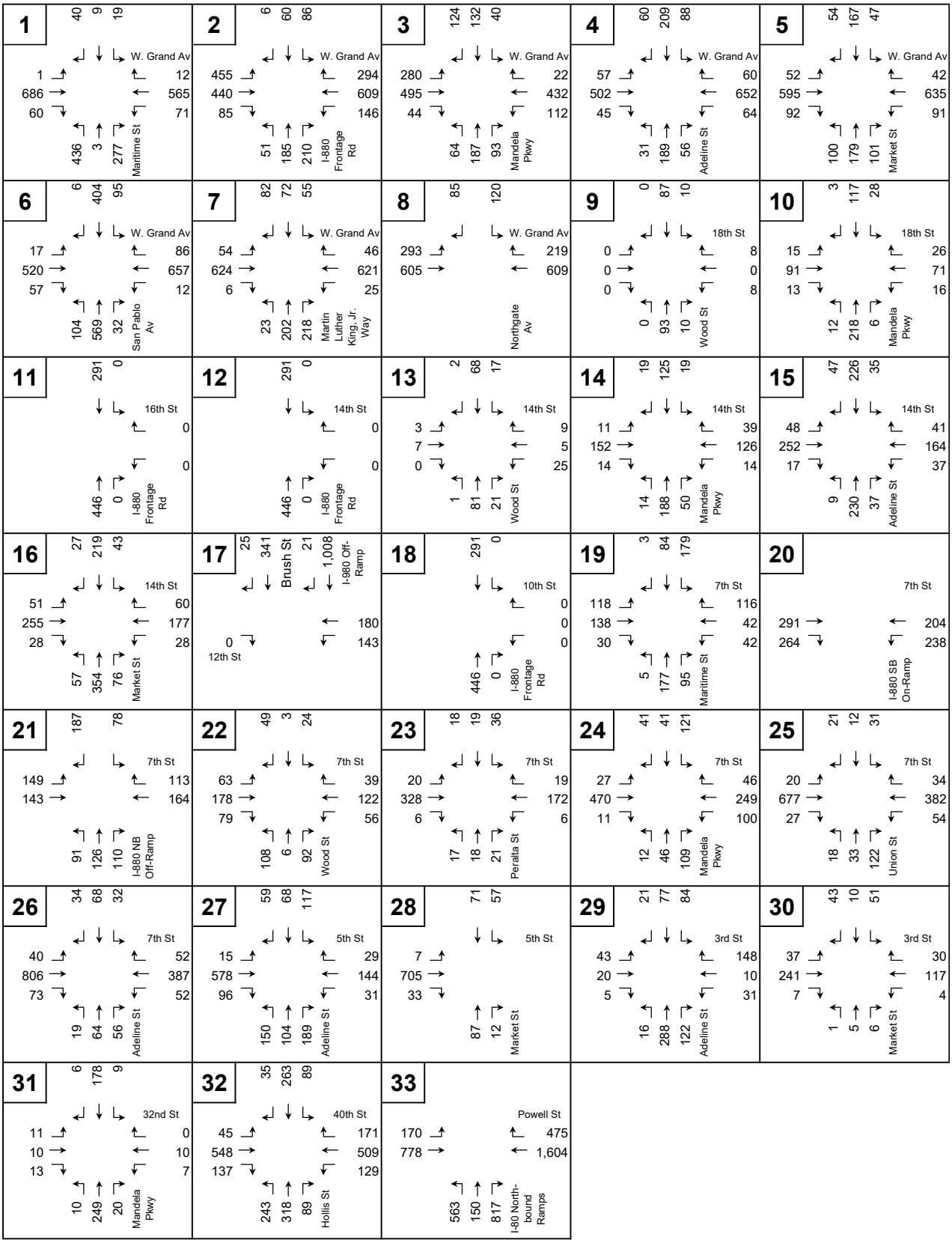


Intersection Peak-Hour Traffic Volumes

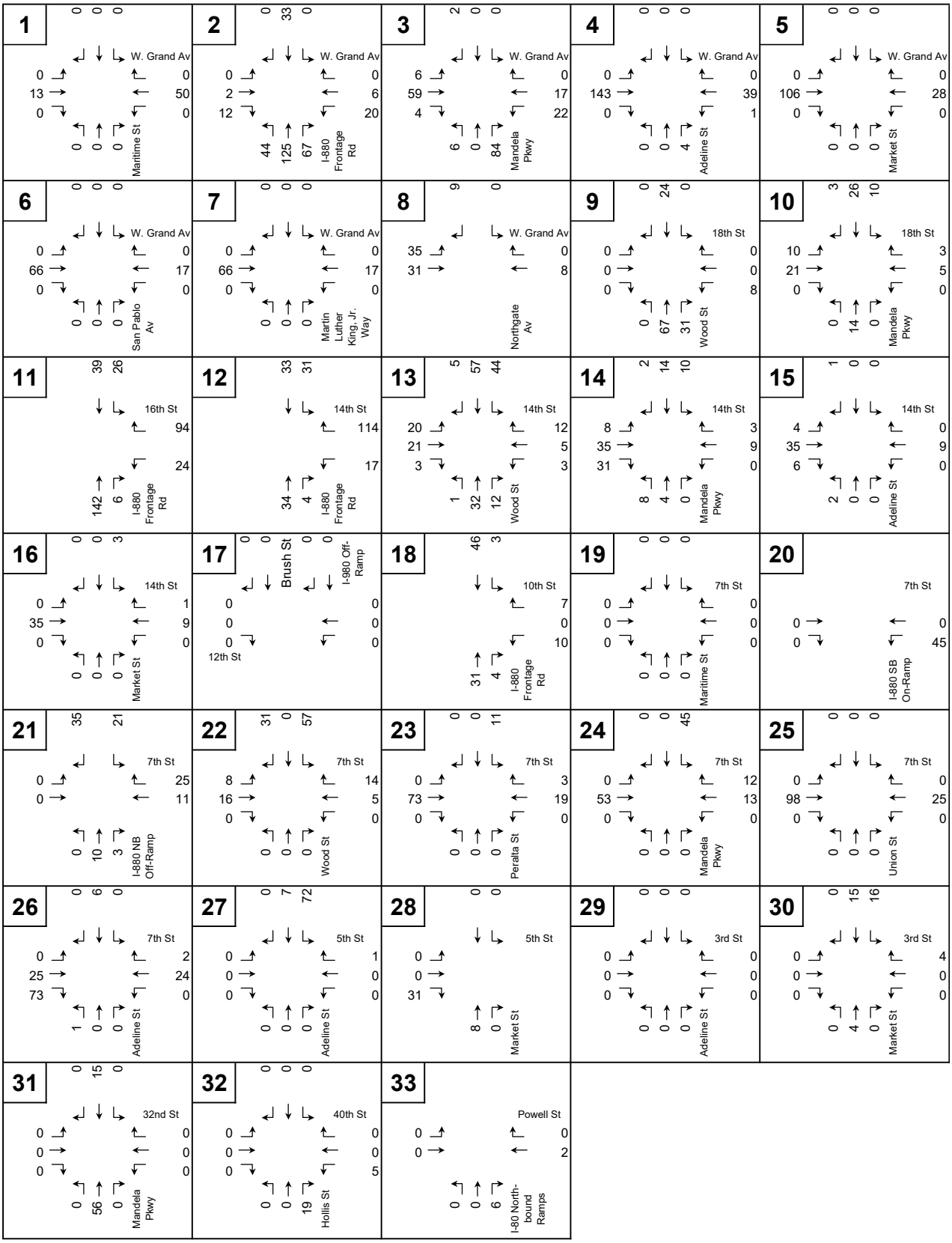
Existing AM Peak Hour Traffic Volumes



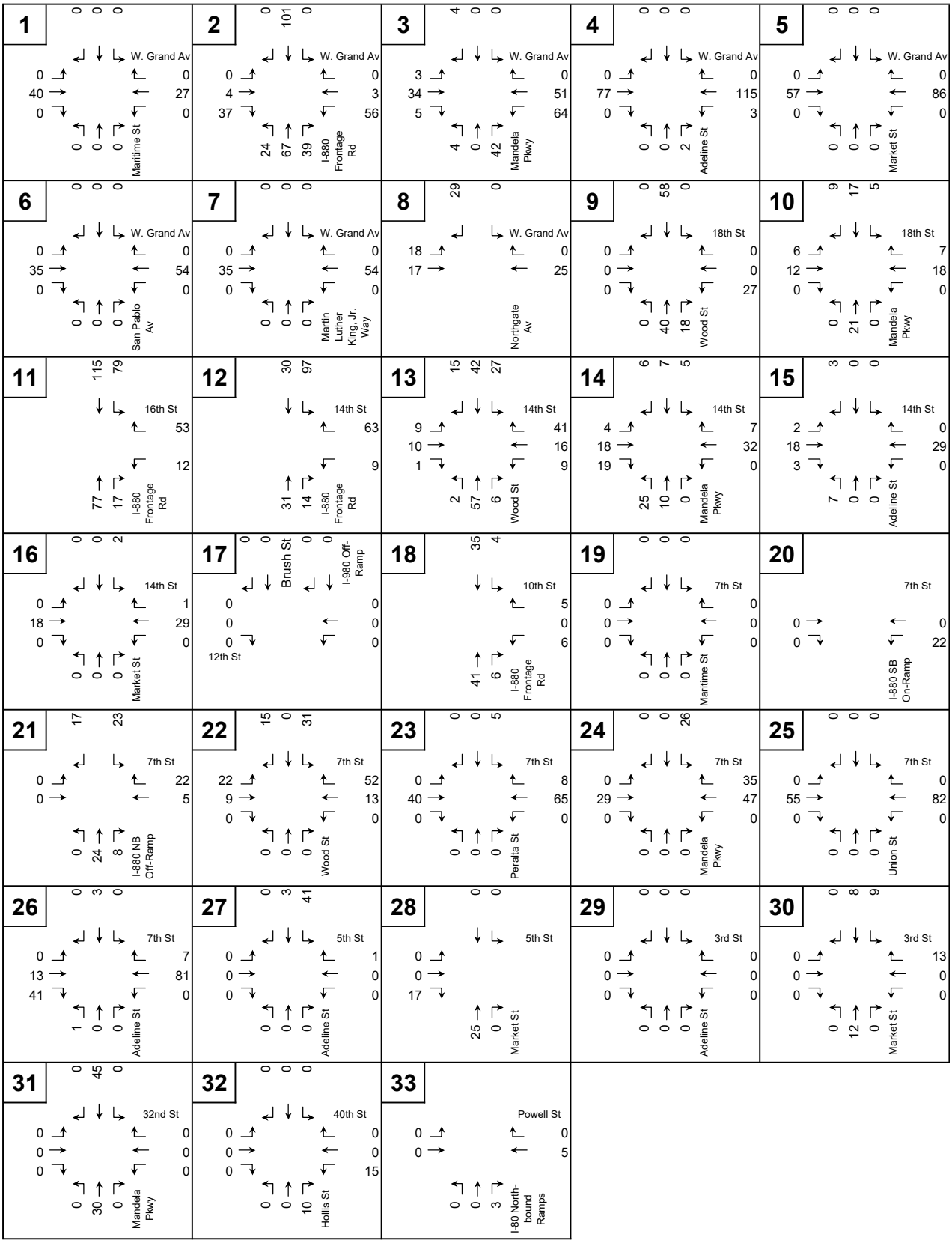
Existing PM Peak Hour Traffic Volumes



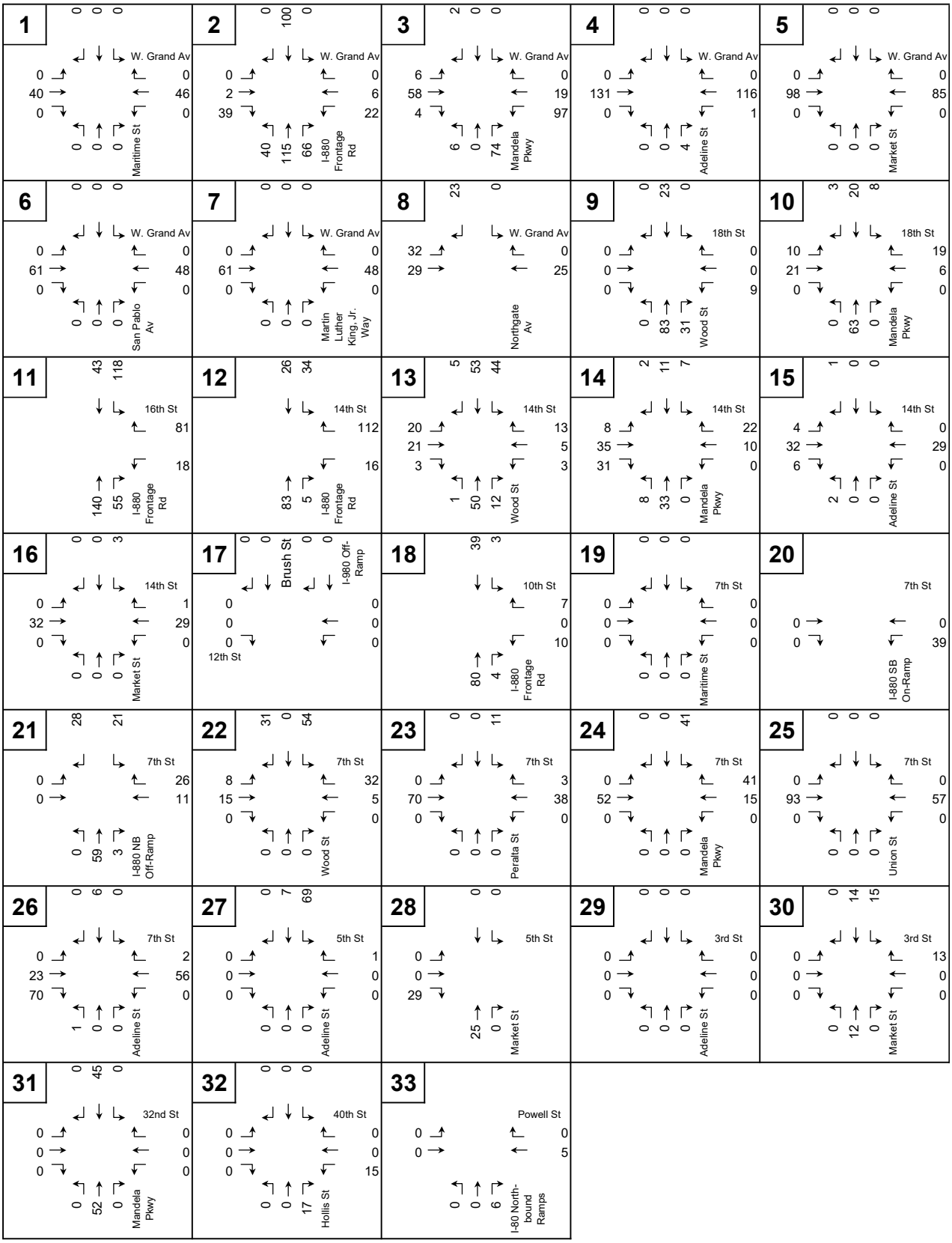
Residential Project Generated AM Peak Hour Traffic Volumes



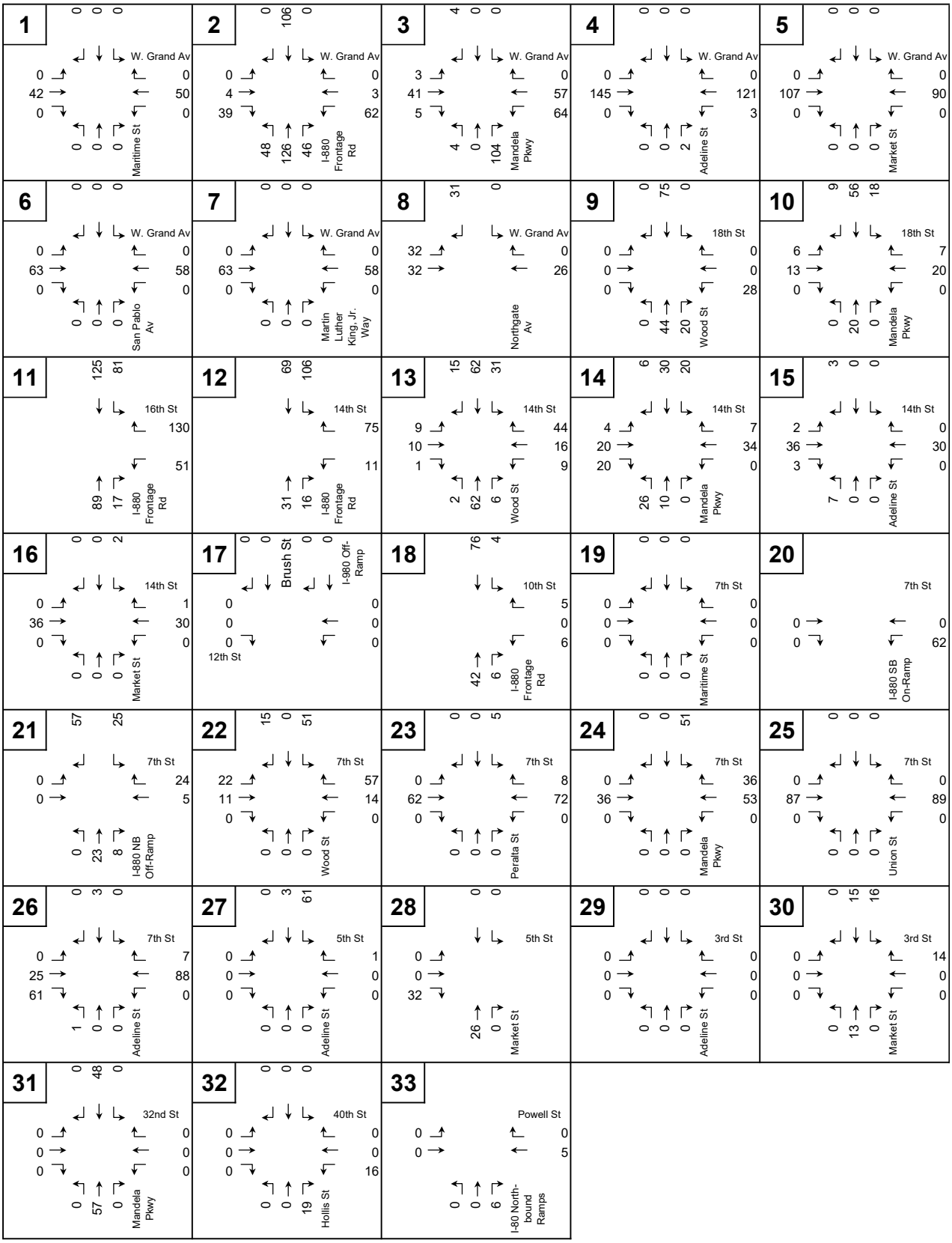
Residential Project Generated PM Peak Hour Traffic Volumes



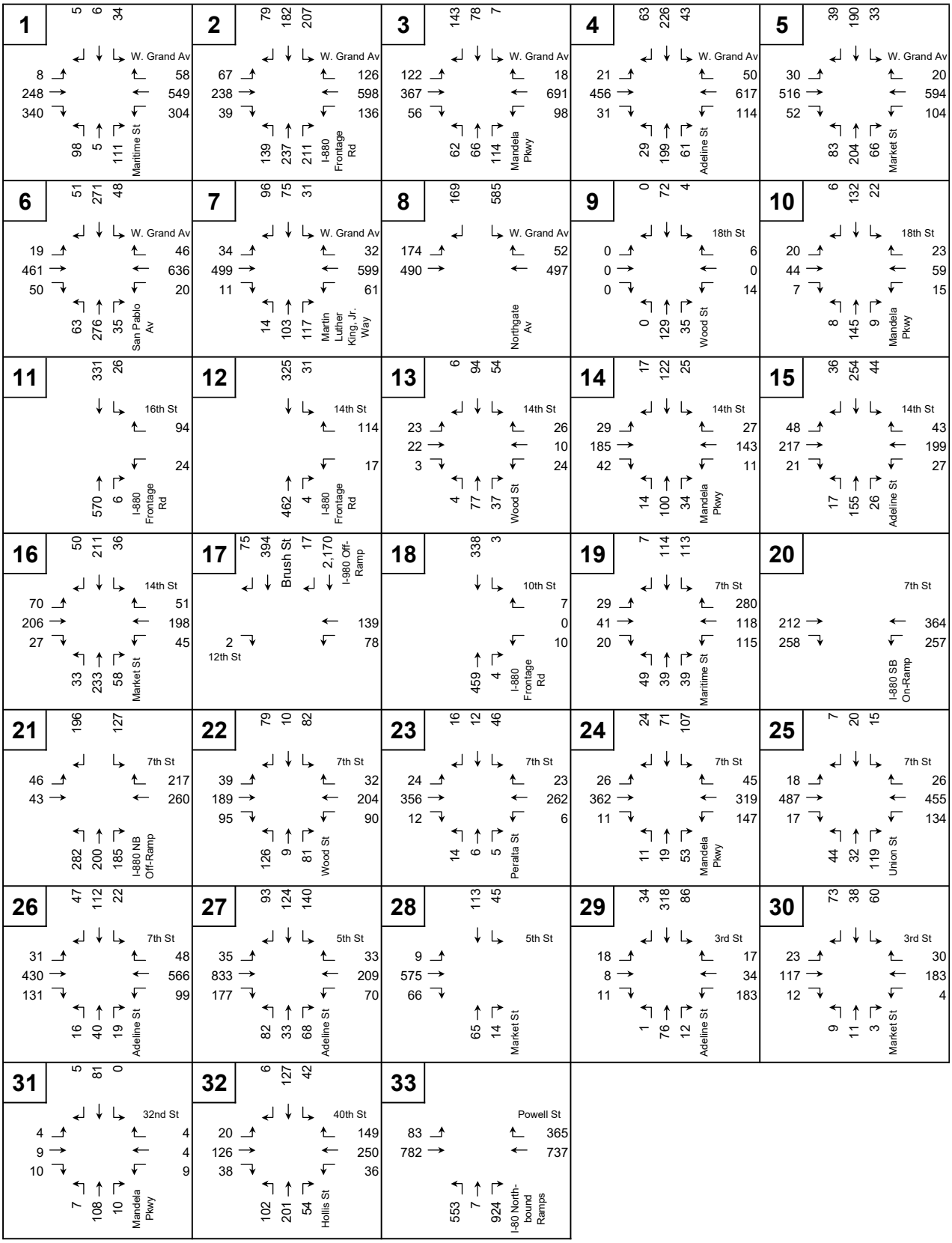
Commercial Project Generated AM Peak Hour Traffic Volumes



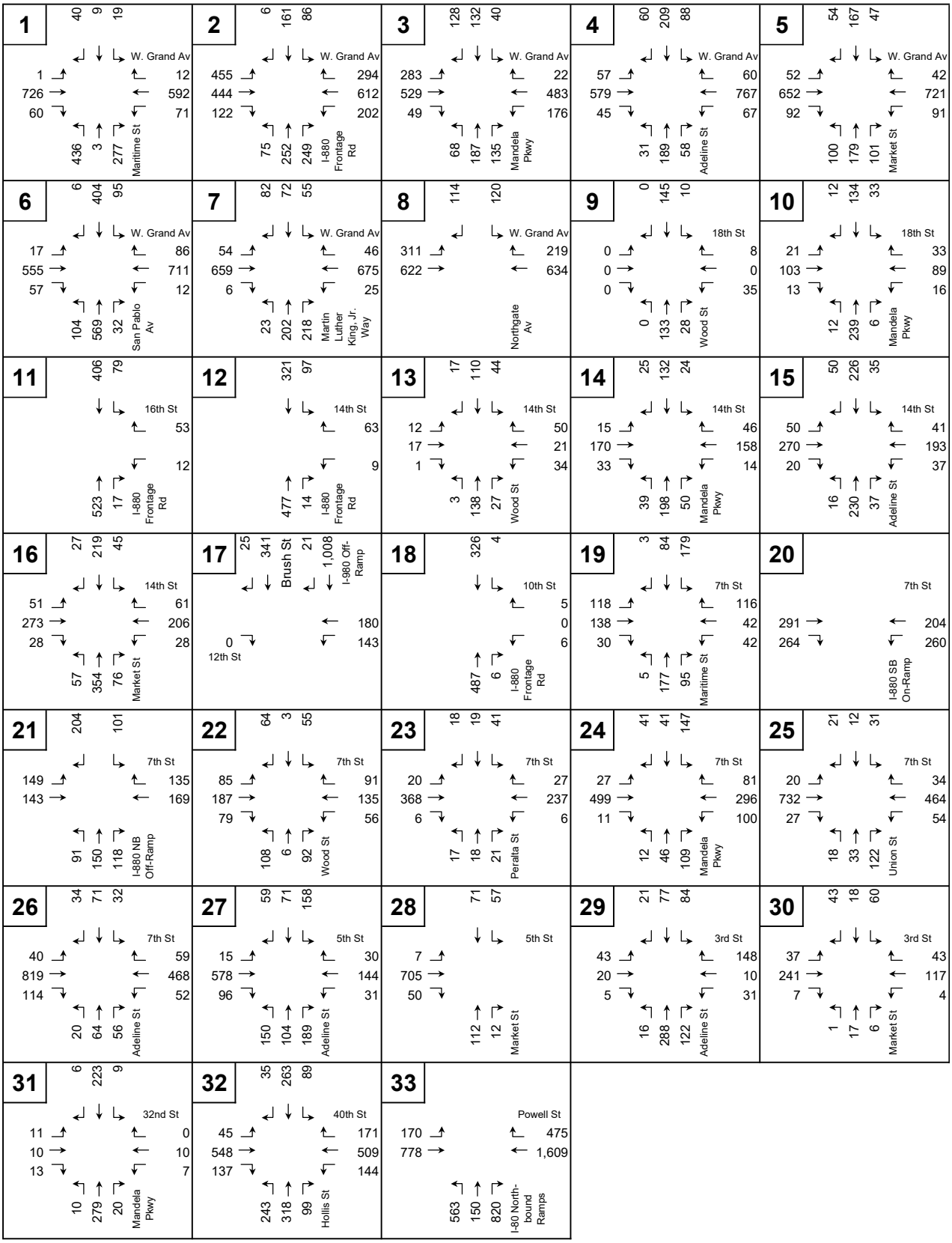
Commercial Project Generated PM Peak Hour Traffic Volumes



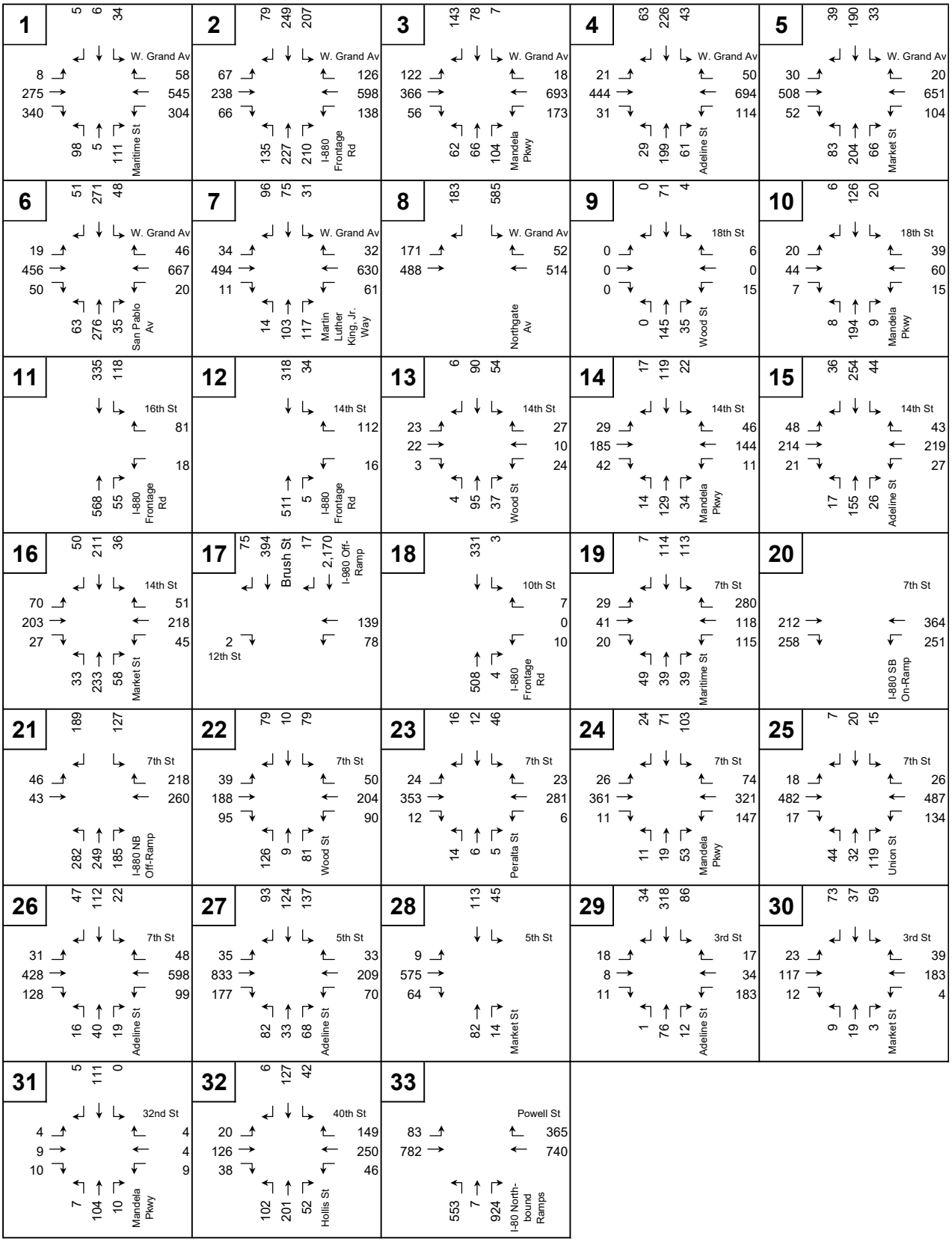
Existing + Residential Project AM Peak Hour Traffic Volumes



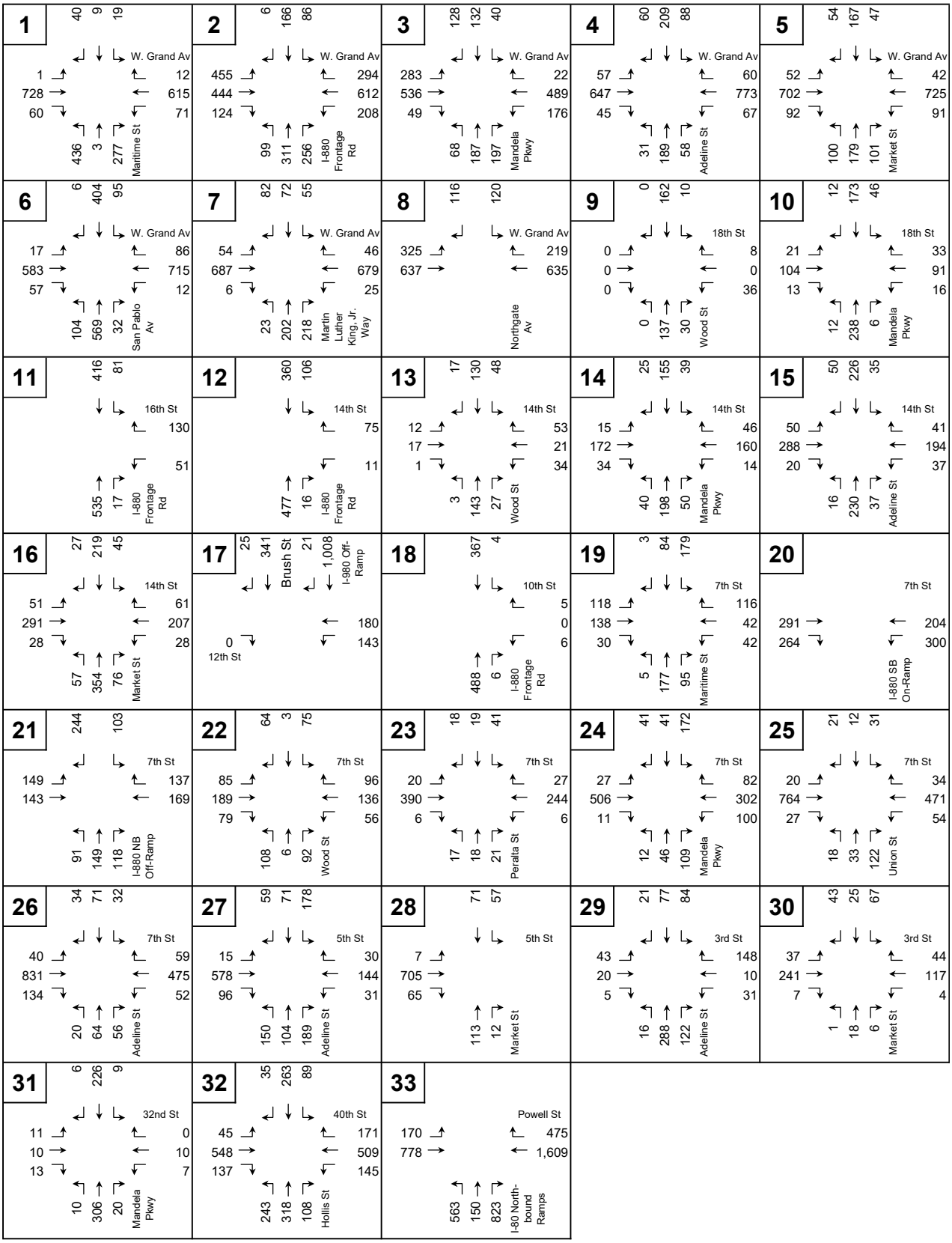
Existing + Residential Project PM Peak Hour Traffic Volumes



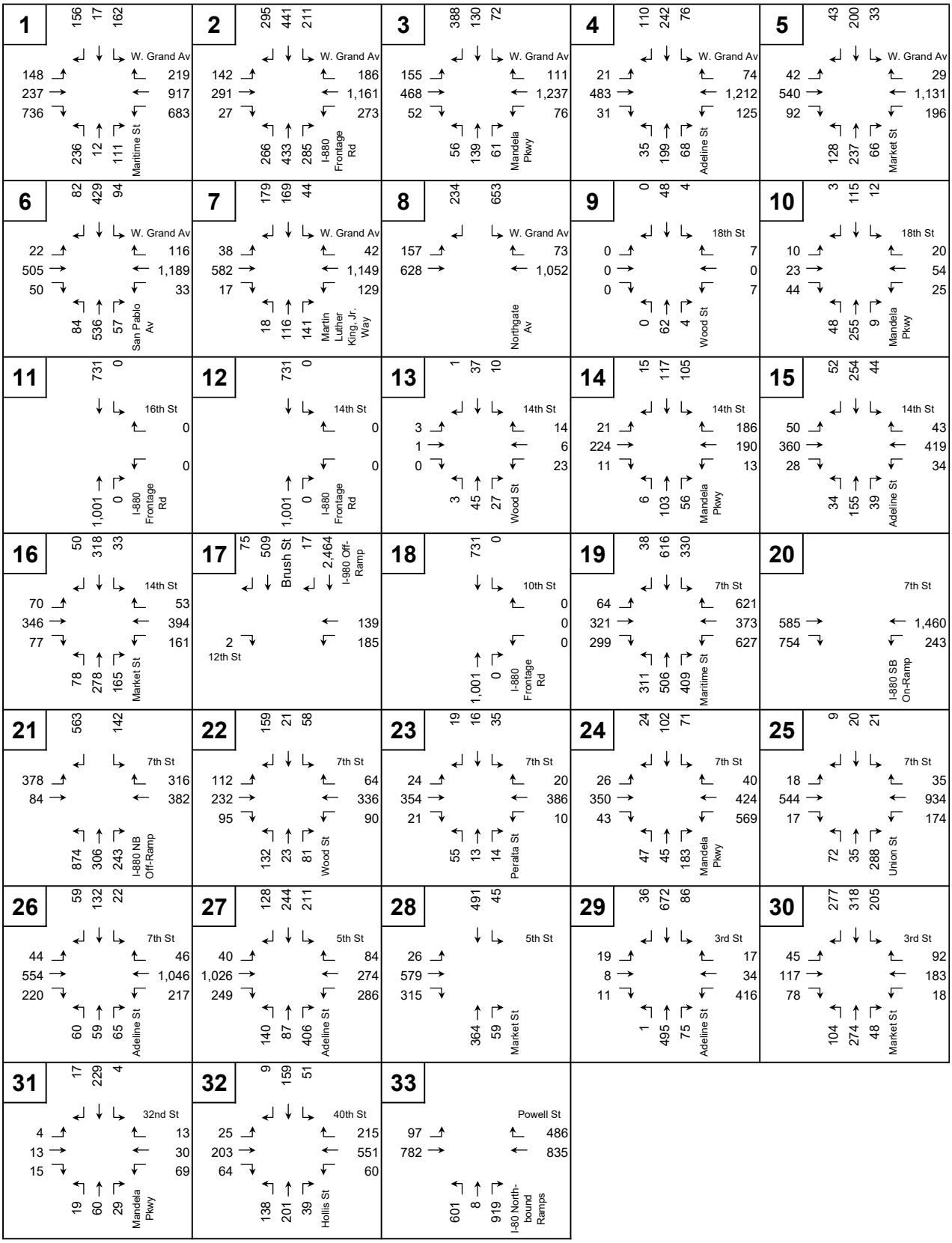
Existing + Commercial Project AM Peak Hour Traffic Volumes



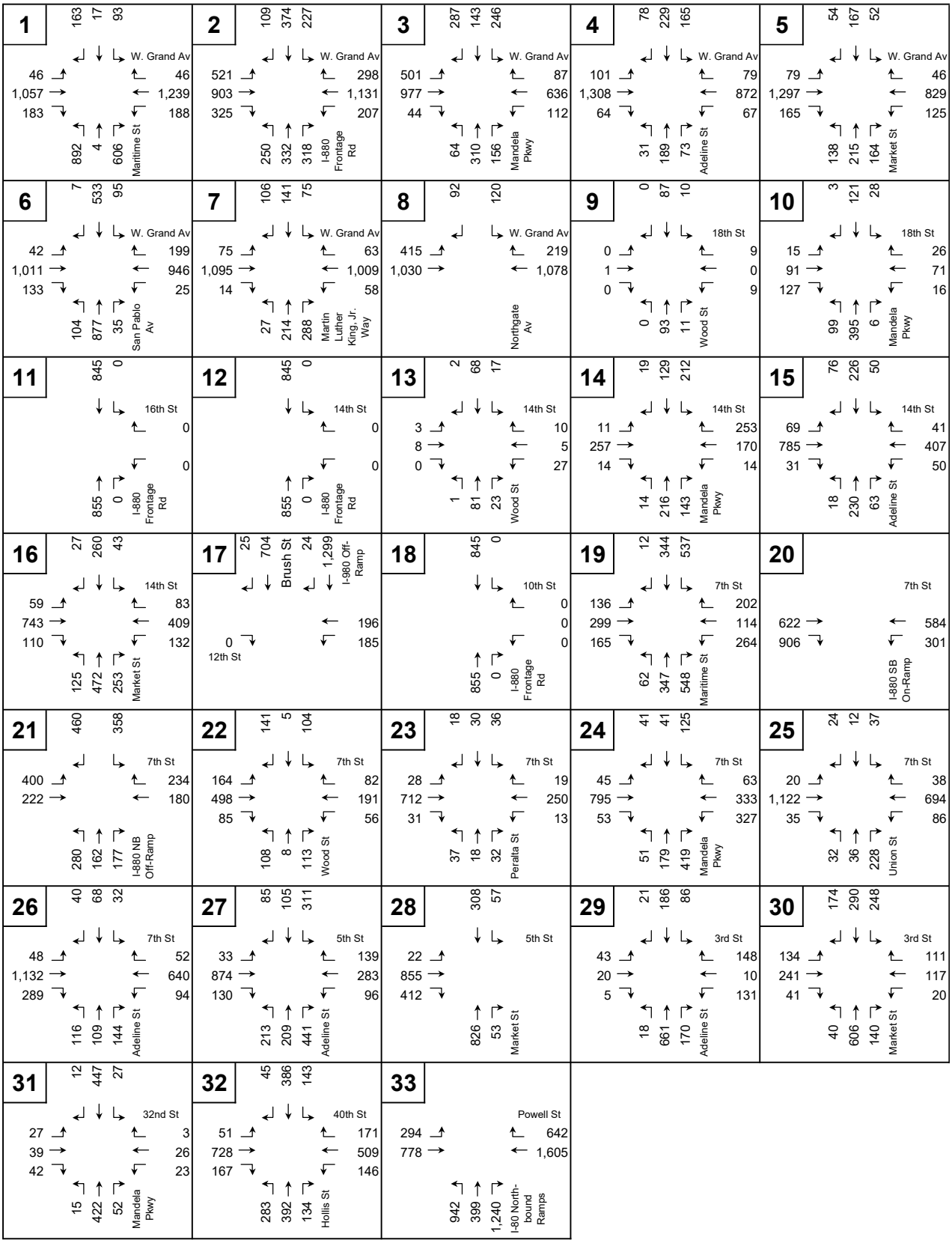
Existing + Commercial Project PM Peak Hour Traffic Volumes



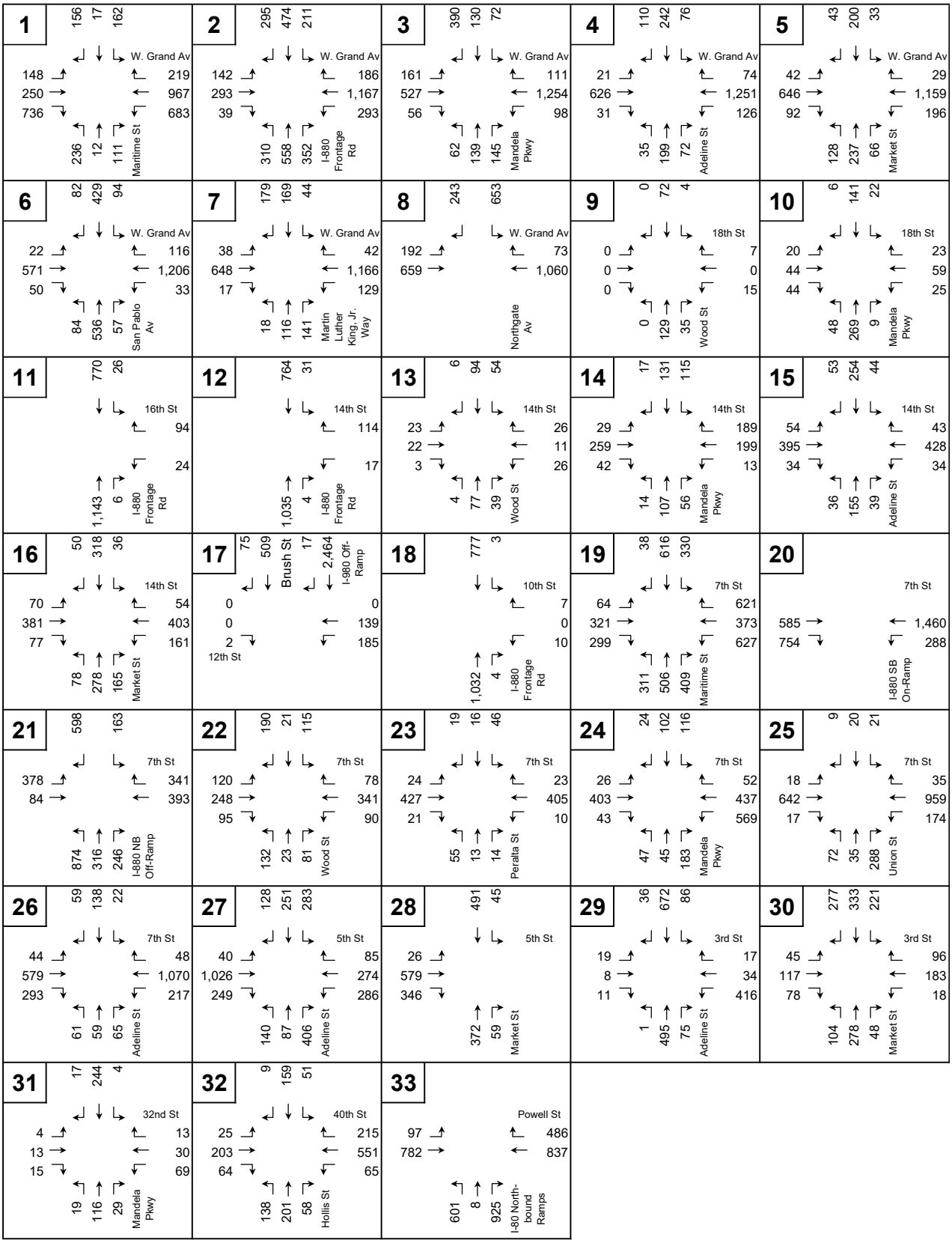
2025 AM Peak Hour Traffic Volumes (No Project)



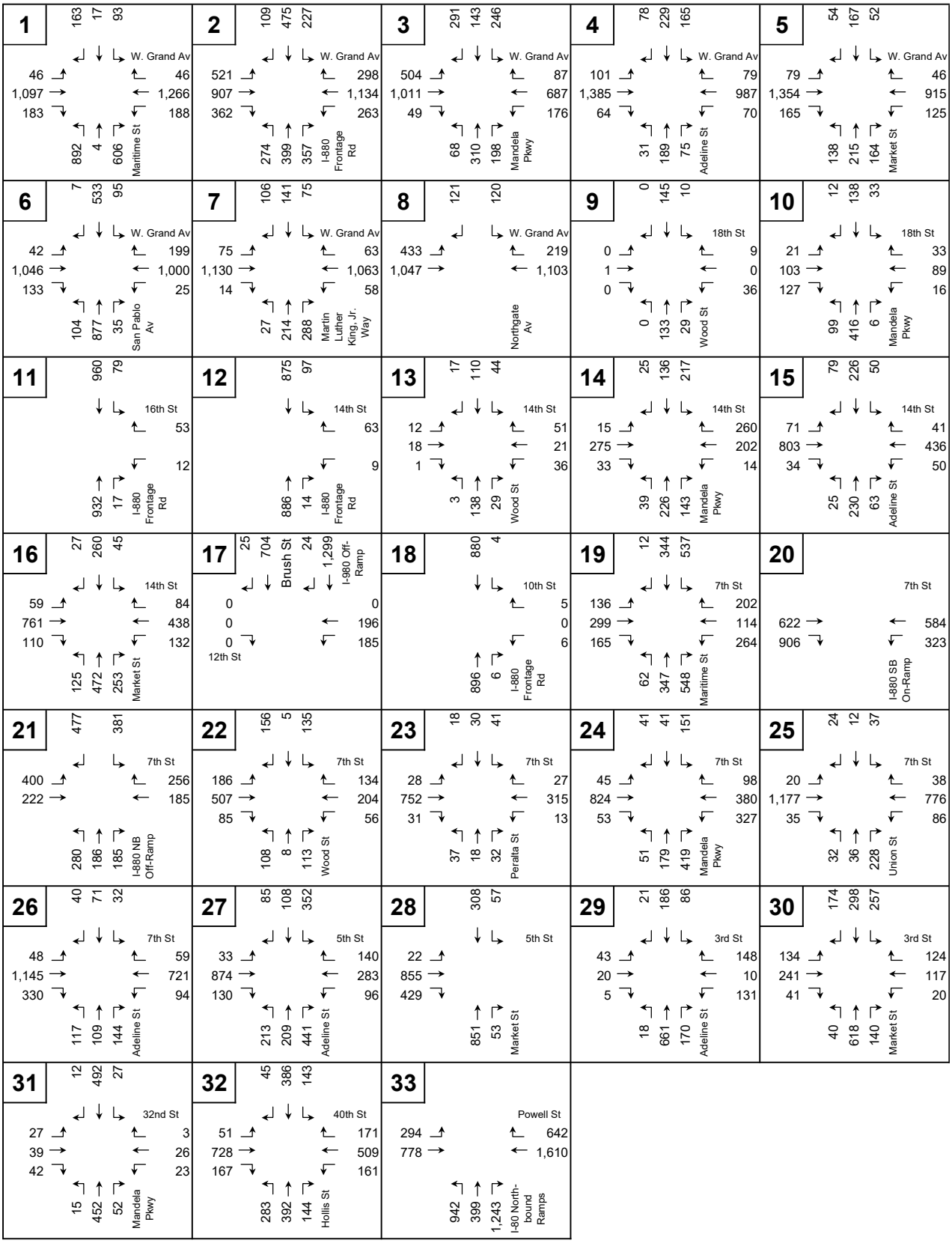
2025 PM Peak Hour Traffic Volumes (No Project)



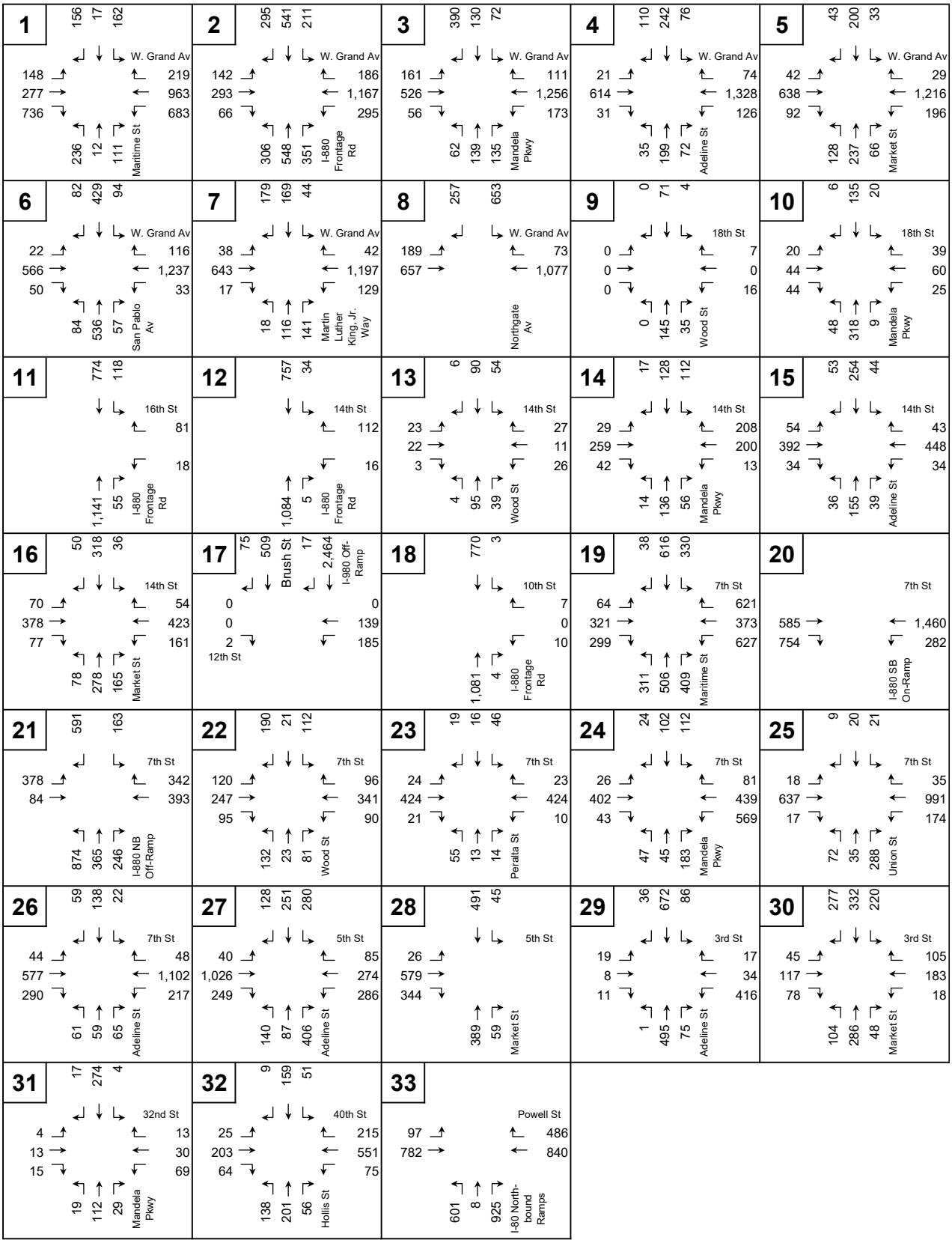
2025 + Residential Project AM Peak Hour Traffic Volumes



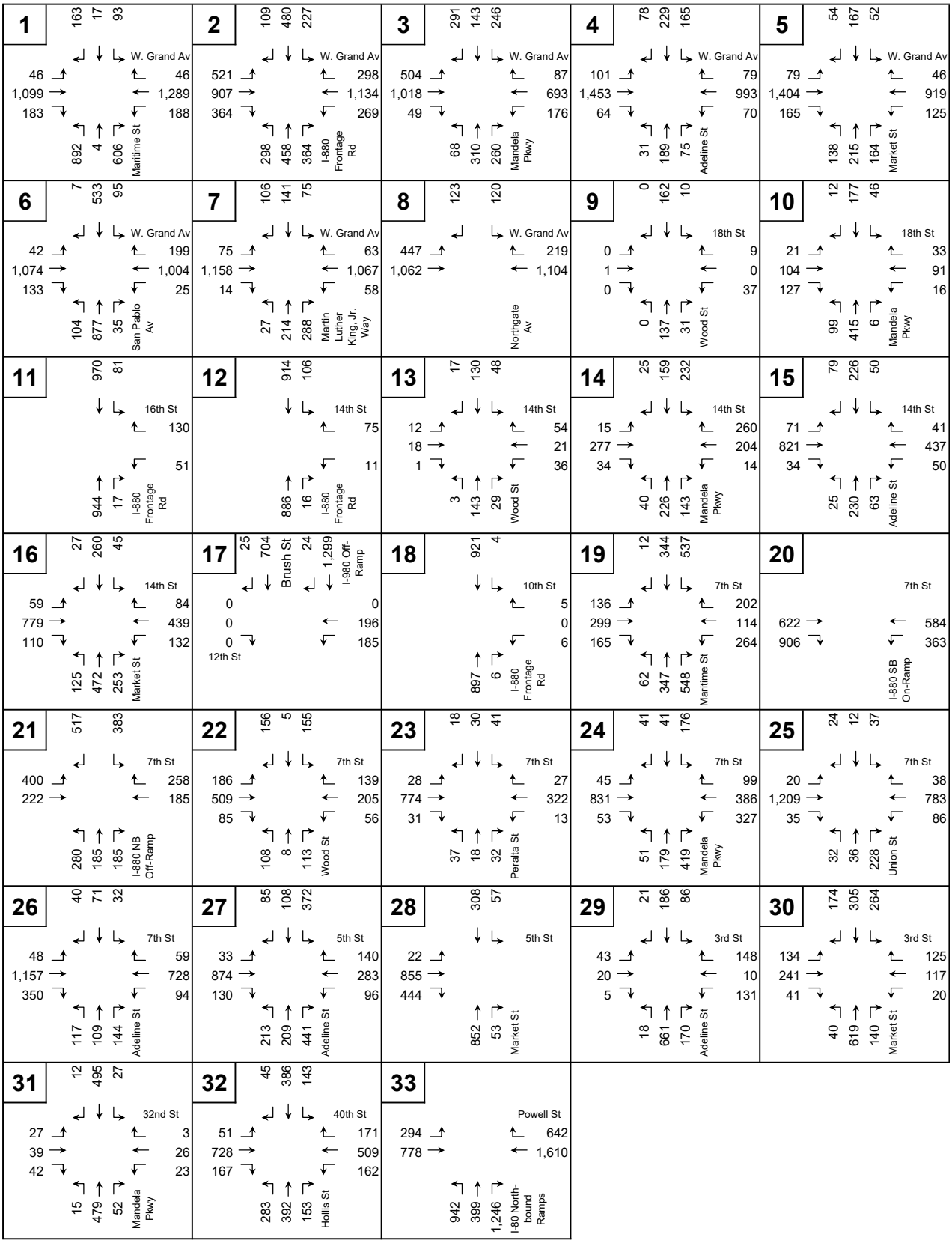
2025 + Residential Project PM Peak Hour Traffic Volumes



2025 + Commercial Project AM Peak Hour Traffic Volumes



2025 + Commercial Project PM Peak Hour Traffic Volumes



Summary of Freeway Operations

Central Station Residential Alternative
Existing Level of Service Summary for Freeway Segments

April 7, 2004

Freeway Segment	Existing Conditions				Existing + Project				Lanes	Existing Traffic Traffic Volume		Project Traffic (in PCEs)		Significant?	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour								
	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C		AM	PM	AM	PM	AM	PM
I-80 at the Bay Bridge															
Eastbound	A	0.121	F	1.127	A	0.122	F	1.131	5	1,101	10,255	13	40		
Westbound	F	1.089	D	0.816	F	1.094	D	0.819	5	9,908	7,426	50	27		
I-80 East of I-80/I-580 Split															
Eastbound	B	0.483	F	1.129	B	0.496	F	1.136	5	4,392	10,270	125	67		
Westbound	F	1.182	C	0.722	F	1.185	C	0.733	5	10,752	6,566	33	101		
I-580 East of I-980/SH-24															
Eastbound	E	0.985	F	1.319	E	0.992	F	1.323	4	7,173	9,603	50	27		
Westbound	F	1.204	F	1.079	F	1.206	F	1.085	4	8,767	7,857	13	40		
I-880 North of Union Street															
Northbound	D	0.806	C	0.661	D	0.808	C	0.667	3	4,399	3,609	13	31		
Southbound	B	0.362	D	0.841	B	0.370	D	0.845	3	1,976	4,593	45	22		
I-880 North of I-980															
Northbound	C	0.755	C	0.619	C	0.759	C	0.633	3	4,120	3,380	25	75		
Southbound	A	0.339	D	0.788	B	0.356	D	0.797	3	1,851	4,302	93	49		
I-880 - south of I-980															
Northbound	E	0.933	D	0.882	E	0.936	D	0.890	5	8,490	8,024	25	75		
Southbound	D	0.861	E	0.955	D	0.871	E	0.961	5	7,837	8,693	93	49		
I-980 North of 27th St.															
Eastbound	A	0.323	C	0.638	A	0.334	C	0.644	4	2,354	4,647	75	40		
Westbound	C	0.627	A	0.334	C	0.629	A	0.343	4	4,562	2,434	20	60		
SR 24 East of I-580															
Eastbound	B	0.391	F	1.020	B	0.395	F	1.021	4	2,848	7,423	25	13		
Westbound	F	1.058	B	0.458	F	1.059	B	0.461	4	7,699	3,335	7	20		

Central Station Commercial Alternative
Existing Level of Service Summary for Freeway Segments

April 7, 2004

Freeway Segment	Existing Conditions				Existing + Project				Lanes	Existing Traffic Traffic Volume		Project Traffic (in PCEs)		Significant?	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour								
	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C		AM	PM	AM	PM	AM	PM
I-80 at the Bay Bridge															
Eastbound	A	0.121	F	1.127	A	0.125	F	1.132	5	1,101	10,255	40	50		
Westbound	F	1.089	D	0.816	F	1.094	D	0.821	5	9,908	7,426	46	42		
I-80 East of I-80/I-580 Split															
Eastbound	B	0.483	F	1.129	B	0.495	F	1.142	5	4,392	10,270	115	126		
Westbound	F	1.182	C	0.722	F	1.193	C	0.733	5	10,752	6,566	100	106		
I-580 East of I-980/SH-24															
Eastbound	E	0.985	F	1.319	E	0.992	F	1.326	4	7,173	9,603	46	50		
Westbound	F	1.204	F	1.079	F	1.210	F	1.085	4	8,767	7,857	40	42		
I-880 North of Union Street															
Northbound	D	0.806	C	0.661	D	0.817	C	0.667	3	4,399	3,609	62	31		
Southbound	B	0.362	D	0.841	B	0.369	D	0.853	3	1,976	4,593	39	62		
I-880 North of I-980															
Northbound	C	0.755	C	0.619	C	0.768	C	0.634	3	4,120	3,380	75	79		
Southbound	A	0.339	D	0.788	B	0.355	D	0.805	3	1,851	4,302	86	95		
I-880 - south of I-980															
Northbound	E	0.933	D	0.882	E	0.941	D	0.890	5	8,490	8,024	75	79		
Southbound	D	0.861	E	0.955	D	0.871	E	0.966	5	7,837	8,693	86	95		
I-980 North of 27th St.															
Eastbound	A	0.323	C	0.638	A	0.333	C	0.649	4	2,354	4,647	69	76		
Westbound	C	0.627	A	0.334	C	0.635	A	0.343	4	4,562	2,434	61	63		
SR 24 East of I-580															
Eastbound	B	0.391	F	1.020	B	0.394	F	1.023	4	2,848	7,423	23	25		
Westbound	F	1.058	B	0.458	F	1.060	B	0.461	4	7,699	3,335	20	21		

Central Station Residential Alternative
2025 Level of Service Summary for Freeway Segments

April 7, 2004

Freeway Segment	Existing Conditions				Cumulative Conditions				Lanes	Cumulative No Project Traffic Volume		Project Traffic (in PCEs)		Significant?		Considerable Contribution? (5% of Increase)	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour										
	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C		AM	PM	AM	PM	AM	PM	AM	PM
I-80 at the Bay Bridge																	
Eastbound	A	0.121	F	1.127	D	0.798	***F***	***1.743***	5	7,250	15,823	13	40		Yes		
Westbound	F	1.089	D	0.816	***F***	***1.817***	***F***	***1.559***	5	16,481	14,163	50	27	Yes	Yes		
I-80 East of I-80/I-580 Split																	
Eastbound	B	0.483	F	1.129	***F***	***1.361***	F	1.144	5	12,264	10,345	125	67	Yes			
Westbound	F	1.182	C	0.722	D	0.890	***F***	***1.254***	5	8,068	11,313	33	101		Yes		
I-580 East of I-980/SH-24																	
Eastbound	E	0.985	F	1.319	C	0.619	F	1.263	4	4,457	9,169	50	27				
Westbound	F	1.204	F	1.079	F	1.169	D	0.861	4	8,497	6,227	13	40				
I-880 North of Union Street																	
Northbound	D	0.806	C	0.661	D	0.880	D	0.847	3	4,793	4,596	13	31				
Southbound	B	0.362	D	0.841	C	0.564	E	0.955	3	3,033	5,195	45	22				
I-880 North of I-980																	
Northbound	C	0.755	C	0.619	***F***	***1.007***	D	0.836	3	5,474	4,487	25	75	Yes			
Southbound	A	0.339	D	0.788	B	0.539	E	0.932	3	2,852	5,038	93	49				
I-880 - south of I-980																	
Northbound	E	0.933	D	0.882	E	0.986	E	0.986	5	8,947	8,899	25	75				
Southbound	D	0.861	E	0.955	D	0.780	E	0.952	5	7,001	8,612	93	49				
I-980 North of 27th St.																	
Eastbound	A	0.323	C	0.638	B	0.374	C	0.756	4	2,647	5,463	75	40				
Westbound	C	0.627	A	0.334	C	0.714	B	0.451	4	5,179	3,225	20	60				
SR 24 East of I-580																	
Eastbound	B	0.391	F	1.020	C	0.565	***F***	***1.243***	4	4,091	9,037	25	13		Yes		
Westbound	F	1.058	B	0.458	***F***	***1.239***	D	0.789	4	9,012	5,727	7	20	Yes			

Central Station Commercial Alternative
2025 Level of Service Summary for Freeway Segments

April 7, 2004

Freeway Segment	Existing Conditions				Cumulative Conditions				Lanes	Cumulative No Project Traffic Volume		Project Traffic (in PCEs)		Significant?		Considerable Contribution? (5% of Increase)	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour										
	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C		AM	PM	AM	PM	AM	PM	AM	PM
I-80 at the Bay Bridge																	
Eastbound	A	0.121	F	1.127	D	0.801	***F***	***1.744***	5	7,250	15,823	40	50		Yes		
Westbound	F	1.089	D	0.816	***F***	***1.816***	***F***	***1.561***	5	16,481	14,163	46	42	Yes	Yes		
I-80 East of I-80/I-580 Split																	
Eastbound	B	0.483	F	1.129	***F***	***1.360***	F	1.151	5	12,264	10,345	115	126	Yes			
Westbound	F	1.182	C	0.722	D	0.898	***F***	***1.255***	5	8,068	11,313	100	106		Yes		
I-580 East of I-980/SH-24																	
Eastbound	E	0.985	F	1.319	C	0.619	F	1.266	4	4,457	9,169	46	50				
Westbound	F	1.204	F	1.079	F	1.173	D	0.861	4	8,497	6,227	40	42				
I-880 North of Union Street																	
Northbound	D	0.806	C	0.661	D	0.889	D	0.847	3	4,793	4,596	62	31				
Southbound	B	0.362	D	0.841	C	0.563	E	0.963	3	3,033	5,195	39	62				
I-880 North of I-980																	
Northbound	C	0.755	C	0.619	***F***	***1.016***	D	0.836	3	5,474	4,487	75	79	Yes		yes	
Southbound	A	0.339	D	0.788	B	0.538	E	0.940	3	2,852	5,038	86	95				
I-880 - south of I-980																	
Northbound	E	0.933	D	0.882	E	0.991	E	0.987	5	8,947	8,899	75	79				
Southbound	D	0.861	E	0.955	D	0.779	E	0.957	5	7,001	8,612	86	95				
I-980 North of 27th St.																	
Eastbound	A	0.323	C	0.638	B	0.373	C	0.761	4	2,647	5,463	69	76				
Westbound	C	0.627	A	0.334	C	0.720	B	0.452	4	5,179	3,225	61	63				
SR 24 East of I-580																	
Eastbound	B	0.391	F	1.020	C	0.565	***F***	***1.245***	4	4,091	9,037	23	25		Yes		
Westbound	F	1.058	B	0.458	***F***	***1.241***	D	0.790	4	9,012	5,727	20	21	Yes			

Project Contribution to Significant Cumulative Traffic Impacts

2025 Project Contribution to Cumulative Traffic Impacts										
Intersections with Cumulative Traffic Impact	Cumulative Traffic Volume Increase		Project Traffic Volume Increase				Project Traffic Percent Increase			
			Maximum Residential Project		Maximum Traffic Project		Maximum Residential Project		Maximum Traffic Project	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
W. Grand Av / Maritime St	1,994	2,422	63	67	86	92	3.2%	2.8%	4.3%	3.8%
W. Grand Av / Frontage Rd	2,370	2,699	309	331	390	434	**13.0%**	**12.3%**	**16.5%**	**16.1%**
W. Grand Av / Mandela Pkwy	1,516	2,072	132	150	151	220	**8.7%**	**7.2%**	**10.0%**	**10.6%**
7th St / Mandela Pkwy	975	1,336	123	137	149	176	**12.6%**	**10.3%**	**15.3%**	**13.2%**
3rd St / Market St (TWSC)	1,274	1,652	39	42	54	58	3.1%	2.5%	4.2%	3.5%

Notes: **Bold** value indicates the project would make a considerable contribution to the cumulative traffic impact.
Listed intersections are the only intersections significantly affected by the Project.

Parking Survey

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

CLIENT: DOWLING ASSOCIATES, INC
PROJECT: CENTRAL STATION PARKING SURVEY
DATE: THURSDAY AUGUST 12TH, 2004
TIME: 11:00PM TO 1:00AM
LOCATION: CITY OF OAKLAND

CLIENT NUMBERS	STREETS WERE THE SURVEY WAS TAKEN:	DIRECTION	AUTO CARS	SEMI TRUCKS	TOTALS
1	11 TH STREET WEST OF PINE STREET	SOUTHSIDE	0	0	0
	11 TH STREET WEST OF PINE STREET	NORTHSIDE	0	0	0
2	PINE STREET BETWEEN 11 TH STREET AND 12 TH STREET	EASTSIDE	0	0	0
	PINE STREET BETWEEN 11 TH STREET AND 12 TH STREET	WESTSIDE	0	0	0
3	12 TH STREET BETWEEN PINE AND WOOD STREET	SOUTHSIDE	1	0	1
	12 TH STREET BETWEEN PINE AND WOOD STREET	NORTHSIDE	1	0	1
4	WOOD STREET BETWEEN 12 TH STREET AND 13TH STREET	EASTSIDE	0	0	0
	WOOD STREET BETWEEN 12 TH STREET AND 13TH STREET	WESTSIDE	4	0	4
5	WOOD STREET BETWEEN 13 TH STREET AND 14TH STREET	EASTSIDE	0	0	0
	WOOD STREET BETWEEN 13 TH STREET AND 14TH STREET	WESTSIDE	0	1	1
6	WOOD STREET BETWEEN 14 TH STREET AND 15TH STREET	EASTSIDE	0	1	1
	WOOD STREET BETWEEN 14 TH STREET AND 15TH STREET	WESTSIDE	0	0	0
7	WOOD STREET BETWEEN 15 TH STREET AND 16TH STREET	EASTSIDE	1	0	1
	WOOD STREET BETWEEN 15 TH STREET AND 16TH STREET	WESTSIDE	2	0	2
8	WOOD STREET BETWEEN 16 TH STREET AND 17TH STREET	EASTSIDE	1	0	1
	WOOD STREET BETWEEN 16 TH STREET AND 17TH STREET	WESTSIDE	0	0	0
9	WOOD STREET BETWEEN 17 TH STREET AND 18TH STREET	EASTSIDE	0	0	0
	WOOD STREET BETWEEN 17 TH STREET AND 18TH STREET	WESTSIDE	0	3	3
10	WOOD STREET BETWEEN 18 TH STREET AND 20TH STREET	EASTSIDE	0	0	0
	WOOD STREET BETWEEN 18 TH STREET AND 20TH STREET	WESTSIDE	0	0	0
11	WOOD STREET BETWEEN 20 TH STREET AND WEST GRAND AVENUE	EASTSIDE	0	0	0
	WOOD STREET BETWEEN 20 TH STREET AND WEST GRAND AVENUE	WESTSIDE	0	0	0
12	WOOD STREET BETWEEN WEST GRAND AVENUE AND 24TH STREET	EASTSIDE	2	0	2
	WOOD STREET BETWEEN WEST GRAND AVENUE AND 24TH STREET	WESTSIDE	6	0	6
13	20 TH STREET BETWEET WOOD STREET AND WILLOW STREET	SOUTHSIDE	0	0	0
	20 TH STREET BETWEET WOOD STREET AND WILLOW STREET	NORTHSIDE	0	1	1
14	18 TH STREET BETWEET WOOD STREET AND WILLOW STREET	SOUTHSIDE	4	0	4
	18 TH STREET BETWEET WOOD STREET AND WILLOW STREET	NORTHSIDE	6	11	17
15	17 TH STREET BETWEET WOOD STREET AND WILLOW STREET	SOUTHSIDE	0	3	3
	17 TH STREET BETWEET WOOD STREET AND WILLOW STREET	NORTHSIDE	0	0	0
16	16 TH STREET BETWEET WOOD STREET AND WILLOW STREET	SOUTHSIDE	0	1	1
	16 TH STREET BETWEET WOOD STREET AND WILLOW STREET	NORTHSIDE	0	0	0
17	15 TH STREET BETWEET WOOD STREET AND WILLOW STREET	SOUTHSIDE	3	2	5
	15 TH STREET BETWEET WOOD STREET AND WILLOW STREET	NORTHSIDE	5	2	7
18	14 TH STREET BETWEET WOOD STREET AND WILLOW STREET	SOUTHSIDE	4	0	4
	14 TH STREET BETWEET WOOD STREET AND WILLOW STREET	NORTHSIDE	6	0	6
19	13 TH STREET BETWEET WOOD STREET AND WILLOW STREET	SOUTHSIDE	3	0	3
	13 TH STREET BETWEET WOOD STREET AND WILLOW STREET	NORTHSIDE	6	0	6
20	12 TH STREET BETWEET WOOD STREET AND WILLOW STREET	SOUTHSIDE	7	0	7
	12 TH STREET BETWEET WOOD STREET AND WILLOW STREET	NORTHSIDE	6	2	8
21	WOOD STREET BETWEEN 11 TH STREET AND 12 TH STREET	EASTSIDE	8	0	8
	WOOD STREET BETWEEN 11 TH STREET AND 12 TH STREET	WESTSIDE	9	0	9
22	11 TH STREET BETWEEN PINE STREET AND WOOD STREET	SOUTHSIDE	2	0	2
	11 TH STREET BETWEEN PINE STREET AND WOOD STREET	NORTHSIDE	8	0	8
23	PINE STREET BETWEEN 10 TH STREET AND 11 TH STREET	EASTSIDE	1	1	2
	PINE STREET BETWEEN 10 TH STREET AND 11 TH STREET	WESTSIDE	4	0	4
	GRAND TOTALS		**100**	**28**	**128**

Appendix C
Updated Cumulative Growth Scenario for the Project EIR (Hausrath Economics Group)

UPDATED CUMULATIVE GROWTH SCENARIO FOR OAKLAND AS PREPARED FOR USE IN THE *CENTRAL STATION PROJECT EIR*

This appendix describes the cumulative growth scenario used for environmental impact analysis purposes in the *Central Station Project EIR*. The scenario provides the future cumulative development context for Oakland, identified in terms of future employment, households, and population. Use of the scenario for analyzing the project's environmental impacts ensures that those impacts are appropriately considered as part of the cumulative context of future citywide and regional growth and development.

The need for developing the cumulative growth scenario is explained below, followed by a description of the approach and the chronology of scenario development and updates. Then, the updated cumulative scenario for Oakland used in this EIR is summarized, followed by comparisons with projections from the Association of Bay Area Governments (ABAG). The specifics of the scenario for West Oakland and the Harbor areas surrounding the Central Station Project are summarized next. The assumptions for growth in the rest of Alameda County and Bay Area region are then identified.

NEED FOR THE CUMULATIVE GROWTH SCENARIO

The cumulative growth scenario for Oakland was developed primarily for use in the cumulative transportation analyses in Oakland EIRs. The growth scenario was originally prepared in 2000 after analyses indicated that the growth projections from ABAG as incorporated into the Alameda County Congestion Management Agency (CMA) travel demand model did not reflect the level of growth and development occurring in Oakland. Those projections also did not reflect the locations of growth for future development projects under construction, approved, proposed, and reasonably foreseeable for Oakland. Since the cumulative growth scenario for Oakland was originally developed, it continues to be updated and refined as needed for EIR analyses and planning efforts, and to incorporate newly released 2000 Census data and new projections series from ABAG. The cumulative growth scenario is now used to review and provide input for new ABAG projections and for updates to the land use database in the CMA travel model.

Totals for the cumulative growth scenario for Oakland are now very similar to the most recent ABAG projections incorporated into the CMA travel model as updated in May 2003. However, Oakland's cumulative growth scenario continues to be used in EIR analyses and planning efforts as it provides more specificity about growth and development occurring in Oakland and can be updated as needed for EIR and planning purposes.

FORECAST-BASED APPROACH THAT INCORPORATES FORESEEABLE FUTURE DEVELOPMENT PROJECTS

The cumulative growth scenario for Oakland is developed using a forecast-based approach, *i.e.*, an approach based on regional forecasts of economic activity and demographic trends. The cumulative growth scenario also considers background growth, which reflects other changes in land use, employment, and population as reflected by economic, demographic, and real estate market data and trends. Anticipated future development projects are identified and updated to include approved, proposed, and potential development projects reasonably foreseeable over the next 20 to 25 years.

The ABAG projections provide the reference for citywide and county totals for future years. The amount of growth represented by development projects and other changes is "fit" within the ABAG projections, to the extent possible. Citywide totals are increased above the ABAG projections if justified by recent and expected future development projects and other anticipated changes. The locations of specific projects and development sites are used for the allocation of growth to subareas and traffic analysis zones (TAZs) within the city. Transportation analyses using the CMA's travel model require inputs at the TAZ level.

CHRONOLOGY OF SCENARIO DEVELOPMENT

The cumulative growth scenario for Oakland was originally prepared and continues to be updated by Hausrath Economics Group (HEG), working closely with City of Oakland staff. The scenario was first completed in November 2000. Since that time, the scenario has been updated and refined for different parts of the City as needed for EIR analyses and planning efforts. It also has been updated to incorporate newly released 2000 Census data and new projections from ABAG. The following identifies the different updates that were completed prior to the scenario developed for this EIR:

- June 2001, updated scenario for *Metroport Project EIR*, focusing on updates in the Oakland Airport/Coliseum area;
- August 2001, updated scenario for *Leona Quarry Project EIR*, focusing on the area surrounding the Leona Quarry project;
- January 2002, updated scenario for *Oakland Army Base (OARB) Redevelopment Project EIR*, focusing on updates in the harbor and OARB redevelopment project area and adjacent parts of West Oakland;
- September 2002, 2000 Census data is incorporated into the land use database, along with future demographic factors consistent with the 2000 Census data, as provided by ABAG *Projections 2002*;
- September 2002, updated scenario for *Central City East (CCE) Redevelopment Project EIR*, focusing on updates in East Oakland, within and surrounding the redevelopment project area;

- Early December 2002, updated scenario for *Jack London Square Redevelopment Project EIR*, focusing on updates in the Jack London District of downtown Oakland including Jack London Square;

- Later December 2002, updated scenario for *West Oakland Redevelopment Project EIR*, focusing on updates in West Oakland, and parts of North Oakland within the redevelopment project area, and in adjacent blocks;

- Early February 2003, updated scenario for *Coliseum Gardens Project EIR*, focusing on the project and surrounding Coliseum BART station area;

- January/February 2003, updated scenario to incorporate ABAG *Projections 2002* and to provide land use inputs for the CMA travel model update completed in May 2003; and

- June 2003, updated scenario for *Uptown Project EIR*, focusing on the project and updates in downtown Oakland areas surrounding the project.

The updated cumulative growth scenario prepared for this EIR as of December 10, 2003, incorporates and builds on all of the updates listed above. In addition, for this EIR, changes were made to the citywide land use database to incorporate the Central Station Project as currently proposed, remove an earlier version of the project, and include updated assumptions for other development in West Oakland, downtown Oakland, and other parts of the City as identified by City staff.

UPDATED CUMULATIVE GROWTH SCENARIO FOR OAKLAND

Cumulative Growth Scenario

The background growth for Oakland identifies employment, households, and population. Employment is disaggregated into four types: service, retail, manufacturing, and other, as required for use in the Alameda County CMA travel model. The projections are allocated to the large number of traffic analysis zones identified throughout the city.[1] Future scenarios are developed for the years 2010 and 2025, consistent with the analysis years in the CMA travel model. The cumulative growth scenario for Oakland includes a 2000 base year scenario, consistent with 2000 Census data, although the CMA model does not include year 2000.

The background growth for Oakland also evaluated how the amount and type of growth represented by future development projects compared to the ABAG projections. Other additions to employment and population included those resulting from increased occupancies of existing buildings, the re-leasing of space vacated by existing businesses and government activities relocating to newly developed projects, the renovation of space that had previously sat vacant,

[1] The traffic analysis zones (TAZs) are Census Tracts or subdivisions of Census Tracts identified for transportation analysis purposes and used in the CMA travel demand model.

and the conversion of space in existing buildings to new and more intensive uses. Reductions in employment and population included changes as a result of base closures, displacements by development projects, and the movement of some types of businesses out of the area due to increasing rents and land values as well as other factors. In addition, background growth also incorporates changes in demographic characteristics of the population in the City's existing housing stock, consistent with the ABAG projections.

Updated Scenario for *Central Station Project EIR*

The cumulative growth scenario for the City of Oakland, as updated for the *Central Station Project EIR*, is summarized in Table C-1 (on the next page). Two versions are shown, one for each of the two alternative project descriptions assessed in the transportation analysis: the maximum trips alternative and the maximum residential alternative. The scenario includes the Central Station Project in each case. The following identifies the net changes in households, population, and jobs in the project area as a result of the project:

	Existing Conditions /a/	Proposed Project /b/	Net Change
Maximum Trips Alternative			
Jobs	30	1,201	+1,171
Households	1	1,223	+1,222
Population	4	2,763	+2,759
Employed Residents	1	2,057	+2,056
Maximum Residential Alternative			
Jobs	30	150	+120
Households	1	1,508	+1,507
Population	4	3,418	+3,414
Employed Residents	1	2,579	+2,578

/a/ Based on 2000 Census data, employment for 2000 from the land use database, and estimated on-site employment from BUILD, LLC/BRIDGE Housing Corporation and Bay Area Economics.
/b/ Bay Area Economics and BUILD, LLC/BRIDGE Housing Corporation.

TABLE C-1
UPDATED CUMULATIVE GROWTH SCENARIO
FOR OAKLAND, AS OF DECEMBER 2003

	2000 /a/	2010	2025	Growth, 2000-2025

Central Station Project: Maximum Trips Alternative				
Households	150,790	160,940	170,610	+19,820
Household Population /b/	392,310	421,830	438,290	+45,980
Total Population /b/	399,480	429,270	445,930	+46,450
Employed Residents /b/	174,740	196,730	227,730	+52,990
Total Employment	185,160	214,890	245,540	+60,380
Manufacturing	17,790	18,440	19,660	+1,870
Other /c/	74,020	83,890	93,120	+19,100
Retail	23,760	27,590	30,850	+7,090
Service	69,590	84,970	101,910	+32,320
Central Station Project: Maximum Residential Alternative				
Households	150,790	161,220	170,900	+20,110
Household Population /b/	392,310	422,490	438,950	+46,640
Total Population /b/	399,480	429,920	446,590	+47,110
Employed Residents /b/	174,740	197,260	228,250	+53,510
Total Employment	185,160	213,840	244,490	+59,330
Manufacturing	17,790	18,300	19,520	+1,730
Other /c/	74,020	83,630	92,860	+18,840
Retail	23,760	27,580	30,830	+7,070
Service	69,590	84,330	101,280	+31,690

NOTE: The cumulative growth scenario includes the Central Station project.
/a/ Households, household population, total population, and employed residents are from the 2000 Census.
/b/ Projections for 2010 and 2025 incorporate changes in demographic characteristics of the population in the existing housing stock in Oakland as evidenced in persons per household and employed persons per household factors from ABAG *Projections 2002*. The demographic characteristics of residents of new housing to be built in Oakland by 2010 and 2025 are based on those same ABAG factors or are estimated using special factors that better reflect the anticipated population in new housing, for TAZs with little or no housing in 2000 of the types being built (as the ABAG factors are based on the existing population in 2000).
/c/ Includes employment in finance, insurance, real estate (FIRE); government; construction; transportation, communications, and utilities (TCU); wholesale; and agriculture and mining.

Source: City of Oakland and Hausrath Economics Group based on approach and methodology described in this appendix.

For the cumulative analysis for this EIR, the project is assumed to be fully developed and fully occupied by the 2010 interim analysis year.

The updated cumulative scenario developed for the *Central Station Project EIR* includes housing development and associated household and population growth in the project area, consistent with the current development proposal. Prior versions of the cumulative scenario had assumed employment growth associated with office/R&D/light industrial development and some live/work in the project area, consistent with earlier development proposals and the City's *General Plan* Land Use and Transportation Element. The largely residential project currently proposed for the project area will require a *General Plan* land use change to allow residential

development on a site currently designated for business use/development. As a result, development of the updated cumulative scenario involved consideration of the citywide effects on overall cumulative growth in Oakland of changing the land use designation for the project area to allow for the proposed residential development. It was reasoned that the following effects are likely:

- **Effects on Housing/Population Growth.** The project and associated change in land use designation for the project area would increase the supply of land for residential development in Oakland. Given the strong demand for housing in the region and Inner East Bay and the relative shortage of land for housing development, a change in land use designation in the project area would increase the amount of housing developed in Oakland and the growth of households and population in the City in the future. This is particularly the case given the project's proposal to add housing in the mid-level price/rent ranges. Thus, over the longer term by 2025, housing developed in the project area is assumed to represent additional housing in Oakland over and above what would otherwise be built.

- **Effects on Business/Job Growth.** The project and associated change in land use would reduce the supply of land for business use/development in Oakland. In particular, it would reduce the supply of sites for mid-rise office/R&D/campus-type development, resulting in less potential for the associated types of business and employment growth in Oakland over the longer term. Potentially, there could be some shift of demand from the project area to development on other sites/locations in Oakland, at least for a while into the future. However, alternative, comparable sites/locations are limited, and generally include sites that are already assumed to be developed by 2025 in the cumulative scenario. Thus, the updated scenario assumes that business development and employment growth in Oakland over the longer term by 2025 would be lower than would otherwise be the case without changes in land use in the project area. The amount of difference in citywide employment reflects some limited shift in demand to sites in parts of downtown Oakland with potential for mid-rise office development.

Comparison with CMA/ABAG Projections

The Updated Cumulative Growth Scenario for Oakland is compared in Table C-2 with the ABAG *Projections 2002* for Oakland and the ABAG projections as incorporated into the Alameda County CMA Travel Model for use in EIR transportation analyses. The ABAG

TABLE C-2
CUMULATIVE GROWTH SCENARIO FOR *CENTRAL STATION PROJECT EIR*
AND CMA/ABAG PROJECTIONS FOR OAKLAND

	Jobs	Households	Household Population	Total Population	Employed Residents
2000					
Oakland Cumulative Scenario, 12/2003 /a/	185,160	150,790 /c/	392,310 /c/	399,480 /c/	174,740 /c/
2010					
Oakland Cumulative Scenario, 12/2003 /a/					
♦ Maximum Trips Alternative	214,890	160,940	421,830	429,270	196,730
♦ Maximum Residential Alternative	213,840	161,220	422,490	429,920	197,260
CMA Model/ABAG *P2002* /b/	213,820	158,130	418,420	-	186,080 /d/
ABAG *Projections 2002*	215,580	156,610	415,200	423,200	183,800 /d/
2025					
Oakland Cumulative Scenario, 12/2003 /a/					
♦ Maximum Trips Alternative	245,540	170,610	438,290	445,930	227,730
♦ Maximum Residential Alternative	244,490	170,900	438,950	446,590	228,250
CMA Model/ABAG *P2002* /b/	245,060	169,080	442,370	-	217,040 /d/
ABAG *Projections 2002*	243,500	168,640	441,200	449,500	217,600 /d/

/a/ *Oakland Cumulative Growth Scenario for Central Station Project EIR*, 12/10/03, prepared as described in this appendix.
/b/ ABAG *Projections 2002*, as included in the updated Alameda County CMA travel demand model released May 2003.
/c/ From 2000 Census.
/d/ Not based on 2000 Census, as developed prior to release of employed resident data.

Source: Hausrath Economics Group based on sources identified above, and as described further in this appendix.

Projections 2002 series provides the basis for the numbers in the CMA model at the time of the analysis for this EIR.[2]

[2] The land use database in the Alameda County CMA travel model at the time of the analysis for this EIR was updated in May 2003 to incorporate ABAG *Projections 2002*. Since that time, ABAG found problems with its allocations of *Projections 2002* employment data to Census Tracts within cities in the region, and recently issued revised employment allocations. City employment totals for jurisdictions remain the same as those originally provided by ABAG (and shown in Table C-2 for Oakland). The *Projections 2002* household and population data are not affected by the recent ABAG revisions to the allocations of employment. As of mid-February 2004, the CMA is in the process of reviewing the employment data in the travel model and revising the employment

The cumulative growth scenario for Oakland compares to the CMA/ABAG projections (*Projections 2002*) as follows:

- **Employment**: Employment projections under the cumulative growth scenario are similar to and fall within about one percent of the ABAG projections for Oakland. The economic activity and employment growth to be accommodated by identified major development projects and other anticipated changes in land use and employment in Oakland are estimated to "fit" within the employment growth for Oakland reflected by the ABAG projections for both the shorter term (2010) and longer term (2025) futures.

- **Housing and Households**: Household projections for Oakland in 2010 and 2025 are a little higher under the cumulative growth scenario than the ABAG projections, about two to three percent higher in the near term (2010) and about one percent higher over the longer term (2025). Housing built in Oakland since the 2000 Census, housing currently under development in Oakland, and housing anticipated to be developed in the future (including the new housing proposed for the project) would accommodate more household growth than reflected by ABAG *Projections 2002*.

- **Population**: The cumulative growth scenario shows higher population in Oakland than the ABAG projections in 2010 due to the larger number of households anticipated. However, the cumulative growth scenario has slightly lower population over the longer term (2025) compared to the ABAG projections, even though the number of households is larger under the cumulative scenario. This difference occurs because the cumulative growth scenario incorporates demographic assumptions for residents in new housing in Oakland that are specific to the types of new housing being built (as is the case for the project). Under the ABAG projections, the demographic characteristics of residents of new housing are based on the characteristics of residents in existing housing nearby, which may not necessarily be applicable for the types of new housing being built (such as for the higher-density types of new housing being built downtown, or for new loft housing in other parts of Oakland). The characteristics of residents in the existing housing stock and overall demographic trends are similar in both cases, as those assumed for the growth scenario are based on ABAG projections.

- **Employed Residents**: The cumulative growth scenario anticipates somewhat more employed residents in Oakland in the future compared to the ABAG

allocations to traffic analysis zones (TAZs) for those situations affected by ABAG's revised employment allocations. The Oakland employment data in the CMA model are not being revised as the Oakland data are not affected by the ABAG revisions. The Oakland land use data in the CMA model were developed through Oakland's cumulative growth scenario process described in this appendix and then submitted to the CMA by the City. The allocations of employment to Oakland TAZs are based on extensive local information and in-depth local analysis, and are not based on the ABAG allocations of employment.

projections. A primary reason is that 2000 Census data that provide the base year for the cumulative growth scenario show about three percent more employed residents in Oakland in 2000, compared to the ABAG projections which were prepared before release of employed resident data from the 2000 Census. The higher number of employed residents in Oakland in 2000 also are included in the future year totals under the cumulative scenario. Other reasons are because of the higher number of households under the cumulative scenario, and because of the demographic characteristics for residents in the types of new housing being built in Oakland, which generally include proportionally more residents who work, compared to demographic characteristics for the population overall.

The cumulative analysis in this EIR assumes the updated cumulative growth scenario for Oakland. This approach ensures that the cumulative effects of all locally anticipated growth and development can be evaluated within the EIR analysis period. This approach for cumulative analyses in Oakland EIRs was discussed with and accepted by the Alameda County CMA.

WEST OAKLAND AND HARBOR AREAS SURROUNDING THE CENTRAL STATION PROJECT

Attention was given to the cumulative growth scenario for traffic analysis zones (TAZs) in the West Oakland and Harbor areas including and surrounding the Central Station Project. Growth and change in these areas are of particular interest for the cumulative traffic analysis. Analysis was done to review and update the projections for the surrounding area for use in the cumulative analyses for this EIR.

The updated growth scenario for the West Oakland and Harbor areas, including and surrounding the project, is summarized in Table C-3 (on the next page). The project is included in the West Oakland area that covers areas to the east of the new I-880/Cypress Freeway.[3] The Harbor area includes areas to the west and south of I-880 to San Francisco Bay and the Estuary.

Tables presented at the end of this appendix provide more detail on the estimates and projections for the surrounding areas. Table C-4 (parts a. through h.) presents the estimates and projections by traffic analysis zones (TAZs) in the surrounding West Oakland and Harbor areas. The projections include the growth associated with the project. (The TAZs within the surrounding areas are identified on the map in Figure C-1, also at the end of this appendix.) Tables C-5 and C-6 list the development projects identified for the surrounding areas based on input from City of Oakland and Port of Oakland staffs. The lists include major projects under construction,

[3] The West Oakland and Harbor areas refer to Oakland planning areas on either side of I-880, and do not correspond to Redevelopment Project Area boundaries.

TABLE C-3
CUMULATIVE GROWTH SCENARIO FOR WEST OAKLAND
AND HARBOR AREAS SURROUNDING THE CENTRAL STATION PROJECT

	2000	2010	2025	Change 2000-2025
		Maximum Trips Alternative		
WEST OAKLAND /a/				
Jobs	15,350	18,570	20,850	+5,500
Households	8,040	10,430	11,420	+3,380
Population	23,350	29,640	31,400	+8,050
Employed Residents	5,795	9,350	11,500	+5,705
HARBOR AREA /b/				
Jobs	3,640	4,710	9,530	+5,890
Households	0	0	0	0
Population	96	96	0	(96)
Employed Residents	0	0	0	0
		Maximum Residential Alternative		
WEST OAKLAND /a/				
Jobs	15,350	17,520	19,795	+4,445
Households	8,040	10,710	11,710	+3,670
Population	23,350	30,295	32,060	+8,710
Employed Residents	5,795	9,870	12,020	+6,225
HARBOR AREA /b/				
Jobs	3,640	4,710	9,530	+5,890
Households	0	0	0	0
Population	96	96	0	(96)
Employed Residents	0	0	0	0

Note: The Central Station project is included in the West Oakland area above.

/a/ Approximately bounded by I-880/Cypress Freeway, I-580, and I-980.
/b/ Including areas to the west and south of I-880/Cypress Freeway to San Francisco Bay.

Source: *Cumulative Growth Scenario for Central Station Project EIR*, 12/10/03; City of Oakland; Hausrath Economics Group.

approved and proposed projects, as well as potential projects under consideration anticipated to be developed by 2025. In most cases, the project assumptions identified on the lists describe the new development; they do not identify existing uses and activities on development sites that would be removed for development, although the latter are accounted for in the cumulative growth scenario.

The projects on the lists for the surrounding West Oakland and Harbor areas all "fit" within the updated cumulative growth scenario summarized herein and used for the cumulative transportation analysis in this EIR. As explained earlier in this appendix, the scenario also includes other changes in land use and in employment and population besides those associated with development of projects on the lists. Thus, the lists alone do not equate to the changes over time in the growth scenario.

The amounts of employment, household, and population growth reflected by the growth scenario, and those represented by the projects on the lists, are more important than the specific projects identified. It is to be expected that the projects on the lists will change over time, and some will be added while others will be deleted. The lists reflect the best information at the time of the analysis. The growth scenario itself can remain valid as changes occur over time in the specifics of the development projects anticipated for the surrounding area.

GROWTH IN THE REST OF ALAMEDA COUNTY AND BAY AREA REGION

The growth scenario used for the cumulative transportation analysis for this EIR assumes growth in employment, households, and population as projected by ABAG *Projections 2002* and included in the CMA travel demand model for the rest of Alameda County and the Bay Area region outside of Oakland.[4]

[4] The land use database in the Alameda County CMA travel model at the time of the analysis for this EIR was that updated as of May 2003 to incorporate ABAG *Projections 2002*. As described earlier in footnote 2, ABAG has since found problems with its allocations of *Projections 2002* employment data to Census Tracts within cities in the region and has issued revised employment allocations. As of mid-February 2004, the CMA is in the process of reviewing the employment data in the travel model and revising employment allocations to TAZs for those situations affected by the ABAG revisions. Possible revisions to the allocations of employment within other cities in Alameda County outside of Oakland are not anticipated to substantially change the EIR conclusions drawn from the recent transportation analyses. The results of the EIR analyses and forecasts are most sensitive to the land use data for Oakland, which are not affected by the revisions to the ABAG data (see earlier footnote). Further, ABAG's revised employment allocations also do not affect the land use data in the nearby City of Emeryville. Possible effects on the allocation of employment in other Alameda County cities would occur in areas outside of those that are the focus of the EIR impact analysis for the Central Station project.

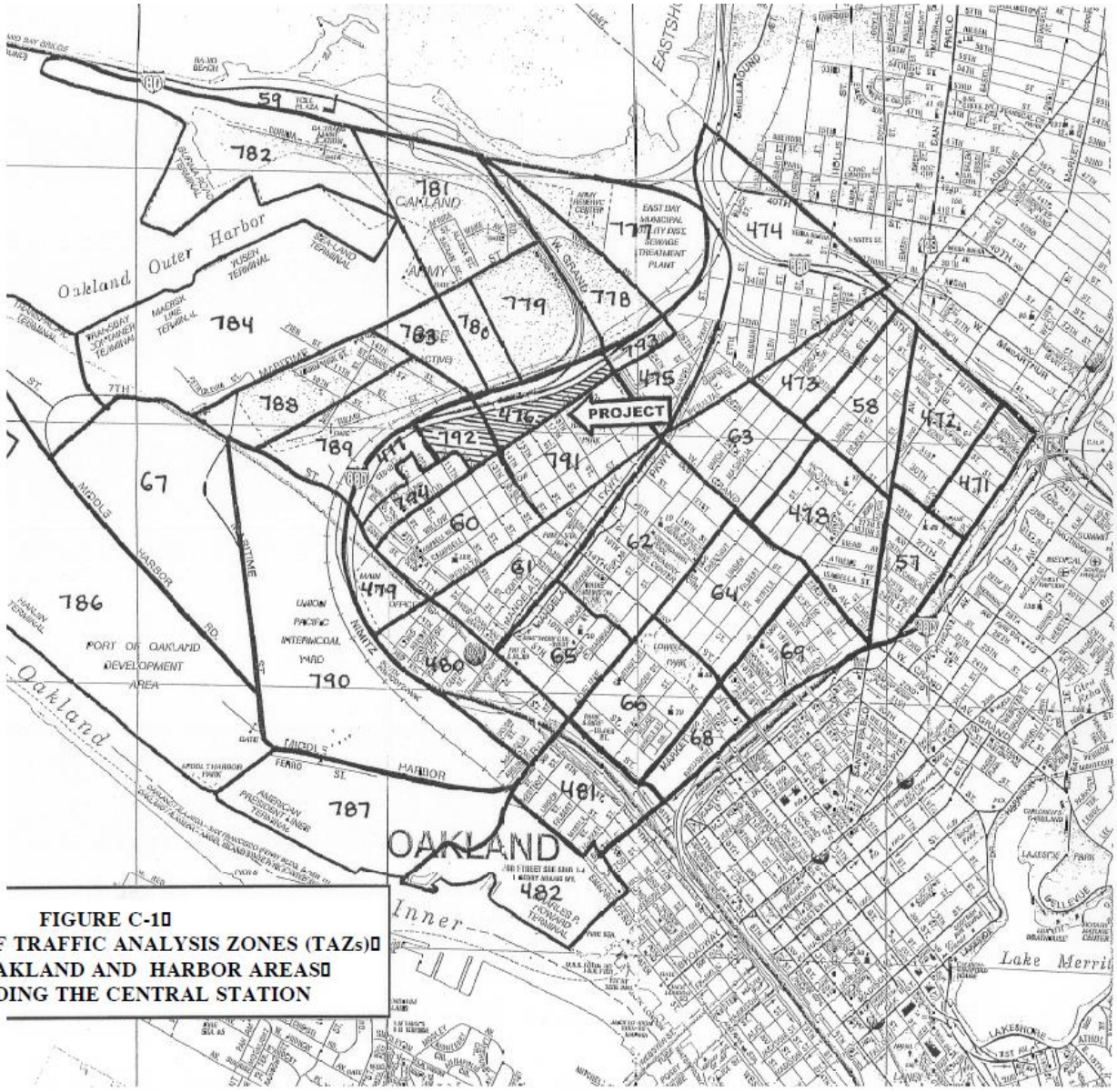


FIGURE C-1
BOUNDARIES OF TRAFFIC ANALYSIS ZONES (TAZs) IN WEST OAKLAND AND HARBOR AREAS SURROUNDING THE CENTRAL STATION

Table C-4a: 2000 CUMULATIVE OAKLAND LAND USE DATA - CENTRAL STATION*MAX TRIPS* - DECEMBER 2003

TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLYD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
59	401700	HB		0	0	0	0	0	0	160	0	0	160	0
777	401700	HB		0	0	0	0	0	0	170	0	0	170	0
778	401700	HB		0	0	0	0	0	0	25	0	0	25	0
779	401700	HB		0	0	0	0	0	20	188	12	12	232	0
780	401700	HB		0	0	0	0	0	0	550	0	0	550	0
783	401700	HB		0	0	0	0	0	0	10	0	54	64	0
788	401700	HB		0	0	0	0	0	10	199	0	131	340	0
789	401700	HB		0	0	0	0	0	0	45	0	0	45	0
67	401900	HB		0	0	0	0	0	0	113	0	0	113	0
781	401900	HB		0	0	0	50	50	0	45	0	0	45	0
782	401900	HB		0	0	0	46	46	0	41	0	0	41	0
784	401900	HB		0	0	0	0	0	0	500	0	0	500	0
785	401900	HB		0	0	0	0	0	0	569	0	0	569	0
786	401900	HB		0	0	0	0	0	0	62	0	0	62	0
790	401900	HB		0	0	0	0	0	0	127	0	0	127	0
482	402000	HB		0	0	0	0	0	130	134	0	0	264	0
787	402000	HB		0	0	0	0	0	0	333	0	0	333	0
		HB Total		**0**	**0**	**0**	**96**	**96**	**160**	**3271**	**12**	**197**	**3640**	
475	401700	WO		0	0	0	0	0	180	420	8	250	858	0
476	401700	WO		1	1	4	0	4	0	12	0	3	15	35900
477	401700	WO		0	0	0	0	0	4	49	0	10	63	0
791	401700	WO		148	140	464	0	464	190	496	20	220	926	35900
792	401700	WO		0	0	0	0	0	0	15	0	0	15	0
793	401700	WO		0	0	0	0	0	0	10	0	0	10	0
794	401700	WO		182	173	572	0	572	43	6	0	31	80	35900
481	402000	WO		4	2	3	0	3	48	333	31	414	826	80900
68	402600	WO		176	322	557	0	557	31	20	89	26	166	31000
69	402700	WO		430	455	1364	0	1364	86	90	34	84	294	33100
57	401400	WO		357	385	1285	280	1565	56	177	80	272	585	33200
471	401400	WO		348	542	1526	0	1526	28	23	40	20	111	33200
472	401400	WO		381	561	1635	39	1674	56	117	40	267	480	33200
58	401500	WO		509	683	1689	0	1689	116	151	31	292	590	38600
473	401500	WO		218	228	709	15	724	123	156	3	292	574	38600
63	401600	WO		56	117	314	5	319	396	213	10	195	814	24100
478	401600	WO		281	427	1387	227	1614	120	259	87	493	959	24100
474	401700	WO		236	254	742	0	742	194	190	183	240	807	35900
60	401800	WO		441	648	1950	3	1953	77	182	72	108	439	35700
479	401900	WO		0	0	0	0	0	0	1618	0	0	1618	0
480	401900	WO		208	223	758	1	759	201	203	20	197	621	36000
65	402100	WO		223	450	1153	8	1161	32	214	40	49	335	25700
61	402200	WO		368	579	1834	10	1844	4	240	0	43	287	28200
62	402300	WO		131	167	451	2	453	357	1056	61	152	1626	47500
64	402400	WO		708	1054	2557	31	2588	91	1051	321	106	1569	41100
66	402500	WO		389	630	1641	138	1779	0	313	1	371	685	26300
		WO Total		**5795**	**8041**	**22595**	**759**	**23354**	**2433**	**7614**	**1171**	**4135**	**15353**	
		Grand Total		**5795**	**8041**	**22595**	**855**	**23450**	**2593**	**10885**	**1183**	**4332**	**18993**	

NOTE: WO = West Oakland; HB = Harbor

Source: Hausrath Economics Group

Table C-4b: 2010 CUMULATIVE OAKLAND LAND USE DATA - CENTRAL STATION*MAX TRIPS* - DECEMBER 2003

TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLYD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
59	401700	HB		0	0	0	0	0	0	240	0	0	240	0
777	401700	HB		0	0	0	0	0	0	170	0	0	170	0
778	401700	HB		0	0	0	0	0	2	44	0	0	46	0
779	401700	HB		0	0	0	0	0	20	188	12	12	232	0
780	401700	HB		0	0	0	0	0	24	732	12	24	792	0
783	401700	HB		0	0	0	0	0	0	71	0	70	141	0
788	401700	HB		0	0	0	0	0	10	263	0	283	556	0
789	401700	HB		0	0	0	0	0	0	30	0	0	30	0
67	401900	HB		0	0	0	0	0	0	208	0	0	208	0
781	401900	HB		0	0	0	50	50	0	75	0	0	75	0
782	401900	HB		0	0	0	46	46	0	108	0	0	108	0
784	401900	HB		0	0	0	0	0	0	557	0	0	557	0
785	401900	HB		0	0	0	0	0	0	401	0	0	401	0
786	401900	HB		0	0	0	0	0	0	481	0	0	481	0
790	401900	HB		0	0	0	0	0	0	132	0	0	132	0
482	402000	HB		0	0	0	0	0	119	93	0	0	212	0
787	402000	HB		0	0	0	0	0	0	325	0	0	325	0
		HB Total		**0**	**0**	**0**	**96**	**96**	**175**	**4118**	**24**	**389**	**4706**	
475	401700	WO		0	0	0	0	0	214	424	28	305	971	0
476	401700	WO		1282	770	1754	0	1754	146	260	65	704	1175	72800
477	401700	WO		0	0	0	0	0	4	65	0	15	84	0
791	401700	WO		209	179	572	0	572	210	471	45	245	971	47000
792	401700	WO		775	453	1009	0	1009	8	0	0	18	26	88300
793	401700	WO		0	0	0	0	0	0	10	0	0	10	0
794	401700	WO		203	194	661	0	661	43	0	0	40	83	38000
481	402000	WO		7	2	4	0	4	48	378	36	464	926	94100
68	402600	WO		186	322	615	0	615	31	20	139	31	221	33700
69	402700	WO		436	455	1339	0	1339	76	90	34	94	294	36300
57	401400	WO		374	385	1297	284	1581	53	177	80	287	597	35900
471	401400	WO		365	542	1540	0	1540	26	23	40	20	109	35900
472	401400	WO		400	561	1650	40	1690	53	117	40	277	487	35900
58	401500	WO		547	747	1835	0	1835	111	151	31	292	585	40500
473	401500	WO		328	290	887	15	902	120	176	3	292	591	48800
63	401600	WO		118	154	410	5	415	471	239	20	204	934	39200
478	401600	WO		374	517	1699	230	1929	98	259	87	523	967	28400
474	401700	WO		811	614	1629	0	1629	268	311	298	418	1295	62200
60	401800	WO		511	715	2171	3	2174	77	182	72	118	449	36900
479	401900	WO		0	0	0	0	0	0	1658	0	0	1658	0
480	401900	WO		297	276	843	1	844	201	763	87	284	1335	47000
65	402100	WO		336	646	1917	8	1925	0	170	51	89	310	28600
61	402200	WO		404	604	1905	10	1915	4	235	40	53	332	29300
62	402300	WO		137	167	453	2	455	344	1186	94	292	1916	51200
64	402400	WO		749	1062	2599	31	2630	118	1006	300	136	1560	42600
66	402500	WO		499	771	2082	140	2222	0	313	1	371	685	27700
		WO Total		**9348**	**10426**	**28871**	**769**	**29640**	**2724**	**8684**	**1591**	**5572**	**18571**	
		Grand Total		**9348**	**10426**	**28871**	**865**	**29736**	**2899**	**12802**	**1615**	**5961**	**23277**	

NOTE: WO = West Oakland; HB = Harbor

Source: Hausrath Economics Group

Table C-4c: 2025 CUMULATIVE OAKLAND LAND USE DATA - CENTRAL STATION*MAX TRIPS* - DECEMBER 2003

TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLYD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
59	401700	HB		0	0	0	0	0	0	160	0	0	160	0
777	401700	HB		0	0	0	0	0	0	190	0	0	190	0
778	401700	HB		0	0	0	0	0	0	300	0	0	300	0
779	401700	HB		0	0	0	0	0	75	300	0	125	500	0
780	401700	HB		0	0	0	0	0	66	264	0	210	540	0
783	401700	HB		0	0	0	0	0	0	0	0	0	0	0
788	401700	HB		0	0	0	0	0	0	0	0	0	0	0
789	401700	HB		0	0	0	0	0	0	188	0	0	188	0
67	401900	HB		0	0	0	0	0	0	300	0	0	300	0
781	401900	HB		0	0	0	0	0	443	942	70	1105	2560	0
782	401900	HB		0	0	0	0	0	225	325	0	1700	2250	0
784	401900	HB		0	0	0	0	0	0	668	0	0	668	0
785	401900	HB		0	0	0	0	0	0	464	0	0	464	0
786	401900	HB		0	0	0	0	0	0	747	0	0	747	0
790	401900	HB		0	0	0	0	0	0	146	0	0	146	0
482	402000	HB		0	0	0	0	0	85	162	0	0	247	0
787	402000	HB		0	0	0	0	0	0	274	0	0	274	0
		HB Total		**0**	**0**	**0**	**0**	**0**	**894**	**5430**	**70**	**3140**	**9534**	
475	401700	WO		0	0	0	0	0	243	457	58	340	1098	0
476	401700	WO		1282	770	1754	0	1754	146	260	65	704	1175	83300
477	401700	WO		0	0	0	0	0	67	211	0	230	508	0
791	401700	WO		316	237	641	0	641	230	446	70	270	1016	64800
792	401700	WO		775	453	1009	0	1009	8	0	0	18	26	101100
793	401700	WO		0	0	0	0	0	0	60	0	0	60	0
794	401700	WO		262	218	622	0	622	43	0	0	60	103	51800
481	402000	WO		8	2	5	0	5	70	498	46	589	1203	106800
68	402600	WO		204	322	610	0	610	31	40	174	56	301	37400
69	402700	WO		480	455	1323	0	1323	54	90	54	114	312	41100
57	401400	WO		422	395	1316	296	1612	44	177	140	307	668	41200
471	401400	WO		413	557	1566	0	1566	21	23	40	30	114	41200
472	401400	WO		447	571	1661	42	1703	44	117	60	297	518	41200
58	401500	WO		600	747	1805	0	1805	101	151	51	312	615	45700
473	401500	WO		505	386	1105	15	1120	80	146	11	302	539	64100
63	401600	WO		123	154	404	5	409	571	283	30	215	1099	44900
478	401600	WO		476	560	1772	241	2013	88	264	117	553	1022	37000
474	401700	WO		966	696	1714	0	1714	294	342	342	451	1429	74700
60	401800	WO		639	763	2272	3	2275	77	182	72	158	489	44400
479	401900	WO		0	0	0	0	0	0	1793	0	0	1793	0
480	401900	WO		995	727	1829	1	1830	101	773	126	288	1288	70000
65	402100	WO		369	646	1903	8	1911	0	50	61	129	240	31500
61	402200	WO		545	671	2033	10	2043	24	195	64	73	356	37400
62	402300	WO		150	167	427	2	429	368	1394	174	634	2570	58800
64	402400	WO		971	1154	2764	32	2796	143	983	320	153	1599	51400
66	402500	WO		548	771	2068	146	2214	0	313	1	391	705	30800
		WO Total		**11496**	**11422**	**30603**	**801**	**31404**	**2848**	**9248**	**2076**	**6674**	**20846**	
		Grand Total		**11496**	**11422**	**30603**	**801**	**31404**	**3742**	**14678**	**2146**	**9814**	**30380**	

NOTE: WO = West Oakland; HB = Harbor

Source: Hausrath Economics Group

Table C-4d: 2000-2025 CUMULATIVE OAKLAND LAND USE DATA - CENTRAL STATION*MAX TRIPS* - DECEMBER 2003

TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLYD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
59	401700	HB		0	0	0	0	0	0	0	0	0	0	0
777	401700	HB		0	0	0	0	0	0	20	0	0	20	0
778	401700	HB		0	0	0	0	0	0	275	0	0	275	0
779	401700	HB		0	0	0	0	0	55	112	-12	113	268	0
780	401700	HB		0	0	0	0	0	66	-286	0	210	-10	0
783	401700	HB		0	0	0	0	0	0	-10	0	-54	-64	0
788	401700	HB		0	0	0	0	0	-10	-199	0	-131	-340	0
789	401700	HB		0	0	0	0	0	0	143	0	0	143	0
67	401900	HB		0	0	0	0	0	0	187	0	0	187	0
781	401900	HB		0	0	0	-50	-50	443	897	70	1105	2515	0
782	401900	HB		0	0	0	-46	-46	225	284	0	1700	2209	0
784	401900	HB		0	0	0	0	0	0	168	0	0	168	0
785	401900	HB		0	0	0	0	0	0	-105	0	0	-105	0
786	401900	HB		0	0	0	0	0	0	685	0	0	685	0
790	401900	HB		0	0	0	0	0	0	19	0	0	19	0
482	402000	HB		0	0	0	0	0	-45	28	0	0	-17	0
787	402000	HB		0	0	0	0	0	0	-59	0	0	-59	0
		HB Total		**0**	**0**	**0**	**-96**	**-96**	**734**	**2159**	**58**	**2943**	**5894**	
475	401700	WO		0	0	0	0	0	63	37	50	90	240	0
476	401700	WO		1281	769	1750	0	1750	146	248	65	701	1160	47400
477	401700	WO		0	0	0	0	0	63	162	0	220	445	0
791	401700	WO		168	97	177	0	177	40	-50	50	50	90	28900
792	401700	WO		775	453	1009	0	1009	8	-15	0	18	11	101100
793	401700	WO		0	0	0	0	0	0	50	0	0	50	0
794	401700	WO		80	45	50	0	50	0	-6	0	29	23	15900
481	402000	WO		4	0	2	0	2	22	165	15	175	377	25900
68	402600	WO		28	0	53	0	53	0	20	85	30	135	6400
69	402700	WO		50	0	-41	0	-41	-32	0	20	30	18	8000
57	401400	WO		65	10	31	16	47	-12	0	60	35	83	8000
471	401400	WO		65	15	40	0	40	-7	0	0	10	3	8000
472	401400	WO		66	10	26	3	29	-12	0	20	30	38	8000
58	401500	WO		91	64	116	0	116	-15	0	20	20	25	7100
473	401500	WO		287	158	396	0	396	-43	-10	8	10	-35	25500
63	401600	WO		67	37	90	0	90	175	70	20	20	285	20800
478	401600	WO		195	133	385	14	399	-32	5	30	60	63	12900
474	401700	WO		730	442	972	0	972	100	152	159	211	622	38800
60	401800	WO		198	115	322	0	322	0	0	0	50	50	8700
479	401900	WO		0	0	0	0	0	0	175	0	0	175	0
480	401900	WO		787	504	1071	0	1071	-100	570	106	91	667	34000
65	402100	WO		146	196	750	0	750	-32	-164	21	80	-95	5800
61	402200	WO		177	92	199	0	199	20	-45	64	30	69	9200
62	402300	WO		19	0	-24	0	-24	11	338	113	482	944	11300
64	402400	WO		263	100	207	1	208	52	-68	-1	47	30	10300
66	402500	WO		159	141	427	8	435	0	0	0	20	20	4500
		WO Total		**5701**	**3381**	**8008**	**42**	**8050**	**415**	**1634**	**905**	**2539**	**5493**	
		Grand Total		**5701**	**3381**	**8008**	**-54**	**7954**	**1149**	**3793**	**963**	**5482**	**11387**	

NOTE: WO = West Oakland; HB = Harbor

Source: Hausrath Economics Group

Table C-4e: 2000 CUMULATIVE OAKLAND LAND USE DATA - CENTRAL STATION*MAX RES* - DECEMBER 2003

TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLYD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
59	401700	HB		0	0	0	0	0	0	160	0	0	160	0
777	401700	HB		0	0	0	0	0	0	170	0	0	170	0
778	401700	HB		0	0	0	0	0	0	25	0	0	25	0
779	401700	HB		0	0	0	0	0	20	188	12	12	232	0
780	401700	HB		0	0	0	0	0	0	550	0	0	550	0
783	401700	HB		0	0	0	0	0	0	10	0	54	64	0
788	401700	HB		0	0	0	0	0	10	199	0	131	340	0
789	401700	HB		0	0	0	0	0	0	45	0	0	45	0
67	401900	HB		0	0	0	0	0	0	113	0	0	113	0
781	401900	HB		0	0	0	50	50	0	45	0	0	45	0
782	401900	HB		0	0	0	46	46	0	41	0	0	41	0
784	401900	HB		0	0	0	0	0	0	500	0	0	500	0
785	401900	HB		0	0	0	0	0	0	569	0	0	569	0
786	401900	HB		0	0	0	0	0	0	62	0	0	62	0
790	401900	HB		0	0	0	0	0	0	127	0	0	127	0
482	402000	HB		0	0	0	0	0	130	134	0	0	264	0
787	402000	HB		0	0	0	0	0	0	333	0	0	333	0
		HB Total		**0**	**0**	**0**	**96**	**96**	**160**	**3271**	**12**	**197**	**3640**	
475	401700	WO		0	0	0	0	0	180	420	8	250	858	0
476	401700	WO		1	1	4	0	4	0	12	0	3	15	35900
477	401700	WO		0	0	0	0	0	4	49	0	10	63	0
791	401700	WO		148	140	464	0	464	190	496	20	220	926	35900
792	401700	WO		0	0	0	0	0	0	15	0	0	15	0
793	401700	WO		0	0	0	0	0	0	10	0	0	10	0
794	401700	WO		182	173	572	0	572	43	6	0	31	80	35900
481	402000	WO		4	2	3	0	3	48	333	31	414	826	80900
68	402600	WO		176	322	557	0	557	31	20	89	26	166	31000
69	402700	WO		430	455	1364	0	1364	86	90	34	84	294	33100
57	401400	WO		357	385	1285	280	1565	56	177	80	272	585	33200
471	401400	WO		348	542	1526	0	1526	28	23	40	20	111	33200
472	401400	WO		381	561	1635	39	1674	56	117	40	267	480	33200
58	401500	WO		509	683	1689	0	1689	116	151	31	292	590	38600
473	401500	WO		218	228	709	15	724	123	156	3	292	574	38600
63	401600	WO		56	117	314	5	319	396	213	10	195	814	24100
478	401600	WO		281	427	1387	227	1614	120	259	87	493	959	24100
474	401700	WO		236	254	742	0	742	194	190	183	240	807	35900
60	401800	WO		441	648	1950	3	1953	77	182	72	108	439	35700
479	401900	WO		0	0	0	0	0	0	1618	0	0	1618	0
480	401900	WO		208	223	758	1	759	201	203	20	197	621	36000
65	402100	WO		223	450	1153	8	1161	32	214	40	49	335	25700
61	402200	WO		368	579	1834	10	1844	4	240	0	43	287	28200
62	402300	WO		131	167	451	2	453	357	1056	61	152	1626	47500
64	402400	WO		708	1054	2557	31	2588	91	1051	321	106	1569	41100
66	402500	WO		389	630	1641	138	1779	0	313	1	371	685	26300
		WO Total		**5795**	**8041**	**22595**	**759**	**23354**	**2433**	**7614**	**1171**	**4135**	**15353**	
		Grand Total		**5795**	**8041**	**22595**	**855**	**23450**	**2593**	**10885**	**1183**	**4332**	**18993**	

NOTE: WO = West Oakland; HB = Harbor

Source: Hausrath Economics Group

Table C-4f: 2010 CUMULATIVE OAKLAND LAND USE DATA - CENTRAL STATION*MAX RES* - DECEMBER 2003

TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLYD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
59	401700	HB		0	0	0	0	0	0	240	0	0	240	0
777	401700	HB		0	0	0	0	0	0	170	0	0	170	0
778	401700	HB		0	0	0	0	0	2	44	0	0	46	0
779	401700	HB		0	0	0	0	0	20	188	12	12	232	0
780	401700	HB		0	0	0	0	0	24	732	12	24	792	0
783	401700	HB		0	0	0	0	0	0	71	0	70	141	0
788	401700	HB		0	0	0	0	0	10	263	0	283	556	0
789	401700	HB		0	0	0	0	0	0	30	0	0	30	0
67	401900	HB		0	0	0	0	0	0	208	0	0	208	0
781	401900	HB		0	0	0	50	50	0	75	0	0	75	0
782	401900	HB		0	0	0	46	46	0	108	0	0	108	0
784	401900	HB		0	0	0	0	0	0	557	0	0	557	0
785	401900	HB		0	0	0	0	0	0	401	0	0	401	0
786	401900	HB		0	0	0	0	0	0	481	0	0	481	0
790	401900	HB		0	0	0	0	0	0	132	0	0	132	0
482	402000	HB		0	0	0	0	0	119	93	0	0	212	0
787	402000	HB		0	0	0	0	0	0	325	0	0	325	0
		HB Total		**0**	**0**	**0**	**96**	**96**	**175**	**4118**	**24**	**389**	**4706**	
475	401700	WO		0	0	0	0	0	214	424	28	305	971	0
476	401700	WO		1804	1055	2409	0	2409	8	0	47	69	124	74400
477	401700	WO		0	0	0	0	0	4	65	0	15	84	0
791	401700	WO		209	179	572	0	572	210	471	45	245	971	47000
792	401700	WO		775	453	1009	0	1009	8	0	0	18	26	88300
793	401700	WO		0	0	0	0	0	0	10	0	0	10	0
794	401700	WO		203	194	661	0	661	43	0	0	40	83	38000
481	402000	WO		7	2	4	0	4	48	378	36	464	926	94100
68	402600	WO		186	322	615	0	615	31	20	139	31	221	33700
69	402700	WO		436	455	1339	0	1339	76	90	34	94	294	36300
57	401400	WO		374	385	1297	284	1581	53	177	80	287	597	35900
471	401400	WO		365	542	1540	0	1540	26	23	40	20	109	35900
472	401400	WO		400	561	1650	40	1690	53	117	40	277	487	35900
58	401500	WO		547	747	1835	0	1835	111	151	31	292	585	40500
473	401500	WO		328	290	887	15	902	120	176	3	292	591	48800
63	401600	WO		118	154	410	5	415	471	239	20	204	934	39200
478	401600	WO		374	517	1699	230	1929	98	259	87	523	967	28400
474	401700	WO		811	614	1629	0	1629	268	311	298	418	1295	62200
60	401800	WO		511	715	2171	3	2174	77	182	72	118	449	36900
479	401900	WO		0	0	0	0	0	0	1658	0	0	1658	0
480	401900	WO		297	276	843	1	844	201	763	87	284	1335	47000
65	402100	WO		336	646	1917	8	1925	0	170	51	89	310	28600
61	402200	WO		404	604	1905	10	1915	4	235	40	53	332	29300
62	402300	WO		137	167	453	2	455	344	1186	94	292	1916	51200
64	402400	WO		749	1062	2599	31	2630	118	1006	300	136	1560	42600
66	402500	WO		499	771	2082	140	2222	0	313	1	371	685	27700
		WO Total		**9870**	**10711**	**29526**	**769**	**30295**	**2586**	**8424**	**1573**	**4937**	**17520**	
		Grand Total		**9870**	**10711**	**29526**	**865**	**30391**	**2761**	**12542**	**1597**	**5326**	**22226**	

NOTE: WO = West Oakland; HB = Harbor

Source: Hausrath Economics Group

Table C-4g: 2025 CUMULATIVE OAKLAND LAND USE DATA - CENTRAL STATION*MAX RES* - DECEMBER 2003

TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLYD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
59	401700	HB		0	0	0	0	0	0	160	0	0	160	0
777	401700	HB		0	0	0	0	0	0	190	0	0	190	0
778	401700	HB		0	0	0	0	0	0	300	0	0	300	0
779	401700	HB		0	0	0	0	0	75	300	0	125	500	0
780	401700	HB		0	0	0	0	0	66	264	0	210	540	0
783	401700	HB		0	0	0	0	0	0	0	0	0	0	0
788	401700	HB		0	0	0	0	0	0	0	0	0	0	0
789	401700	HB		0	0	0	0	0	0	188	0	0	188	0
67	401900	HB		0	0	0	0	0	0	300	0	0	300	0
781	401900	HB		0	0	0	0	0	443	942	70	1105	2560	0
782	401900	HB		0	0	0	0	0	225	325	0	1700	2250	0
784	401900	HB		0	0	0	0	0	0	668	0	0	668	0
785	401900	HB		0	0	0	0	0	0	464	0	0	464	0
786	401900	HB		0	0	0	0	0	0	747	0	0	747	0
790	401900	HB		0	0	0	0	0	0	146	0	0	146	0
482	402000	HB		0	0	0	0	0	85	162	0	0	247	0
787	402000	HB		0	0	0	0	0	0	274	0	0	274	0
		HB Total		**0**	**0**	**0**	**0**	**0**	**894**	**5430**	**70**	**3140**	**9534**	
475	401700	WO		0	0	0	0	0	243	457	58	340	1098	0
476	401700	WO		1804	1055	2409	0	2409	8	0	47	69	124	85200
477	401700	WO		0	0	0	0	0	67	211	0	230	508	0
791	401700	WO		316	237	641	0	641	230	446	70	270	1016	64800
792	401700	WO		775	453	1009	0	1009	8	0	0	18	26	101100
793	401700	WO		0	0	0	0	0	0	60	0	0	60	0
794	401700	WO		262	218	622	0	622	43	0	0	60	103	51800
481	402000	WO		8	2	5	0	5	70	498	46	589	1203	106800
68	402600	WO		204	322	610	0	610	31	40	174	56	301	37400
69	402700	WO		480	455	1323	0	1323	54	90	54	114	312	41100
57	401400	WO		422	395	1316	296	1612	44	177	140	307	668	41200
471	401400	WO		413	557	1566	0	1566	21	23	40	30	114	41200
472	401400	WO		447	571	1661	42	1703	44	117	60	297	518	41200
58	401500	WO		600	747	1805	0	1805	101	151	51	312	615	45700
473	401500	WO		505	386	1105	15	1120	80	146	11	302	539	64100
63	401600	WO		123	154	404	5	409	571	283	30	215	1099	44900
478	401600	WO		476	560	1772	241	2013	88	264	117	553	1022	37000
474	401700	WO		966	696	1714	0	1714	294	342	342	451	1429	74700
60	401800	WO		639	763	2272	3	2275	77	182	72	158	489	44400
479	401900	WO		0	0	0	0	0	0	1793	0	0	1793	0
480	401900	WO		995	727	1829	1	1830	101	773	126	288	1288	70000
65	402100	WO		369	646	1903	8	1911	0	50	61	129	240	31500
61	402200	WO		545	671	2033	10	2043	24	195	64	73	356	37400
62	402300	WO		150	167	427	2	429	368	1394	174	634	2570	58800
64	402400	WO		971	1154	2764	32	2796	143	983	320	153	1599	51400
66	402500	WO		548	771	2068	146	2214	0	313	1	391	705	30800
		WO Total		**12018**	**11707**	**31258**	**801**	**32059**	**2710**	**8988**	**2058**	**6039**	**19795**	
		Grand Total		**12018**	**11707**	**31258**	**801**	**32059**	**3604**	**14418**	**2128**	**9179**	**29329**	

NOTE: WO = West Oakland; HB = Harbor

Source: Hausrath Economics Group

Table C-4h: 2000-2025 CUMULATIVE OAKLAND LAND USE DATA - CENTRAL STATION*MAX RES* - DECEMBER 2003

TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLYD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
59	401700	HB		0	0	0	0	0	0	0	0	0	0	0
777	401700	HB		0	0	0	0	0	0	20	0	0	20	0
778	401700	HB		0	0	0	0	0	0	275	0	0	275	0
779	401700	HB		0	0	0	0	0	55	112	-12	113	268	0
780	401700	HB		0	0	0	0	0	66	-286	0	210	-10	0
783	401700	HB		0	0	0	0	0	0	-10	0	-54	-64	0
788	401700	HB		0	0	0	0	0	-10	-199	0	-131	-340	0
789	401700	HB		0	0	0	0	0	0	143	0	0	143	0
67	401900	HB		0	0	0	0	0	0	187	0	0	187	0
781	401900	HB		0	0	0	-50	-50	443	897	70	1105	2515	0
782	401900	HB		0	0	0	-46	-46	225	284	0	1700	2209	0
784	401900	HB		0	0	0	0	0	0	168	0	0	168	0
785	401900	HB		0	0	0	0	0	0	-105	0	0	-105	0
786	401900	HB		0	0	0	0	0	0	685	0	0	685	0
790	401900	HB		0	0	0	0	0	0	19	0	0	19	0
482	402000	HB		0	0	0	0	0	-45	28	0	0	-17	0
787	402000	HB		0	0	0	0	0	0	-59	0	0	-59	0
		HB Total		**0**	**0**	**0**	**-96**	**-96**	**734**	**2159**	**58**	**2943**	**5894**	
475	401700	WO		0	0	0	0	0	63	37	50	90	240	0
476	401700	WO		1803	1054	2405	0	2405	8	-12	47	66	109	49300
477	401700	WO		0	0	0	0	0	63	162	0	220	445	0
791	401700	WO		168	97	177	0	177	40	-50	50	50	90	28900
792	401700	WO		775	453	1009	0	1009	8	-15	0	18	11	101100
793	401700	WO		0	0	0	0	0	0	50	0	0	50	0
794	401700	WO		80	45	50	0	50	0	-6	0	29	23	15900
481	402000	WO		4	0	2	0	2	22	165	15	175	377	25900
68	402600	WO		28	0	53	0	53	0	20	85	30	135	6400
69	402700	WO		50	0	-41	0	-41	-32	0	20	30	18	8000
57	401400	WO		65	10	31	16	47	-12	0	60	35	83	8000
471	401400	WO		65	15	40	0	40	-7	0	0	10	3	8000
472	401400	WO		66	10	26	3	29	-12	0	20	30	38	8000
58	401500	WO		91	64	116	0	116	-15	0	20	20	25	7100
473	401500	WO		287	158	396	0	396	-43	-10	8	10	-35	25500
63	401600	WO		67	37	90	0	90	175	70	20	20	285	20800
478	401600	WO		195	133	385	14	399	-32	5	30	60	63	12900
474	401700	WO		730	442	972	0	972	100	152	159	211	622	38800
60	401800	WO		198	115	322	0	322	0	0	0	50	50	8700
479	401900	WO		0	0	0	0	0	0	175	0	0	175	0
480	401900	WO		787	504	1071	0	1071	-100	570	106	91	667	34000
65	402100	WO		146	196	750	0	750	-32	-164	21	80	-95	5800
61	402200	WO		177	92	199	0	199	20	-45	64	30	69	9200
62	402300	WO		19	0	-24	0	-24	11	338	113	482	944	11300
64	402400	WO		263	100	207	1	208	52	-68	-1	47	30	10300
66	402500	WO		159	141	427	8	435	0	0	0	20	20	4500
		WO Total		**6223**	**3666**	**8663**	**42**	**8705**	**277**	**1374**	**887**	**1904**	**4442**	
		Grand Total		**6223**	**3666**	**8663**	**-54**	**8609**	**1011**	**3533**	**945**	**4847**	**10336**	

NOTE: WO = West Oakland; HB = Harbor

Source: Hausrath Economics Group

Table C-6
OAKLAND CUMULATIVE GROWTH SCENARIO
ASSUMPTIONS FOR COMMERCIAL/INDUSTRIAL PROJECTS IN THE WEST OAKLAND AND HARBOR AREAS
CENTRAL STATION PROJECT EIR - DECEMBER 2003

/a/	Project	Time Period	Oakland TAZ	CMA TAZ	Planning District /c/	Sq. Ft.	Empls	SF/Emp	Location	Comments
	PROJECTS COMPLETED BY 2000									
x	K-Mart		474	474	WO	117,000	155	755	1555 40th St./near Hubbard St.	
	Base Closure - FISCO		67/786	67	HB		(500)			
	Base Closure - Oakland Army Base		778-783/788/789	67/475/476/477	HB		(2,047)			
x	Oakland Army Base - Interim Leasing (City and Port areas)		778-783/788/789	67/475/476/477	HB		1,277			
x	Port Maritime Growth (exclusive of OARB interim leasing)		67/482/784-787/790	67/482	HB		279			
	PROJECTS TO BE COMPLETED 2000 - 2005									
x	Mandela Gateway / West Oakland Transit Village	1	61/65	61/65	WO				Mandela + 7th St.	
C	Retail	1	61	61	WO	15,900	40	400		Residential with neighborhood retail
C	Retail	1	65	65	WO	3,700	11	350		Residential with neighborhood retail
x	Co-generation project, light industrial, and artisan space	1	63	63	WO	32,000	71	450	24th St. + Poplar	
x	Industrial Arts School and Gallery	1	65	65	WO	47,000	40		7th St.+ Union	Reuse of warehouse
x	Jack London GatewayAcorn Shopping Center	1	68	68	WO		50		900 Market at 8th/7th	Revitalization/New stores
	IKEA Parking Deck	1	474	474	WO				Shellmound + I-80	Completed
	Extended Stay America	1	474	474	WO	149 rms	97	0.65/rm	Yerba Buena + Mandela Parkway	Completed
x	Expo Design Center - replaces K-Mart	1	474	474	WO	117,000	200		1555 40th St. / near Hubbard St.	Replaced K-Mart; +45 employees assumed
x	OTR site - Best Buy	1	474	474	WO	45,000	60	750	Yerba Buena + Mandela	Completed
x	Plywood & Lumber Sales / Warehouse	1	474	474	WO	34,000	28	1,200	28th St. + Ettie	New construction / light industrial warehouse
x	Mandela + Wood / 32nd to 34th	1	475	475	WO	50,000	111	450	West of Mandela	Reuse of existing and possible new construction; light industrial and cultural/education/entertainment
x	Infill under and around new freeway	1	475	475	WO		35			Emery Go BART and other uses
x	Bridge/Chestnut Court - retail	1	478	478	WO	4,000	11	350	2240 Chestnut St.	Residential with ground floor retail
x	Amtrak Maintenance Facility	1	480	480	WO	163,400	350		Near 3rd St. + Kirkham	Approved; moving from nearby
x	Port Maritime Expansion (exclusive of OARB interim leasing)	1	67/482/784-787/790	67/482	HB		194			Employment growth reflects 60% operation of new terminal in Vision 2000 by 2005 and shifts in operations among existing
x	Oakland Army Base - Interim Leasing (City and Port areas)	1	778-783/788/789	67/475/476/477	HB		653			
	PROJECTS TO BE COMPLETED 2005 - 2010									
C	Carnation Factory Site (lt. ind/R&D/office/retail)	2	62	62	WO	127,000	318	400	Mandela + 14th/16th/Poplar	Adaptive reuse; possible new construction
x	Additional light industrial, light manufacturing, and artisan uses	2	63	63	WO	45,000	100	450		Infill, intensification of use in existing space, and new construction; replaces older industrial uses
x	Industrial incubator	2	64	64	WO	30,000	67	450	Market / 21st to 18th	Reuse of former warehouse
x	Giambolini Property - mixed use development	2	474	474	WO	40,000	89	450	Between Ettie + Hannah	New construction / Lt. industrial flex space
x	Romax Iron Works Site - commercial/business flex space	2	474	474	WO	20,000	44	450	Near Peralta + Hollis	Part of mixed use development
x	Light industrial / business flex space / artisans and lt. manufacturing	2	474	474	WO	65,000	144	450	Mandela, Hanna, 34th + vicinity	Infill, new construction, and/or intensification of use in existing; replaces older industrial uses
x	Infill/Intensification	2	474	474	WO		60			New uses net of declines
x	Mandela/Wood, north of 26th	2	475	475	WO	7,000	16	450		Infill development or conversion; replaces older industrial
x	Mandela/Wood, West Grand to 26th	2	475	475	WO	15,000	23	450		Reuse of existing and/or new construction; lt. industrial, lt. mfg., retail/commercial, services; replaces older industrial uses
C	Central Station Project (max trips alt.) /b/	2	476	476	WO				Wood / 12th to West Grand	
C	Live-work	2	476	476	WO	8,400	16	513		Predevelopment 2003
C	Retail/Commercial	2	476	476	WO	46,000	167	275		Predevelopment 2003
C	Event/Commercial	2	476	476	WO	12,000	44	275		Predevelopment 2004
C	Office	2	476	476	WO	258,000	938	275		Predevelopment 2005
C	Rental Residential/Support	2	476	476	WO		10			Predevelopment 2006
C	Central Station Project - live/work	2	792	477	WO	13,260	26	513	Wood / 12th to West Grand	Predevelopment 2003

/a/	Project	Time Period	Oakland TAZ	CMA TAZ	Planning District /c/	Sq. Ft.	Empls	SF/Emp	Location	Comments
x	Amtrak Maintenance Facilities - expanded operations	2	480	480	WO		200			Expansion as train service increases
x	DC Metals site - Transit Village - parking with commercial	2	480	480	WO	5,000	14	350		
x	Alliance for West Oakland Mixed Use - comm'l and pkg structure	2	480	480	WO	40,000	100	400	5th + Mandela	Pre-application filed 2002
x	Infill / incubators, artisan space	2	791	791	WO		45			New uses net of decline in older uses
x	Port Maritime Expansion and OARB Reuse (Maritime)	2	67/482/783-790	67/482	HB		153			Employment growth reflects full development of 1,000 acres for terminals, incorporating Vision 2000, JIT development, and increased maritime areas from OARB.
	PROJECTS TO BE COMPLETED 2010 - 2025									
x	New commercial/retail along San Pablo	3	57	57	WO	30,000	67	450	San Pablo Ave.	
x	Kirkham / 16th + 18th and/or Kirkham / 12th + 14th	3	62	62	WO	150,000	333	450	Kirkham/16th+18th and/or Kirkham/12th+14th	Transition to light industrial/R&D uses; reuse and/or new construction
x	Intensification of retail / commercial along San Pablo	3	58/472	58/472	WO		80			Increased use of existing space and possibly some infill and new space
	West Oakland Transit Village	3	60/61/480	60/61/480	WO					
x	entertainment/cultural uses	3	60	60	WO	20,000	30			Oppt'y site 8 or others
x	retail/commercial	3	61	61	WO	5,000	14	350		
x	retail/commercial	3	480	480	WO	10,000	29	350		Oppt'y sites 3, 4, or others
	parking - public structured parking	3	480	480	WO		3			
x	Infill / incubators, artisan space	3	791	791	WO		45			New uses net of decline in older uses
x	Pacific Pipe/American Steel sites (Lt. indust./R&D/office/retail)	3	62	62	WO	280,000	622	450	Mandela / West Grand to 18th St.	New construction and/or reuse and intensification
x	Additional light industrial, light manufacturing, and artisan uses	3	63	63	WO	135,000	300	450		Infill, intensification of use in existing space, and new construction; replaces older industrial uses
x	Mixed use lofts / commercial-retail	3	64	64	WO	12,500	31	400	West Grand at Market	
x	Light industrial / business flex space	3	474	474	WO	65,000	144	450	Mandela, 3nd, 28th + vicinity	Infill, new construction, and/or intensification of use in existing; replaces older industrial uses
x	Infill / intensification	3	474	474	WO		60			New uses net of declines
x	Mandela/Wood, north of 26th	3	475	475	WO	18,000	40	450		Infill development or conversion; replaces older industrial
x	Mandela/Wood, West Grand to 26th	3	475	475	WO	45,000	69	450		Reuse of existing and/or new construction; lt. industrial, lt. mfg., retail/commercial, services; replaces older industrial uses
x	Infill/intensification of retail/commercial along San Pablo + W. Grand	3	478	478	WO		50			Increased use of existing space and possibly some infill and new space
x	Port Maritime Expansion and OARB Reuse (Maritime)	3	67/482/783-790	67/482	HB		728			Employment growth reflects full development of 1,000 acres for terminals, incorporating Vision 2000, JIT development, and increased maritime areas from OARB.
	EBMUD - wastewater treatment expansion	3	477	475	HB		40			
x	16th & Wood sites / light Industrial	3	477	477	HB	185,000	463	400		Phoenix Iron Works & other sites potentially
x	Oakland Army Base Reuse: Gateway (Non-Maritime)	3	778-782	67/475/476	HB					
x	Office	3	782	67	HB	600,000	2,250	267		
x	R&D / light Industrial	3	781	67	HB	996,000	2,490	400		
x	Retail	3	781	67	HB	25,000	70	357		
x	Warehouse/Distribution	3	778	475	HB	300,000	240	1,250		
x	R&D / light Industrial	3	779	476	HB	200,000	500	400		
x	R&D / light Industrial	3	780	476	HB	176,000	440	400		
	Job Training	3	780	476	HB	50,000	100	500		
x	Oakland Army Base - End of Interim Leasing	3	778-783/788/789	67/475/476/477	HB		(1,930)			Permanent reuse replaces interim leasing

Notes:
/a/ 'X' in first column indicates updated assumptions compared to original 11/21/00 Cumulative Scenario. 'C' indicates updated assumptions for Central Station Project.
/b/ This list reflects Maximum Trips Alternative with residential, retail, and office development.
/c/ WO = West Oakland; HB = Harbor

Source: City of Oakland; Port of Oakland; Hausrath Economics Group (12/10/03)

Appendix D
Historic Evaluation of the 16th Street Train Station (Alan Dreyfus)

APPENDIX D

Historic Evaluation of the 16th Street Train Station within the Project Area Prepared by Alan Dreyfus, AIA, April 22, 2004

The Southern Pacific 16th Street Station and Signal Tower

Description

The 16th Street Station is a terra cotta clad structure located at the northwest terminus of 16th and 17th Streets. It is set at the rear of an open paved area approximately 200 feet from Wood Street. The Station shares the site with a large complex of utilitarian structures set diagonally to the east. The view of the Station is almost entirely unobstructed from the north, west and south. The front façade is especially visible from Wood and 16th Streets.

The Station consists of a central, main structure about 50' tall, flanked by symmetrical, lower side wings to the north and south. A large L-shaped baggage wing extends to the north and west of the north wing. An elevated concourse runs along the entire west side of the Station, extending beyond the Station to the north and south. Original plans indicate that the entire complex was constructed at one time, between 1910 and 1912. A rectangular 3-story Signal Tower, constructed at a later date, is located about 150 feet to the north of the Station, along the line of the original tracks.

The exterior of the Station is clad in granite colored terra cotta over a granite base. The windows are steel sash deeply inset in the façade. The hipped roof, originally clay tile, is now covered in rolled composite roofing. The bare metal sub-structure of a marquee remains above the main entry. The concourse is constructed of steel columns and girders with two decorative steel canopies extending for its full length. The stairs accessing the concourse are cast iron with marble treads.

The interior of the central section is entirely occupied by the General Waiting Room that occupies the full 3 stories. The floors are marble, and there is evidence of a tall, marble wainscot that once ran the entire circumference of the room. The walls and ceilings are elaborately decorative molded plaster.

The Signal Tower is constructed of reinforced concrete with a stucco exterior, and a hipped roof with broad eaves.

The 16th Street Station is a City of Oakland Landmark. In 1988 a DPR historic resources inventory form was completed by the Oakland Cultural Heritage Survey, and the Station was given a National Register status of 3, "appears to be eligible for inclusion in the National Register". The Station and Signal Tower were also recorded in a California Department of Transportation Architectural Inventory/Evaluation form in 1990, and were evaluated as eligible for the National Register. The 16th Street Station and Signal Tower appear to be eligible for the National Register under Criterion A, for their association with the development of rail transportation in the Bay Area and on a national level. The Station also appears to be eligible

under criterion C for its architectural significance as an exceptional example of train station design.

Condition

The buildings have been unoccupied since the station sustained structural damage in the 1989 Loma Prieta earthquake, and the deterioration has been significant in that time.. The exterior terra cotta is in generally good condition, showing minimal spalling or cracking, although it is covered with graffiti in many places. Diagonal grouting lines are visible on the north and south walls of the General Waiting Room where repairs were made to stabilize areas that were damaged in the earthquake. The decorative metal is missing from the entry marquee, much of the glazing is broken, and the original tile roof is missing, although a number of the tiles are stored inside the Station.

The interior is in a very deteriorated condition. The marble wainscot has been almost entirely stripped from the Waiting Room walls, and the plaster walls and ceiling have suffered substantial damage from vandalism and lack of weatherproofing. Two huge paintings that occupied the north and south walls of the Waiting Room are missing, with the exception of a small corner of one on the south wall. Most doors are missing, as are the original clocks, the decorative light fixtures and the restroom partitions and fixtures.

Potential Impacts and Mitigation Measures

Introduction

The project being analyzed is described in the Project Description and in the *Central Station Master Plan* prepared by Pyatok Associates. The guidelines for development are described in *Section 5.0 Development Standards* of the Master Plan, and specific standards affecting the 16th Street Station and adjacent projects are described in *Section 5.80 16th Street Train Station.* There are potential impacts to the 16th Street Station that derive from implementation of the proposed project, both from new construction that is planned adjacent to the Station and from the adaptive reuse project planned for the Station.

New Construction

Demolition

The location of planned new construction to the north and west of the Station will potentially require demolition of some significant portions of the Station. Project construction to the north will require the demolition of the baggage wing and the portion of the raised concourse that extends over the baggage wing, and beyond it to the north. The required extension of 16th Street through to the frontage road will result in the demolition of the portion of the concourse that extends beyond the Station to the south. A required access road to the west will result in the demolition of 70% of the remaining concourse, including one of the decorative canopies.

While not as significant as the General Waiting Room and its symmetrical wings, these portions of the Station are original, and an integral part of its historic use. Demolition of these portions of the Station will have an unavoidable significant adverse impact on the historic integrity of the Station.

Suggested Mitigation Measures

1. *Seismically strengthen and rehabilitate the exterior of the General Waiting Room and the symmetrical wings to the north and south, including the remaining portions of the passenger concourse, in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Buildings (Secretary's Standards)*

2. *Record the 16th Street Station in accordance with the procedures of the Historical American Building Survey (HABS).*

3. *Salvage architectural elements and materials from the portion of the building to be demolished including terra-cotta cladding, windows, doors and hardware to be re-used in the rehabilitation of the General Waiting Room.*

Implementation of these mitigation measures will not reduce the impact to a less than significant level.

Setting

Currently the building setting is an industrial landscape with few buildings in the near vicinity. Adjacent railroad tracks make its use clear. Construction of new high density housing adjacent to the Station and the Signal Tower, as proposed, will significantly alter the historic setting of both the Station and the tower. This alteration of the historic context has the potential to weaken the physical relationship between the structures and to obscure their original uses. The alteration of the setting constitutes an unavoidable significant impact of the proposed project on the Station.

Suggested Mitigation Measures

1. *Install plaques on the exterior façade of the Station and the Signal Tower that identify their historic uses and include additional historical information.*

2. *Create a display on the interior of the Station using historic photos and documents to give a more complete history of the Station and the Signal Tower.*

3. *Create a feature in the proposed public plaza that recalls the historic use of the Station. The feature could be sculptural, for example a railroad element, or a landscape feature, as for example pathways or paving patterns that recall the paths of the trolley cars that originally served the Station.*

Implementation of these mitigation measures will not reduce the impact to a less than significant level.

New construction also has the potential to adversely impact the architectural setting of the Station by the blocking views of the Station and/or by the diminution of its prominence. For the most part, the location and scale of new construction described in the master plan is restricted in such a manner as to preserve the most important view corridors and to prevent adjacent new construction from overshadowing the Station. Specifically, the view of the front façade will be protected by designating areas to the south and east of the building as "non-development areas" This will preserve the view of the Station from Wood and 16th Streets, the main approaches to the Station. New construction to the west is limited in height to 30 feet with a required setback of 40 feet. This will allow for retention of the current view of the Station from west, where the views are primarily from the elevated sections of Highway 880.

New construction to the northeast, however, is permitted to 65 feet in height and requires a minimum setback of only 15 feet. The small setback is appropriate for the area to the north, as this area is currently occupied by the baggage wing and existing utility sheds. However, the existing construction is limited in height to approximately 25 feet, and the 65-foot height limit will allow for construction of structures that are taller than the Station, and that will potentially block the view of Station from the northeast. This could be mitigated to a less than significant level by restricting the height of adjacent construction to 25 feet.

New construction is permitted within 15 feet of the Signal Tower to a height of 65 feet as well. Preliminary plans indicate that a non-development zone extending from the terminus of 18th Street will border the Signal Tower on the north, and that a required access road will border the tower to the west. This will preserve views of the tower from the northwest, including the 880 freeway and the frontage road which currently provide the best views of the tower. The remaining new construction has the potential to totally eliminate all other long-range view of the Signal Tower. As the Signal Tower is a small structure, only 35 feet tall at its peak, limiting the height of surrounding construction might not reveal enough of the building to significantly reduce the potential impact on these views.

Suggested Mitigation Measures

1. *Limit the height of new construction adjacent to the main Station and along Wood Street to 25 feet.*

Implementation of these mitigation measures may reduce the impact on the Station to a less than significant level, but will not reduce the potential impact on the Signal Tower .

Adaptive Reuse

The potential impacts of an adaptive reuse project are addressed in The *Central Station Master Plan.* The Master Plan includes the following standards for the treatment of the 16th Street Station and the Signal Tower:

General Standards

1. Any renovation, modification or addition to the 16th Street Station shall conform with standards set forth in of the Planning Code "Special regulations for designated landmarks".

2. Any re-use of the 16th Street Station shall include stabilization and repair of exterior materials to improve the exterior appearance and to ensure a water tight building envelope.

3. For the purpose of these standards, the primary portion of the Station is defined as the General Waiting Room and the symmetrical wings to the north and south.

Standards for Additions to the 16th Street Station

1. Additions to the Train Station are permitted subject to the following limitations:

    a. No addition to the existing Train Station shall exceed a total building footprint greater than 20% of the existing structure to be retained.

    b. No addition to the existing Train Station shall exceed the height of the north or south wings that flank the General Waiting Room (approximately 25 feet in height).

    c. No addition shall be made to either the primary façade facing the 16th Street Plaza or the southern façade, facing the 14th Street non-development area.

2. No additions are permitted to the Signal Tower.

The Master Plan dictates conformance with section 17.102.030 of the Planning Code, which mandates design review for any alteration to a designated City Landmark. Design review criteria states that the proposed alteration will not adversely affect the exterior appearance or character of a landmark building, which will provide a level of assurance that the project will not have a significant impact on the exterior of the Station or the Signal Tower. Additionally, by restricting any potential additions to the Station to areas where demolition of building wings are proposed as part of the total project development, and restricting the footprint and height of any proposed addition, these guidelines reduce the possibility of an addition having an adverse impact on the exterior of the Station. The Master Plan dictates that no additions will be allowed to the Signal Tower.

The standards included in the master plan do not address the treatment of the interior of the Station or Signal Tower as part of any planned re-use. Potential impacts to the interiors include:

1. Damage to the historic fabric caused by inappropriate installation of new structural elements, mechanical systems or finishes.

2. Loss of historic fabric due to reconfiguration of the interior or removal and replacement of original finishes.

3. Alteration of the historic appearance due to insertion of incompatible new construction or the installation of incompatible fixtures and fittings.

These potential impacts can be reduced to a less than significant level by mandating that the rehabilitation of the main Station and the Signal Tower comply with the Secretary of the Interior's Standards for the Treatment of Historic Buildings.

Suggested Mitigation Measures:

1. *Stipulate that rehabilitation of the historic structures shall comply with the Secretary of the Interior's Standards for the Treatment of Historic Buildings.*

Implementation of these mitigation measures may reduce the impact to a less than significant level.

Appendix E
Proposed Soil Screening Levels and RWQCB Approval

- Geomatrix Consultants, Inc., Revised Remediation Cleanup Levels, Central Station Sites, Wood Street between 10th Street and West Grand Avenue, Oakland, California May 18, 2004
- California Regional Water Quality Control Board, San Francisco Bay Region, Approval of Remediation Cleanup Levels, Central Station Site, Wood Street between 10th Street and West Grand Avenue, Oakland, California, May 21, 2004

Available from the Planning Department, City of Oakland:

- Geomatrix Consultants, Inc., Proposed Remediation Levels, October 20, 2003
- Geomatrix Consultants, Inc., Rationale for Using U.S. EPA Region 9 Preliminary Remediation Goals (PRGs) as the Proposed Soil Remediation Standards, February 9, 2004
- Geomatrix Consultants, Inc., Draft Report: Tier 1 Environmental Risk Assessment, March 25, 2004

Revised Remediation Cleanup Levels (May 18, 2004)

2101 Webster Street
12th Floor
Oakland, CA 94612
(510) 663-4100 • FAX (510) 663-4141

GEOMATRIX

May 18, 2004
Project 8371.001

Mr. Mark Johnson and
Mr. Roger Brewer
Regional Water Quality Control Board
1515 Clay Street, #1400
Oakland, California 94612

via Facsimile (510) 622-2460
and U.S. Mail (4 pages)

Subject: Revised Remediation Levels
Central Station Sites
Wood Street between 10th Street and West Grand Avenue
Oakland, California

Dear Messrs. Johnson and Brewer:

Geomatrix Consultants, Inc. (Geomatrix), has prepared this letter on behalf of HFH, Ltd., Central Station Land, LLC, Oakland Icehouse, LLC, and BUILD West Oakland, to present the revised remediation levels for various residential development plans on adjacent properties located along Wood Street and between 10th Street and West Grand Avenue in Oakland, California (the site). This letter was prepared following our May 10, 2004 meeting where these revised remediation levels were discussed.

Table 1 presents the revised soil remediation levels for chemicals detected in at least one soil sample collected across the site. These levels were developed considering the following criteria:

- Risk-based goals for the protection of human health (i.e., direct contact and inhalation of chemicals in indoor air) based on an unrestricted land use using a target lifetime incremental cancer risk of $1x10^{-5}$ for carcinogenic polyaromatic hydrocarbons (PAHs), a target lifetime incremental cancer risk of $1x10^{-6}$ for other carcinogenic chemicals, and a target hazard quotient of 0.2 for noncarcinogenic chemicals;
- Risk-based goals for total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs) based on the protection of groundwater quality from leaching of soil at levels that would result in groundwater concentrations above non drinking water standards;
- Naturally-occurring background concentrations for metals; and
- Ceiling limits based on nuisance odor concerns.

Risk-based levels based on the protection of groundwater quality for metals and organochlorine pesticides (OCPs), and ecological terrestrial habitats and receptors were not considered for the following reasons:

- Based on the results of previous investigations, subsurface geology underlying the site is primarily composed of fill material consisting of clayey gravel with sand to a depth of approximately 4.5 feet below ground surface (ft bgs). The fill is underlain by a combination of clay and sand, to a depth of 10 ft bgs. Metals were likely constituents in these fill materials. Except for arsenic, the distribution of metals in soil are not representative of isolated source areas, but rather, the distribution of metals are more likely representative of background conditions in fill materials. Elevated concentrations of arsenic may be attributed to past use of arsenical pesticides along the railtracks;

- The distribution of OCPs in soil indicate that elevated concentrations of OCPs are limited in a lateral and vertical extent, suggesting that a widespread impact to shallow groundwater underlying the site is unlikely;

- Metals and OCPs are generally not considered highly mobile; migration of metals and OCPs in soil to groundwater is slow and limited;

- Elevated concentrations of metals (i.e., arsenic) and OCPs will be remediated allowing for unrestricted site use. Under this scenario, the source(s) will be removed and potential impacts to groundwater quality as a result of leaching will no longer be significant;

- Except for endolsulfan, risk-based screening levels for OCPs based on direct contact are more stringent than screening levels for the protection of groundwater. Thus, the proposed remediation levels for each of the OCPs are also protective of groundwater quality. Endosulfan was detected in only one out of 23 soil samples collected from the site and is below the risk-based screening level for direct contact, suggesting that potential impacts to groundwater is unlikely significant;

- Except for isolated locations, groundwater samples collected from the site and analyzed for TPH and VOCs indicate that shallow groundwater has not been significantly affected by historical site related activities, suggesting that leaching of constituents in soil to groundwater is not a significant migration pathway;

- Although the migration of metals and OCPs in soil to groundwater is possible, shallow groundwater underlying the site, ranging from 1 to 6 ft bgs, is not anticipated to be used as a drinking water source in the foreseeable future. Potential exposures to constituents in shallow groundwater, either through consumption or direct contact pathways, are incomplete;

- The site is located more than 1.5 miles from San Francisco Bay. Potential migration of metals and OCPs in soil to groundwater and into surface water bodies is not a significant pathway; and

- The site has historically been used for industrial activities. Endangered or threatened species do not exist in the vicinity of the site.

The site is under consideration for medium to high-density multi-family residential redevelopment, where exposed soil will be covered by buildings, roadways, and/or ornamental landscaping. Thus, potential exposures to chemicals in soil from incidental ingestion and dermal contact by future residential receptors are incomplete. However, except for TPH, the proposed remediation levels will be applied to the top three feet below ground surface or to the top of the water table. As indicated in Table 1, separate remediation levels for TPH are proposed for surficial soil (i.e., soil less than 3 feet or to the top of groundwater) and subsurface soil, defined as soil at depths of more than three feet below ground surface.

We trust that the information presented in this letter and the attached table is sufficient for your approval so that the proposed remedial approaches can proceed. Please call either of the undersigned if you have questions, comments, or need further information.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.

Robert H. Cheung
Senior Toxicologist

Jennifer L. Patterson, P.E. #59161
Senior Engineer

Table 1

cc: Mark Johnson, RWQCB
Andrew Lundgren, RWQCB
Andrew Getz, HFH, Ltd.
Kevin Wakelin, Central Station Land, LLC; Oakland Icehouse, LLC
Terezia Nemeth, BUILD West Oakland, LLC
Tom Graf

RWQCB Approval of Remediation Cleanup Levels (May 21, 2004)

California Regional Water Quality Control Board
San Francisco Bay Region

Terry Tamminen
Secretary for Environmental Protection

1515 Clay Street, Suite 1400, Oakland, California 94612
(510) 622-2300 • Fax (510) 622-2460
http://www.swrcb.ca.gov/rwqcb2

Arnold Schwarzenegger
Governor

Date: May 21, 2004
File No. 01S0556 (MEJ)

Jennifer L. Patterson, P.E.
Geomatrix Consultants, Inc.
2101 Webster Street, Suite 1200
Oakland, CA 94612

Subject: Approval of Remediation Cleanup Levels, Central Station Site, Wood Street between 10th Street and West Grand Avenue, Oakland, California

Dear Ms. Patterson:

Water Board staff have reviewed the following documents submitted by Geomatrix Consultants, Inc., submitted to our office on behalf of: HFH, Ltd.; Central Station Land, LLC; Oakland Icehouse, LLC; and BUILD West Oakland, LLC (the Developers) for various residential development plans for the Central Station Site (the site):

- October 20, 2003, *Proposed Remediation Levels;*
- February 9, 2004, *Rationale for Using U.S. EPA Region 9 Preliminary Remediation Goals (PRGs) as the Proposed Soil Remediation Standards* memorandum;
- March 25, 2004, draft report, *Tier 1 Environmental Risk Assessment;* and,
- May 18, 2004 *Revised Remediation Cleanup Levels*

The proposed cleanup levels presented in the May 18, 2004 letter, are based on Regional Board, Environmental Screening Levels (ESLs) for potential non-drinking water sources, which considers nuisance criteria, direct contact and volatilization. Attaining these cleanup levels will remediate the site to allow for unrestricted land use. No institutional controls (deed restrictions, risk management plans, etc.) will be required, if these standards are applied to the site. Prior to commencement of work a remediation plan must be submitted to and approved by this office.

Should any of the Developers intend to leave soil in-place which exceeds the proposed cleanup levels presented in the May 18, 2004 letter, they will need to propose such action to this office for our consideration and approval. If approved, appropriate risk management/institutional controls shall be required for these areas of the site.

Should you have any comments or questions, please contact Mark Johnson of my staff at (510) 622-2493 or mej@rb2.swrcb.ca.gov.

Sincerely,

Bruce H. Wolfe
Executive Office

cc: Lynn Nakashima, DTSC
Roger Brewer, RWQCB
Mark Gomez, City of Oakland
Susan Hugo, ACDEH
Andrew Getz, HFH, Ltd.
Kevin Wakelin, Central Station Land, LLC; Oakland Icehouse, LLC
Joe McCarthy and Terezia Nemeth, BUILD West Oakland, LLC
Tom Graf
Rick Holliday and Rick Mariano, Holliday Development

Appendix F
Sensitive Biological Resources in the Project Area Vicinity

Table F-1
Sensitive Animals Reported in the Vicinity of the Project Area

Species Name	Status[1] Federal	State	CDFG[2]	CNPS[3]	Habitat	Habitat Present	Observed	Potential Project Effect
Invertebrates								
Mimic Tryonia (California brackishwater snail) *Tryonia imitator*	None	None	None	N/A	Inhabits coastal lagoons, estuaries, and salt marshes where it lives in permanently flooded areas. Reported from Lake Merritt but population probably extirpated.	No	No	None
Fish								
Tidewater Goby *Eucuclogobius newberryi*	Endangered	None	(Special Concern)	N/A	Shallow lagoons and lower stream reaches influenced by tidal action along the California Coast. Reported from Lake Merritt.	No	No	None
Amphibians and Reptiles								
California Tiger Salamander *Ambystoma californiense*	Candidate	None	(Special Concern) Protected		Annual grasslands and understory of hardwood habitats. Breeding typically associated with temporary pools and ponds. This population has been extirpated (Jennings and Hayes 1994).	No	No	None
Birds								
Double Crested Cormorant (rookeries) *Phalacrocorax auritus*	None	None	(Special Concern)	N/A	Status applies to rookeries only. This is a colonial nester that uses cliffs and trees along lake margins. Report is for a colony on the San Francisco Bay Bridge.	No	No	None

Table F-1
Sensitive Animals Reported in the Vicinity of the Project Area

Species Name	Status[1] Federal	State	CDFG[2]	CNPS[3]	Habitat	Habitat Present	Observed	Potential Project Effect
California Black Rail *Laterallus jamaicensis coturniculus*	(Special Concern)	Threatened	Fully Protected	N/A	Found in tidal salt marshes where pickleweed is the primary vegetation. Also found in fresh water and brackish marshes at low elevations. Reported from the Emeryville Crescent Marsh.	No	No	None
Northern Harrier (nesting) *Circus cyaneus*	None	None	(Special Concern)	N/A	Nests on the ground typically associated with shrubby vegetation. Often found foraging over open grasslands and marshes.	No	No	None
California Least Tern *Sterna antillarum browni*	Endangered	Endangered	None	N/A	Nests on bare or almost bare flat surfaces, sandy beaches, alkali flats etc between San Francisco Bay and Baja California. Reported from Alameda Naval Air Station.	No	No	None
White-tailed Kite *Elanus leucurus*	(Special Concern)	None	Fully Protected	N/A	Grasslands with scattered dense-topped trees for nesting.	No	No	None
California Clapper Rail *Rallus longirostris obsoletus*	Endangered	Endangered	Fully Protected		Saltwater and brackish marshes often crossed by tidal sloughs in the San Francisco Bay. Closely associated with pickleweed. Reported from the Emeryville Crescent Marsh	No	No	None
Mammals								
Salt-marsh Harvest Mouse *Reithrodontomys raviventris*	Endangered	Endangered	Fully Protected	N/A	Found only in emergent salt marsh habitats of San Francisco Bay where pickleweed is the primary vegetation. Reported from the Emeryville Crescent Marsh	No	No	None

Table F-1
Sensitive Animals Reported in the Vicinity of the Project Area

Species Name	Status[1] Federal	State	CDFG[2]	CNPS[3]	Habitat	Habitat Present	Observed	Potential Project Effect

Sources:

California Department of Fish and Game, 2003. CNDDB (California Natural Diversity Data Base), Commercial version, information dated 05/05/2003.

Jennings, M.R. and M.P. Hayes, 1994. Amphibian and reptile species of Special Concern in California. Final Report, Inland Fisheries Division, California Department of Fish and Game.

Sawyer J.O. and T. Keeler-Wolf, 1995. A manual of California vegetation, California Native Plant Society.

Williams, D.F., Mammal species of Special Concern in California. 1986 Administrative Report 86-1, Wildlife Management Division, California Department of Fish and Game.

Notes

[1] Endangered and threatened are a species status under the California or Federal Endangered Species Act, Federal species of concern and candidate species do not receive any statutory protection under the Federal ESA.

[2] California Department of Fish and Game. Species designated as Species of Concern by CDFG are to be mitigated for under CEQA. A protected designation indicates that these species are fully protected under the Fish and Game Code and cannot be taken or possessed without a permit from the Fish and Game Commission or CDFG.

[3] California Native Plant Society. Species on List 1A are believed to be extinct within California. Species on List 1B are rare or endangered in California and elsewhere in their range.

Element Rankings (Sawyer and Keeler-Wolf 1995):

S2.1 Very Threatened in California

S3.1 Very Threatened in California

S3.2 Threatened in California

Table F-2
Sensitive Plants and Habitats Reported in the Vicinity of the Project Area

Species Name	Status[1] Federal	State	CDFG[2]	CNPS[3]	Habitat	Habitat Present	Observed	Potential Project Effect
Plants								
Bent-flowered Fiddleneck *Amsinckia lunaris*	(Special Concern)	None	None	1B	Cismontane woodland, valley and foothill grassland. Collected in 1883.	No	No	None
Alkali Milk-vetch *Astragalus tener* var *tener*	None	None	None	1B	Alkali flats in annual grasslands, playas, or vernal pools. Known from three collections between 1882 and 1895.	No	No	None
Robust Spineflower *Chorizanthe robusta* var *robusta*	Endangered	None	None	1B	Sandy terraces, bluffs, and loose sand of coastal dunes, coastal scrub and foothill woodlands. Thought to be extirpated, lsat observed in 1891.	No	No	None
Point Reyes Bird's-beak *Cordylanthus maritimus* ssp *palustris*	(Special Concern)	None	None	1B	Coastal salt marsh. Reported in 1880 and 1891 but not found in 1990 surveys. Believed to be extirpated.	No	No	None
Round-leaved Filaree *Erodium macrophyllum*	None	None	None	2	Cismontane woodland and valley and foothill grassland. Typically over clay soils. Collected in 1891 and 1894 from non-specific locations in Oakland and Berkeley.	No	No	None
Water Sack (=saline) Clover *Trifolium depauperatum* var *hydrophilum*	None	None	None	1B	Marshes, swamps, valley/foothill grasslands, and vernal pools. Last collected in 1883.	No	No	None

Table F-2
Sensitive Plants and Habitats Reported in the Vicinity of the Project Area

Species Name	Status[1] Federal	State	CDFG[2]	CNPS[3]	Habitat	Habitat Present	Observed	Potential Project Effect
Beach Layia *Layia carnosa*	Endangered	Endangered	None	1B	Typically found on sparsely vegetated semi-stabilized dunes. Reported from San Francisco in 1904.	No	No	None
Rose Linanthus *Linanthus roseceua*	(Special Concern)	None	None	1B	Coastal bluff scrub. Last observed in 1885 somewhere in San Francisco.	No	No	None
Kellogg's Horkelia *Horkelia cuneata* ssp *sericea*	(Special Concern)	None	None	1B	Closed-cone coniferous forest, coastal scrub, chaparral, old dunes. Reported as declining in 1887. Not found in 1980s or 1990s.	No	No	None
Santa Cruz Tarplant *Holocarpha macradenia*	Threatened	Endangered	None	1B	Coastal praries, valley and foothill grasslands over light sandy soil or sandy clay. Extirpated following 1916 collection.	No	No	None
San Francisco Bay Spineflower *Chorizanthe cuspidata* var *cuspidata*	(Special Concern)	None	None	1B	Found on sandy slopes and terraces of coastal scrub, dune, and prairie habitats. Collected west of Lake Merritt in 1881.	No	No	None
Habitats								
Northern Coastal Salt Marsh	None	S3.2			Emeryville Crescent Marsh	No	No	None

Table F-2
Sensitive Plants and Habitats Reported in the Vicinity of the Project Area

Species Name	Status[1] Federal	State	CDFG[2]	CNPS[3]	Habitat	Habitat Present	Observed	Potential Project Effect

Sources:

California Department of Fish and Game, 2003. CNDDB (California Natural Diversity Data Base), Commercial version, information dated 05/05/2003.

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Notes:

[1] Endangered and threatened are a species status under the California or Federal Endangered Species Act, Federal species of concern and candidate species do not receive any statutory protection under the Federal ESA.

[2] California Department of Fish and Game. Species designated as Species of Concern by CDFG are to be mitigated for under CEQA. A protected designation indicates that these species are fully protected under the Fish and Game Code and cannot be taken or possessed without a permit from the Fish and Game Commission or CDFG.

[3] California Native Plant Society. Species on List 1A are believed to be extinct within California. Species on List 1B are rare or endangered in California and elsewhere in their range.

Element Rankings (Sawyer and Keeler-Wolf 1995):

S1.2 Fewer than 6 viable occurrences and/or less than 2,000 acres; Threatened in California

S2.1 6-20 viable occurrences and/or 2,000-10,000 acres; Very Threatened in California

S2.2 6-20 viable occurrences and/or 2,000-10,000 acres; Threatened in California

S3.1 21-100 viable occurrences and/or 10,000-50,000 acres; Very Threatened in California

S3.2 21-100 viable occurrences and/or 10,000-50,000 acres; Threatened in California

Appendix G
Project Population, Households, and Employment
(Bay Area Economics)

Central Station Inputs to Oakland/CMA Model - Maximum Residential Alternative

TAZ (a)	BDRMS	Units	Occupancy (b)	Residential HH	Pop. per HH (c)	Emp. Pop. per HH (c)	Total Pop	Emp. Residents	Household Average Income (d)	Commercial SqFt	EMP psf (f)	Employees
792	Studio	0	96%	0	2.15	2.12	-	-				
792	1 BR	229	96%	220	2.08	1.74	458	383				
792	2 BR	80	96%	77	2.09	1.68	161	129				
792	3 BR	60	96%	58	3.21	1.66	186	96				
792	1 BR Live Work	34	96%	33	2.08	1.74	69	57				
792	2 BR Live Work	68	96%	65	2.09	1.68	136	109				
792	Employment in Live Work Sq.Ft. (e)									132,600	512.5	26
792	Commercial											
Total		**471**		**453**			**1,009**	**775**	**$82,500**	**132,600**		**26**
476	Studio	238	96%	228	2.15	2.12	490	483				
476	1 BR	220	96%	211	2.08	1.74	439	367				
476	2 BR	0	96%	0	2.09	1.68	-	-				
476	3 BR	131	96%	126	3.21	1.66	404	209				
476	1 BR rental	204	96%	196	1.89	1.46	370	286				
476	2 BR rental	216	96%	207	2.49	1.51	515	313				
476	3 BR rental	6	96%	6	3.42	1.63	21	10				
476	1 BR Live Work	0	96%	0	2.08	1.74	-	-				
476	2 BR Live Work	84	96%	81	2.09	1.68	169	136				
	Employment in Live Work Sq.Ft. (e)									117,600	512.5	23
	Employment in Rental Residential project											10
	Commercial									25,000	275	91
Total		**1,099**		**1,055**			**2,409**	**1,804**	**$69,500**	**142,600**		**124**
Project Total		***1,570***		***1,508***			***3,418***	***2,579***	**$73,400**	***275,200***		***150***
							2.27	1.71				
EXISTING DEVELOPMENT (to be netted out)												
792		0	96%	0			0	0				15
476		1		1			4	1				15
(outside of Project Site)		(est)										
792		15	96%	14								N/A
476	None (project site encompasses the entire TAZ)											

Notes:

(a) TAZ 792 contains sites 1, 2 & 3 from the Central Station project description.

(b) Occupancy rates based on California Dept. of Finance calculation of Oakland citywide occupancy rate.

(c) Population and employed residents in owner and rental households calculated from the 2000 U.S. Census 1-Percent Public Use Microdata Sample (PUMS) Oakland/Berkeley area.

(d) Mean household income calculations assume that household incomes in rental units will average 100% Countywide area median income (AMI) and incomes in for-sale market-rate units will average 135 to 145% Alameda County AMI. For-sale household incomes assume that households will average 35% for principal, interest, taxes and insurance (PITI). All incomes are shown in 2000 constant dollars.

(e) Assumes that 10% of space in the live/work units will be used for employment uses. Employment per square foot factors reflect an equal mix of office and light industrial uses (275 and 750 sf per employee respectively).

(f) Self-storage employment based on survey of 10 facilities with average employment of 2.7 and median employment of 2.

Source: BUILD, Bay Area Economics, California Dept. of Finance, U.S. Census 2000.

Central Station Inputs to Oakland/CMA Model - Maximum Commercial Alternative

				Residential						Commercial		
TAZ (a)	BDRMS	Units	Occupancy (b)	HH	Pop. per HH (c)	Emp. Pop. per HH (c)	Total Pop	Emp. Residents	Household Average Income (d)	SqFt	EMP psf (f)	Employees
792	Studio	0	96%	0	2.15	2.12	-	-				
792	1 BR	60	96%	58	2.08	1.74	121	101				
792	2 BR	80	96%	77	2.09	1.68	161	129				
792	3 BR	60	96%	58	3.21	1.66	186	96				
792	1 BR Live Work	14	96%	13	2.08	1.74	27	23				
792	2 BR Live Work	68	96%	65	2.09	1.68	136	109				
792	Employment in Live Work Sq.Ft. (e)									110,600	512.5	22
792	Self-Storage									221,000		3
Total		**282**		**271**			**631**	**458**	**$85,600**	**331,600**		**25**
476	Studio	130	96%	125	2.15	2.12	269	265				
476	1 BR	130	96%	125	2.08	1.74	260	218				
476	2 BR	0	96%	0	2.09	1.68	-	-				
476	3 BR	89	96%	85	3.21	1.66	273	141				
476	1 BR rental	197	96%	189	1.89	1.46	357	276				
476	2 BR rental	190	96%	182	2.49	1.51	453	275				
476	3 BR rental	6	96%	6	3.42	1.63	21	10				
476	1 BR Live Work	0	96%	0	2.08	1.74	-	-				
476	2 BR Live Work	60	96%	58	2.09	1.68	121	97				
	Employment in Live Work Sq.Ft. (e)									84,000	512.5	16
	Employment in Rental Residential project											10
	Commercial									316,000	275	1,149
Total		**802**		**770**			**1,754**	**1,282**	**$68,000**	**400,000**		**1,175**
Project Total		***1,084***		***1,041***			***2,384***	***1,740***	**$72,600**	***731,600***		***1,200***
							2.29	1.67				
EXISTING DEVELOPMENT (to be netted out)												
792		0	96%	0			0	0				15
476		1		1			4	1				15
(outside of Project Site)		(est)										
792		15	96%	14								N/A
476	None (project site encompasses the entire TAZ)											

Notes:

(a) TAZ 792 contains sites 1, 2 & 3 from the Central Station project description.

(b) Occupancy rates based on California Dept. of Finance calculation of Oakland citywide occupancy rate.

(c) Population and employed residents in owner and rental households calculated from the 2000 U.S. Census 1-Percent Public Use Microdata Sample (PUMS) Oakland/Berkeley area.

(d) Mean household income calculations assume that household incomes in rental units will average 100% Countywide area median income (AMI) and incomes in for-sale market-rate units will average 135 to 145% Alameda County AMI. For-sale household incomes assume that households will average 35% for principal, interest, taxes and insurance (PITI). All incomes are shown in 2000 constant dollars.

(e) Assumes that 10% of space in the live/work units will be used for employment uses. Employment per square foot factors reflect an equal mix of office and light industrial uses (275 and 750 sf per employee respectively).

(f) Self-storage employment based on survey of 10 facilities with average employment of 2.7 and median employment of 2.

Source: BUILD, Bay Area Economics, California Dept. of Finance, U.S. Census 2000.

Central Station Inputs to Oakland/CMA Model - Maximum Trips Alternative

				Residential						Commercial		
TAZ (a)	BDRMS	Units	Occupancy (b)	HH	Pop. per HH (c)	Emp. Pop. per HH (c)	Total Pop	Emp. Residents	Household Average Income (d)	SqFt	EMP psf (f)	Employees
792	Studio	0	96%	0	2.15	2.12	-	-				
792	1 BR	229	96%	220	2.08	1.74	458	383				
792	2 BR	80	96%	77	2.09	1.68	161	129				
792	3 BR	60	96%	58	3.21	1.66	186	96				
792	1 BR Live Work	34	96%	33	2.08	1.74	69	57				
792	2 BR Live Work	68	96%	65	2.09	1.68	136	109				
792	Employment in Live Work Sq.Ft. (e)									132,600	512.5	26
792	Commercial											
Total		**471**		**453**			**1,009**	**775**	**$82,500**	**132,600**		**26**
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476	1 BR rental	197	96%	189	1.89	1.46	357	276				
476	2 BR rental	190	96%	182	2.49	1.51	453	275				
476	3 BR rental	6	96%	6	3.42	1.63	21	10				
476	1 BR Live Work	0	96%	0	2.08	1.74	-	-				
476	2 BR Live Work	60	96%	58	2.09	1.68	121	97				
	Employment in Live Work Sq.Ft. (e)									84,000	512.5	16
	Employment in Rental Residential project											10
	Commercial									316,000	275	1,149
Total		**802**		**770**			**1,754**	**1,282**	**$68,000**	**400,000**		**1,175**
Project Total		***1,273***		***1,223***			***2,763***	***2,057***	**$73,300**	***532,600***		***1,201***
							2.26	1.68				
EXISTING DEVELOPMENT (to be netted out)												
792		0	96%	0			0	0				15
476		1		1			4	1				15
(outside of Project Site)		(est)										
792		15	96%	14								N/A
476	None (project site encompasses the entire TAZ)											

Notes:

(a) TAZ 792 contains sites 1, 2 & 3 from the Central Station project description.

(b) Occupancy rates based on California Dept. of Finance calculation of Oakland citywide occupancy rate.

(c) Population and employed residents in owner and rental households calculated from the 2000 U.S. Census 1-Percent Public Use Microdata Sample (PUMS) Oakland/Berkeley area.

(d) Mean household income calculations assume that household incomes in rental units will average 100% Countywide area median income (AMI) and incomes in for-sale market-rate units will average 135 to 145% Alameda County AMI. For-sale household incomes assume that households will average 35% for principal, interest, taxes and insurance (PITI). All incomes are shown in 2000 constant dollars.

(e) Assumes that 10% of space in the live/work units will be used for employment uses. Employment per square foot factors reflect an equal mix of office and light industrial uses (275 and 750 sf per employee respectively).

(f) Self-storage employment based on survey of 10 facilities with average employment of 2.7 and median employment of 2.

Source: BUILD, Bay Area Economics, California Dept. of Finance, U.S. Census 2000.

Wood Street Zoning District

Oakland, California



Zoning Standards, Guidelines and Regulations for Development and Use of Property within the Wood Street Zoning District

D r a f t

04 August, 2004

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1.00 OVERVIEW

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1.10 Overview of Wood Street Zoning District

The Wood Street Zoning District is all that real property located in West Oakland, consisting of approximately 29.20 acres in total, and generally bounded by 10th Street, Wood Street, West Grand Avenue and Frontage Road/I-880, as more particularly described in the District Boundary. See Figure 1.20-3. The zoning, standards, guidelines, regulations and other requirements for the development and use of property within the Wood Street Zoning District (Wood Street Zoning Regulations) shall be those solely set forth herein and shall supersede, without limitation, those set forth in Title 17 of the Oakland Municipal Code.

All subsequent applications for development and use of property within the Wood Street Zoning District, including, without limitation, Preliminary and Final Development Plans (as further described herein), shall be consistent with the provisions of Wood Street Zoning Regulations.

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1.20 Components of Zoning Regulations

The primary components of the Wood Street Zoning Regulations are described below.

Section No.	*Title*
2.0	*Development Plans and Design Review* This section describes the process for approval of applications for development and use of property within the Wood Street Zoning District.
3.0	*District Area Designations and Definition of Terms* Organization and Definitions describe the categorization of each area within the Wood Street Zoning District as either a Development Area, Public Access Area or Public Street and describe the elements of the Wood Street Zoning Regulations that govern each designated area.
4.0	*Land Use Regulations* The Land Use Regulations describe the allowable land uses and set forth land use regulations for each of the Development Areas within the Wood Street Zoning District.
5.0	*Development Standards* The Development Standards set forth mandatory requirements for all development and use of property within the Wood Street Zoning District.
6.0	*Design Guidelines* The Design Guidelines set forth design parameters for all development and use of property within the Wood Street Zoning District.

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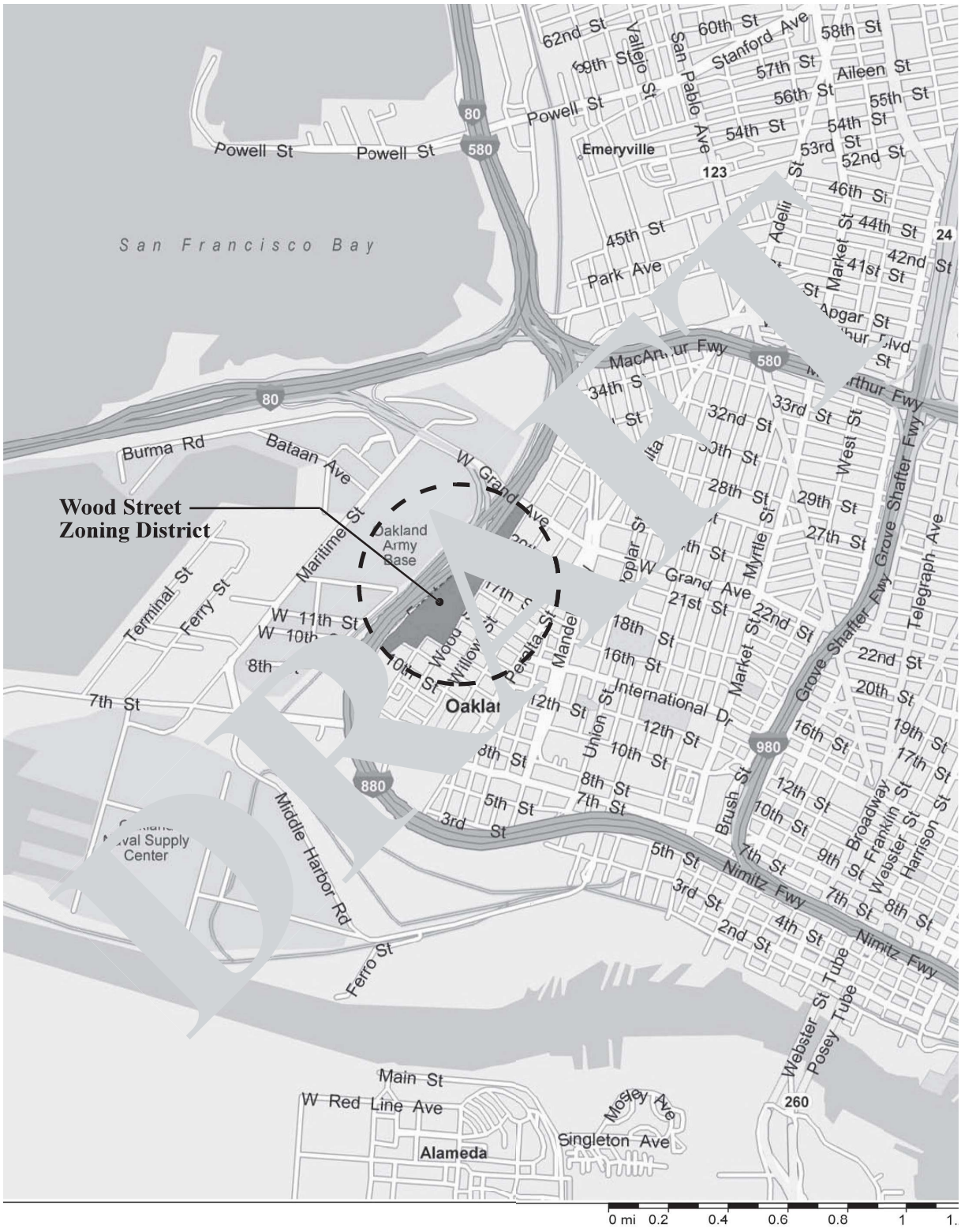
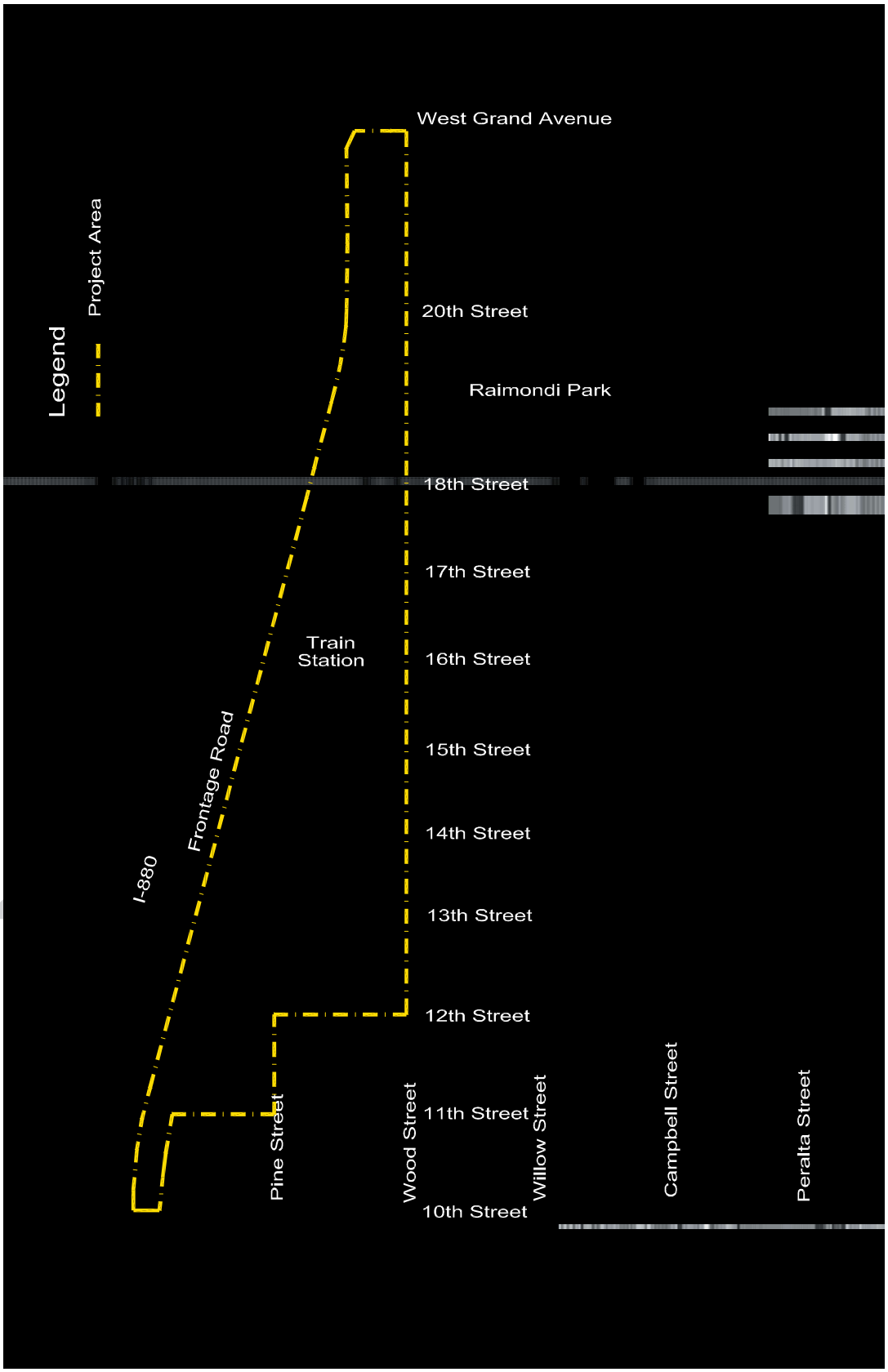


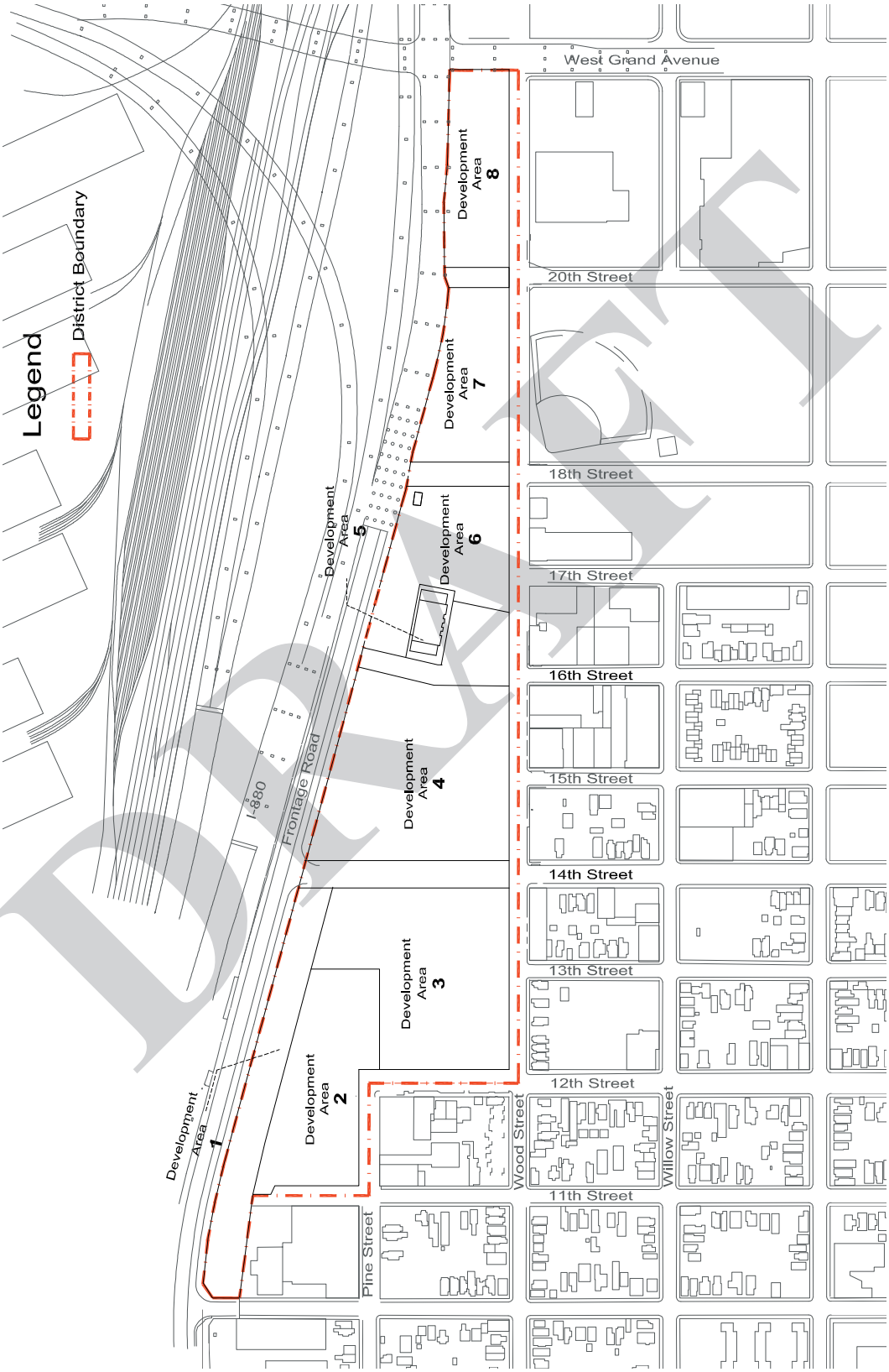
Vicinity Map

Figure 1.20-1



Zoning District - Aerial Photograph

Figure 1.20-2



District Boundary and Development Areas

Figure 1.20-3

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2.00 DEVELOPMENT PLANS AND DESIGN REVIEW

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2.10 Preliminary Development Plan

Development of each Development Area or Public Access Area within the Wood Street Zoning District requires submittal and approval of a Preliminary Development Plan and a Final Development Plan. More than one Development Area and/or Public Access Area may be included in a Preliminary Development Plan. Both the Preliminary and Final Development Plans shall be prepared by a professional design team consisting of a registered civil engineer, or licensed architect, planner or licensed building designer, and other qualified professionals that the City may require.

Other applications required for development and use of property within the Wood Street Zoning District (e.g., subdivision map) may be submitted concurrently with a Preliminary Development Plan. All required fees shall be paid in accordance with Oakland's Master Fee Schedule submitted at the time of applications for the Preliminary and/or Final Development Plans and/or other planning and subdivision approvals.

(X) copies of a Preliminary Development Plan for one or more Development Areas and/or Public Access Areas shall be submitted, and shall include the following:

1. Streets, driveways, sidewalks, pedestrian and bike ways, and off-street parking and loading areas, including integration with surrounding uses;
2. Location and approximate dimensions of structures;
3. Utilization of property for residential and non-residential use;
4. Estimated population;
5. Reservations for public uses, including schools, parks, playgrounds, and other open spaces;
6. Major landscaping features, including trees protected by OMC Chapter 12.36, as it may be amended;
7. Creeks protected by OMC Chapter 13.16, as it may be amended**;** or as identified by the Site Context Map submitted pursuant to Section 17.XX.060B;
8. Historic resources pursuant to the City's Historic Preservation Element Policy 3.8 or as defined in Section 15064.5 of Title 22 of the California Code of Regulations; and
9. Drainages and elevations establishing the scale, character, and relationship of buildings, streets, and open spaces.
10. A tabulation of the land use area and gross floor area to be devoted to various uses and a calculation of the average residential density per net acre and per net residential acre.
11. A construction and occupancy phasing plan.
12. A public services and facilities plan.
13. A public facilities financing plan.

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2.20 Review of Preliminary Development Plan

The Planning Director shall forward a copy of the Preliminary Development Plan to the City Engineer for review no later than 10 days after its submittal. The Planning Commission shall hold a public hearing on the Preliminary Development Plan no later than seventy-five days after it is sent to the City Engineer or within thirty days of the Planning Commission receiving a report from the City Engineer, whichever is earlier. Notice of the hearing shall be given by the City Clerk or Planning Director, as set forth in OMC Section X.XX. The Planning Commission shall approve the Preliminary Development Plan if it makes written findings that the Preliminary Development Plan is in substantial conformance with the Wood Street Zoning Regulations. The Planning Commission shall disapprove the Preliminary Development Plan if it makes written findings that the Preliminary Development Plan is not in substantial conformance with the Wood Street Zoning Regulations and that it is not possible to require changes or impose conditions of approval as are reasonably necessary to ensure conformity to the Wood Street Zoning Regulations. The decision of the Planning Commission on the Preliminary Development Plan shall become final ten calendar days after the adoption of the findings, unless the Planning Commission decision is appealed to the City Council in accordance with OMC Section X.XX. In the event the last date to file an appeal falls on a weekend or holiday when City offices are closed, the next date such offices are open for business shall be the last date of appeal.

If the Preliminary Development Plan for a Development Area or Public Access Area satisfies the requirements for a Final Development Plan (as described in Section 2.30 below), the Preliminary Development Plan may also serve as a Final Development Plan, and the applicant shall not be required to file a separate Final Development Plan for that Development Area or Public Access Area.

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2.30 Final Development Plan

Unless an extension is granted pursuant to Section 2.40 below, a Final Development Plan for a Development Area or Public Access Area shall be submitted no later than two years after the final approval of the Preliminary Development Plan. The Final Development Plan shall include all information contained in the Preliminary Development Plan plus the following:

1. The location of all public infrastructure that provides water, sewage, and drainage facilities and other utility services;
2. The location of all private infrastructure that provides gas, electric, and other utility services;
3. Detailed building plans and elevations;
4. Landscape plans prepared by a landscape architect;
5. The character and location of signs;
6. Improvement plans for all public and private streets, driveways, sidewalks, pedestrian and bike ways, and off-street parking and loading areas;
7. Grading or other earth-moving plans; and
8. The public facilities financing plan approved as part of the Preliminary Development Plan modified as necessary to reflect changed conditions or new information.

If the Final Development Plan is not submitted within two years of the date of approval of the Preliminary Development Plan, the Preliminary Development Plan shall be void and of no further force and effect unless an extension is approved pursuant to Section 2.40 below.

An applicant shall submit all legal documents required for dedication or reservation of land and for all bonds or other forms of financial assurances acceptable to the City required for timely completion of public improvements necessitated by the project (including, without limitation, for guaranteeing 100% of the costs of completion and faithful performance of the work), with the Final Development Plan.

2.40 Review of Final Development Plan

The Planning Director shall forward the Final Development Plan to the City Engineer for review no later than 10 days after its submittal. The Planning Commission shall hold a public hearing on the Final Development Plan no later than seventy-five days after the Plan is sent to the City Engineer or within thirty days of the Planning Commission receiving a report from the City Engineer, whichever is earlier. Notice of the hearing shall be given by the City Clerk or Planning Director as set forth in O.M.C. Section X.XX.

The Planning Commission shall approve the Final Development Plan if it makes written findings that the Final Development Plan is in substantial conformance with the Preliminary Development Plan and the Wood Street Zoning Regulations. The Planning Commission shall disapprove the Final Development Plan if it makes written findings that the Final Development Plan is not in substantial conformance with either the Preliminary Development Plan or the Wood Street Zoning Regulations and that it is not possible to require changes or impose conditions of approval as are reasonably necessary to ensure such conformity.

The decision of the Planning Commission on the Final Development Plan shall be final ten calendar days after the adoption of the findings unless the Planning Commission decision is appealed to the City Council in accordance with O.M.C. Section X.XX. In the event the last date to file an appeal falls on a weekend or holiday when City offices are closed, the next date such offices are open for business shall be the last date of appeal.

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An applicant, based on good cause, may request a written extension of the initial two-year time limit to submit a Final Development Plan for a maximum of two years at any time prior to the expiration of the two-year period. The Planning Director may approve, modify, or deny such request. The decision of the Planning Director may be appealed to the Planning Commission with ten days of the decision in accordance with O.M.C. Section X.XX. Prior to the expiration of any extension granted by the Planning Director, an applicant, based on good cause, may request a second written extension of the initial two-year time limit to submit a Final Development Plan. This second request shall be referred to the Planning Commission. The Planning Commission may approve, modify or deny such request for a maximum of two years. The decision of the Planning Commission shall be final and not appealable.

Approval of a Final Development Plan shall expire and be of no further force and effect if: (1) three years after the approval of the Final Development Plan substantial construction pursuant to a building permit has not commenced; or (2) construction has not continued in conformance with the approved phasing plan, as determined by the Planning Director and set forth in writing and provided to the applicant. The decision of the Planning Director may be appealed to the Planning Commission within ten days of the date of the decision in accordance with O.M.C. Section X.XX. The decision of the Planning Commission shall be final and not appealable.

An applicant, based on good cause, may request a written extension of the Final Development Plan for three years at any time prior to the expiration of the date of approval of the Final Development Plan. The Planning Director may approve, modify, or deny such request. The decision of the Planning Director may be appealed to the Planning Commission within ten days of the date of the decision in accordance with Section 17.139.140. The decision of the Planning Commission shall be final and not appealable. Prior to the expiration of any extension to an approved Final Development Plan granted by the Planning Director, an applicant, based on good cause, may request a second written extension of the Final Development Plan. This second request shall be referred to the Planning Commission. The Planning Commission may approve, modify or deny such proposal for a maximum of three years. (The decision of the Planning Commission shall be final and not appealable). Based on good cause, the Planning Commission may, at a public hearing, grant one additional and final extension of the Final Development Plan for up to three years if an application for an extension is filed prior to the expiration of the date of the previous extension granted by the Planning Commission. The decision of the Planning Commission shall be final and not appealable.

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2.50 Final Development Plan/Final Design Review

Final Development Plan / Final Design Review shall be required as part of the approval process for a Final Development Plan. After design review approval, no further design review approvals of the Development Area or Public Access Area shown on the Final Development Plan shall be required except to the extent that the application for Final Design Review did not provide adequate information regarding one or more uses within the Development Area or Public Access Area to allow for Final Design Review. The procedure for Final Development Plan / Final Design Review shall follow the schedule outlined in Section 17.136.060. Final Development Plan / Final Design Review shall be limited to a determination of whether or not the proposed design is in substantial compliance with the design guidelines specified in these Wood Street Zoning Regulations. Remodels and additions to the buildings and sites within a Development Area or Public Access Area after issuance of a certificate of occupancy shall be conducted pursuant to O.M.C. Section 17.136.060.

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3.00 DISTRICT AREA DESIGNATIONS AND DEFINITION OF TERMS

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3.10 District Area Designations

All land areas within the Wood Street Zoning District are designated as either Development Areas, Public Access Areas or Public Streets, as described below. *See Figure 3.10-1 District Area Designations.*

1. **Development Areas** are comprised of one or more privately owned lots that are intended for development. The Wood Street Zoning District includes eight Development Areas designated by the number one (1) through eight (8)

2. **Public Access Areas** are comprised of privately and/or publicly owned lots on which no permanent building is allowed. Public Access Areas include publicly accessible open space, parking areas, vehicular and pedestrian access areas, loading zones, and landscaped recreational spaces.

   Public Access Areas include the extensions of 14th Street, 15th Street, 18th Street, and 20th Street. These areas provide pedestrian, bicycle, emergency access between Frontage Road and Wood Street, but do not allow vehicular transit traffic. Public Access Areas also include the 16th Street Plaza fronting the 16th Street Train Station.

3. **Public Streets** are comprised of public right of ways that are developed and maintained as public streets.

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3.20 Overlay Zones

Three Overlay Zones are established to provide for regulation of Development Areas in response to specific adjoining conditions. Regulations applicable to Overlay Zones modify or replace the regulations otherwise applicable to the underlying Development Area as specified herein.

1. **Wood Street Overlay Zone –** The purpose of the Wood Street Overlay Zone is to establish a transition in scale from the existing neighborhood and the mixed-use development and to promote an active and pedestrian-scaled street frontage.

   The Wood Street Overlay Zone is 30 feet in depth as measured from the street line, and parallels Wood Street between 12th Street and 20th Street.

2. **Plaza Overlay Zone –** The purpose of the Plaza Overlay Zone is to ensure that new development fronting the 16th Street Plaza creates a well-defined urban space with active ground floor uses facing the 16th Street Plaza and to ensure that the scale of new buildings is complimentary to the scale of the 16th Street Train Station.

   The Plaza Overlay Zone frames the 16th Street Plaza. The southern portion of the Overlay Zone is twenty (20) feet in depth, as measured from the 16th Street line and extends from Wood Street to a line parallel to and five (5) feet from the south facade of the 16th Street Train Station. The northern portion of the Overlay Zone is twenty (20) feet in depth as measured from the street line bounding the Plaza and extends from Wood Street to a line parallel to and five (5) feet from the south facade of the 16th Street Train Station.

3. **Frontage Road Overlay Zone –** The purpose of the Frontage Road Overlay Zone is to allow greater flexibility for development facing onto a busy arterial street.

   The Frontage Road Overlay Zone is twenty (20) feet in depth, as measured from the street line of Frontage Road, and extends from 10th Street north to the southern edge of the 16th Street Plaza.

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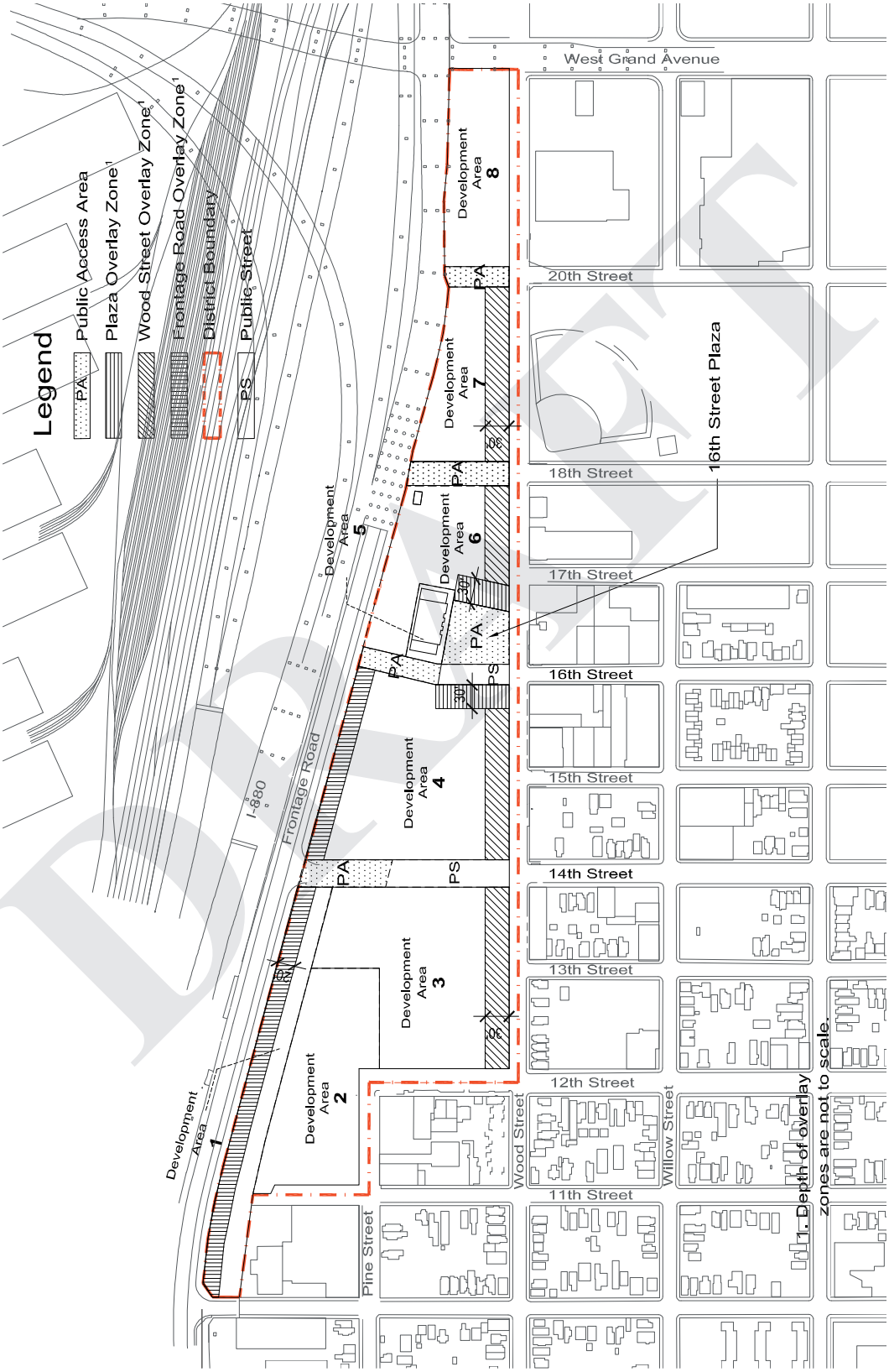

District Area Designations

Figure 3.10-1

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3.40 Definition of Terms

The following definitions apply to terms used in the Wood Street Zoning Regulations. For terms not defined below, the definition shall be as set forth in Section 17.09 of the Oakland Planning Code.

At-grade — Facilities or activities located on the ground with no structure or occupied space located below.

Above grade — Facilities or activities located over a parking structure or occupied space.

Awning (or Canopy) — A device that projects from the exterior facade of a building and is intended to shelter an opening or window below.

Balcony — A usable outdoor space located above the ground floor and projecting from the face of the building with enclosed space immediately below.

Bay Window — An occupied space cantilevered from the face of the building and located above the ground floor.

Below Grade Parking Garage — A parking garage located below grade such that the first finished floor or outdoor area above the parking deck is not more than five (5) feet above grade.

Building Frontage — Building portions of buildings containing occupied space and located parallel and immediately adjacent to a street line or street setback line.

Development Project — Any facility constructed on a private parcel within a Development Area.

Development Area — See Section 3.10 of this Zoning District.

Elevated Roadway — Any roadway or portions of roadway more than five (5) feet above the average adjacent grade measured at the adjoining lot line.

Equipment — Utility meters, transformers, back flow preventers, check values, heating, Satellite Dishes, ventilation and cooling equipment, and other devices associated with utility services or building systems. Equipment does not include plumbing and appliance vents, louvers, lighting and other minor devices.

Facade — The exterior wall of a building.

Ground Floor — The first story of a building located not more than five (5) feet above and not more than three (3) feet below the average finished grade at the adjoining street line or lot line. A ground floor may be located above a below grade parking garage.

Ground Floor Parking Garage — A parking garage located at the ground floor, as defined above.

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Interior Lot Line	A lot line that separates private lots, not including lot lines adjoining Public Access Areas.
Landscape Area	Any portion of a Development Area that is not occupied by a building, parking area, service area or vehicular circulation area.
Limit of Development Area	A lot line that divides a Development Area from a Public Access Area.
Limited Activity	See definition in Section 4.23 of this Zoning District.
Opposite Walls	An exterior wall of the same or of another building on the same lot that is intersected by a perpendicular line extending horizontally outward from the window of a habitable room, or from anywhere along the same wall within ten (10') feet to either side of the centerline of the window.
Mixed-Use Development-	An integrated development containing residential, commercial and/or industrial activities.
Occupied Space	A space within a building used for activities associated with human occupation, excluding parking garages, storage areas, utility or service spaces and waste handling areas.
Overlay Zone	See Section 3.00 of this Zoning District.
Parking Garage	A structure or portion of a structure containing three or more parking spaces.
Parallel	A line shall be considered parallel to another line if the least angle created by their intersection (if any) is not more than 30 degrees.
Perpendicular	A line shall be considered perpendicular to another line if the least angle created by their intersection is not less than 60 degrees.
Planning	The City of Oakland Planning Code Title 17 of the Oakland Municipal Code, the most recent revision date as of the adoption of the Central Station Zoning District.
Public Access Area	See Section 3.10 of this Zoning District.
Public Streets	See Section 3.10 of this Zoning District.
Setback	The required distance from a lot line or street line to the face of a building or structure.
Surface Parking	Parking located at grade and not enclosed in a structure. Surface parking may have an overhead shelter.

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Street Furniture	Fixed components within the public right of way or Public Access Area including trash receptacles, light poles, bollards, benches, planters and bike racks.
Street Line	A lot line dividing a lot from a public street, or a Public Access Area
Street Frontage	Any portion of a development project adjoining a street line
Street Setback	The required setback at a street line
Tuck-under Parking	Partially enclosed parking located below or partially below occupied space
Visible from the street	Visible from any point five (5) feet above the surface of a public street or Public Access Area immediately adjoining the lot or Development Area in question.

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4.00 LAND USE REGULATIONS

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4.10 Land Use Regulations

Applicability
The provisions of this section apply to all Development Areas within the Wood Street Zoning District.

Allowable Activities
Activities are regulated based on the four designations defined below. Activity designations for each Development Area are set forth in *Table 4.20-1.*

"P". Permitted Activities
These activities are permitted as a matter of right. Any permitted activity may be required to obtain a business license, or equivalent, prior to commencement of the use.

"L". Limited Activities
These activities are permitted, or are permitted as a conditional activities, subject to the limitations set forth in Section 4.23. (Note that there is no equivalent Limited Activities category in the Planning Code)

"C". Conditionally Permitted Activities
These activities require a Conditional Use Permit as set forth in the Planning Code.

"N". Prohibited Activities
These activities are not permitted.

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4.20 Activity Classifications

Activity classifications are as set forth in Section 17.10 of the Planning Code.

4.21 Accessory Activities

Accessory activities shall be allowed as set forth in the Planning Code, Section 17.10.040, except as modified by the following provisions:

1. Home Occupations.
   Home occupations are allowed as an accessory activity in all Development Areas as set forth in Section 17.112 of the Planning Code, except as modified by the following provisions:

   a. Home occupations may employ up to two full time employees other than a resident of the living unit.
   b. Exterior signage shall be allowed as set forth in Section 5.70 of Development Standards.
   c. Limitations on vehicular storage set forth in Section 17.112.040 Paragraph E of the Planning Code shall not apply to the Wood Street Zoning District.

4.22 Limited Activities

The purpose of the limited activity regulations is to allow the integration of appropriately scaled mixed-use activities that enhance the quality of life for the neighborhood, improve economic vitality and help reduce automobile travel, without compromising the predominantly residential character of the Wood Street Zoning District.

All activities indicated as "L" in *Table 4.20-1* are subject to the limitations set forth in this Section 4.22. Limited activities regulated herein are permitted either as a matter of right or as a conditional activity, subject to the limitations set forth under each activity classification. Limited activities not indicated as permitted or permitted with a Conditional Use Permit are prohibited.

Limited Activities are subject to the parking requirements set forth in Section 5.50

Residential Activities

1. Service-Enriched Permanent Housing.

   a. Limited activities permitted
      1. Service-enriched permanent housing serving senior citizens age sixty years or older.

   b. Limited activities permitted with a Conditional Use Permit
      1. All other service -enriched permanent housing types.

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Civic Activities

2. Community Assembly.

    a. Limited activities permitted

        1. Places of worship, churches, temples, mosques, and synagogues with a total floor area not exceeding 2,500 square feet.
        2. Public, parochial, private non-profit clubs and lodges, meeting halls, and recreation centers with a total floor area not exceeding 5,000 square feet.
        3. Public, parochial, and non profit gymnasiums with a total floor area not exceeding 5,000 square feet.

3. Administrative.

    a. Limited activities permitted

        1. Administrative activities with a total floor area not exceeding 2,500 square feet.

    b. Limited activities permitted with a Conditional Use Permit

        1. Administrative activities with a total floor area greater than 2,500 square feet but not exceeding 5,000 square feet.

4. Health Care.

    a. Limited activities permitted
        1. Health care activities with a total floor area not exceeding 2,500 square feet.

    b. Limited activities permitted with a Conditional Use Permit
        1. Health care activities with a total floor area greater than 2,500 square feet but not exceeding 5,000 square feet.

5. Utility and Vehicular.

    a. Limited activities permitted

        1. Police substations with a total floor area not exceeding 1,000 square feet.
        2. Neighborhood serving post offices with a total floor area not exceeding 1,000 square feet, which provide all required on-site parking.

6. Recreation and Open Markets.

    a. Limited activities permitted

        1. Open markets located in the 16th Street Plaza with a frequency not exceeding once a week.

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7. General Food Sales.

   a. Limited activities permitted
      1. Markets and restaurants located on the ground floor with a total floor area not exceeding 5,000 square feet.

   b. Limited activities permitted with a Conditional Use Permit
      1. Markets or restaurants with a total floor area greater than 5,000 square feet but not exceeding 20,000 square feet.

8. Convenience Market.

   a. Limited activities permitted
      1. Convenience markets with hours of operation limited to between 6AM and 11PM that do not sell distilled spirits, with a total floor area not exceeding 2,500 square feet.

   b. Limited activities permitted with a Conditional Use Permit
      1. Convenience markets with hours of operation limited to between 6AM and 2AM.
      2. Convenience markets with a total floor area greater than 2,500 square feet but not exceeding 5,000 square feet.

9. Alcoholic Beverage Sales

   a. Limited activities permitted
      1. Alcoholic beverage sales with hours of operation limited to between 6AM and 11PM, that sell beer and wine but do not sell liquor, with a total floor area not exceeding 2,500 square feet.

   b. Limited activities permitted with a Conditional Use Permit
      1. Alcoholic beverage sales with a total floor area greater than 2,500 square feet but not exceeding 5,000 square feet.

10. Convenience Sales and Service.

   a. Limited activities permitted
      1. Convenience sales and services with a total floor area not exceeding 2,500 square feet.

   b. Limited activities permitted with a Conditional Use Permit
      1. Convenience sales and services with a total floor area greater than 2,500 square feet but not exceeding 5,000 square feet.

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11. Medical Service.

    a. Limited activities permitted
        1. Medical treatment services with a total floor area not exceeding 2,500 square feet.

12. General Retail Sales.

    a. Limited activities permitted
        1. General retail sales with a total floor area not exceeding 2,500 square feet.

    b. Limited activities permitted with a Conditional Use Permit
        1. General retail sales with a total floor area greater than 2,500 square feet but not exceeding 5,000 square feet.

13. General Personal Service.

    a. Limited activities permitted
        1. General personal services with a total floor area not exceeding 2,500 square feet.

    b. Limited activities permitted with a Conditional Use Permit
        1. General personal services with a total floor area greater than 2,500 square feet but not exceeding 5,000 square feet.

14. Consultative and Financial Service.

    a. Limited activities permitted
        1. Consultative and financial services with a total floor area not exceeding 2,500 square feet.

    b. Limited activities permitted with a Conditional Use Permit
        1. Consultative and financial services with a total floor area greater than 2,500 square feet but not exceeding 5,000 square feet.

15. Retail Business Supply.

    a. Limited activities permitted
        1. Neighborhood scale office and art supply stores with a total floor area not exceeding 5,000 square feet.

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16. Construction Sales and Services.

    a. Limited activities permitted

        1. Neighborhood serving hardware and construction product sales and services with a total floor area not exceeding 5,000 square feet.

    b. Limited activities permitted with a Conditional Use Permit

        1. Neighborhood serving hardware and construction product sales and services with a total floor area greater than 5,000 square feet but not exceeding 10,000 square feet.

4.23 Joint Living and Working Quarters

Joint Living and Working Quarters are allowed in all Development Areas subject to the standards set forth in Section 17.102.190 of the Planning Code.

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Table 4.20-1 (Page 1 of 2)
Activity Regulations

Use Classifications	Development Areas							
	1	2	3	4	5	6	7	8
Residential Activity Types								
Permanent	P	P	P	P	N	P	P	P
Residential Care occupying a 1-family dwelling	C	C	C	C	N	C	C	C
Service Enriched Permanent Housing	L	L	L	L	N	L	L	L
Transitional Housing	N	N	N	N	N	N	N	N
Emergency Shelter	N	N	N	N	N	N	N	N
Semi-Transient	N	N	N	N	N	N	N	N
Civic Activity Types								
Essential Service	N	P	N	P	P	P	N	P
Limited Child-Care	P	P	P	P	P	P	P	P
Community Assembly	N	L	N	L	C	L	N	L
Community Education	C	C	C	C	C	C	C	C
Non-Assembly Cultural	N	P	N	P	P	P	N	P
Administrative	N	L	N	L	P	L	N	P
Health Care	N	L	N	C	C	C	N	P
Special Health Care	N	N	N	N	N	N	N	N
Utility and Vehicular	N	L	N	L	L	L	N	L
Extensive Impact	N	N	N	N	N	N	N	N
Telecommunications	P	P	P	P	P	P	P	P
Commercial Activity Types								
General Food Sales	N	L	N	L	L	L	N	L
Convenience Market	N	L	N	L	L	L	N	L
Fast-Food Restaurant	N	N	N	C	C	C	N	C
Alcoholic Beverage Sales	N	L	N	L	L	L	N	L
Convenience Sales and Service	N	L	N	L	L	L	N	P
Mechanical and Electronic Games	N	N	N	N	N	N	N	P
Medical Service	N	L	N	L	L	L	N	L
General Retail Sales	N	L	N	L	L	L	N	P
General Personal Service	N	L	N	L	L	L	N	P
Consultative and Financial Service	N	L	N	L	L	L	N	P
Consumer Laundry and Repair	N	N	N	N	N	N	N	N
Group Assembly	N	N	N	N	C	N	N	P

Activity Designations:
P= Permitted Activity
C= Conditionally Permited Activity
L= Limited Activities permitted as set forth in Section 4.23
N= Prohibited Activity

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Table 4.20-1 (Page 2 of 2)
Activity Regulations

Use Classifications	Development Areas							
	1	2	3	4	5	6	7	8
Commercial Activity Types - Continued								
Business and Communications	N	C	N	C	C	C	N	P
Retail Business Supply	N	L	N	L	L	L	N	P
Research Service	N	N	N	N	N	N	N	P
General Wholesale Sales	N	N	N	N	N	N	N	P
Transient Habitation	N	N	N	N	N	N	N	P
Construction Sales and Services	N	L	N	L	L	L	N	L
Automotive Sales, Rental and Delivery	N	N	N	N	N	N	N	C
Automotive Servicing	N	N	N	N	N	N	N	N
Automotive Repair and Cleaning	N	N	N	N	N	N	N	N
Automotive Fee Parking	N	N	N	N	N	N	N	P
Transport and Warehousing	N	P	N	N	N	N	N	N
Animal Care	N	N	N	N	N	N	N	N
Undertaking Service	N	N	N	N	N	N	N	N
Scrap Operation	N	N	N	N	N	N	N	N
Manufacturing Activities Types								
Custom	N	P	N	C	C	C	N	P
Light	N	C	N	N	N	N	N	C
General	N	N	N	N	N	N	N	C
Heavy	N	N	N	N	N	N	N	N
Small Scale Transfer and Storage Hazardous Waste Management	N	N	N	N	N	N	N	N
Industrial Transfer/Storage Hazardous Waste Management	N	N	N	N	N	N	N	N
Residuals Repositories Hazardous Waste Management	N	N	N	N	N	N	N	N
Agricultural and Extrative Activities Types	N	N	N	N	N	N	N	N
Plant Nursery	N	N	N	N	N	N	N	N
Crop and Animal Raising	N	N	N	N	N	N	N	N
Mining and Quarrying	N	N	N	N	N	N	N	N

Activity Designations:
P= Permitted Activity
C= Conditionally Permited Activity
L= Limited Activities permitted as set forth in Section 4.23
N= Prohibited Activity

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5.00 DEVELOPMENT STANDARDS

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5.10 Introduction to Development Standards

Applicability
The Development Standards are mandatory provisions that apply to all Development Areas in the Wood Street Zoning District, except as specified herein. Each section of the Development Standards includes a statement which indicates any limits of applicability within a particular Development Area and any conditions or locations that are exempt from the standards contained in that section.

Statement of intent
Each set of standards includes a statement of intent which sets forth the underlying purpose of that standard.

General standards and standards applicable only to specific Development Areas
All sections include general standards that apply to all Development Areas. Certain sections also include standards only applicable to a specific Overlay Zone or Development Area. In the case of conflict, standards applicable to a specific Overlay Zone or Development Area shall take precedence over general standards.

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5.20 Maximum Density

Applicability
The following standards apply to all residential uses.

No Exceptions

Statement of Intent
The intent of the maximum density standard is to establish a limit on the number of dwelling units allowed in a specific Development Area. Maximum density is regulated by means of a required minimum land area per regular dwelling unit.

General Standards
1. The maximum allowable density for residential development in each Development Area shall be as set forth in *Table 5.90-1 Development Standards Summary.*

2. For efficiency dwelling units, the minimum allowable lot area per unit shall be the same as for regular dwelling units.

3. One additional unit is allowed if after division of the total lot area by the minimum lot area the reminder is equal to 2/3 or greater of the minimum lot area.

4. Refer to the Planning Code for Definition of Regular Dwelling Unit and Efficiency Dwelling Unit.

5.21 Minimum Density

Applicability
The following standards apply to all residential uses.

No Exceptions

Statement of Intent
The intent of the minimum density standard is to ensure that residential development in the Wood Street Zoning District provides a number of dwelling units sufficient to create an active, mixed use, urban development. Minimum density is regulated by means of a maximum allowable lot area per regular dwelling unit.

General Standard
1. The minimum allowable density for residential development in each Development Area shall be as set forth in *Table 5.90-1 Development Standards Summary.*

2. For efficiency dwelling units, the maximum allowable lot area per unit may be increased by 1/3.

3. For rooming units, there is no minimum density standard.

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5.22 Floor Area Ratio

Applicability
The following standard applies to all non-residential uses except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the standards set forth in this section:

1. Non-residential uses located in existing buildings

Statement of Intent
The intent of the floor area ratio standard is to establish a maximum allowable floor area for non-residential uses on a given lot.

General Standard

1. The allowable FAR for each Development Area shall be as set forth in *Table 5.90-1 Development Standards Summary*.

2. On lots containing both residential and non-residential uses, no portion of the lot area used to meet the minimum lot area per dwelling unit set forth in the density standard, shall be used as a base for computing the allowable floor area for any non-residential facility on the same lot.

5.23 Maximum Height

Applicability
The following standards apply to all uses.

Exceptions
The locations or conditions indicated below are exempt from the standards set forth in this section:

1. Existing Buildings

Statement of Intent
The intent of the maximum height standard is to establish a maximum allowable height of buildings to ensure a compatible relationship with surrounding development.

General Standards

1. The maximum height allowed in each Development Area shall be as set forth in *Table 5.90-1 Development Standards Summary,* except as noted otherwise below. See height zones, *Figure 5.23-1* for graphic illustration of maximum height.

2. Projections above height limits are allowed as set forth in Section 17.108.30 of the Planning Code.

Standards for Development Area 3

3. A maximum height of sixty five (65) feet shall apply to any portion of a structure located within that portion of Development Area 3 indicated in Figure 5.23-1.

Standards for Development Area 6

4. A maximum height of thirty five (35) feet shall apply to any portion of a new structure located on that portion of Development Area 6 located between the 16th Street Station/ Development Area 5 and the Frontage Road.

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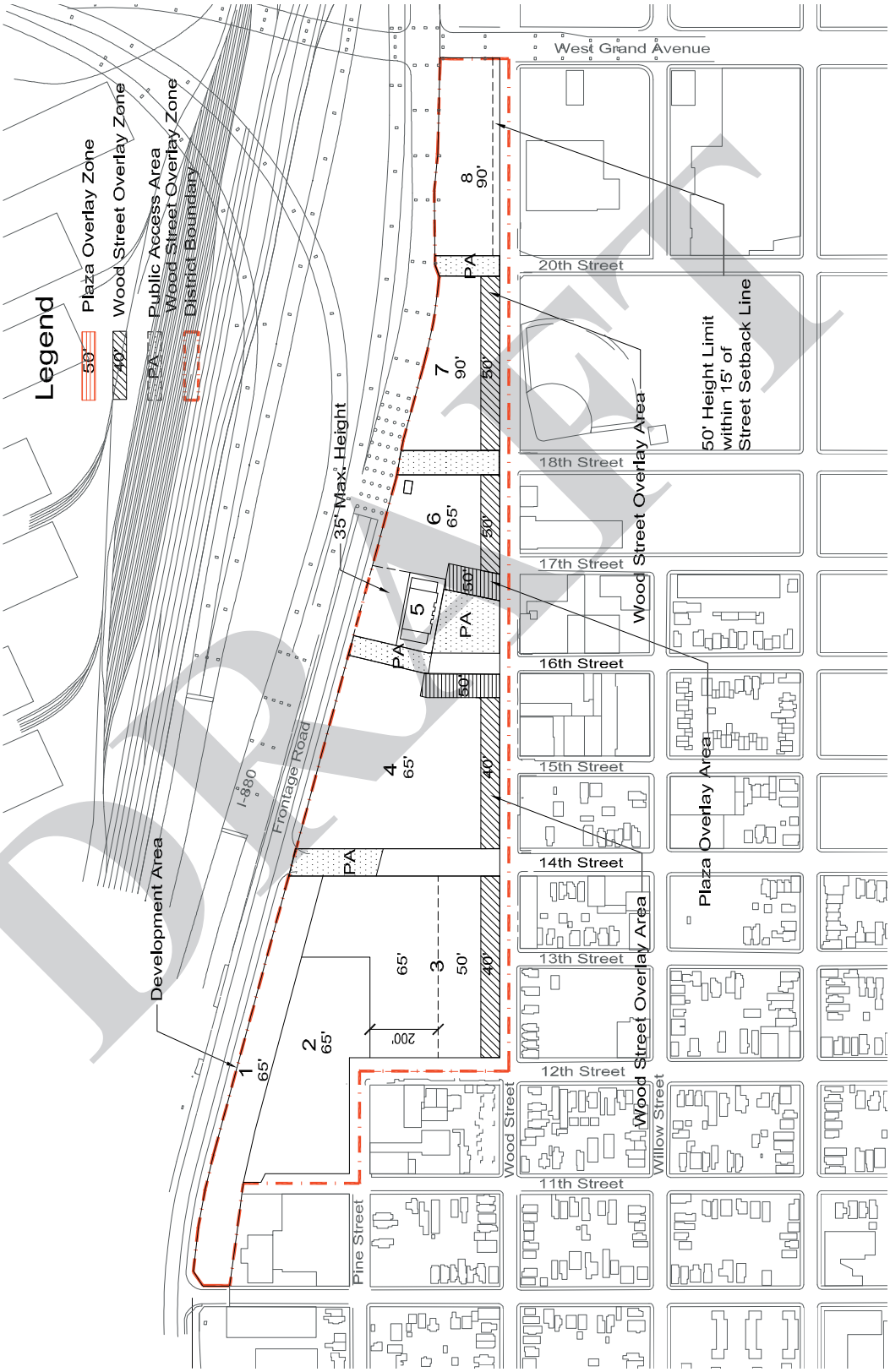

Height Zones

Figure 5.23-1

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Standards for Development Area 8

5. A maximum height of fifty (50) feet shall apply to any portion of a structure located within fifteen (15) feet of the street setback line on Wood Street.

5.24 Minimum Setbacks

Applicability
The following standards apply to all uses.

Exceptions
The locations or conditions indicated below are exempt from the standards set forth in this section:

1. Existing buildings

Statement of Intent
The intent of the minimum setbacks standard is to establish a minimum required distance between the building face and the property line.

Setback Classifications
For the purposes of the Wood Street Zoning District Regulations, the typical classifications of front, side, and rear yards are replaced by the setback classifications described below.

1. **Street setbacks** refer to required setbacks from property lines or easement lines adjoining Public Streets or Public Access Areas.

2. **Interior setbacks** refer to required setbacks at all lot lines separating privately owned lots within a development area.

General Standards

1. Minimum required setbacks shall be as set forth in *Table 5.90-1*, *Development Standards Summary.* See Figure 5.24-1 for graphic illustration of minimum street setbacks.

2. The required setback area shall be unobstructed except for facilities allowed by Section 17.108.130 of the Planning Code.

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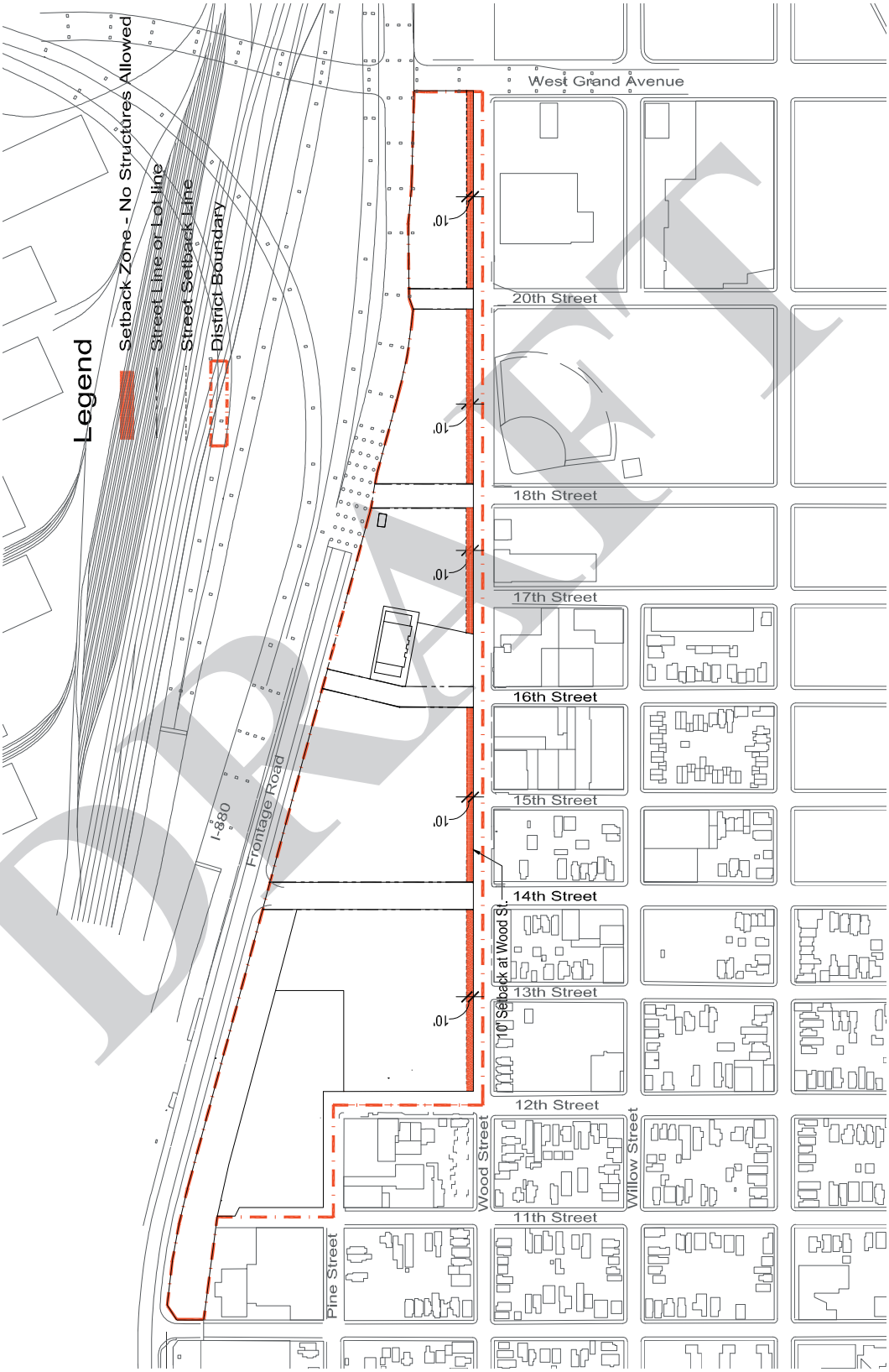

Minimum Street Setbacks

Figure 5.24-1

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5.30 Building Frontage

Applicability
The following standards apply to all uses except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the standards set forth in this section:

1. Existing buildings
2. Development located adjacent to elevated roadways
3. Development located in the Frontage Road Overlay Zone

Statement of Intent
The intent of building frontage standards is to ensure that occupied building frontage is provided at the street line or street setback line to create an active, well defined street.

General Standards

1. For any individual lot, a minimum percentage of each street line or street setback line shall be occupied by building frontage of at least one story or fifteen (15) feet in height and at least twenty (20) feet in depth. See *Figure 5.30-1.*

   For each lot, the minimum percentage of the street line or street setback line occupied by building frontage shall be as indicated below:

   a. Wood Street Overlay Zone 75%
   b. Plaza Overlay Zone 90%
   c. All other locations 50%

2. Of the required building frontage, a minimum of 2/3 shall be located within two feet of the street line or street setback line. The remaining 1/3 may be setback from the street line or street setback line a distance not to exceed twelve (12) feet. See *Figure 5.30-2*

3. Building frontage shall contain occupied space at the first story.

4. Covered arcades, porches, gate houses and similar architectural elements that create sheltered outdoor space may be considered building frontage, provided these elements adjoin or provide access to occupied space.

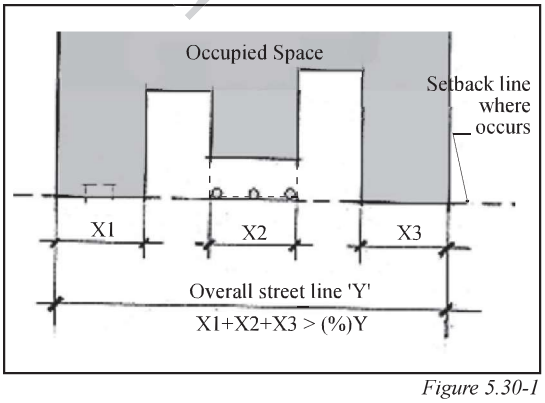

Figure 5.30-1

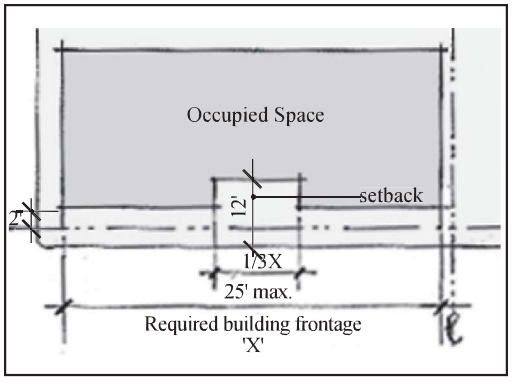

Figure 5.30-2

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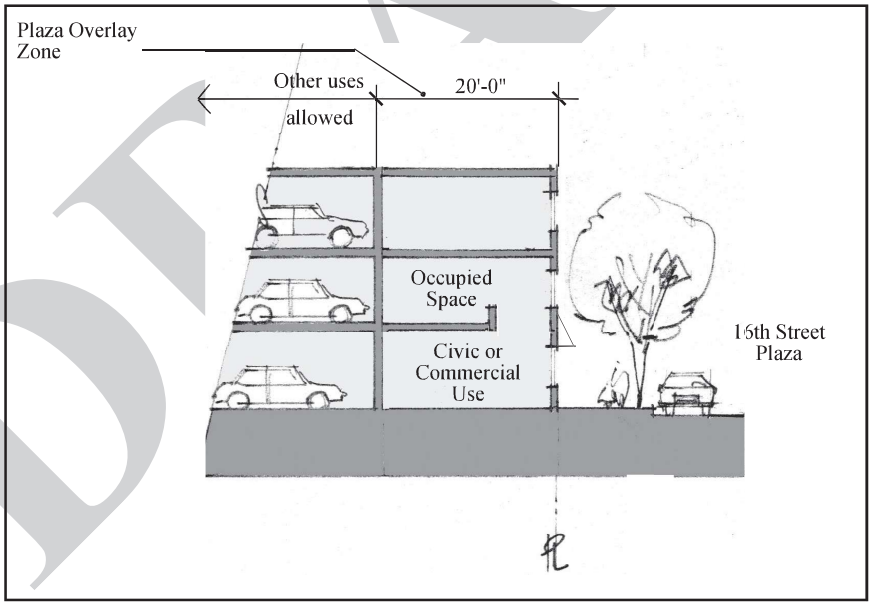
Standards for Development Area 8

1. A minimum of 50% of the required building frontage at Wood Street shall contain occupied space. The remainder of the required building frontage may contain parking or other non-occupied uses.

Standards for the Plaza Overlay Zone

1. At ground level, buildings within the Plaza Overlay Zone shall contain either:
   a. Publicly accessible civic or commercial uses
   b. Lobbies serving occupied space above

2. Upper floors within the Plaza Overlay Zone shall contain occupied space. See *Figure 5.30-7*



Building frontage at Plaza Overlay Zone *Figure 5.30-3*

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5.31 Building Frontage at Corner Locations on Wood Street

Applicability
The following standards apply to all uses located on Wood Street at intersections with public streets or with Public Access Areas:

Exceptions
The locations and conditions indicated below are exempt from the standards set forth in this section:

1. The intersection of Wood Street and West Grand Avenue, (West Grand Avenue is elevated at this location)

Statement of Intent
The intent of the standards contained in this section is to ensure that occupied building frontage is provided at corner locations where it will serve to define and activate the street frontage.

General Standards

1. At corner locations on Wood Street a continuous building frontage at least one story or fifteen (15) feet in height shall be provided at the street setback line for a distance of thirty (30) feet minimum along Wood Street, and twenty (20) feet minimum along the intersecting street line. See *Figure 5.31-1*

2. Building frontage at corner locations shall contain occupied space.

3. Recessed or beveled corner entries are acceptable at corner frontages.

4. A minimum of one pedestrian entry into the building is required to be provided from either of the intersecting streets (or Public Access Area) within thirty (30) feet of the corner, as measured from the intersection of the street setback line at Wood Street and the street line or at the intersecting street.

Standards for Plaza Overlay Zone

5. Corner setbacks are allowed where required to provide outdoor seating areas for cafes, restaurants or similar General Food Sale activities.

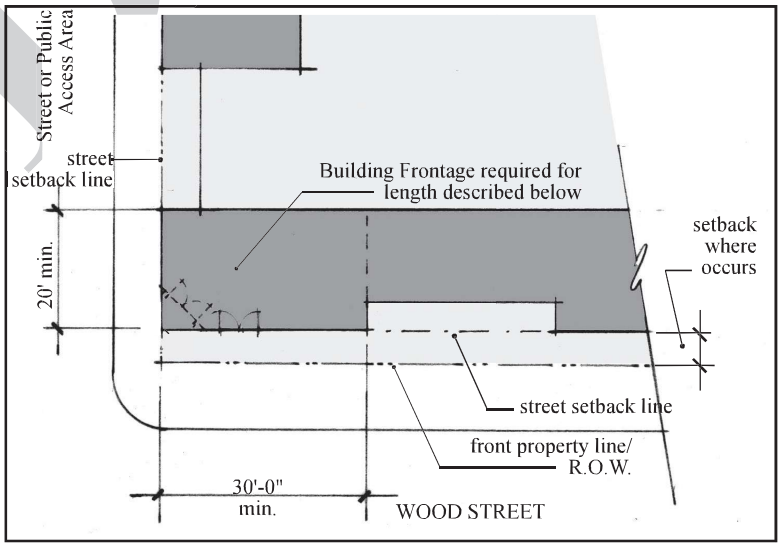

Figure 5.31-1

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5.32 Street Front Entries

Applicability
The following standards shall apply at all uses adjacent to the street line or street setback line at Wood Street, 14th Street, 16th Street and 18th Street except as specified below

Exceptions
The locations and conditions indicated below are exempt from the standards set forth in this section:

1. Building frontage located in Development Area 8
2. Building frontage located in the Frontage Road Overlay Zone
3. Building frontage adjacent to elevated roadways
4. Existing buildings

Statement of Intent
The intent of the street front entries standard is to encourage street-oriented development projects through provision of a consistent pattern of street oriented pedestrian entries.

General Standards

1. For each lot, the average distance and the maximum distance between pedestrian entries at the street line or street setback line shall not exceed the distances set forth below. The distance between entries shall be measured from center line of entry to center line of entry.

	Maximum Distance Between Adjacent Entries
Wood Street Overlay Area	60'
Plaza Overlay Area	60'
All Other Street Frontages	100'

2. For the purpose of this standard, pedestrian entries would include the following:
   a. Entry to individual units or commercial spaces
   b. Common entry to a building containing more than one unit
   c. Outdoor entry leading to common outdoor space

3. The followings are not considered entries for the purpose of this standard:
   a. Emergency exits
   b. Access to service or utility enclosures

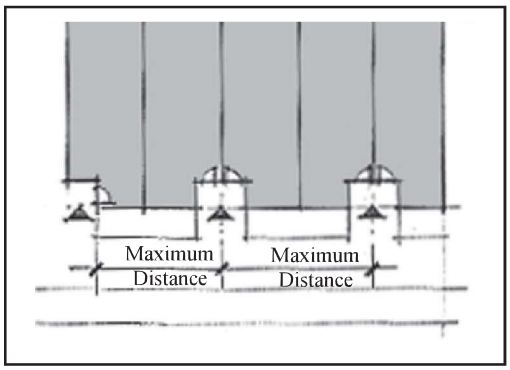

Figure 5.23-1

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4. Required entries must be visible from and located within twenty (20) feet of the street line or street setback line.

5. Entry access shall be direct from the public right-of-way by means of walks, stairs, ramps, gates, or combination of these components

6. All required pedestrian entries shall be marked by either an overhang, awning, building articulation, and/or architectural feature

7. All entries shall incorporate exterior lighting at the point of entry

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5.33 Street Front Openings

Applicability
The following standards apply at all ground floor building frontage parallel to and located less than twenty (20) feet from the street line or street setback line at Wood Street except as specified as below.

Exceptions
The locations and conditions indicated below are exempt from the standards set forth in this section:

1. Existing buildings

Statement of Intent
The intent of the street front openings standard is to encourage street oriented development.

General Standards

1. Ground level openings in the form of a door, window, or passage way shall be spaced no more than twenty-five (25) feet apart.

2. A minimum of 25% of the ground floor wall area shall consist of transparent openings, entries to occupied space, or a combination of the two. See *Figure 5.33-1*
   a. The ground floor wall area shall be measured from the first floor above grade to the floor level above, or to a point twelve (12) feet above the first floor, whichever is less.
   b. Service area and utility doors, emergency exists, and ventilation grills are not considered openings for the purposes of this standard.

3. Fifty percent (50%) of the required openings shall consist of windows or storefronts which meet either one of the following standards.
   a. The vertical distance between the window sill and the adjacent sidewalk shall not exceed 4'-6".
   b. The vertical distance between the window sill and the first floor level shall not exceed 3'-8".

Standards for Frontage Road Overlay Zone

4. At building frontage within the Frontage Road Overlay Zone, the standards for street front openings set forth above shall apply to the first level of occupied space. (Refer to *Section 5.63 item 9*)

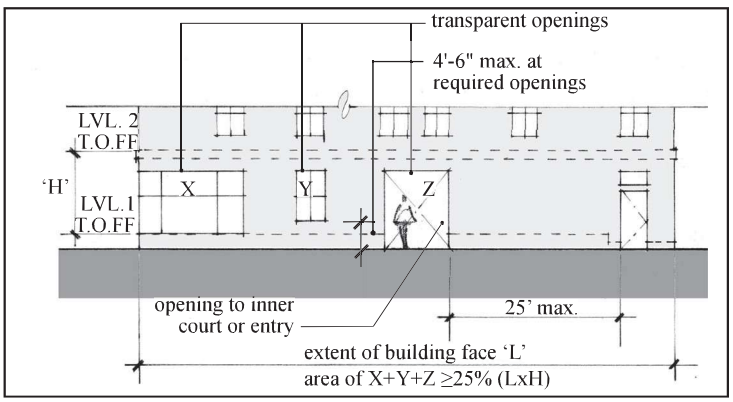

Figure 5.33-1

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5.34 Projections over the Street Line or Street Setback Line

Applicability
The following standards apply to all residential uses.

No Exceptions

Statement of Intent
Bay windows at street frontages make a neighborhood more secure by providing opportunities for residents to overlook the street. For that reason, bay windows are allowed to project over the street line subject to the standards set forth in this section.

General Standards

1. Bay windows projecting over the street line or street setback line must meet the following criteria:
   a. Bays must be self supporting and the bottom of the bay window must be no less than ten (10) feet above the height of the adjoining sidewalk
   b. Overall width of a single bay shall not exceed fourteen (14) feet
   c. The horizontal distance between bays shall be a minimum of three (3) feet
   d. Bays greater than eighteen (18) inches in depth must have windows on at least two sides.

2. The maximum allowable horizontal projection over the street line or street setback line is three (3) feet.

3. Within any one-hundred foot length of street frontage, the overall width of bays projecting over the street line or street setback line shall not exceed sixty percent (60%) of the corresponding horizontal wall dimension.

4. These standards supersede the provisions of Section 17.108.130 of the Planning Code related to projections of bays into required front yards.

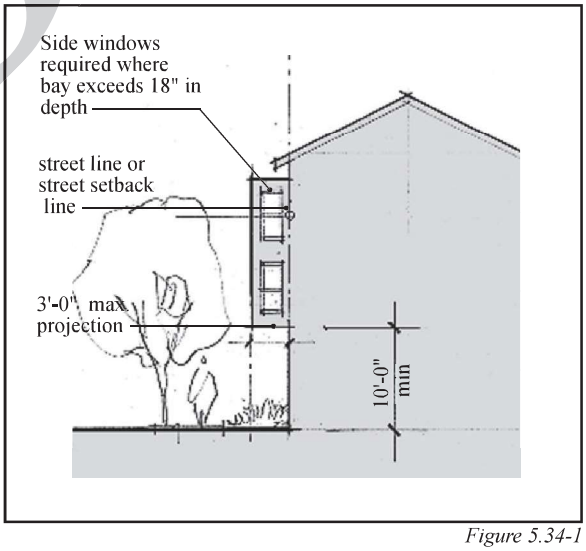

Figure 5.34-1

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5.40 Usable Open Space for Residential Uses

Applicability
The following standards apply to all residential uses.

No Exceptions

Statement of Intent
The intent of the standards set forth in this section is to ensure provision of open areas to serve the residents' need for outdoor leisure and recreation areas.

General Standards

1. On each lot containing Residential Facilities, usable open space shall be provided as set forth in *Table 5.90-1 Development Standards Summary.*

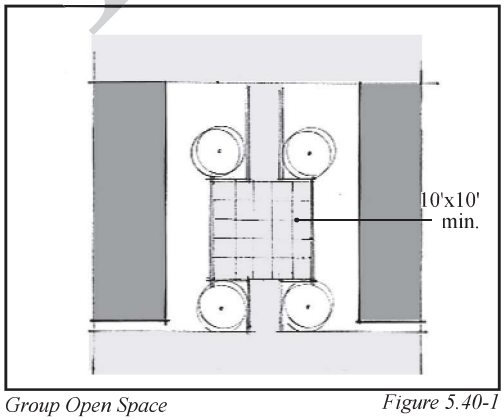
2. A minimum of 30% of the required usable open space shall be group open space. The remainder of required usable open space may consist of either group or private open space, or a combination of the two.

3. Location of group usable open space:
   a. At least 50% of the required usable group open space shall be located immediately adjacent to a primary pedestrian route linking dwelling units with site entries, parking areas, common facilities or a combination of the above.
   b. The remaining fifty percent (50%) of group open space may be located anywhere on the lot including on the roof of a building.

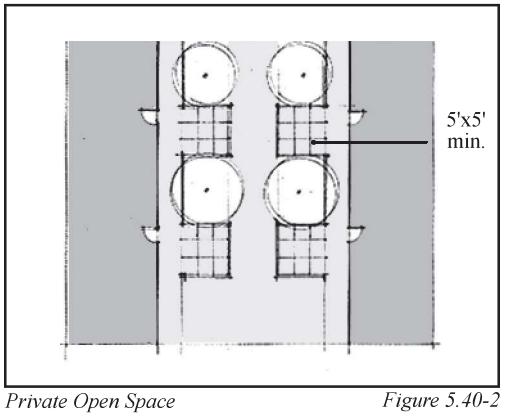
4. Private usable open space shall be adjacent to and readily accessible from the living unit served.

5. Size and shape: The minimum size and shape of the required outdoor space shall be such that a square of the size set forth below will fit entirely within the space.
   a. Private usable open space: 5'x5'
   b. Group usable open space: 10'x10'

6. Except as otherwise provided in the standards set forth in this section, the requirements for accessibility, openness and enclosure shall be as set forth in Section 17.126 of the Planning Code.



Group Open Space *Figure 5.40-1*



Private Open Space *Figure 5.40-2*

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5.41 Minimum Separation Between Opposite Walls on the Same Lot

Applicability
The following standards apply to all uses except as specified as below.

Exceptions
The locations and conditions indicated below are exempt from the standards set forth in this section:

1. Opposite walls of existing buildings

Statement of Intent
The intent of the standards set forth in this section is to ensure that all occupied spaces have reasonable access to light and air.

General Standards

1. The minimum separation between walls on the same lot containing windows of habitable rooms shall be equal to the average height of the two opposite walls containing those windows. See *Figure 5.41-1*

2. The minimum allowable separation is twelve (12) feet

3. The maximum required separation is thirty (30) feet.

4. Self-supporting bay windows located not less than ten (10) feet above the lowest point of either opposite wall are allowed to project a maximum of three (3) feet into the required separation provided that a minimum separation of twelve (12) feet is maintained from the face of bay and the opposite wall or opposite bay.

5. The total area of bays projecting into the minimum separation shall not exceed 50% of the wall area of either wall.

6. Except as otherwise provided in the standards set forth in this section, the requirements for projections into required separation shall be as set forth in Section 17.108.130 of the Planning Code.

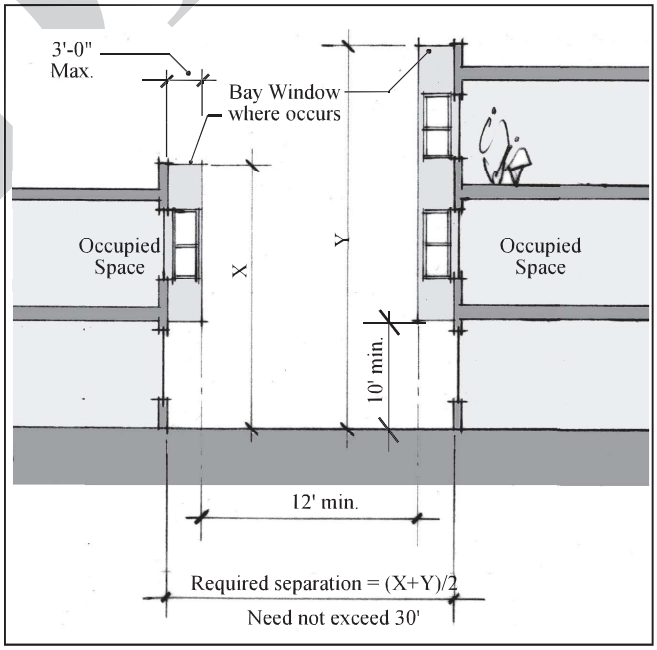

Figure 5.41-1

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5.50 Required Off-Street Parking

Applicability
The following standards apply to all uses.

No Exceptions

Statement of Intent
The intent of the required off-street parking standard is to govern the provision of off-street parking.

General Standards
1. Off-street parking spaces shall be provided for each activity as set forth in *Table 5.90-1, Development Standards Summary.*

Notes
There is no requirement to provide visitor parking for Residential Uses.

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5.51 Dimensional Requirements for Off-Street Parking

Applicability
The following standards apply to required off-street parking spaces serving all uses except as specified below.

Exceptions
The locations and conditions indicated below are exempt from the standards set forth in this section:
1. Existing off-street parking areas

Statement of Intent
The intent of the standards set forth in this section is to ensure that the dimensions of stalls and maneuvering areas are adequate to serve the needs of the users.

General Standards for Parking Serving Residential Uses
1. The following subsections of Section 17.94 of the Planning Code shall apply to the Wood Street Zoning District.
   a. Section 17.94.060 Parking Spaces (Items A,B & C)
   b. Section 17.94.070 Maneuvering aisles (all)
   c. Section 17.94.090 Other Dimensional Requirements (all)

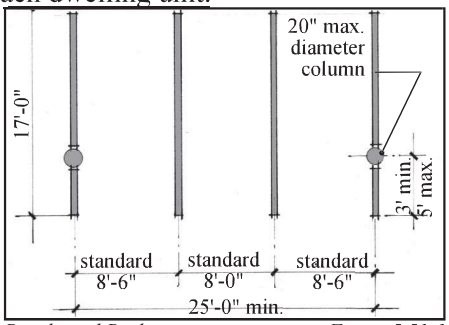
Additional Standards For Parking Serving Residential Uses
2. A standard parking stall size of 8'x17' may be provided for all required spaces serving residential uses.

3. In parking garages where the layout of stalls must conform to a regular grid of columns, the dimensions indicated in *Figure 5.51-1* shall be considered to provide the minimum allowable clearance related to the obstruction created by the structural columns.

Standards For Parking Serving Uses Other Than Residential Uses
4. Required dimensions for parking serving activities other than residential shall be as set forth in Section 17.116 of the Planning Code.

Standards For Other Parking Arrangements
5. Mechanical Parking Systems:
   a. Mechanical parking systems including vertical stacking systems are allowed subject to approval by the Building Official. The Parking Stall Dimension for such systems shall be as required for safe operation of the systems. All required off-street parking spaces shall have independent access.

6. Tandem Parking:
   a. Tandem parking is allowed provided at least one independent parking space is provided for each dwelling unit.



Residential Parking *Figure 5.51-1*
Parking Garage, minimum dimensions

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5.52 Joint Use Parking

Applicability
The following standards apply to all uses.

No Exceptions

Statement of Intent
The intent of the joint use parking standard is to provide for efficient and effective joint use parking.

General Standards
1. Residential uses shall be allowed to utilize off-street parking serving other uses, provided the following conditions are met.

   a. Joint use parking shall be located on the same lot or within three hundred (300) feet of the uses served.

   b. Joint use parking spaces are guaranteed to be available for residential use between the hours of 6:00 PM and 8:00 AM.

   c. Joint use parking shall be arranged to provide security and access at least equal to other required off-street parking.

   d. Joint use parking arrangements shall be recorded as a condition of approval for the development project.

2. Joint use parking shall not account for more than thirty percent (30%) of the required off-street residential parking.

5.53 Curb Cuts

Applicability
The following standards apply to all curb cuts at street lines except as specified below.

Exemptions
The locations and conditions indicated below are exempt from the standards set forth in this section:
1. Existing curb cuts serving existing buildings

Statement of Intent
The intent of the curb cuts standards is to ensure that the width and spacing of curb cuts provides for efficient on-street parking and is consistent with a pedestrian-oriented development project.

General Standards
1. The maximum total allowable width of an individual curb cut is twenty-four (24) feet.

2. The distance between curb cuts on public streets shall not be less than twenty-four (24) feet.

Standards for Wood Street Overlay Zone
3. In the Wood Street Overlay Zone, the aggregate width of curb cuts shall not exceed 20% of the lot frontage.

4. The distance between curb cuts shall not be less than forty-four (44) feet.

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5.54 Off-Street Loading Requirements

Applicability
The following standards apply to uses except as specified below.

Exceptions
The locations and conditions indicated below are exempt from the standards set forth in this section:
1. Existing loading areas serving existing buildings

Statement of Intent
The intent of the off-street loading standards is ensure that all development projects have adequate access to loading areas.

General Standards
1. Designated loading zones shall be provided at Public Access Areas as indicated in Appendix A - Streetscape and Open Space Plan, Section 7.00.

2. There is no requirement for off-street loading areas other than areas identified in the Streetscape and Open Space Plan.

5.60 Location and Screening of Surface Parking

Applicability
The following standards apply to all surface parking areas except as specified below.

Exceptions
The locations and conditions indicated below are exempt from the standards set forth in this section:
1. A development project located adjacent to elevated roadways

Statement of Intent
The intent of these standards is to ensure that surface parking shall generally be located to screen view of parking from the street.

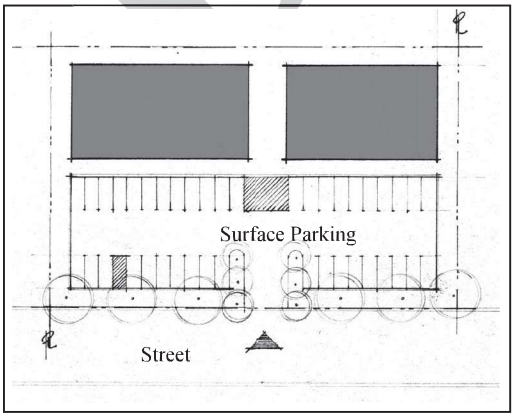

Figure 5.60-1

Not Allowed

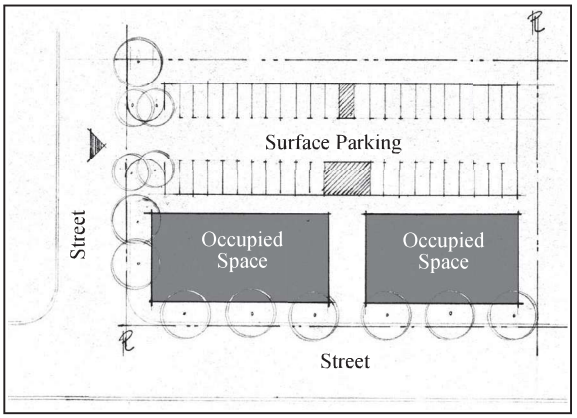

Figure 5.60-2

Allowed

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General Standards

1. Surface parking areas containing more than four stalls are not allowed less than twenty (20) feet from a street line or street setback line unless each of the following conditions is met. See *Figure 5.60-1*.

   a. The width of the surface parking does not exceed sixty five (65) feet, measured from curb to curb

   b. The surface parking is screened from view from the street by one of the following means.

      1. A solid fence or wall with a minimum height of four (4) feet located between the street line and the parking area with maximum transparent area of thirty percent (30%).

      2. An open fence with a minimum height of four (4) feet with adjoining planting that will create an opaque screen at least equal in height to the fence within three years of planting.

2. Individual surface parking areas less than twenty (20) feet of the street line or street setback line must be separated by a minimum of sixty (60) feet. The intervening space shall contain occupied building frontage, usable open areas, or a combination of the two.

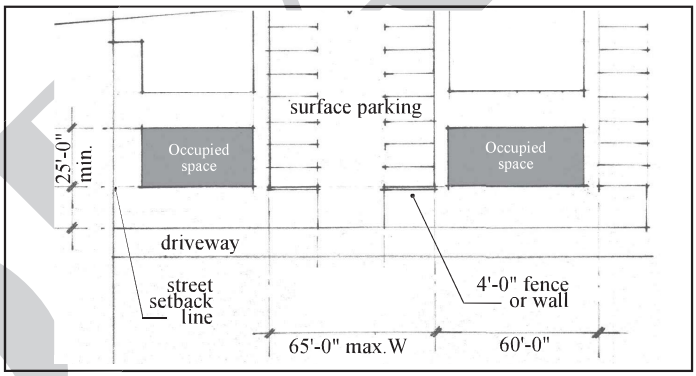

Figure 5.60-1

Standards for Wood Street Overlay Zone

3. No surface parking is permitted within the Wood Street Overlay Zone.

4. All surface parking visible from and within sixty (60) feet of Wood Street shall be screened from direct view from Wood Street as indicated in item 1b above.

Standards for Frontage Road Overlay Zone

5. Surface parking is allowed in the Frontage Road Overlay Zone subject to the following limitations:

   a. The width of surface parking in the Frontage Road Overlay Zone shall not exceed two hundred (200) feet or an aggregate maximum of fifty percent (50%) of the street frontage of any lot, whichever is less.

   b. Surface parking in the Frontage Road Overlay Zone shall be screened as indicated in item 1b above.

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5.61 Trees at Surface Parking Areas

Applicability
The following standards apply at all off-street surface parking areas containing 10 or more stalls except as specified below.

Exceptions
The locations and conditions indicated below are exempt from the standards set forth in this section:
1. Existing off-street parking areas serving existing buildings

Statement of Intent
The intent of these standards is to ensure the provision of shade trees at surface parking areas.

General Standards
1. For every eight (8) parking spaces, a minimum of one tree shall be provided.

2. All required trees shall be 15 gal. minimum size at time of planting and shall be provided with an automatic irrigation system.

3. Tree wells shall be a minimum of 9 square feet in an area, measured to the inside face of curb or paving.

4. Required trees shall be located within the parking area and shall be distributed evenly. See *Figure 5.61-1*

5. All required trees shall be protected from vehicular traffic by a curb, bollard or metal tree guard.

6. Trees may be omitted where a covered structure is provided at parking stalls.

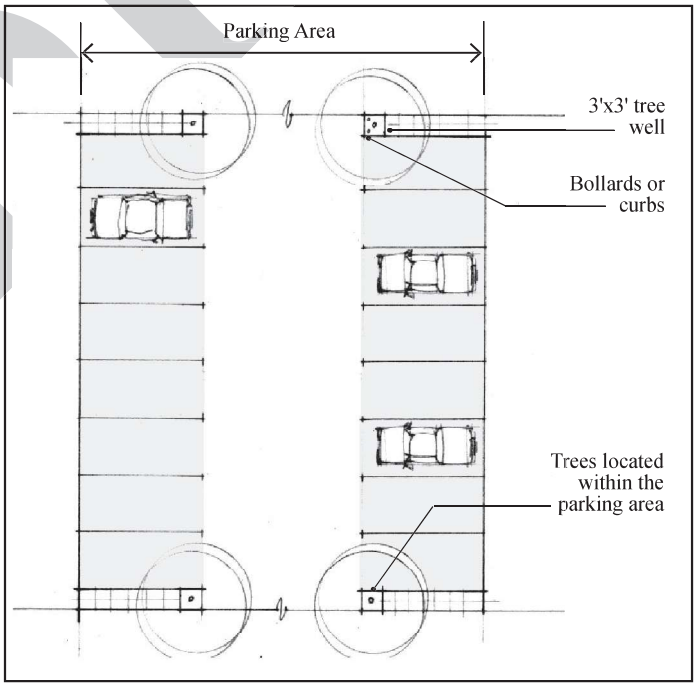

Figure 5.61-1

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5.62 Location and Screening of Tuck-under Parking

Applicability
The following standards apply to all Residential Uses except as specified below.

Exceptions
The locations and conditions indicated below are exempt from the standards set forth in this section:
1. Existing Buildings
2. Adjacent to elevated roadways

Statement of Intent
The intent of these standards is to limit the impact of tuck-under parking on the street frontage.

General Standards
1. Tuck-under parking is not allowed less than twenty (20) feet from the street line or street setback line unless the following conditions are met.
   a. The width of the tuck-under parking does not exceed sixty-five (65) feet, measured from end of stall to end of stall, or curb to curb. See *Figure 5.62-1*
   b. The tuck-under parking area is screened by a wall or fence with a minimum height of six (6) feet. Openings in the wall or fence shall not exceed 40% of the area of the wall or fence.

2. Individual tuck-under parking areas located less than twenty (20) feet from the street line or street setback line must be separated by a minimum of sixty (60) feet. The intervening space shall contain occupied building frontage, usable open areas, or a combination of the two.

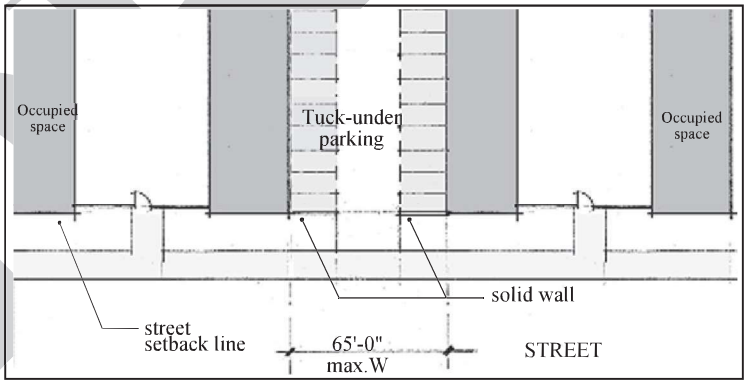

Figure 5.62-1

Standards for Wood Street Overlay Zone.
3. No tuck-under parking is permitted within the Wood Street Overlay Zone.

4. All tuck-under parking visible from and within sixty (60) feet of Wood Street shall be screened from direct view from Wood Street as indicated in item 1b above.

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Standards for Frontage Road Overlay Zone

5. Tuck-under parking is allowed in the Frontage Road Overlay Zone subject to the following requirements.

a. Tuck-under parking shall be screened from view from the public right-of-way by a wall or fence with a minimum height of six (6) feet wall. Openings in the wall shall not exceed forty percent (40%) of the area of the wall or fence.

b. Occupied space or usable open space shall be located above the tuck-under parking.

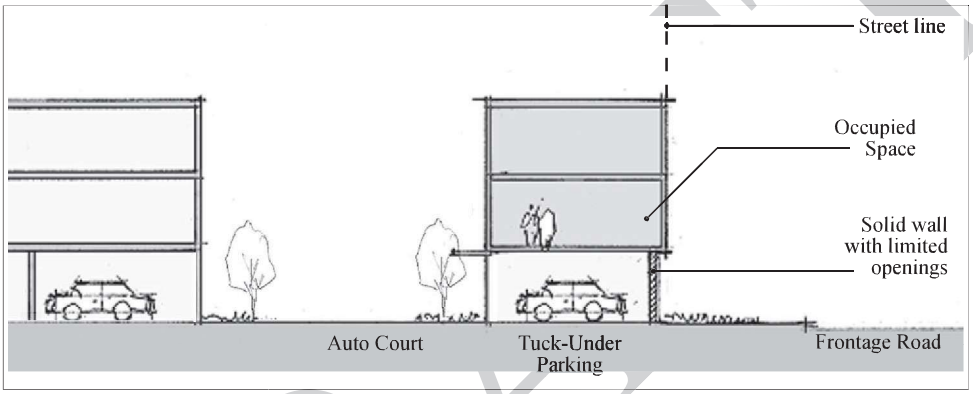

Figure 5.62-2

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5.63 Location & Screening of Parking Garages

Applicability
The following standards apply to parking garages containing three or more parking stalls except as specified below.

Exceptions
The locations and conditions indicated below are exempt from the standards set forth in this section:

1. Parking garages developed within the shell of existing buildings
2. Parking garages adjacent to elevated roadways

Statement of Intent
The intent of standards related to the location and screening of parking garages is to ensure that parking garages are generally screened from the street frontage. Three acceptable strategies for screening structured parking adjacent to the street line or street setback line are set forth below.

Option I - Below-grade parking with occupied space at the ground floor, a maximum of five (5) feet above average grade. See *Figure 5.63-1*

Option II -Occupied space at the ground floor, with parking above. See *Figure 5.63-2*

Option III-Parking garage screened by a "liner" of occupied space with minimum depth of twenty (20) feet. See *Figure 5.63-3*

Reference Section 6.25 of Design Guidelines for guidelines related to parking garage facades.

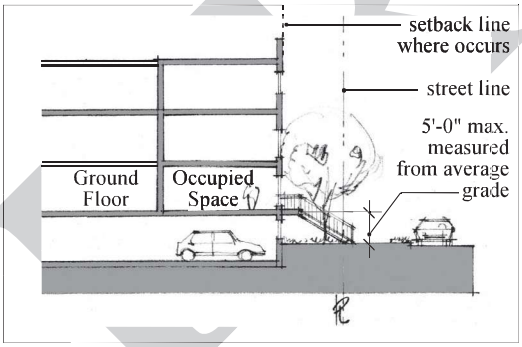

Figure 5.63-1

Option I
Below grade parking

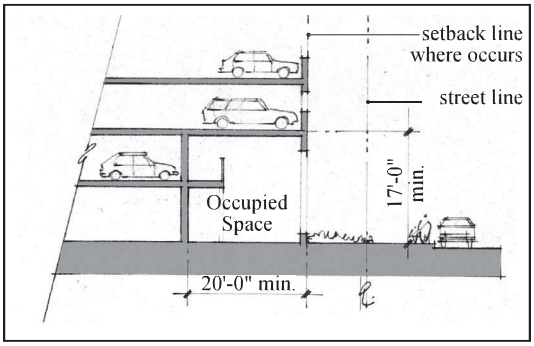

Figure 5.63-2

Option II
Parking structure on setback line with occupied space at ground level.

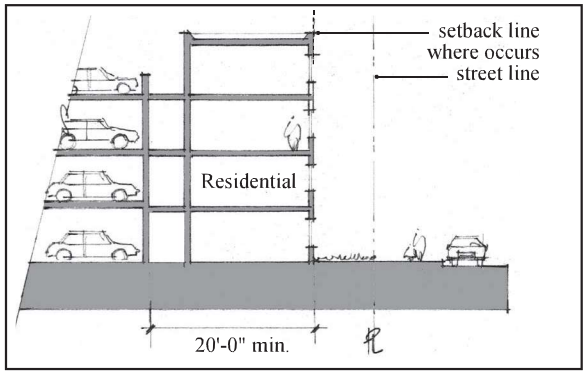

Figure 5.63-3

Option III
Residential liner between parking structure public right-of-way (R.O.W.)

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General Standards

1. Ground floor parking garages are not permitted within twenty (20) feet of the street line, except as specifically allowed by other standards set forth in this section.

2. Parking garage frontage may be located at the ground floor and less than twenty (20) feet from the street line or street setback line, provided the width of the garage frontage does not exceed sixty-five (65) feet. See *Figure 5.63-4.*

3. Above grade parking garages are allowed to extend to the street line or street setback line where occupied space is provided at the ground floor with a minimum depth of twenty (20) feet and a minimum height of seventeen (17) feet, measured to top of finish floor above. See *Figure 5.63-2.*

4. Below grade parking garages are allowed less than twenty (20) feet from the street line or the street setback line provided occupied space at least one story in height occurs immediately above. See *Figure 5.63-1.*

Standards for Wood Street Overlay Zone

5. No ground floor parking garages are permitted within the Wood Street Overlay Zone.

6. Individual vehicular entries to parking garages from Wood Street shall not exceed twenty-four (24) feet in width.

7. Individual vehicular entries to parking garages shall be separated by a minimum distance of sixty (60) feet, measured to center line of entry.

8. For each lot, no more than two (2) vehicular entries to parking garages may occur from Wood Street within any two-hundred (200) foot distance measured at the street line.

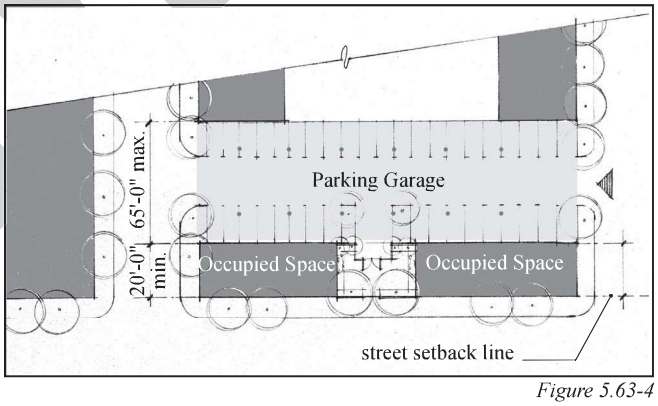

Figure 5.63-4

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Standards for Frontage Road Overlay Zone

9. A ground floor parking garage not exceeding one (1) story or twelve (12) feet in height measured to the floor above may be located less than twenty (20) feet from the street line, provided occupied space or usable open space is located immediately above.

10. A parking garage or garages not exceeding two (2) stories or twenty-four (24) feet in height may be located less than twenty (20) feet from the street line, provided the aggregate length of the parking garage does not exceed two hundred (200) feet or fifty percent (50%) of the street line of any individual lot, and provided occupied space or usable open space is located immediately above.

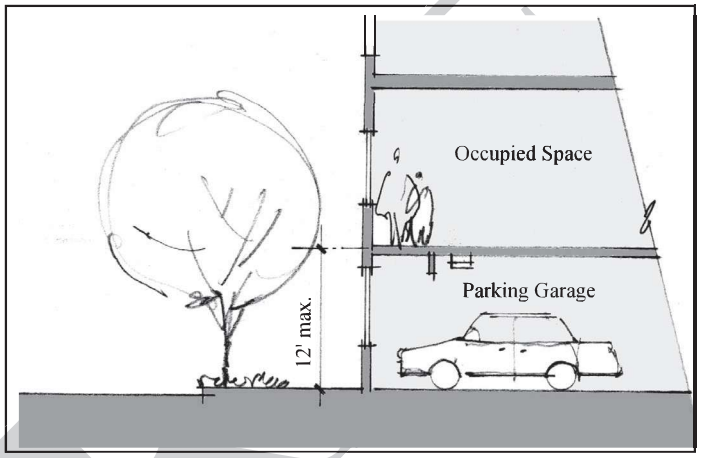

Figure 5.63-5

Allowable garage frontage
at Frontage Road Overlay Zone

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5.70 Limitations on Signs

Applicability
The following standards apply at all private signs visible from a Public Street or Public Access Area except as specified below.

Exceptions
The locations and conditions indicated below are exempt from the standards set forth in this section:

1. Existing signs serving existing buildings

Statement of Intent
The intent of these standards is to ensure that the display area of signs is compatible with the proposed development.

General Standards

1. The display area and number of signs shall conform to the limitations set forth in Table 5.70-1, Summary of Signs Standards.

2. For activities with frontage exceeding seventy-five (75) feet on two or more public streets or Public Access Areas, the allowable aggregate display area and allowable number of signs may be doubled.

3. No sign shall exceed the maximum height applicable to the Development Area where it is located.

4. Billboards and other free standing commercial signs are not allowed.

   Exceptions
   a. Portable signs designed to be stored inside during non-business hours

Table 5.70-1
Summary of Signs Standards

Use	Sign Type	Aggregate Display Surface (square feet)	Allowable Number of Individual Signs
Residential	Home Occupation Signs	-	No signs allowed
Residential Facilities of three or more units	Project Sign	40	1 sign per project
Commercial	Business Sign	20	2 signs for each commercial establishment
Commercial Activities greater than 10,000 in floor area	Business Sign	35	2 signs for each commercial establishment
All Uses	Development Sign	100	2 signs for each separate development project

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5.80 16th Street Station/Development Area 5

Applicability
The following standards apply to the existing 16th Street Station and new buildings or additions to the Train Station located within Development Area 5. These standards also apply to the existing 16th Street Signal Tower located in Development Area 6.

No Exceptions

Statement of Intent
The intent of these standards is to ensure that renovation of the Station and the scale and location of adjacent development is consistent with the Station's status as a City of Oakland Landmark.

General Standards for Renovation at 16th Street Train Station

1. Any renovation, modification or addition to the Station shall conform with the standards set forth in Section 17.102.030 of the Planning Code "Special regulations for designated landmarks" and to the Secretary of the Interior's Standards for Rehabilitation of Historic Structures.

2. Any re-use of the 16th Street Train Station shall include stabilization and repair of existing exterior materials to improve the exterior appearance and to ensure a water tight building envelope.

3. For the purposes of these standards, the primary portion of the Station shall be defined as the Main Hall and the symmetrical flanking wings to the north and south.

Standards for Additions to 16th Street Train Station

1. Additions to the Station shall not exceed a maximum height of thirty-five (35) feet as set forth in Table 5.90-1, Development Standards Summary.

2. No addition shall be made to the primary portion of the Station on the facade facing the 16th Street Plaza or on the southern facade facing the 14th Street Public Access Area.

Standards for New Buildings adjacent to the 16th Street Signal Tower

1. Additions to the Signal Tower are not permitted.

2. New structures shall be set back from the existing Signal Tower not less than a minimum distance of fifteen (15) feet.

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Table 5.90-1 (A)
Development Standards Summary

Standard	Development Area 1	Development Area 2	Development Area 3	Development Area 4	Development Area 5	Development Area 6	Development Area 7	Development Area 8
Maximum Residential Density								
1-Min. land area per regular dwelling unit	1535.22 sf	848.85 sf	1217.50 sf	613.75 sf	NA	615.92 sf	679.02 sf	331.65 sf
2-Max. dwelling units per acre	28.4 DU/A	51.5 DU/A	35.8 DU/A	71.1 DU/A	NA	70.7 DU/A	64.2 DU/A	131.3 DU/A
3-Max. number of units	82	189	200	450	0	215	170	264
Minimum Density for Residential Uses	1 unit per 2,000sf of site area *(22 DU/A)*	1 unit per 2,000sf of site area *(22 DU/A)*	1 unit per 2,000sf of site area *(22 DU/A)*	1 unit per 1,000sf of site area *(44 DU/A)*	NA	1 unit per 1,000sf of site area *(44 DU/A)*	1 unit per 1,000sf of site area *(44 DU/A)*	1 unit per 1,000sf of site area *(44 DU/A)*
Maximum FAR (For non-residential uses)	NA	1.38 : 1	NA	2.02 : 1	0.640:1	2.02 : 1	NA	2.947 : 1
Max. Area of Non-Residential Uses	0	220,779sf	0	40,000sf	14,487sf	6,000sf	0	258,000sf
Maximum Height	65 ft [2]	65 ft [2]	50 ft [2][3]	65 ft [2]	[3]	65 ft [2]	90 ft [4]	90 ft [4]
Minimum Street Setbacks [5]								
-Wood Street	10 ft	10 ft	10 ft	10 ft	10 ft	10 ft	10 ft	10 ft
-12th Street	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft
-Frontage Road	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft
-14th Street	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft
-Public Access Areas	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft
Minimum Interior Setbacks	5 ft	5 ft	10 ft	5 ft	5 ft	5 ft	0 ft	0 ft
Minimum Usable Open Space (per dwelling unit, DU) -Minimum area per unit	100 sq ft	75 sq ft	100 sq ft	75 sq ft	NA	75 sq ft	75 sq ft	50 sq ft
Required Off-Street Parking for Residential Uses	1 space per D.U.	1 space per D.U.	1 space per D.U.	1 space per D.U.	1 space per D.U.	1 space per D.U.	1 space per D.U.	1 space per D.U.
Required Off-Street Parking for Live Work Units	1 space per L/W.U.	1 space per L/W.U.	1 space per L/W.U.	1 space per L/W.U.	1 space per L/W.U.	1 space per L/W.U.	1 space per L/W.U.	1 space per L/W.U.
Required Off-Street Parking for All Other Uses	As required for C-51 zoning District	As required for C-51 zoning District	As required for C-51 zoning District	As required for C-51 zoning District	As required for C-51 zoning District	As required for C-51 zoning District	As required for C-51 zoning District	As required for C-51 zoning District

1. Density based on regular dwelling units. See Section 5.20 for non-regular dwelling units
2. Reference *Section 5.23* and *Figure 5.23-1* for height restrictions in Overlay Areas.
3. See Section 5.80 for restrictions on additions to 16th Street Train Station.
4. Reference *Section 5.23* for height restrictions on Wood Street Frontage.
5. Reference Minimum Street Setbacks *Figure 5.24-1*

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6.00 DESIGN GUIDELINES

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6.10 Introduction to Design Guidelines

Introduction

The Design Guidelines establish the design parameters for the Wood Street Zoning District and address aspects of building and site design not otherwise regulated by the Development Standards. Each development project within a Development Area shall be evaluated in terms of how the design satisfies the design intent set forth in the Design Guidelines, in accordance with Section 2.30 above (Final Development Plan/Final Design Review). Subject to determination by the Planning Director, design solutions may be approved on the basis of conformance with the intent of the Design Guidelines without conforming to the specific recommendations set forth in those guidelines.

Applicability and Exceptions

The Design Guidelines are generally applicable to all Development Areas. Each set of guidelines includes a statement which identifies any limits of applicability within a Development Area as well as any locations or conditions that are exempt from the guidelines contained in that section.

Statement of Intent

Each set of guidelines includes a statement of intent which sets forth the underlying purpose of the guidelines. Design solutions which do not meet specific guidelines will be evaluated in terms of conformance with the statement of intent.

Guidelines - Encouraged, Discouraged and Not Allowed

As a means of illustrating intent, certain guidelines provide examples under the categories of "encouraged," "discouraged" or "not allowed" These examples are representative and are not an exhaustive list of all possible examples in each category. Elements that are indicated as discouraged may be allowed subject to the determination by the Planning Director that a certain design solution in a particular application is consistent with the intent of that Guideline.

Optional Prescriptive Guidelines

For certain guidelines, a set of optional prescriptive guidelines is provided. Design solutions which adhere to the prescriptive guidelines shall be deemed to have met the intent of the Design Guidelines. Design solutions which do not adhere to the prescriptive guidelines must be consistent with the intent of the Design Guidelines, subject to determination by the Planning Director.

Guidelines for specific locations

Guidelines applicable to specific Overlay Zones or Development Areas are included in some sections. In case of conflict, guidelines applicable to a specific Overlay Zone or Development Area shall take precedence over general guidelines.

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6.20 Architectural Character

Applicability

The following guidelines apply to all Development Areas.

No Exceptions

General Guidelines

1. Each development project shall by use of massing, articulation, materials and detail establish a coherent, integrated architectural character that is consistent throughout the development project. All built aspects of the development project shall be considered as contributing to the architectural character of the development project, including but not limited to; site structures and furnishings, exterior lighting, paving and signage.

2. Buildings are not restricted to any specific architectural style. Within the overall scope of the Wood Street Zoning District, a variety of architectural styles are encouraged as a means of enhancing the eclectic urban character of the development project.

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6.21 Pedestrian Connections

Applicability
The following guidelines apply to all Development Areas except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the guidelines contained in this section:

1. Existing buildings
2. Development Area 8
3. Frontage Road Overlay Zone
4. Plaza Overlay Zone
5. Adjacent to elevated roadways

Statement of Intent
The intent of the guidelines set forth in this section is to create a pattern of ground level pedestrian entries and views into the interior of the development project site that is consistent with a neighborhood oriented urban development.

General Guidelines

1. Provide multiple ground level openings and entries into the site. Particular emphasis should be placed on visual and pedestrian connections at Wood Street.

Encouraged

a. Multiple pedestrian connections with Public Streets or Public Access Areas
b. Ground level vistas into the site from the public streets or Public Access Areas
c. Ground level pedestrian lanes or auto/pedestrian lanes that subdivide larger Development Areas.

Discouraged

a. Building frontage at street lines or street set back lines exceeding 200 feet in length without provision of ground level pedestrian access and views into the interior portion of the development site.

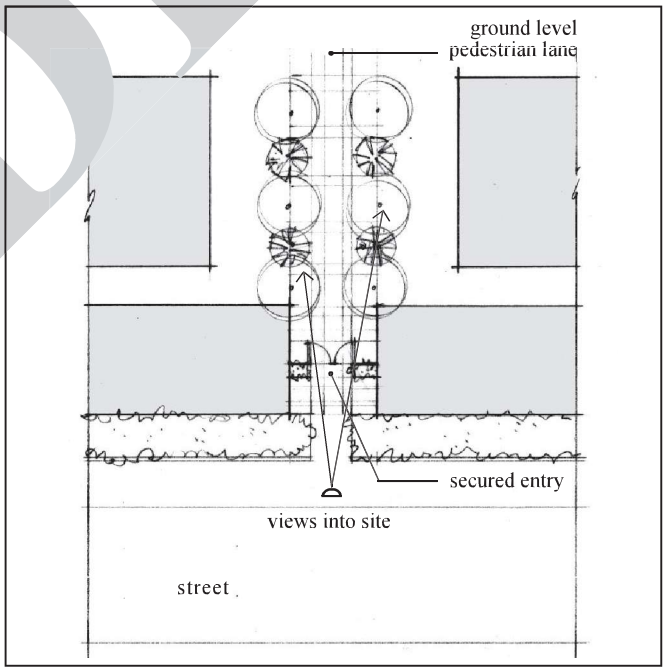

Figure 6.21-1, (Illustrative Only)

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6.23 Building Massing

Applicability
The following guidelines apply to portions of buildings located within sixty (60) feet of the street line or street setback line and greater than two (2) stories or twenty five (25) feet in height except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the guidelines contained in this section:

1. Building frontage on 10th Street
2. Building frontage on the 20th Street Public Access Area
3. Building frontage adjacent to elevated roadways
4. Existing buildings
5. Commercial uses at Development Area 8

Statement of Intent
The intent of the guidelines set forth in this section is to encourage building massing that is consistent with neighborhood oriented mixed-use character of the Wood Street Zoning District.

General Guidelines
1. Massing should be employed to reduce the visual scale of large development projects and to respond to specific urban conditions.

Encouraged

a. Articulation of separate building volumes.
b. Building massing that emphasizes corner locations
c. Building massing that emphasizes major entry points into the site
d. Creation of a varied building silhouette by incorporating significant changes in massing at the roof lines

Guidelines for Wood Street Overlay Zone
1. Significant changes in building massing are strongly encouraged to reduce the perceived scale of buildings fronting Wood Street. See *Figure 6.23-1.*

a. For the purposes of this guideline, a significant change in massing is defined as a building offset having a width and depth of not less than eight (8) feet and a height of not less than one story.

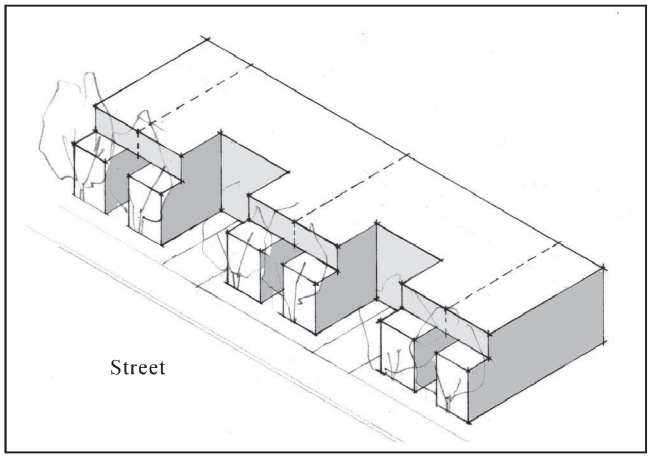

Figure 6.23-1, (Illustrative Only)

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6.24 Building Articulation

Applicability
The following guidelines apply to all building facades located parallel to and less than twenty (20) feet from a street line or street setback line except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the guidelines contained in this section:

1. Building frontage on 10th Street
2. Building frontage on the 20th Street Public Access Area
3. Building frontage adjacent to elevated roadways
4. Existing buildings
5. Commercial uses at Development Area 8

Statement of Intent
The intent of the guidelines set forth in this section is to encourage building articulation that is consistent with the neighborhood oriented, mixed use character of the Wood Street Zoning District.

General Guidelines
1. Building facades shall be articulated by means of recesses, changes in plane, bays, projecting elements, variations in exterior finishes or a combination thereof. Articulation strategies may include emphasizing groupings of dwelling units or occupied spaces, establishing vertical and horizontal rhythms, creating a varied building silhouette, adding visual accents and similar architectural strategies.

Prescriptive Guidelines (Optional)
1. Any building plane greater than sixty (60) feet in width and more than one story in height shall be articulated by a recess or projection extending at least two stories in height with a minimum width of four (4) feet and a minimum depth of two (2) feet. See *Figure 6.24-1*

2. The maximum length for a single building plane may be increased to one hundred (100) feet when building articulation is provided in the form of a recess or projection extending at least two stories in height with a minimum width of two (2) feet, a minimum depth of one and one half (1 1/2) feet, and occurring a minimum of three times within any one hundred (100) foot length of building facade. See *Figure 6.24-2*

3. The allowable length of a single uninterrupted plane may be doubled at the first story.

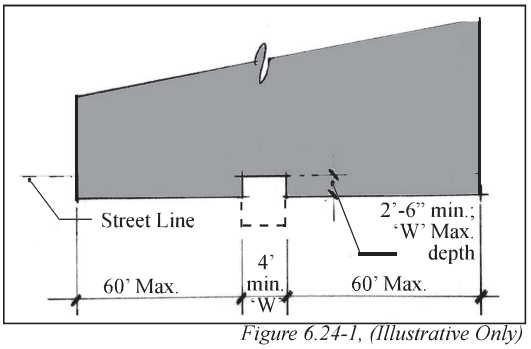

Figure 6.24-1, (Illustrative Only)

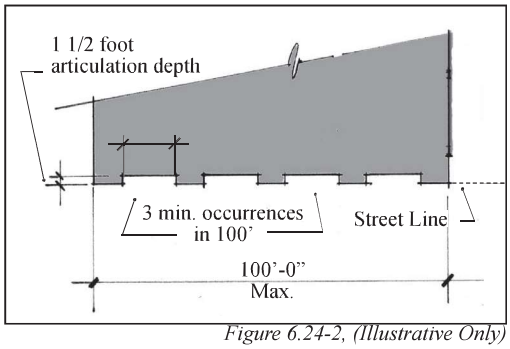

Figure 6.24-2, (Illustrative Only)

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6.25 Facades At Parking Garages

Applicability
The following guidelines apply to all parking garage facades visible from and located within sixty (60) feet of a street line or street setback line except as specified below except as specified below.

Exceptions
The locations indicated below are exempt from the guidelines contained in this section:

1. Building frontage on 10th Street
2. Building frontage on 20th Street
3. Building frontage located adjacent to and below elevated roadways.
4. Facades of garages that will be concealed by subsequent phased construction.

Coordination with Development Standards
Refer to *Section 5.64* of the *Development Standards* for limitation on the location of parking garages.

Statement of Intent
The intent of the guidelines set forth in this section is to discourage parking garage facades that are utilitarian in character, allow extensive views of parked cars and do not relate to the architectural character of the occupied space served.

General Guidelines

1. The architectural character of the parking garage facade shall be integrated with that of the occupied space served by the garage. See *Figure 6.25-1*

    a. Patterns of openings at garage facades should be similar in rhythm and scale to openings at the occupied spaces served by the garage.

    b. Garage facades should incorporate awnings, canopies, sunscreens planters, ornamental railings and other elements that impact a visual richness comparable to that of facades at the occupied space served by the garage.

2. Transparent openings at garage facades, including unglazed openings or openings with clear glazing shall not exceed 50% of the wall area visible from the exterior at any story of a parking garage.

    a. There is no limitation on the area of permanent translucent materials at garage facades, such as glass block or etched glazing.

3. Lighting at parking garages shall be located or screened to prevent direct view of light source from streets or public access areas, to the greatest degree practical.

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6.26 Balconies

Applicability
The following guideline applies to balconies at all buildings parallel to and located less than twenty (20) feet from a street line or street setback line except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the guidelines contained in this section:

1. Existing Buildings

Statement of Intent
Balconies provide useful outdoor space for dwelling units and desirable articulation to building facades. However, a predominance of balconies on the street frontage can result in a cluttered appearance and can limit the visual connection between occupied spaces and the street. The intent of the guidelines set forth in this section is to ensure that balconies, where provided, are consistent with the architectural character of the development project.

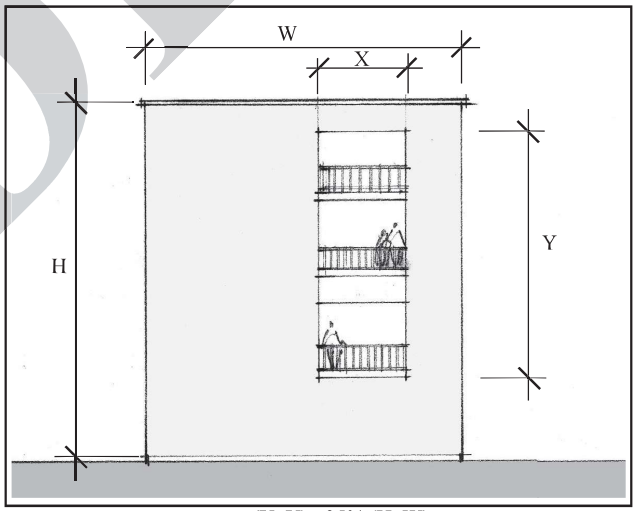
General Guidelines

1. Where provided, balconies shall be visually integrated with the architectural character of the development project and shall not be the predominant element on any facade facing the street line.

Prescriptive Guidelines (Optional)

1. Within any one hundred (100) lineal feet of building frontage, the total area of balconies shall not exceed thirty-five percent (35%) of the area of the building plane measured as indicated below. See *Figure 6.26-1*

   a. The vertical dimension of the balconies shall be measured from the finish floor of the balcony to the underside of the floor or ceiling above.
   b. The building plane shall be measured from top of finish floor at grade to top of parapet



(XxY)≤ 35% (HxW)

Figure 6.26-1, (Illustrative Only)

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6.27 Awnings & Canopies

Applicability
The following guidelines apply to all buildings or portions of buildings parallel to and located less than twenty (20) feet from a street line or street setback line except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the guidelines contained in this section:

1. Existing Buildings

Coordination with Development Standards
Refer to Section 5.32 of the Development Standards for requirements related to building entries at building frontage.

Statement of Intent
Storefront awnings and canopies at ground level commercial locations provide articulation to the building facade, sun and rain protection to pedestrians, and shield large window areas from glare. The intent of the guidelines set forth in this section is to encourage the provision of awnings and canopies that are consistent with the architectural character of the development project.

General Guidelines

1. Awnings or canopies are encouraged at primary entries to ground level commercial spaces, except at locations where the primary entry is protected by other architectural elements. (i.e. arcade)

2. Awnings and canopies shall be divided into sections that relate to and emphasize vertical elements of the building façade

3. Awnings and canopies shall align with horizontal datum lines at the building façade

4. Awnings and canopies shall be constructed of durable materials. Fabrics designed for exterior use are acceptable.

Guidelines for Plaza Overlay Zone

5. At building facades within the Plaza Overlay Zone, a consistent pattern of awnings or canopies shall be provided at the ground floor of each facade fronting the plaza.

   a. These awning or canopy treatments are not required to be consistent with those at other buildings fronting the plaza.

   b. This requirement does not apply where an arcade, porch or other sheltering architectural element is provided at the ground floor.

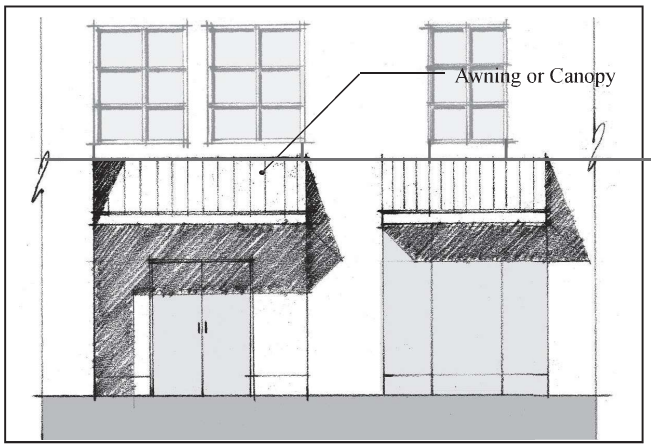

Figure 6.27-1, (Illustrative Only)

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6.30 Windows

Applicability
The following guidelines apply to all buildings or portions of buildings visible from and within sixty (60) feet of the public right of way except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the guidelines contained in this section:

1. Existing Buildings

Statement of Intent
The intent of the guidelines set forth in this section is to ensure that the selection and design of the windows enhances the architectural character of the development project. The treatment of windows is critical to the exterior appearance of a building. Windows help establish the scale of a building and because of their predominance on building facades express the quality of the construction more than any other single exterior element.

General Guidelines

1. The proportion and subdivision of typical windows should reflect the overall proportion and character of the building. Exceptions for special windows are allowed.

2. Window materials, trim (if any), and detailing should be of good quality and consistent with the architectural character of the building and compatible with the other exterior materials.

3. Windows set flush with cement plaster (stucco) finish without provision of trim, projecting sills, or other perimeter detailing are strongly discouraged

4. Glazing shall be transparent to the greatest degree practical

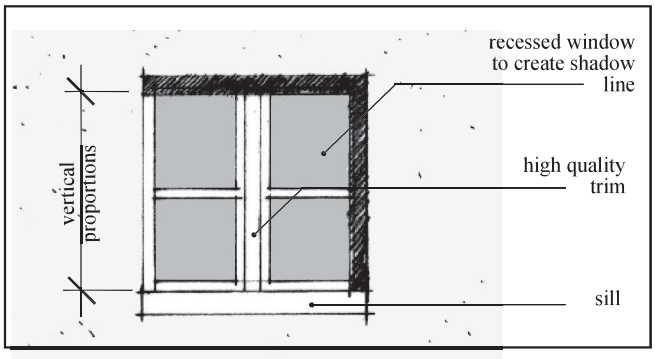
   Encouraged: clear glazing, Low-E glazing where needed for sun control

   Discouraged: tinted glazing except at special locations, or at commercial occupancies located above the ground floor

   Not Allowed: reflective glazing, except at spandrels or other limited areas where consistent with overall architectural design

5. Window grills or security screens are discouraged, particularly at locations less than twenty (20) feet from a street line or street setback line.

   a. Where necessary due to specific security concerns, window grills or security screens shall be fabricated of high quality materials and be designed as an integral part of the architectural character of the development project



Example of window articulation

Figure 6.30-1, (Illustrative Only)

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6.31 Garage Doors

Applicability
The following guidelines apply to all garage doors visible from and located less than sixty (60) feet from a street line or street setback line, and serving parking garages containing three or more parking spaces except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the guidelines contained in this section:

1. Existing Buildings

Coordination with Development Standards
Refer to *Section 5.63* of the *Development Standards* for limitations on the location of garage doors within in the Wood Street Overlay Zone.

Statement of Intent
The intent of the guidelines set forth in this section is to ensure that vehicular entries to parking garages do not detract from the street front pedestrian environment or the architectural character of a development project.

General Guidelines

1. Automatic, motor operated garage doors shall be provided at all vehicular entries to parking garages

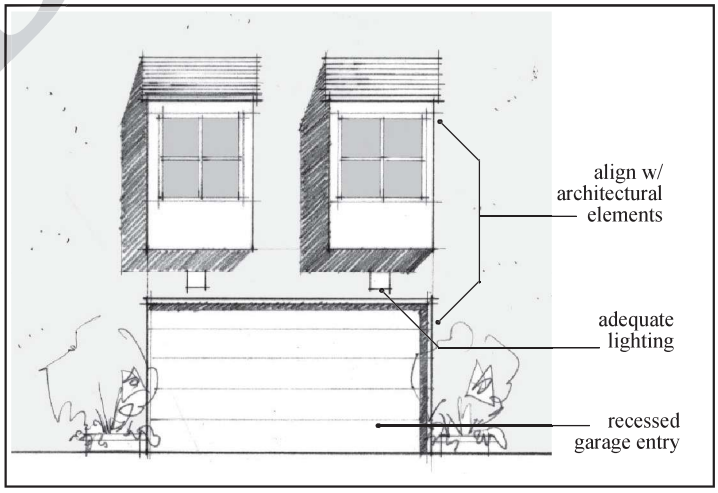
2. Garage door openings shall be aligned with windows, bays or other architectural elements to create an integrated composition consistent with the overall architectural character of a development project.

3. Garage doors shall be recessed a minimum of one (1) foot from the face of the adjoining building facade.

4. Garage doors shall be constructed of high quality durable materials:

Encouraged: Single panel sliding-type garage doors
Sectional overhead doors

Discouraged: Residential grade garage doors
Single panel overhead doors



Example of garage door articulation *Figure 6.31-1, (Illustrative Only)*

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6.32 Service Access

Applicability
The following guidelines apply to all ground level service doors or gates visible from and located less than twenty (20) feet from a street line or street setback line, and which provide access to waste handling areas, electrical or mechanical equipment, gas or electric meters, or other non-occupied service spaces except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the guidelines contained in this section:

1. Building frontage adjacent to elevated roadways
2. Existing service access doors at existing buildings.

Statement of Intent
The intent of the guidelines set forth in this section is to ensure that service access doors and gates do not detract from the architectural character of the development project.

General Guidelines

1. All service doors and gates shall be designed as integral elements of the building design.

2. The aggregate width of service doors shall not exceed fifteen (15) feet within any 60 feet of street frontage

3. Doors exceeding thirty (30) square feet in area (such as doors to waste handling areas or electric transformers) shall be recessed a minimum of 9 inches from the primary building plane

4. Service doors or gates shall not allow any view into space served. Louvers required for venting or ventilation purposes are acceptable provided they do not allow visibility into service areas.

Guidelines for Wood Street Overlay Zone

1. Service openings facing Wood Street are discouraged, where service openings are necessary they shall be subject to the following limitations.

   a. The maximum combined width of the service access openings shall not exceed eight (8) feet in any 60 feet of street frontage

   b. No individual service access opening shall exceed eight (8) feet in width

6.33 Underground Utility Connections

Applicability
The following guidelines apply to all Development Areas, except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the guidelines contained in this section:

1. Existing buildings

General Guidelines
All utility lines serving lots within the Wood Street Zoning District shall be underground to point of entry at building, including electrical, telephone, data and cable services.

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6.34 Screening of Equipment

Applicability
The following guidelines apply to all Development Areas except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the guidelines contained in this section:
1. Adjacent to elevated roadways

Statement of Intent
Equipment and mechanical penetrations shall be incorporated in the overall building and site design to avoid detracting from the architectural character of the development project.

General Guidelines
1. All equipment located within twenty-five (25) feet of a street line or adjoining setback line shall be screened by one of the following means. (Refer to *3.40 Definition of Terms* for definition of equipment).

   a. By enclosure entirely within the structure of the building with access provided by opaque service access door. (A portion of Electric meters may be exposed to allow reading of meter without opening door.)

   b. By enclosure in a below grade vault or structure

   c. By provision of a fence or wall with a minimum opacity of 50 percent. The top of the fence or wall shall be at least equal in height to the equipment screened. See *Figure 6.34-1*

   d. By combination of an open fence and adjoining planting that will reach a height sufficient to screen the equipment within three years

   Exceptions
   The following equipment is not required to be screened.
   a. Residential gas meters serving individual dwelling units in groups not exceeding four meters.
   b. Individual commercial gas meters.
   c. Individual residential electrical meters.
   d. Back flow preventers for irrigation systems not exceeding 2" nominal size.

2. Equipment located more than twenty (20) feet from a street setback line or street setback line shall be integrated into the overall building and site design.

3. All equipment located on the roof of a building shall be screened by one of the following means.

   a. Located such that it is not visible from the street.

   b. By provision of a screening device consistent with the architectural character of the development project and with an open area not exceeding forty (40) percent that screens equipment visible from the street.

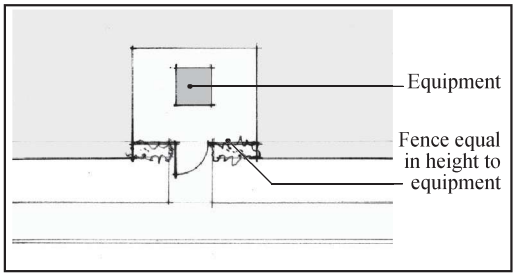

Figure 6.34-1, (Illustrative Only)

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6.35 Mechanical Penetrations at Facades and Roofs

Applicability
The following guidelines apply to all Development Areas except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the guidelines contained in this section:

1. Existing Buildings

Statement of Intent
The intent of the guidelines set forth in this section is to ensure that exterior mechanical penetrations are located and/or screened to avoid detracting from the architectural character of the development project.

General Guidelines

1. The following guidelines apply to all roofs with slopes exceeding 2:12.

   a. At all buildings or portions of buildings located less than sixty (60) feet from a street line or street setback line appliance vents, exhaust fans, and similar roof penetrations shall be located so as to not be visible from the street, to the greatest degree practical.

   b. Where visible from street, roof penetrations shall be aligned to present an organized appearance.

   c. All exposed metal penetrations and roof accessories shall be finished to match or blend with the roof color.

2. Mechanical penetrations at building facades, including kitchen and dryer vents, bath exhausts and other penetrations shall be aligned horizontally and vertically with other penetrations, window openings and/or other architectural features to present an organized appearance consistent with the architectural character of the building. See *Figure 6.35-1*

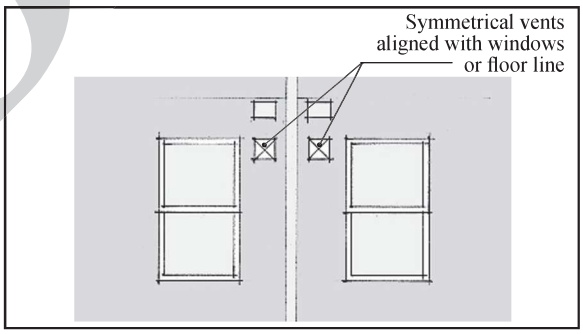

Figure 6.35-1, (Illustrative Only)

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6.36 Waste Handling Areas

Applicability
The following guidelines apply at all Development Areas.

No Exceptions

Statement of Intent
The intent of the guidelines set forth in this section is to ensure that waste handling areas are located and designed to provide adequate capacity, secure and convenient access for residents, and to avoid adverse impact on the street frontage, common areas and the surrounding neighborhood.

General Guidelines

1. All waste handling areas shall either be enclosed in the structure of the building or screened by a wall or fence consistent with architectural character of the building and adequate to prevent view of trash or recycling containers from the street, public access areas, common circulation areas or group open space areas.

2. Adequate lighting shall be provided at the path leading to the waste handling enclosure as well as within the enclosure.

3. Space allocated for recycling shall be consistent with the requirements of Section 17.118 of the Planning Code.

Guidelines for Wood Street Overlay Zones

1. Waste Handling areas are not allowed in the Wood Street or Plaza Overlay Zones unless they conform to the following requirements.

    a. The waste handling area shall be enclosed entirely within the structure of the building, with access provided by opaque service door.

    b. The service doors accessing the waste handling shall not face Wood Street or the 16th Street Plaza.

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6.40 Exterior Materials

Applicability
The following guidelines apply to all Development Areas except as specified below.

Exceptions
The locations or conditions indicated below are exempt from the guidelines contained in this section:
1. Existing exterior materials on existing buildings

Statement of Intent
The intent of the guidelines set forth in this section is to promote the selection of high quality exterior materials.

Guidelines.
1. All exterior materials and building components shall be durable and of a high-quality.

2. Exterior Wall Materials

   Encouraged: cement plaster (stucco), cement board (panels or planks); wood panels, planks; metal – corrugated panels, flat panels; stone; brick & split face block.

   Discouraged: EIFS (Exterior Insulation and Finish Systems), unfinished concrete block, hardboard or plywood siding

   Not Allowed: vinyl or aluminum siding; unfinished wood siding

3. Roofing Materials at Sloped Roofs where visible from the street *(roofs of 2:12 slope or greater)*

   Encouraged: concrete or clay tile, (s-barrel or flat); high-quality composition shingles; fire-treated wood shakes or shingles; standing seam metal roofing

   Discouraged: sheet or roll roofing; synthetic shakes or shingles; high-glaze tiles or glossy painted concrete tiles

4. Roofing Materials at flat roofs *(roofs less than 2:12 slope)*

   No limitations

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6.41 Exterior Color

Applicability
The following guidelines apply to all Development Areas.

No Exceptions

Statement of Intent
The intent of the guidelines set forth in this section is to ensure that selection of exterior colors enhances the architectural character of the development project.

General Guidelines.
1. Each development project shall create a cohesive color palette that takes into consideration the finish of all exterior elements.

2. Development projects are encouraged to employ more than one body color to articulate the form, rhythm and scale of the building.

3. Accent colors are encouraged where they enhance the architectural character of the development project.

6.42 Exterior Lighting

Applicability
The following guidelines apply to all Development Areas.

No Exceptions

Statement of Intent
The intent of the guidelines set forth in this section is to ensure that exterior lighting provides for adequate visibility and security at all paths of travel, and enhances the architectural character of the development project.

Guidelines
1. A minimum average lighting level of one foot candle shall be provided along all designated paths of travel between dwelling units, buildings and site entrances, public streets, and open spaces.

2. Exterior lighting shall be provided immediately adjacent to all entries to the site, buildings, dwelling units and commercial spaces.

3. All exterior light fixtures shall be designed and situated to avoid glare at occupied space.

4. Exterior light fixtures shall be compatible in location, design and finish with the architectural character of the development project.

5. The location and design of exterior lighting adjacent to a street or public access area shall be coordinated with lighting at the adjoining streetscape design.

6. High-pressure and low-pressure sodium lamps are not allowed due to poor color rendition.

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6.50 Signage & Graphics

Applicability
The following guidelines apply to all Development Areas.

No Exceptions

Coordination with Development Standards
Refer to Section 5.70 of the Development Standards for limitations on the display area and number of signs.

Statement of Intent
The intent of the guidelines set forth in this section is to ensure that exterior signage does not detract form the architectural character of the development.

General Guidelines
1. Signs shall respect the architectural elements of the buildings they identify and shall be designed as architectural elements in their own right.

2. Signs shall not obscure architectural elements such as transoms or columns.

3. All exterior signage shall be professionally designed and fabricated of high-quality durable materials.

4. The size of signs and sign letters shall be in scale and proportion to the space in which they are located.

5. The design and alignment of adjacent signs shall be coordinated in order to achieve an organized appearance.

6. The following sign types are not allowed
   a. Internally lit 'cabinet' signs
   b. Moving signs
   c. Blinking or flashing signs

7. Sign lighting shall utilize spotlighting or exposed neon and shall not create glare for pedestrians or motorists.

Guidelines for Projecting Signs
1. Location of projecting signs shall be coordinated to avoid obscuring other signage.

Guidelines for Freestanding Signs
1. Free standing signs shall be designed to avoid blocking vehicular or pedestrian site lines.

2. Free standing signs shall both exceed five (5) feet in height.

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6.60 Planting Areas

Applicability
The following guidelines apply to all Development Areas.

No Exceptions

Coordination with Development Standards
Refer to Section 5.61 of the Development Standards for standards related to provision of trees at surface parking areas

Statement of Intent
The intent of the guidelines set forth in this section is to promote planting that enhances the livability and neighborhood oriented character of the development.

General Guidelines

1. Planting areas should be designed to be attractive year round through provision of a variety of textures and seasonal color.

2. Planting shall be utilized for the following purposes:
   a. to emphasize and enhance pedestrian and vehicular entries.
   b. to screen service areas
   c. to provide buffering between non-compatible site uses.
   d. to provide buffering between private and group usable outdoor space
   e. to improve appearance and comfort of outdoor space.

3. Planting shall take into consideration public safety, and shall not interfere with the site lines or movement for motorists, pedestrians, or bicyclists.

Guidelines for Planting at Street Frontage

1. Setback areas between the back of sidewalk and the building line shall be designed to provide the maximum amount of planted area. A minimum of 75% of the required setback areas shall be planted.

2. Planting in required street setbacks shall be designed to not exceed 36” in height to maintain sight lines for pedestrian and residents. Higher planting are acceptable adjacent to buildings to provide privacy at street facing windows.

3. Trees shall be limbed to provide visibility through and below the canopy.

4. Where no street setback is required, planting areas are encouraged between the building face and the back of sidewalk to soften and enhance the street frontage.

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Planting at usable group outdoor areas.

1. At required group usable open space planted areas should comprise a minimum percentage of the required usable open area not less than indicated below.

    a. At grade group usable open space: 40%

    b. Above grade group usable open space 25%

Pot Sizes

1. Soil depth in pots should not be less than 18 inches.

Selection of Plant Materials

1. Trees, shrubs and ground covers should be selected primarily from drought tolerant native or Mediterranean species.

2. Selection of plant materials should take into account solar orientation, building shadow and soil characteristics to ensure sustained growth.

3. Trees should be a mix of deciduous and evergreen, and should be selected on the basis of hardiness and ease of maintenance.

4. Plant sizes should meet the following minimum sizes at the time of planting

    a. Deciduous Shade Trees: 2 inch caliper
    b. Ornamental trees: 1.5 inch caliper
    c. Evergreen trees: 2 inch caliper
    d. Multi-stem ornamental trees: 6-8 feet in height
    e. Shrubs: 5 gallon container
    f. Vines: 1 gallon container
    g. Ground cover and perennials: 2-1/4 inch pots

Irrigation

1. All planting areas should be provided with an automatic irrigation system that meets the following criteria

    a. Utilization of bubblers, drip systems, and other water efficient strategies
    b. Provision of sufficient coverage to all landscape areas
    c. Minimum overspray on non-planted areas.
    d. Easily maintained.

Maintenance of Planted Areas

1. All landscape areas shall be maintained in conformance with standards set forth in Section 17.124.020 of the Planning Code.

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Appendix I
OARB Area Redevelopment Plan
Mitigation Monitoring and Reporting Program

INTRODUCTION

This document is a Mitigation Monitoring and Reporting Program (MMRP) for the Oakland Army Base Area Redevelopment Plan for the City of Oakland and its Redevelopment Agency prepared pursuant to Public Resources Code Section 21081.6. The mitigation measures presented in this MMRP are as contained in the Oakland Army Base Area Redevelopment Plan Draft Environmental Impact Report (EIR) dated April 29, 2002, Final EIR dated July 19, 2002 (SCH No. 2001082058), and as revised on July 31,2002 by the City of Oakland Planning Commission and the Oakland Base Reuse Authority (OBRA). Although most environmental impacts of the Oakland Army Base Area Redevelopment Plan will be caused by, and mitigated by both the City of Oakland and the Port of Oakland, this MMRP applies only to the City of Oakland and its Redevelopment Agency. Therefore, the City is the implementing and monitoring party for each mitigation measure listed below. The Port of Oakland has, on September 17, 2002, adopted a separate MMRP for those environmental impacts and mitigation measures identified in the Oakland Army Base Area Redevelopment Plan EIR as applicable to the Port.

Throughout this document, "City" includes the Redevelopment Agency of the City of Oakland and the City of Oakland; "Port" refers to the Port of Oakland. Implementation of mitigation measures will be carried out in accordance with the standard policies and practices and documented in the files of the City.

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1. SUMMARY OF MEASURES

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 4.1-2: Proposed land uses in a portion of the 16th/Wood sub-district would be fundamentally inconsistent with Seaport and Bay plan Port Priority Use designations.	**Mitigation 4.1-1:** Amend the Bay and Seaport plans to eliminate, where necessary, Port Priority Use designations within the 16th/Wood sub-district.	Pre-construction; at relevant site
Impact 4.2-1: Under proposed redevelopment, dissimilar land uses may be located proximate to one another.	**Mitigation 4.2-1:** The City shall ensure that Gateway development area redevelopment activities adjacent to Port of Oakland industrial maritime facilities are designed to minimize any land use incompatibilities to the extent feasible.	Pre-construction
	Mitigation 4.2-3: The City and Port shall coordinate to implement Mitigation Measures 4.2-1 and 4.2-2.	Pre-construction; Operations
Impact 4.3-1: Redevelopment would cause the level of service to degrade to worse than LOS D at three intersections located outside the Downtown area: • West Grand Avenue/Maritime Street • West Grand Avenue/I-880 Frontage Road • 7th/Maritime Street **Impact 5.3-1**: Increased congestion at Intersections exceeding the cumulatively significant threshold.	**Mitigation 4.3-1:** ***West Grand Avenue/Maritime Street.*** As part of the design for the realignment of Maritime Street, project area developers shall fund on a fair-share basis modifications to the West Grand Avenue/Maritime Street intersection.	Pre-construction
	Mitigation 4.3-2: ***West Grand Avenue/I-880 Frontage Road.*** Project area developers shall fund, on a fair-share basis, modifications to the West Grand Avenue/I-880 Frontage Road intersection.	Pre-construction
	Mitigation 4.3-3: ***7th/Maritime Street.*** As part of the design for the realignment of Maritime Street, project area developers shall fund on a fair-share basis modifications to the 7th/Maritime Street intersection.	Pre-construction

a. •"Pre-construction" means prior to issuance of demolition, grading, or building permits, or the equivalent.
•"Construction" includes remediation, demolition and construction.
•"Pre-operations" means prior to issuance of certification of occupancy or its equivalent.
•"Operations" means occupation and ongoing use of structures or facilities.

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 4.3-2: Redevelopment would cause some roadway segments on the MTS to operate at LOS F and increase the V/C ratio by more than three percent on segments that would operate at LOS F without redevelopment. **Impact 5.3-2**: Increased congestion on the Metropolitan Transportation System (MTS) exceeding the cumulatively significant threshold.	**Mitigation 4.3-4:** The City and Port, in consultation with transit agencies, shall jointly create and maintain a transit access plan(s) for the redevelopment project area designed to reduce demand for single-occupant, peak hour trips, and to increase access to transit opportunities. Major project area developers shall fund on a fair share basis the plan(s).	Pre-operations
Impact 4.3-3: Redevelopment could result in traffic hazards to motor vehicles, bicycles, or pedestrians due to inadequate design features or incompatible uses. **Impact 5.3-3**: Increase in traffic hazards.	**Mitigation 4.3-5:** Redevelopment elements shall be designed in accordance with standard design practice and shall be subject to review and approval of the City or Port design engineer. **Mitigation 4.3-7:** The City and the Port shall continue to work together and shall create a truck management plan designed to reduce the effects of transport trucks on local streets. The City and Port shall fund on a fair share basis implementation of this plan.	Pre-construction Pre-operations
Impact 4.3-4: Due to site constraints, it may not be possible to provide two emergency access routes to the western portion of the Gateway development area, which would be in excess of 1,000 feet from the nearest major arterial. **Impact 5.3-4**: Inadequate emergency access.	**Mitigation 4.3-8:** Provide an emergency service program and emergency evacuation plan using waterborne vessels.	Pre-operations; at time Port and Gateway development area employees exceed 2,044 (1995 baseline)
Impact 4.3-5: Redevelopment could fundamentally conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).	**Mitigation 4.3-9:** Redevelopment plans shall conform to City of Oakland or Port development standards with facilities that support transportation alternatives to the single-occupant automobile.	Pre-construction
Impact 4.3-6: Redevelopment could result in an inadequate parking supply at the Gateway development area, the 16th/Wood sub-district, or for trucks serving the Port of Oakland. **Impact 5.3-5**: Inadequate truck parking.	**Mitigation 4.3-10:** The number of parking spaces provided in the project area shall comply with City code or Port requirements and/or with recommendations of a developer funded parking demand analysis.	Pre-construction

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 4.3-9: Redevelopment would increase the peak hour average ridership at the West Oakland BART station by 3 percent where average waiting time at fare gates could exceed 1 minute. **Impact 5.3-8**: Increased waiting time during peak weekday hours at BART fare gates.	**Mitigation 4.3-12:** The City and Port shall provide detailed information regarding redevelopment to BART to enable BART to conduct a comprehensive fare gate capacity assessment at the West Oakland BART station. Pending the results of this assessment, the City and the Port may need to participate in funding the cost of adding one or more fare gates at the West Oakland BART station.	Operations
Impact 4.3-11: Remediation, demolition/deconstruction, and construction activities within the redevelopment project area would utilize a significant number of trucks and could cause significant circulation impacts on the street system.	**Mitigation 4.3-13:** Prior to commencing hazardous materials or hazardous waste remediation, demolition, or construction activities, a Traffic Control Plan (TCP) shall be implemented to control peak hours trips to the extent feasible, assure the safety on the street system and assure that transportation activities are protective of human health, safety, and the environment.	Pre-construction
Impact 5.3-1: Increased congestion at intersections exceeding the cumulatively significant threshold.	**Mitigation 5.3-1: *7th/Maritime Street.*** Project area developers shall fund a fair share of additional modifications at the 7th /Maritime Street intersection. **Mitigation 5.3-2: *7th Street/I-880 Northbound Ramps.*** Project area developers shall fund a fair share of modifications at the 7th Street/I-880 Northbound ramp. **Mitigation 5.3-3: *3rd/Adeline Street.*** Project area developers shall fund a fair share of the modifications at the 3rd/Adeline Street intersection. **Mitigation 5.3-4: *3rd/Market Street.*** Project area developers shall fund a fair share of modifications at the 3rd/Market Street intersection. **Mitigation 5.3-5: *12th/Brush Street.*** Project area developers shall fund a fair share of modifications to the 12th /Brush Street intersection to increase the signal cycle length to 102 seconds. **Mitigation 5.3-6: *Powell Street/I-80 Northbound Ramps.*** Project area developers shall fund a fair share of modifications at the Powell Street/I-80 northbound ramps intersection.	Operations; at time level of service exceeds LOS E Operations; at time additional delay exceeds 2 seconds Operations; at time level of service exceeds LOS E Operations; at time level of service exceeds LOS E Operations; at time level of service exceeds LOS E Operations; at time additional delay exceeds 2 seconds
Impact 5.3-5: Inadequate truck-related parking.	**Mitigation 5.3-7:** The City and Port shall cooperatively develop a program that combines multiple strategic objectives and implementation tools designed to reduce cumulative truck parking and other AMS impacts.	Operations

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 5.3-7: Increased ridership on BART trains.	**Mitigation 5.3-8:** The City and Port shall work with BART and AC Transit to ensure adequate BART train and AC Transit capacity will be available for riders to and from the redevelopment project area, and possibly fund, on a fair share basis, BART train and AC Transit capacity improvements.	Operations
Impact 4.4-1: PM as fugitive dust would be emitted during construction and remediation activities. **Impact 5.4-1**, see below..	**Mitigation 4.4-1:** Contractors shall implement all BAAQMD "Basic" and "Optional" PM_{10} (fugitive dust) control measures at all sites, and all "Enhanced" control measures at sites greater than four acres.	Construction
Impact 4.4-2: Construction equipment exhaust could increase levels of NO_x, ROG, CO, and PM_{10} (the latter primarily as diesel PM) that could exceed 15 tons per year, or result in substantial increase in diesel emissions.	**Mitigation 4.4-2:** Contractors shall implement exhaust control measures at all construction sites.	Construction
	Mitigation 4.4-4: The City and the Port shall jointly create, maintain, and fund on a fair share basis, a truck diesel emission reduction program. The program shall be sufficiently funded to strive to reduce and/or off-set redevelopment related contributions to local West Oakland diesel emissions to less than significant levels, consistent with applicable federal, state and local air quality standards and shall continually reexamine potential reductions toward achieving less than significant impacts as new technologies emerge. The adopted program shall define measurable reductions within specific time periods.	Pre-operations; at time of Port and Gateway development area redevelopment
Impact 4.4-4: Passenger vehicles and delivery trucks associated with redevelopment would emit NO_x, ROG, CO, and PM in excess of 15 tons per year or 80 pounds per day	**Mitigation 4.4-5:** Major developers shall fund on a fair share basis BAAQMD-recommended feasible Transportation Control Measures (TCMs) for reducing vehicle emissions from commercial, institutional, and industrial operations, as well as all CAP TCMs the BAAQMD has identified as appropriate for local implementation.	Pre-operations; Operations
Impact 4.4-5: Space and water heating as well as routine maintenance of office buildings, warehouses, retail stores, and live-work space, could emit NO_x, ROG, CO and PM_{10} in quantities that could exceed thresholds..	**Mitigation 4.4-6:** Title 24 of the Uniform Building Code (UBC) requires that new construction include energy-conserving fixtures and designs. Additionally, the City and Port shall implement sustainable development policies and strategies related to new development design and construction.	Pre-construction

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 5.4-1: Redevelopment would result in significant cumulative air quality impacts associated with emissions of nitrogen oxides (NOx), reactive organics gases (ROG), carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM_{10}), and diesel exhaust (almost entirely particulate matter less than 2.5 microns in diameter [$PM_{2.5}$]), the latter defined as a toxic air contaminant by the California Air Resources Board (CARB).	**Mitigation Measure 5.4-1:** The City and the Port shall encourage, lobby, and potentially participate in emission reduction demonstration projects that promote technological advances in improving air quality.	Pre-operations; Operations
Impact 4.5-1: Construction, including remediation, could result in short-term noise levels in excess of established standards, or that violate the City of Oakland Noise Ordinance at and near the redevelopment project area, and along construction haul routes.	**Mitigation 4.5-1:** Developers and/or contractors shall develop and implement redevelopment-specific noise reduction plans.	Construction
Impact 4.6-1: Redevelopment has the potential to encounter previously unknown subsurface cultural resources during ground-disturbing activities.	**Mitigation 4.6-1:** Should previously unidentified cultural resources be encountered during redevelopment, work in that vicinity shall stop immediately, until an assessment of the finds can be made by an archaeologist. If the resource is found to be significant under CEQA, an appropriate mitigation plan must be developed.	Construction
Impact 4.6-2: Redevelopment would remove all resources contributing to the OARB Historic District. **Impact 4.6-3**: Redevelopment would render the OARB Historic District no longer eligible to the National and/or California Registers of Historic Places or Local Register. **Impact 4.11-2**: Redevelopment would remove buildings contributing to a historic district, including visually striking warehouse structures visible from I-80, a locally designated scenic route, and a portion of the state scenic highway system. **Impact 5.6-1**: Loss of historic resources.	**Mitigation 4.6-2:** The City, Port and OARB sub-district developers shall fund on a fair-share basis development of a commemoration site, including preparation of a Master Plan for such a site, at a public place located within the Gateway development area. The City shall ensure that the scale and scope of the commemoration site reflects the scale of the actual loss of historic resources.	Pre-construction

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
	Mitigation 4.6-3: The City shall ensure the commemoration site is linked to the Gateway Park and the Bay Trail via a public access trail.	Pre-construction
	Mitigation 4.6-4: The City, Port and OARB sub-district developers shall fund on a fair-share basis collection and preservation of oral histories from OARB military and civilian staff.	Pre-construction
	Mitigation 4.6-5: The City, Port, and OARB sub-district developers shall fund on a fair share basis collaboration with "military.com" or a similar military history web site.	Operations; to be available after completion of book; see Measure 4.6-16
	Mitigation 4.6-6: The City, Port, and OARB sub-district developers shall fund on a fair share basis distribution of copies of the complete OARB HABS/HAER documentation prepared by the Army to: Oakland History Room, Oakland Public Library; Bancroft Library, University of California; and Port of Oakland Archives for the purpose of added public access to these records.	Pre-construction
	Mitigation 4.6-7: If determined of significant historical educational value by the Oakland Landmarks Preservation Advisory Board and the Oakland Heritage Alliance, the City, Port, and OARB sub-district developers shall fund on a fair share basis distribution of copies of "A Job Well Done" documentary video published by the Army.	Pre-construction
	Mitigation 4.6-8: The City, Port, and OARB sub-district developers shall fund on a fair share basis preservation and long-term curation of murals from OARB Building No. 1, and OBRA shall either donate the murals to the Oakland Museum of California, or provide a permanent location elsewhere.	Pre-construction
	Mitigation 4.6-9: The City, Port, and OARB sub-district developers shall fund on a fair share basis a program to salvage as whole timber posts, beams, trusses and siding of warehouses to be deconstructed. These materials shall be used on site if deconstruction is the only option. Reuse of a warehouse building or part of a warehouse building at its current location, or relocated to another Gateway location is preferable.	Pre-construction
	Mitigation 4.6-10: The City, Port, and OARB sub-district developers shall fund on a fair share basis production of a brochure describing history and architectural history of the OARB.	Operations; to be available at time Bay Trail opens

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
	Mitigation 4.6-11: The City, Port, and OARB sub-district developers shall fund on a fair share basis acquisition of copies of construction documentation and photographs of historic buildings currently in the OARB files and transfer the copies to the Oakland History Room files and Port historic archives, including funding to cover costs of archiving and cataloging these materials, as well as curator costs at the Oakland History Room. While select photos and information may be exhibited at the commemoration site, the Oakland History Room is the most appropriate location for this archive.	Pre-construction
	Measure 4.6-14: No demolition or deconstruction of contributing structures to the OARB Historic District shall occur until necessary. All efforts shall be made to retain as much of Building 1 as possible while still achieving remediation goals.	Pre-construction
	Measure 4.6-15. As part of the deconstruction and salvaging requirements for demolition of any contributing structure within the OARB Historic District (see Mitigation Measure 4.6-9), specific architectural elements, building components or fixtures should be salvaged. A professional architectural historian shall determine which, if any of such elements, components or fixtures should be retained.	Pre-construction
	Mitigation 4.6-16: The City, Port, and OARB sub-district developers shall fund on a fair share basis preparation of an Historical Resource Documentation Program. This program shall consist of a coordinated effort of primary research and documentation, with a substantial scholarly input and publicly available products. The first product of this program shall include a coordinated effort to conduct the research, writing, photo documentation, assembly and publication efforts needed to prepare a comprehensive book on the history of the Oakland Army Base. The book shall document the important contribution the Base has had to the U.S. military, to Oakland and to the nation at large.	Pre-construction

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 4.6-4: Redevelopment would result in renovation of the SPRR (Amtrak) Station and 16th Street Tower, which could alter the historic character of the buildings in a manner that could affect their eligibility.	**Mitigation 4.6-13:** Prior to major renovation of a historically significant structure, the redeveloper of the SPRR Station and 16th Street Tower shall ensure that historically significant artifacts and features, if present, are retained and protected in place if feasible. If retention and protection is found Infeasible, such artifacts and features shall be recorded and deposited with the appropriate museum. Renovation of the exterior of a historic structure shall be consistent with the Secretary's of Interior's Standards.	Pre-construction at relevant site
Impact 4.7-2: Hazardous or acutely hazardous materials (AHMs) may be handled or emitted within ¼ mile of an existing or proposed school.	**Mitigation 4.7-1:** For use of hazardous materials within ¼ mile of an existing or proposed school, business operators shall prepare Business Plan, update annually, and keep on file with the Oakland Fire Department. **Mitigation 4.7-2:** For use of AHMs within ¼ mile of an existing or proposed school, in addition to a Business Plan, business operators shall prepare, implement, and update a Risk Management and Prevention Plan (RMPP) on at least an annual basis.	Pre-operations; Operations Pre-operations, Operations
Impact 4.7-4: Site preparation, remediation and development of areas that contain contaminated soil and groundwater could expose remediation and construction workers, and future utility workers, tenants, and visitors to soil and groundwater contamination conditions. **Impact 4.7-5**, see below. **Impact 5.7-1**: Increased exposure to hazardous wastes during construction.	**Mitigation 4.7-3:** Implement RAP/RMP as approved by DTSC, and if future proposals include uses not identified in the Reuse Plan and incorporated into the RAP/RMP, or if future amendments to the remediation requirements are proposed, obtain DTSC and, as required, City approval. **Mitigation 4.7-4:** For the project area not covered by the DTSC-approved RAP/RMP, investigate potentially contaminated sites; if contamination is found, assess potential risks to human health and the environment, prepare and implement a clean-up plan for DTSC or RWQCB approval, prepare and implement a Risk Management Plan, and prepare and implement a Site Health and Safety Plan prior to commencing work.	Pre-construction Pre-construction

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 4.7-5: Potential exposure to contaminants in soil and groundwater remaining in place after remediation could be a hazard to future residents, employees and visitors.	**Mitigation 4.7-5:** For the project areas not covered by the DTSC-approved RAP/RMP, remediate soil and groundwater contamination consistent with the City of Oakland ULR Program and/or other applicable laws and regulations.	Pre-construction
Impact 4.7-6: Workers and others could be exposed to LBP in buildings, ACM or PCBs during demolition, remediation, renovation and site work activities. **Impact 5.7-1**: Increased exposure to hazardous wastes during construction.	**Mitigation 4.7-6:** Buildings and structures constructed prior to 1978 slated for demolition or renovation that have not previously been evaluated for the presence of LBP shall be sampled to determine whether LBP is present in painted surfaces, and the safety precautions and work practices as specified in government regulations shall be followed during demolition.	Pre-construction
	Mitigation 4.7-7: Buildings, structures and utilities that have not been surveyed for ACM, shall be surveyed to determine whether ACM is present prior to demolition or renovation, and the safety precautions and work practices as specified in government regulations shall be followed during demolition.	Pre-construction
	Mitigation 4.7-8: Buildings and structures proposed for demolition or renovation shall be surveyed for PCBs-impacted building materials, and the safety precautions and work practices as specified in government regulations shall be followed during demolition.	Pre-construction
Impact 4.7-7: Workers or others could be exposed to hazardous materials and contamination in and around ASTs and USTs during remediation and redevelopment activities. **Impact 5.7-1**: Increased exposure to hazardous wastes during construction.	**Mitigation 4.7-9:** For ASTs/USTs on the OARB, implement the RAP/RMP.	Pre-construction
	Mitigation 4.7-10: For the remainder of the redevelopment project area (non-OARB areas), if an AST or UST is encountered, it would be closed in place or removed and the soil would be tested and remediated, if necessary, pursuant to regulatory approvals and oversight.	Construction

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 4.7-8: Workers or others could experience direct contact exposure to LBP-contaminated soil, concrete, and pavement surrounding buildings that have LBP. **Impact 5.7-1**: Increased exposure to hazardous wastes during construction.	**Mitigation 4.7-11:** For LBP-impacted ground on the OARB, implementation of RAP/RMP to be approved by DTSC as part of the project will result in avoidance of this potentially significant impact. For the remainder of the redevelopment project area, sampling shall be performed on soil or paved areas around buildings that are known or suspected to have LBP, and the safety precautions and work practices specified in government regulations shall be followed.	Pre-construction
Impact 4.7-10: During interim or future use of existing buildings, people could be exposed to ACM or other environmental hazards.	**Mitigation 4.7-12:** The condition of identified ACM shall be assessed annually, and prior to reuse of a building known to contain ACM.	Pre-construction
	Mitigation 4.7-13: No future tenancies shall be authorized at the OARB for use categories that are inconsistent with the Reuse Plan without an updated environmental analysis and DTSC approval as provided for in the RAP/RMP.	Pre-operations
	Mitigation 4.7-14: For the remainder of the redevelopment project area (non-OARB areas), any building that has not been surveyed for ACM but potentially contains ACM shall be surveyed to determine whether ACM is present prior to demolition, renovation or reuse.	Pre-construction
Impact 4.7-11: Workers could be exposed to polychlorinated biphenyls (PCBs) and PCB-contaminated equipment during remediation, construction and future operations. **Impact 5.7-1**: Increased exposure to hazardous wastes during construction.	**Mitigation 4.7-15:** Known PCB transformers or PCB-contaminated transformers at the OARB shall be removed, monitored and/or maintained in accordance with applicable laws and regulations.	Pre-construction; Construction; Operations
	Mitigation 4.7-16: Oil-filled electrical equipment in the redevelopment project area that has not been surveyed shall be investigated prior to the equipment being taken out of service to determine whether PCBs are present.	Pre-construction; Construction; Operations
	Mitigation 4.7-17: PCB-containing or PCB-contaminated equipment taken out of service shall be handled and disposed in compliance with applicable laws and regulations.	Pre-construction; Construction; Operations

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 4.9-1: Construction activities and increases in employees and residents as well as increased building density would increase demand for fire, hazmat, and first responder medical emergency services. **Impact 4.3-4**, see above. **Impact 5.9-1**: Increased demand for fire-related services.	**Mitigation 4.9-1:** The City and Port shall cooperatively investigate the need for, and if required shall fund on a fair-share basis ,development and operation of increased firefighting and medical emergency response services via fireboat to serve the OARB sub-district.	Pre-operations; at time Port and Gateway development area employees exceed 2,044 (1995 baseline)
Impact 4.9-6: Redevelopment construction could interfere with operation of the Maritime Street emergency response staging area, or with the West Grand Avenue and 7th Street evacuation routes.	**Mitigation 4.9-2:** The Port and City shall work with OES to ensure changes in local area circulation are reflected in the revised Response Concept.	Pre-construction
	Mitigation 4.9-3: The Port and City shall require developers within their respective jurisdictions to notify OES of their plans in advance of construction or remediation activities.	Pre-construction
Impact 4.9-8: Redevelopment would increase potable water demand. **Impact 5.9-5**: Increased demand for water.	**Mitigation 4.9-4:** Individual actions with landscaping requirements of one or more acres shall plumb landscape areas for irrigation with recycled water.	Pre-construction
	Mitigation 4.9-5: Individual buildings with gross floor area exceeding 10,000 square feet shall install dual plumbing for both potable and recycled water, unless determined to be infeasible by the approving agency (City or Port).	Pre-construction
	Mitigation 4.9-6: Site design shall facilitate use of recycled water, and shall comply with requirements of CCR Title 22 regarding prohibitions of site run-off to surface waters.	Pre-construction
Impact 4.9-10: Redevelopment would increase the quantity of solid waste, and demand for solid waste services. **Impact 5.9-7**: Increased demand for solid waste services.	**Mitigation: 4.9-7:** To the maximum extent feasible, the City and Port shall jointly participate in a deconstruction program to capture materials and recycle them into the construction market.	Pre-construction
	Mitigation 4.9-8: Concrete and asphalt removed during demolition/construction shall be crushed on-site or at a near-site location, and reused in redevelopment or recycled to the construction market.	Construction

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
	Mitigation 4.9-9: The City and Port shall require developers to submit a plan that demonstrates a good faith effort to divert at least 50 percent of operations phase solid waste from landfill disposal. This measure shall reflect future increases in the City's or Port's waste diversion goals above the current 50 percent.	Operations
Impact 4.9-12: Both construction/remediation vehicles and increased operations vehicle activity would accelerate or advance deterioration of local roadways and the timing and extent of roadway maintenance/repair.	**Mitigation 4.9-10:** The Port and City of Oakland shall work cooperatively to develop an ongoing joint program to identify and evaluate impacted local roadways and identify required maintenance/repair activities. The agencies will fund needed repairs and maintenance on a fair-share basis.	Construction; Operations
Impact 4.11-3: New security lighting and/or lighting for night time operations would alter current patterns of light or glare, and could alter nighttime views in the area.	**Mitigation 4.11-1:** New lighting shall be designed to minimize off-site light spillage; "stadium" style lighting shall be prohibited.	Pre-construction
	Mitigation 4.11-2: At or near the boundary of the proposed Gateway Park, new lighting shall be shielded to prevent light spillage into natural areas.	Pre-construction
Impact 4.11-4: New construction could introduce building or landscaping elements that would now or in the future cast shadow on existing collectors or photovoltaic cells, or a building using passive solar heat collection.	**Mitigation 4.11-3:** New active or passive solar systems within or adjacent to the project area shall be set back from the property line a minimum of 25 feet.	Pre-construction
	Mitigation 4.11-4: New construction within the Gateway development area adjacent to a parcel containing permitted or existing active or passive solar systems shall demonstrate through design review that the proposed structures shall not substantially impair operation of existing solar systems.	Pre-construction
	Mitigation 4.11-5: The City and Port shall coordinate with respect to the design of new, permanent buildings constructed along the Port/Gateway boundary to minimize conflicts over solar access.	Pre-construction
Impact 4.11-5: New construction could introduce building or landscaping elements that would now or in the future cast shadow that substantially impairs the beneficial use of a public park or open space.	**Mitigation 4.11-6:** New construction adjacent to a public park or open space shall demonstrate through design review that development shall not substantially impair enjoyment of the public using the space.	Pre-construction

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 4.12-3: Redevelopment would result in net loss of approximately 27 acres of open and covered water at New Berth 21. **Impact 5.12-1**: Effects to sensitive species. **Impact 5.12-2**: Loss of protected wetlands and waters of the U.S.	**Mitigation 4.12-4:** Contractors, developers, the Port, and EBRPD shall comply with all permit conditions from the Corps, RWQCB, USFWS/NMFS, BCDC, and CDFG for fill.	Pre-construction
Impact 4.12-6: Redevelopment may result in loss of protected trees measuring 4 inches dbh (or larger) or trees with a dbh of greater than 9 inches.	**Mitigation 4.12-7:** Application for a tree preservation/tree removal permit from the City of Oakland for all protected trees shall comply with the Tree Ordinance, which includes replacement of native trees at a minimum of a 1:1 ratio. The Port is not subject to the City's ordinance, but shall replace native trees at a minimum 1:1 ratio.	Pre-construction; Construction
Impact 4.12-7: Redevelopment may affect nesting migratory birds. **Impact 5.12-1**: Effects to sensitive species.	**Mitigation 4.12-8:** Trees shall be removed between September 1 and January 31 to avoid the nesting season (February 1 to August 31). Alternatively, field surveys shall be conducted no earlier than 45 days and no later than 20 days prior to the removal of any trees during the nesting/breeding season of bird species potentially nesting on the site to determine whether birds are present. **Mitigation 4.12-9:** Construction shall not occur within 150 feet of an active nest until the nest is vacated or the juveniles have fledged.	Construction Construction
Impact 4.12-9: Loss of up to approximately 0.5 acre of isolated, urban wetlands. **Impact 5.12-2**: Loss of protected wetlands and waters of the U.S.	**Mitigation 4.12-13:** Contractors and developers shall comply with all conditions imposed by the RWQCB for fill of wetlands.	Pre-construction

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 4.13-1: Redevelopment could expose increased numbers of people and structures to strong seismic ground shaking. **Impact 4.13-2**: Redevelopment could expose increased numbers of people or structures to seismic related ground failure, including liquefaction, lateral spreading, subsidence, or collapse. **Impact 4.13-3**: Localized landsliding may occur in sloped shoreline areas. **Impact 4.13-5**: Redevelopment could occur on expansive soils. **Impact 4.13-6**: Redevelopment elements may be located above a well, pit, sump, mound, tank vault, unmarked sewer line, landfill, or unknown fill soils. **Impact 5.13-1**: Exposure of persons or property to seismic risk.	**Mitigation 4.13-1:** Redevelopment elements shall be designed in accordance with criteria established by the UBC, soil investigation and construction requirements established in the Oakland General Plan, the Bay Conservation and Development Commission Safety of Fill Policy, and wharf design criteria established by the Port or City of Oakland (depending on the location of the wharf).	Pre-construction
	Mitigation 4.13-2: Redevelopment elements shall be designed and constructed in accordance with requirements of a site-specific geotechnical evaluation.	Pre-construction
Impact 4.13-4: Under certain conditions, disturbance of soils during construction or remediation could result in erosion.	**Mitigation 4.13-3:** Prior to ground-disturbing activities, the contractor shall develop and implement a Regional Water Quality Control Board (RWQCB)-acceptable Stormwater Pollution Prevention Plan (SWPPP) that includes erosion control measures.	Pre-construction
Impact 4.13-6: Redevelopment elements may be located above a well, pit, sump, mound, tank vault, unmarked sewer line, landfill, or unknown fill soils.	**Mitigation 4.13-4:** The project applicant shall thoroughly review available building and environmental records.	Pre-construction
	Mitigation 4-13.5: The developer shall perform due diligence, including without limitation, retaining the services of subsurface utility locators and other technical experts prior to any ground-disturbing activities.	Pre-construction

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 4.14-1: Operation of wells could cause saltwater to intrude into shallow groundwater. **Impact 5.14-1**: Concurrent operation of multiple remediation wells or construction dewat4ering activities could further impair groundwater quality.	**Mitigation 4.14-1:** Installation of groundwater extraction wells into the shallow water-bearing zone or Merritt Sand aquifer for any purpose other than construction de-watering and remediation, including monitoring, shall be prohibited.	Construction; Operations
Impact 4.14-2: Operation of wells could cause contaminants to migrate to uncontaminated groundwater.	**Mitigation 4.14-2:** Extraction of groundwater for construction de-watering or remediation, including monitoring, shall be minimized where practicable; if extraction will penetrate into the deeper aquifers, than a study shall be conducted to determine whether contaminants of concern could migrate into the aquifer; if so, extraction shall be prohibited in that location.	Construction; Operations
Impact 4.15-1: In-water construction or remediation would increase turbidity, and could release contaminants, affecting water quality. **Impact 4.15-1**: Construction-related increases in erosion and sedimentation/turbidity.	**Mitigation 4.15-1:** Prior to in-water construction, the contractor shall prepare a water quality protection plan acceptable to the RWQCB, including site-specific best management practices for protection of Bay waters, and shall implement this plan during construction. **Mitigation 4.15-2:** Contractors and developers shall comply with all permit conditions from the Corps, RWQCB, and BCDC.	Pre-construction Pre-construction
Impact 4.15-2: Under certain circumstances, disturbance of soils during construction and remediation could result in erosion, which in turn could increase sediment loads to receiving waters. **Impact 4.15-1**: Construction-related increases in erosion and sedimentation/turbidity.	**Mitigation 4.15-3:** Prior to ground-disturbing activities, the contractor shall develop and implement a Stormwater Pollution Prevention Plan to be reviewed by the City or the Port, including erosion and sediment control measures.	Pre-construction

Impact	Mitigation Measures	Schedule to Begin Implementation [b]
Impact 4.15-3: During construction or remediation, shallow groundwater may be encountered that could be contaminated with sediment or chemicals, and could enter nearby receiving waters as could contaminated stormwater. **Impact 5.15-2**: Increases in 303(d) pollutants and toxics.	**Mitigation 4.15-4:** Prior to construction or remediation, the contractor shall develop and implement a Stormwater Pollution Prevention Plan, including protocols for determining the quality and disposition of construction water which includes shallow groundwater encountered during construction/remediation; depending on the results of the testing, contaminated water shall be disposed of via standards of the applicable regulatory agency (RWQCB, DTSC, or EBMUD), as appropriate. In addition, the contractor shall comply with the requirements of NPDES Permit Nos. CAG912002 and CAG912003 if appropriate.	Pre-construction
Impact 4.15-4: Net changes in impervious surface could result in higher pollutant loads to receiving waters.	**Mitigation 4.15-5:** Post-construction controls of stormwater shall be incorporated into the design of new redevelopment elements to reduce pollutant loads.	Pre-construction
Impact 4.15-5: Use of recycled water for non-potable purposes could lead to degradation of surface water quality.	**Mitigation 4.15-6:** Site-specific design and best management practices shall be implemented to prevent runoff of recycled water to receiving waters.	Pre-construction
Impact 4.15-6: New construction could result in changes in localized flooding.	**Mitigation 4.15-7:** New development shall conform with the policies of the City of Oakland's Comprehensive Plan Environmental Health Hazards Element regarding flood protection. **Mitigation 4.15-8:** The City and the Port shall complete flood hazard mapping in the project area, where necessary and applicable to delineate 100- and 500-year flood hazard zones.	Pre-construction Pre-construction

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Appendix J
Project Water Supply Assessment

EAST BAY
MUNICIPAL UTILITY DISTRICT

September 14, 2004

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250 Frank Ogawa Plaza, Suite 3330
Oakland, CA 94607

Dear Ms. Cappio:

RE: Water Supply Assessment – Central Station Project

This letter responds to your request of July 8, 2004 for water agency consultation concerning the Central Station Project (Enclosure 1). The East Bay Municipal Utility District (EBMUD) appreciates the opportunity to provide this response.

Pursuant to Sections 10910-10915 (SB-610) of the California Water Code, the project meets the threshold requirement for an assessment of water supply availability based on the amount of water this project would require, which would be greater than the amount required by a 500 dwelling unit project.

Please note that this assessment addresses the issue of water supply only and is not a guarantee of service, and future water service is subject to rates and regulations in effect at the time.

Project Demand

The water demands for the Central Station Project area are accounted for in EBMUD's water demand projections as published in EBMUD's 2000 Urban Water Management Plan (UWMP/Enclosure 2). EBMUD's water demand projections account for anticipated future water demands within EBMUD's service boundaries and for variations in demand-attributed changes in development patterns. The current water demand for the existing land uses in the Central Station Project area is about 20,000 gallons per day (gpd). The projected demand, based on the projected water consumption by the applicant for the project area, is estimated to be 220,000 gpd and is consistent with EBMUD's demand projections that indicate densification of these types of land uses.

Project Area

The Central Station Project is located in West Oakland and is bounded by West Grand Avenue to the north, 10th Street to the south, Frontage Road to the west, and Wood Street to the east. The 27.5 acre project includes up to 1,570 residential units; 537,000 square

Recycled Paper

feet of commercial, retail, and services; a new 33,000 square foot plaza; and up to 2,232 parking spaces.

EBMUD Water Demand Projections

The water consumption of EBMUD customers has remained relatively level in recent years in spite of population and account growth. Between 1987 and the present, consumption has ranged from a high of approximately 220 million gallons per day (mgd) in 1987 to a low of 170 mgd in 1989. Based on extensive forecasting in EBMUD's Water Supply Management Program (WSMP) and recent land use based demand forecasting, the WSMP forecast for 2020 water demand of 277 mgd can be reduced to 229 mgd with successful water recycling and conservation programs that are in place. The Central Station Project will not change the EBMUD 2020 demand projection.

EBMUD Water Supply and Water Rights

EBMUD has water rights and facilities to divert up to a maximum of 325 mgd from the Mokelumne River, subject to the availability of Mokelumne River runoff and the prior water rights of other users. EBMUD's position in the hierarchy of Mokelumne River water users is determined by a variety of agreements between Mokelumne River water right holders, the appropriative water rights permits and licenses that have been issued by the State, pre-1914 rights and riparian rights. Conditions that restrict EBMUD's ability to use its 325 mgd entitlement include:

- Upstream water use by prior right holders.
- Downstream water use by riparian and senior appropriators and other downstream obligations, including protection of public trust resources.
- Drought, or less than normal rainfall for more than a year.
- Emergency outage.

During periods of drought, runoff from the Mokelumne River is insufficient to supply the 325 mgd entitlement. EBMUD studies indicate that, with its current water supply and the water demands expected in 2020, deficiencies in supply of up to 67 percent could occur during droughts.

EBMUD UWMP

The UWMP, adopted by the Board of Directors in Resolution No. 33242-01, includes planning level analyses at the County- and EBMUD-wide levels for existing and projected water demand. A summary of EBMUD's demand and supply projections in five-year increments is provided in a table (Enclosure 3) from the UWMP. The data reflects the latest actual and forecast values.

EBMUD's evaluation of water supply availability accounts for the diversions of both upstream and downstream water right holders and fishery releases. Fishery releases are based on the requirements of a 1998 Joint Settlement Agreement (JSA) between EBMUD and State and Federal wildlife agencies. The JSA requires EBMUD to make minimum flow releases from its reservoirs to the lower Mokelumne River to benefit the fishery. As this water is released downriver, it is, therefore, not available for use by EBMUD's customers.

The available supply shown in the table (Enclosure 3) in years 1, 2 and 3 of a multiple-year drought was determined by EBMUD's hydrologic model with the following assumptions:

- EBMUD Drought Planning Sequence is used for 1976, 1977 and 1978.
- Total system storage is depleted by the end of the third year of the drought.
- The diversions by Amador and Calaveras Counties upstream of Pardee Reservoir increase over time.
- Releases are made to meet the requirements of senior downstream water right holders and fishery releases are made according to the JSA.

As discussed under the Drought Management Program section in Chapter 3 of the UWMP, EBMUD's system storage generally allows it to continue serving its customers during dry-year events. EBMUD imposes rationing based on the projected storage at the end of September. By imposing rationing in the first dry year of potential drought, EBMUD attempts to minimize rationing in subsequent years if a drought persists while continuing to meet its current and subsequent-year fishery flow release requirements and obligations to downstream agencies. Table 3-1 in the UWMP summarizes the guidelines for consumer water reduction goals based on system storage.

In the table (Enclosure 3), "Single Dry" year (or Year 1 of "Multiple Dry Years") is determined to be a year that EBMUD would implement Drought Management Program elements at the "moderate" stage with the goal of achieving between 0 to 15 percent reduction in customer demand. Year 2 of Multiple Dry Years is determined to be a year that EBMUD would implement Drought Management Program elements at the "severe" stage with the goal of achieving between 15 to 25 percent reduction in customer demand. In Year 3 of the multiple-year drought, deficiencies from about 48 percent in year 2005 to about 67 percent in year 2020 are forecast to occur. Therefore, a supplemental supply is needed, which is defined by EBMUD as the additional amount of water necessary to limit customer deficiency to 25 percent in a multiple-year drought while continuing to meet the requirements of senior downstream water right holders and the provisions of the 1998 JSA.

Supplemental Water Supply and Demand Management

The goals of meeting projected water needs and increased water reliability rely on three components: supplemental supply, water conservation and recycled water.

Chapter 2 of the UWMP describes EBMUD's supplemental water supply project alternatives to meet its long-term water demand. To address the need for a supplemental water supply during droughts, EBMUD signed a contract in 1970 with the Federal government for a supplemental supply from the Central Valley Project (CVP). In 2001, EBMUD certified the environmental documentation amending its CVP contract 14-06-200-5183A, reducing EBMUD's contract from 150,000 acre-feet (AF)/year to an annual entitlement not to exceed 133,000 AF. In 2002, EBMUD signed a Memorandum of Agreement with the City of Sacramento, the County of Sacramento and the U.S. Bureau of Reclamation to study a joint regional water project on the Sacramento River near Freeport. The Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) of the Freeport Regional Water Project identifies several regulatory permits and approvals required for the implementation of the project alternatives. These are listed in Table 2-6 of the Freeport Regional Water Project Draft EIR/EIS, July 2003.

Chapter 2 of the UWMP also describes other supplemental water projects, including the development of groundwater storage within EBMUD's service area. EBMUD is studying the environmental impacts of these proposed projects. Specific capital outlay and financing information for these projects are included in EBMUD's FY02-03 Capital Improvement Program and Five-Year Plan. The Freeport project would also allow for a future groundwater conjunctive use component and, along with the proposed local groundwater projects, emergency interties and planned water recycling and conservation efforts, would ensure a reliable water supply to meet projected demands for current and future EBMUD customers within the current service area. Without a supplemental water supply source, continued conservation efforts and further use of recycled water, deficiencies in supply are projected as noted above.

The Central Station Project presents an opportunity to incorporate many water conservation measures. EBMUD requests that the conditions of approval for the implementation of the Central Station Project have a requirement that the project comply with the Landscape Water Conservation Section of the Municipal Code of the City of Oakland (Chapter 7, Article 10). EBMUD also requests the opportunity to meet with staff to discuss water conservation programs and best management practices applicable to the project area. A key objective of this discussion will be to explore timely opportunities to expand conservation via early consideration of EBMUD's conservation programs and best management practices applicable to the project.

The Central Station Project area is located within the service area boundary of EBMUD's [illegible] EBMUD anticipates recycled water delivery to the project area within the next ten years and will coordinate closely with the project sponsor regarding installation of dual plumbing for use of recycled water where feasible.

The project sponsor should contact David J. Rehnstrom, Senior Civil Engineer, at (510) 287-1365 for further information.

Sincerely,

W.R. Kirkpatrick

WILLIAM R. KIRKPATRICK
Manager of Water Distribution Planning Division

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Enclosures: 1. Letter of Request for Water Supply Assessment dated July 8, 2004
2. EBMUD's 2000 Urban Water Management Plan Area
3. EBMUD's Projected Demand and Available Supply Table

cc: Board of Directors w/o Enclosure 2

Enclosure 1

CITY OF OAKLAND

250 FRANK H. OGAWA PLAZA, SUITE 3315 • OAKLAND, CALIFORNIA 94612-2032

Community and Economic Development Agency
Planning & Zoning Services Division

(510) 238-3941
FAX (510) 238-6538
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July 8, 2004

RECEIVED
JUL 16 2004
WATER SERVICE PLANNING

Mr. William Kirkpatrick
East Bay Municipal Utility District
Manager, Water Distribution Planning Division
P.O. Box 24055, MS 701
Oakland, CA 94607

Re: Request for Confirmation of Water Supply Assessment for the Central Station Project, Oakland

Dear Mr. Kirkpatrick:

Per amendments to Section 10910 of the Water Code implemented by Senate Bill 610, the City of Oakland is submitting this request to the East Bay Municipal Utility District (EBMUD) to determine whether the projected water demand associated with the proposed Central Station Project was included as part of the most recently adopted urban water management plan, and, if it was not included, to prepare a water supply assessment as outlined in Section 10910(c)(3) of the Water Code. The assessment is required in order to determine whether adequate water supply is available to meet the projected water demand of the proposed Central Station Project, which is currently under review by the City of Oakland (City). On January 21, 2004, the City published a reissued Notice of Preparation (NOP) for an Environmental Impact Report (EIR) and EBMUD submitted comments regarding that notice on February 23, 2004 (see attached NOP).

The proposed Central Station Project is located on a 27.49 acre site in West Oakland and includes the following: up to 1,570 residential units (including apartments, condominiums and live/work units); up to 537,000 square feet of commercial, retail and service uses; a new 33,000 square foot plaza; and up to 2,232 parking spaces.

The City respectfully requests that EBMUD immediately prepare a water supply assessment for the Central Station Project, based on the description in the attached Notice of Preparation. The City acknowledges that this request for an assessment is a required part of the environmental documentation for the Project. We appreciate your prompt response to this request.

Thank you for your assistance in this matter. Please contact me at (510) 238-2229 or ccappio@oaklandnet.com if you require any additional information.

Sincerely,

Claudia Cappio
Development Director

Attachment
cc: Rodney Jeung, EIP Associates; file

PROJECTED DEMAND AND AVAILABLE SUPPLY
EAST BAY MUNICIPAL UTILITY DISTRICT

(million gallons per day - mgd)

	2000	2005	2010	2015	2020
Customer Demand[1]	230	242	257	267	277
Adjusted for Conservation[2]	(8)	(14)	(20)	(27)	(34)
Adjusted for Recycled Water[3]	(6)	(9)	(11)	(12)	(14)
Planning Level of Demand	216	219	226	228	229
Available Supply & Need for Supplemental Supply					
Normal Year	>216	>219	>226	>228	>229
Supplemental Supply Need	*0*	*0*	*0*	*0*	*0*
Single Dry Year (Multiple Dry Years - Year 1) Moderate Stage (approximately 7% deficiency)[4]	200	203	210	212	213
Supplemental Supply Need	*0*	*0*	*0*	*0*	*0*
Multiple Dry Years - Year 2 Severe Stage (approximately 25% deficiency)[4]	162	164	169	171	172
Supplemental Supply Need	*0*	*0*	*0*	*0*	*0*
Multiple Dry Years - Year 3					
Available Supply	125	114	95	84	77
Deficiency	42%	48%	58%	63%	67%
Supplemental Supply Need[5] (to limit deficiency to 25%)	*87*	*102*	*128*	*142*	*154*

1. *Demand taken from the 2000 Demand Study.*
2. *Conservation water savings goals from the WCMP 1999 Annual Report, 2 mgd in 1999 and 34 mgd for year 2020, linearly interpolated into five-year increments.*
3. *Chapter 5 of UWMP.*
   Note: Conservation and Reclamation savings reported are those attributed to programs which are a part of the 1993 WSMP. Reference Chapter 6 of UWMP.
4. *Drought conditions per Table 3-1, UWMP.*
5. *The supplemental supply need is calculated from modeling studies and is the amount of water needed to limit customer deficiency to 25 percent and to implement all provisions of the 1998 Joint Settlement Agreement.*