DRAFT ENVIRONMENTAL IMPACT REPORT

CENTRAL CITY EAST REDEVELOPMENT PLAN

City of Oakland,
Oakland Redevelopment Agency

State Clearinghouse # 2002042071

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Executive Summary

Project Under Review

The City of Oakland has designated a substantial portion of Central and East Oakland as a new Redevelopment Project Area, and is now considering adoption of a Redevelopment Plan for this Project Area. This *Redevelopment Plan for the Central City East Project Area* is the Project evaluated in this Environmental Impact Report (EIR). The Redevelopment Plan is not a precise plan nor does it contain specific proposals for redevelopment of individual sites or identify particular actions the Redevelopment Agency will take with regard to specific projects. Instead, the Redevelopment Plan presents a basic framework and a process within which specific projects and programs will be established and implemented over time. Redevelopment actions are anticipated to continue throughout a 30-year redevelopment period. The 30-year time frame for the Redevelopment Plan is primarily a time frame required by the California Community Redevelopment Law, and used for financing bonds and other financial indebtedness. For purposes of this EIR, Redevelopment Plan implementation and the commensurate buildout of growth projections as presented in this EIR are assumed to occur by year 2025 within the Project Area. This approach ensures that the aggregate effects of Redevelopment Plan implementation within the Project Area are adequately disclosed.

Project Area

The Project Area is generally a linear portion of the City of Oakland that stretches along the eastern and central portions on the City, as more fully described in Chapter 3 and shown on Figure 3-2 of this EIR. The Project Area lies generally mid-way between Interstate 580 (I-5800) and I-880, but also includes a portion west of I-880 along the Oakland Estuary. The northerly extent of the Project Area is Jackson Street near the downtown and the southerly extent of the Project Area is Durant Street at the Oakland/San Leandro boundary. The Project Area is approximately 3,340 acres in size.

For the purpose of Redevelopment Plan development and implementation, the Project Area has been divided into four subareas. These subareas are distinct in their land use patterns and mix. They also differ from each other in terms of their blighting conditions and their opportunities for redevelopment and revitalization. These four subareas include:

- Eastlake/San Antonio Subarea
- Fruitvale Subarea

- Central East Subarea
- Elmhurst Subarea

Purpose and Need

The primary purpose of the Redevelopment Plan is to alleviate the physical and economic burdens caused by blighted conditions in the area. Blight prevents full utilization of the Project Area and creates a burden on the local community. The following Project objectives are intended to attain the purposes of the California Community Redevelopment Law:

1. Eliminate blighting influences and correct environmental deficiencies, including, among others, buildings in which it is unsafe or unhealthy for persons to live or work, incompatible or uneconomic land uses, and small and irregular lots.

2. Assemble land into parcels suitable for modern integrated development, with pedestrian and vehicular circulation.

3. Replan, redesign or redevelop areas that are stagnant or improperly utilized.

4. Provide opportunities for participation by owners and tenants in revitalization of their properties.

5. Strengthen retail and other commercial functions in the Project Area.

6. Strengthen the economic base of the Project Area by stimulating new investment.

7. Expand employment opportunities.

8. Provide an environment for social and economic growth.

9. Expand and improve housing for low- and moderate-income households.

10. Install new, or replace existing public improvements, facilities and utilities in areas that are currently inadequately served.

Project Description

The Redevelopment Plan is designed to eliminate blight and blighting influences and restore the fabric of the community in terms of its housing resources, its employment opportunities, the economic well-being of its residents, and the condition of its public infrastructure, services, programs and facilities.

Potential Implementation Programs

The Redevelopment Plan identifies a range of potential implementation programs that could achieve the foregoing objectives. These programs can generally be grouped into four major categories including:

- property improvement programs,
- public infrastructure improvement programs,
- assistance in the redevelopment of specific properties, and
- provision of additional affordable housing opportunities.

Redevelopment Characteristics

The basis for future redevelopment activity within the Project Area will be to implement and conform to the City of Oakland General Plan including the Land Use and Transportation Element *(*LUTE, City of Oakland, March 1998); the *Oakland Estuary Policy Plan* (City and Port of Oakland, June 1999); the Open Space, Conservation and Recreation Element (OSCAR, City of Oakland, June 1996); and the Housing Element (City of Oakland, 1994; update anticipated 2003).

Redevelopment will facilitate successful implementation of the General Plan by targeting public investments and activities towards certain catalyst projects, infrastructure improvement projects and infill development projects that are consistent with the General Plan. These targeted investments and activities have not been identified at this time. Therefore, as a conservative assumption for use in this EIR, the Redevelopment Plan is anticipated to assist either directly or indirectly in the development and redevelopment of all projected growth within the Project Area that is consistent with the General Plan. Based on the City General Plan, the Redevelopment Plan is projected to assist either directly or indirectly in the development of:

- approximately 1,440 net new households,
- an increase in population of approximately 3,780 people, and
- approximately 2,210 net new employment opportunities during the 20-year planning horizon of this EIR.

These projections represent the aggregate of all development anticipated to occur within the Project Area, and form the basis of subsequent environmental analysis. Redevelopment is not expected to provide direct assistance to all such new development activity; however, any number of individual projects that comprise this overall development projection may receive direct or indirect benefits from redevelopment by virtue of their location within the Redevelopment Project Area.

A summary of projected growth and development within the Project Area by subarea is shown on **Table 2-1**.

Table 2-1: Summary of Projected Growth and Development within the Central City East Redevelopment Project Area

Residential	**Units**	**Population**
Eastlake/San Antonio	750	1160
Estuary Plan Area	100	210
Subtotal	850	1370
Fruitvale	10	180
Central East	310	1170
Elmhurst	270	1060
Total	**1440**	**3780**

Non-Residential	**Retail**	**Service**	**Mfg.**	**Other**	**Total Employment**
Eastlake/San Antonio	180	180	-30	150	480
Estuary Plan Area	30	760	-20	-90	680
Subtotal	210	940	-50	60	1160
Fruitvale	90	140	0	10	240
Central East	230	130	0	170	530
Elmhurst	280	210	0	-210	280
Total	**810**	**1420**	**-50**	**30**	**2210**

Source: Hausrath Economics Group, 2002

Approach to the EIR

The *California Environmental Quality Act* requires that "all public and private activities or undertakings in furtherance of a redevelopment plan shall constitute a single project" (CEQA Guidelines Section 15180). CEQA also specifies that an EIR for a redevelopment plan shall be treated as a Program EIR (CEQA Guidelines Section 15180). Therefore this EIR examines, at a program level, the potential environmental effects associated with all projected growth and development within the Project Area s that may benefit from redevelopment actions. This EIR provides an assessment of all foreseeable aspects of the establishment of the Redevelopment Plan.

Intended Uses of this EIR

The City of Oakland is the Lead Agency for this EIR and will be responsible for considering its certification. The Oakland Redevelopment Agency, as a Responsible Agency, will also use the information contained in this EIR when considering adoption of the Redevelopment Plan. Other

responsible agencies and interested agencies, groups and individuals will also review this Draft EIR.

This EIR will serve as a Program EIR under Section 15168 of CEQA. Subsequent specific redevelopment projects and actions that may be implemented within the Project Area over time may rely on this EIR, or this EIR may provide a basis for possible subsequent environmental review of these projects and actions. As subsequent redevelopment activities proceed, they may require additional City permits or approvals, potentially including site-specific environmental review or supplements to this EIR.

Areas of Controversy

During the public scoping process for this EIR, no specific areas of controversy have arisen. Comments from public agencies as to the scope of this EIR pertained to issues of traffic impacts (addressed in Chapter 5: Traffic), increased demands on transit services (also addressed in Chapter 5: Traffic), and toxic and hazardous materials (addressed in Chapter 8: Hazards and Hazardous Materials).

Issues to be Resolved

The primary issue to be resolved by the Oakland Redevelopment Agency is whether to adopt the Redevelopment Plan for Central City East, or some other alternative potentially including the No Project alternative.

Summary of Impacts

This summary provides an overview of the analysis contained within the following chapters of this EIR. The California Environmental Quality Act (CEQA) requires that a summary include the following topics:

- significant impacts,
- recommended mitigation measures
- significant, unavoidable impacts, and
- alternatives to the proposed project.

Significant Impacts and Mitigation Measures

Under CEQA, a significant impact on the environment is defined as "a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project" CEQA Guidelines Section 15382). Implementation of the Redevelopment Plan has the potential to generate environmental impacts in a number of areas. At the end of this chapter, the Summary Table of Potentially Significant Impacts and Mitigation Measures identifies all environmental topics for which potentially significant environmental impacts have been

identified, and lists those mitigation measures recommended to reduce or avoid such environmental impacts.

Significant and Unavoidable Impacts

Implementation of the Redevelopment Plan would result in, or would contribute to significant and unavoidable impacts, as summarized below and discussed more thoroughly in subsequent chapters of this EIR.

Cumulative Traffic Impact

The intersection of High Street/International Boulevard is projected to operate at level of service "F" under future cumulative conditions. Future growth and development within the Project Area, consistent with the assumptions and projections of the City General Plan, and as may be assisted or facilitated by implementation of the Redevelopment Plan, would contribute to this cumulative condition. According to the thresholds established in this EIR, the Project's contribution of traffic to this intersection would be cumulatively considerable. No feasible mitigation measures have been identified that are capable of reducing this cumulative impact to a level of less than significant.

Project Impact on Historic Resources

The 9th Avenue Terminal building is a structure identified as potentially eligible for inclusion on the National Register of Historic Places and is therefore considered an historic resource under CEQA. *The Estuary Policy Plan* (City and Port of Oakland 1999) anticipates demolition or substantial alteration to the 9th Avenue Terminal building in order to create a new public park. The environmental impact of demolishing or substantially altering the 9th Avenue Terminal building in order to create a new public park has been fully analyzed and addressed in the previous *Oakland Estuary Plan EIR* (City and Port of Oakland, June 1999). That EIR notes, "at the time that development is proposed for the site, certain potential mitigation may be required to lessen the impact." These mitigation measures are identified as "potential measures" since no specific project that would involve demolition or alteration to the 9th Avenue Terminal building had been proposed at that time.

The Redevelopment Plan does not contain a specific proposal for demolition or alteration of the 9th Avenue Terminal building. However, the Redevelopment Plan's implementation activities pursuant to the *Oakland Estuary Policy Plan* may facilitate or assist in this anticipated demolition or alteration of an historic resource. Therefore, this EIR recommends adoption of the previously identified "potential" mitigation measures from the *Estuary Policy Plan EIR*. These mitigation measures can reduce, or off-set to a certain extent the impacts associated with demolition or alteration of this historic structure, but cannot reduce this impact to a level of less than significant.

Alternatives to the Proposed Project

Several alternatives to the LUTE and to the Estuary Policy Plan have been analyzed in previous EIRs. Those analyses have been incorporated by reference into this EIR. Additionally, three alternatives to the proposed Redevelopment Plan are analyzed in this Draft EIR, including:

- No Project Alternative, including a no-development scenario and a scenario assuming ongoing implementation of the General Plan without assistance from the Redevelopment Plan;

- Reduced Project Alternative, which would not include those redevelopment projects and programs designed to assist in the creation of additional housing units within the Project Area; and

- Park and Recreation Focused Alternative that would direct Redevelopment Agency efforts within the Project Area toward implementation of the Oakland Clean Water, Safe Waterfront Parks and Recreation Trust Fund bond measure.

In the absence of the No Project Alternative, the redevelopment alternative that would focus the least amount of the Redevelopment Agency's resources toward facilitating and assisting in Project Area growth and development is Alternative #3: Parks and Recreation Focus. However, as a narrowly focused use of Redevelopment Agency resources, this alternative would not meet the more broadly defined list of goals and objectives established for the Project.

Summary Table

Information in the following Summary Table of Potentially Significant Environmental Effects and Mitigation Measures has been organized to correspond to environmental issues and significant impacts that are discussed in the Draft EIR. The table is arranged in three columns:

- description of potential impacts with level of significance prior to mitigation,

- recommended mitigation measures, and

- resulting level of significance after implementation of mitigation measures.

POTENTIALLY SIGNIFICANT IMPACTS	MITIGATION MEASURES AND RESULTING LEVEL OF SIGNIFICANCE	
Project-Specific Impacts and Mitigation Measures:		
Land Use		
No Potentially Significant Impacts Identified	None needed.	*No impact*
Transportation		
Potential Impact 5.3: Growth and development within the Project Area, as may be assisted by implementation of the Redevelopment Plan, would add more than ten vehicles to intersections where the Caltrans' peak hour volume traffic signal warrants would be satisfied. This is a *potentially significant impact* of the Project.	**Mitigation Measure 5.3A: Install a Traffic Signal at the Embarcadero / 5th Avenue Intersection.** Installing a traffic signal at the Embarcadero / 5th Avenue intersection would provide for the orderly movement of traffic. The traffic signal would be equipped with railroad preemption to prevent southbound motor vehicle queues from extending onto the Union Pacific Railroad tracks that cross 5th Avenue just north of the intersection. Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost for this signal. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement. **Mitigation Measure 5.3B: Install a Traffic Signal at the Embarcadero / I-880 NB Off-Ramp Intersection.** Installing a traffic signal at the Embarcadero / I-880 NB Off-Ramp would provide for the orderly movement of traffic. The intersection would operate at LOS A during the a.m. and p.m. peak hours after installation of a traffic signal. Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost for this signal. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.	*Less than significant*

POTENTIALLY SIGNIFICANT IMPACTS	MITIGATION MEASURES AND RESULTING LEVEL OF SIGNIFICANCE	
Air Quality		
Potential Impact 6-5: Construction associated with the Redevelopment Plan's implementation projects, programs and other activities within the Project Area would generate dust (including the respirable fraction known as PM_{10}) and combustion emissions. These emissions would be a *potentially significant effect* of the Project.	**Mitigation Measure 6-5A: Construction Emission Controls.** Contractors for future development projects pursuant to implementation of the Redevelopment Plan shall implement BAAQMD dust control measures as outlined in BAAQMD *CEQA Guidelines* (1999) or any subsequent applicable BAAQMD updates. More details regarding this measure are included in Chapter 6 of the EIR.	*Less than significant*
Noise		
Potential Impact 7.1: Implementation of the Redevelopment Plan's projects, programs and other activities could generate short-term increases in noise and vibration due to construction. This would be a short-term adverse impact, and would be *potentially significant.*	**Mitigation Measure 7.1: Construction Noise.** Compliance with the City Noise Level Standards for Temporary Construction or Demolition Activities would mitigate construction noise impacts associated with future development projects pursuant to implementation of the Redevelopment Plan to a less-than-significant level. More details regarding this measure are included in Chapter 7 of the EIR.	*Less than significant*
Potential Impact 7.3: Depending on the precise location of new land uses that may be constructed pursuant to the Redevelopment Plan, future land uses within some portions of the Project Area could be incompatible with projected noise levels. This impact is considered to be *potentially-significant.*	**Mitigation Measure 7.3: Noise Compatibility.** The City of Oakland Land Use Compatibility Guidelines for Community Noise set limits on the level of noise that receiving land uses may be suscepted to, and requires analysis and mitigation should these noise levels be exceeded. In accordance with these guidelines, the following specific mitigation measures would apply to new development projects that may be in furtherance of implementation of the Redevelopment Plan. More details regarding this measure are included in Chapter 7 of the EIR	*Less than significant*
Hazards and Hazardous Materials		
No Potentially Significant Impacts Identified	None needed	*No impact*

POTENTIALLY SIGNIFICANT IMPACTS	MITIGATION MEASURES AND RESULTING LEVEL OF SIGNIFICANCE	
Public Infrastructure		
Potential Impact 9.2: Implementation of the Redevelopment Plan's projects, programs and other activities is expected to facilitate or assist in the construction of new residential and/or commercial development within the Project Area. Such new development may require localized improvements to the water delivery and wastewater collection systems to provide adequate pipeline capacity, particularly along major transit corridors. Potential localized infrastructure capacity constraints represent a *potentially significant impact.*	**Mitigation Measure 9.2**: Major new development projects pursuant to or in furtherance of the Redevelopment Plan shall be reviewed to determine projected water and wastewater loads as compared to available capacity. Where appropriate, determine capital improvement requirements, fiscal impacts and funding sources prior to project approval.	*Less than significant*
Public Services		
No Potentially Significant Impacts Identified	None needed.	*No impact*
Cultural and Historic Resources		
Potential Impact 11.1: Implementation of the Redevelopment Plan's projects, programs and other activities could result in new development involving excavation within the Project Area. Such excavation could unearth archaeological resources at currently known archaeological sites. Some of these remains could have scientific or cultural importance. This is a *potentially significant impact* if left unmitigated.	**Mitigation Measure 11.1A: Avoidance.** In accordance with CEQA, all cultural resources deemed significant should be avoided during project implementation whenever possible. **Mitigation Measure 11.1B: Characterization and Research**. If avoidance is not feasible, additional mitigation will be required for potential impacts to be considered less-than-significant. Should subsequent Redevelopment Plan projects, programs or other activities be proposed at archaeological properties, mitigation consisting of subsurface archaeological characterization should be conducted to define the subsurface extent and integrity of the site. Additional archival research may also be conducted as a means of corroborating the archaeological data collected. This additional data-gathering phase at each site may be sufficient, on an individual basis, to consider loss of the resource during development as a less-than-significant impact.	*Less than significant*

POTENTIALLY SIGNIFICANT IMPACTS	MITIGATION MEASURES AND RESULTING LEVEL OF SIGNIFICANCE	
	Mitigation Measure 11.1C: Data Recovery. Some sites may prove to be inherently complex or significant so that testing alone will not be considered adequate mitigation to permit loss. In those cases, data recovery may be warranted, wherein a more comprehensive subsurface examination, based on a Research Design formulated to address pertinent research topics, may be required.	
Potential Impact 11.2: Future development activities pursuant to the Redevelopment Plan's implementation projects, programs or other activities within the Project Area have the potential to encounter previously unknown subsurface cultural resources during ground-disturbing activities. This is a *potentially significant impact* of the Redevelopment Plan.	**Mitigation Measure 11.2:** In accordance with CEQA Section 15064.5, should previously unidentified cultural resources be discovered during construction, the project sponsor is required to cease work in the immediate area until such time a qualified archaeologist, and the City of Oakland, can assess the significance of the find and make mitigation recommendations, if warranted.	*Less than significant*
Potential Impact 11.4: The Redevelopment Plan is intended to implement the City of Oakland General Plan, including the Oakland Estuary Plan. Redevelopment assistance with implementation of that portion of the Estuary Plan pertaining to creation of an 11-acre Crescent Park at the site of the 9th Avenue Terminal would result in demolition of the Terminal building. The 9th Avenue Terminal building has been determined eligible for the National Register of Historic Places, and its demolition would be a *significant impact.*	**Mitigation Measure 11.4:** Consistent with the recommendations of the Estuary Policy Plan EIR, the following mitigation measures shall be adopted and, to the extent feasible, implemented pursuant to any Redevelopment Plan's implementation project, program or other activity involving demolition or substantial alteration to the 9th Avenue Terminal building. 1. Modify the project design to include restoration of a portion of the historic character of the property. 2. Modify the design to incorporate or replicate elements of the building's original architectural design. 3. Salvage and preserve significant features and materials of the structure in a local museum or within the new project. 4. Document in an Historic American Building Survey or other appropriate format: photographs, oral history, videos, etc. 5. Place a plaque, commemorative marker or artistic or interpretive display on the site providing information on the historical significance of the resource.	*Significant and Unavoidable*

POTENTIALLY SIGNIFICANT IMPACTS	MITIGATION MEASURES AND RESULTING LEVEL OF SIGNIFICANCE	
	6. Contribute to a Façade Improvement Fund, the Historic Preservation Revolving Loan Fund, the Oakland Cultural Heritage Survey, or other program appropriate to the character of the resource. Additional mitigation measures may be developed at the time a specific proposal is considered that would involve demolition or substantial alteration to this building.	
Cumulative Impacts and Mitigation Measures:		
Transportation		
Cumulative Impact 5.1: The Project, in combination with past projects, other current projects, and probable future projects, would cause some regional roadway segments to operate at LOS F. This cumulative condition would increase the V/C ratio by more than three percent on segments that would operate at LOS F without cumulative development. Although this is considered to be a significant cumulative effect, the Project's contribution to this effect is *less than cumulatively considerable*.	None required.	*Significant cumulative effect, but* less than cumulatively considerable *contribution by the Project.*
Cumulative Impact 5.2: Traffic generated by new growth and development within the Project Area, in combination with traffic from past projects, other current projects, and probable future projects, would cause some signalized intersections to operate at unacceptable levels of service. Traffic generated from within the Project Area would contribute to certain intersections as having a significant cumulative impact, and the contribution of Project Area traffic would be considered a *cumulatively considerable contribution* to these cumulative effects.	**Mitigation Measure 5.2A: Modify Traffic Signal Phasing at the High Street / International Boulevard Intersection.** Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost to provide protected left-turn phasing for the turn lanes on International Boulevard. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement. **Mitigation Measure 5.2B: Add a Right-Turn Lane at the 73rd Avenue & Bancroft Avenue Intersection**. Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost to provide a right-turn lane for eastbound traffic on	*Cumulatively significant and unavoidable* at the High Street/International Boulevard intersection. *Less than significant* at all other intersections studied.

POTENTIALLY SIGNIFICANT IMPACTS	MITIGATION MEASURES AND RESULTING LEVEL OF SIGNIFICANCE	
	Bancroft Avenue at 73rd Street. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement. **Mitigation Measure 5.2C: Add a Left-Turn Lane at the 73rd Avenue & MacArthur/Foothill Boulevard Intersection.** Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost to provide a second left-turn lane for northbound traffic on 73rd Street at MacArthur/Foothill Boulevard and increase the signal cycle length to 104 seconds. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement. **Mitigation Measure 5.2D: Increase the Traffic Signal Cycle Length at the 98th Avenue & MacArthur Boulevard Intersection.** Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost to increase the signal cycle length to 82 seconds. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.	
Cumulative Impact 5.4: New growth and development within the Project Area, in combination with past projects, other current projects, and probable future projects, would be likely to increase average ridership on AC Transit by more than 3 percent. This is a significant cumulative effect. It is possible that the contribution of AC Transit riders from within the Project Area to cumulative ridership on AC Transit would be *cumulatively considerable.*	**Mitigation Measure 5.4: Coordination with AC Transit.** The City of Oakland shall coordinate with AC Transit to ensure that the average load factor on any specific AC Transit line does not exceed 125 percent over a peak thirty-minute period. At the Redevelopment Agency's sole discretion, redevelopment financing capabilities could potentially be used to assist AC Transit in meeting this operational threshold.	Significant cumulative effect, but *less than cumulatively considerable* contribution by the Project.

POTENTIALLY SIGNIFICANT IMPACTS	MITIGATION MEASURES AND RESULTING LEVEL OF SIGNIFICANCE	
Cumulative Impact 5.5: New growth and development within the Project Area, in combination with other transit oriented development that has been proposed near the Project Area would likely result in cumulatively significant impacts on BART service at fare gates. The contribution of peak hour riders on BART trains due to new growth and development within the Project Area could be *cumulatively considerable*.	**Mitigation Measure 5.5: Coordination with BART.** The City of Oakland shall coordinate with BART to ensure that adequate fare gate capacity is available at the Fruitvale BART station to accommodate anticipated increases in ridership associated with projected growth and development within the Project Area. To the extent that adequate capacity may be reliant on the addition of one or more new fare gates at the station, the Redevelopment Agency, at its sole discretion, may consider utilizing redevelopment financing capabilities to assist in the financing of such station improvements.	Significant cumulative effect, but *less than cumulatively considerable* contribution by the Project.
Public Services		
Cumulative Impact 10.1: On a cumulative basis, the growth and development that may be facilitated by, or be in furtherance of, the Redevelopment Plan would *contribute to a cumulatively considerable deficit* in existing parkland.	**Mitigation Measure 10.1A**: The City of Oakland Redevelopment Agency shall coordinate with the Office of Parks and Recreation to develop and initiate a land acquisition program for new parks in underserved areas. As with schools, the biggest challenge will be to find available land in appropriate areas to serve new residents. The Redevelopment Agency may be able to assist through the use of redevelopment tools in the identification and acquisition of appropriate new park sites. **Mitigation Measure 10.1B**: The City of Oakland Redevelopment Agency shall coordinate with the City Office of Parks and Recreation and the OUSD, local churches, private recreation providers and local non-profit agencies to promote joint use agreements and joint use partnerships that maximize the use of non-park recreational facilities. **Mitigation Measure 10.1C**: The City of Oakland and its Redevelopment Agency shall identify and pursue local funding opportunities to augment existing General Fund monies. At the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used for parkland acquisitions and improvements.	Less than cumulatively considerable.

POTENTIALLY SIGNIFICANT IMPACTS	MITIGATION MEASURES AND RESULTING LEVEL OF SIGNIFICANCE	
Cumulative Impact 10.2: On a cumulative basis, the growth and development that may be facilitated by, or be in furtherance of, the Redevelopment Plan would *contribute to a cumulatively considerable deficit* in existing school capacity.	**Mitigation Measure 10.2A**: The City of Oakland and its Redevelopment Agency shall coordinate with the OUSD to develop and initiate a land acquisition program for new schools. The School District's biggest challenge will be to find available land in appropriate areas to serve new student populations. The City and Agency may be able to assist, through the use of redevelopment tools, in the identification and acquisition of appropriate sites. **Mitigation Measure 10.2B**: The City of Oakland, its Redevelopment Agency, and public and private land developers within the Project Area shall work with the OUSD to identify possible joint use opportunities. Joint use may take many different forms. Examples of joint use may include the lease or sale of air rights above or below existing school grounds or facilities to private developers, or joint venturing with private developers, public entities or other parties in the development of surplus school property. Other standard joint use opportunities include joint ventures with the City parks department in the development of shared school grounds/public park space. **Mitigation Measure 10.2C**: The City of Oakland and its Redevelopment Agency shall coordinate with the OUSD to identify and pursue local funding opportunities to match potential state grants. At the Redevelopment Agency's sole discretion, local funds could potentially include the use of redevelopment funds.	Significant cumulative effect, but *less than cumulatively considerable* contribution by the Project.

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Project Description

Introduction

The City of Oakland has designated a substantial portion of Central and East Oakland as a new Redevelopment Project Area, and is now considering adoption of a Redevelopment Plan for this Project Area. The *Redevelopment Plan for the Central City East Project Area* (City of Oakland, January 2003), known hereafter as the "Redevelopment Plan," has been prepared by the City of Oakland Redevelopment Agency (Agency) and the Central City East Project Area Committee (PAC). The Central City East Redevelopment Project Area (Project Area) is located in Central and East Oakland, in the San Francisco Bay Area of California (see **Figure 3-1**).

The use of redevelopment as a strategy for implementation of economic improvements and neighborhood revitalization in this part of the City began with establishment of the downtown Central District Redevelopment Area in the 1960s and the Coliseum Redevelopment Area in 1995. The Central District Redevelopment Area is located immediately to the northeast of the Project Area, and the Coliseum Redevelopment Area is located immediately to the southwest of the Project Area, as shown on **Figure 3-2**.

Prior Planning Efforts

Consistent with state law, the Redevelopment Agency is now considering expansion of redevelopment authority in the Central City East portion of the City to facilitate redevelopment consistent with the City's General Plan. Prior planning efforts in furtherance of this objective have included:

- The *Preliminary Plan for the Central City East Redevelopment Project* (Preliminary Plan, City of Oakland, December 2001). The Preliminary Plan outlines the boundaries of the Project Area, the land uses that are proposed as the basis for redevelopment, and the purposes and intended uses of redevelopment within the Project Area.

Figure 3-1

Figure 3-2

Figure 3-2 (back)

- Pursuant to California Redevelopment Law (CRL, Section 33385), a citizens Project Area Committee (PAC) was established in June of 2002 to provide guidance and advice to the Redevelopment Agency on the finalization of the Redevelopment Plan. The PAC is a committee of community-elected representatives. PAC members representing homeowners, residential tenants and business owners were elected by subarea. Additionally, three community organizations from each subarea were designated to serve on the PAC by the City Council. Each of these organizations chose their representatives. The PAC is advisory to the Redevelopment Agency on policy matters concerning redevelopment of the Project Area.

- The *Preliminary Report for the Central City East Redevelopment Project* (Preliminary Report, Keyser Marston Associates, October 2002) was then prepared. The Preliminary Report is one of the legally required documents leading to adoption of the Redevelopment Plan. It provides documentation on the nature and extent of the conditions within the Project Area and how these conditions will be corrected through the use of redevelopment. It also describes how redevelopment will be financed so that economic feasibility can be demonstrated (Keyser Marston Associates 2002, page 1).

Overview of the Redevelopment Plan

The Central City East Redevelopment Plan is the fundamental document that, if adopted, will govern the Oakland Redevelopment Agency's activities within the Project Area. It would establish long-term goals and objectives, policies, procedures and financing tools for the Redevelopment Project Area. The Redevelopment Plan would also set forth certain parameters regarding the Agency's authority to conduct activities within the Project Area. The Redevelopment Plan is a general document, thereby providing the Agency with long-term flexibility to address issues, projects, programs and other activities over the 30-year term of the Plan. The programs and projects included in the Redevelopment Plan are further described in subsequent sections of this Project Description.

Redevelopment Plan in Relation to the General Plan

The Redevelopment Plan has been developed to be fully consistent with the City of Oakland General Plan, including the Land Use and Transportation Element (LUTE), the Open Space, Conservation and Recreation Element (OSCAR), the Estuary Policy Plan, the Historic Preservation Element and the Housing Element. As such, the physical development that may occur in furtherance of the Redevelopment Plan will be based on, and will be fully consistent with, the land use designations, development standards and other goals, objectives and policies in the City's General Plan. This consistency is further described in subsequent sections of this Project Description.

Redevelopment Plan and Environmental Effects

The Redevelopment Plan, in and of itself, will not result in any physical impact on the environment. However, the programs, projects and other activities authorized by the Redevelopment Plan and as generally described in this Project Description may result in environmental impacts. These impacts are generally within the framework of growth

projections, assumptions and physical changes identified and analyzed in the General Plan LUTE EIR (City of Oakland, June 1998) as more fully discussed in subsequent chapters of this Environmental Impact Report. Although the Redevelopment Plan is proposed for a 30-year planning horizon, this Program EIR analyzes those impacts that would be expected to occur over a 20-year period, or by approximately the year 2025. The 30-year time frame for the Redevelopment Plan is primarily a time frame required by the California Community Redevelopment Law, and used for financing bonds and other financial indebtedness.

Project Area Location

The Project Area is generally a linear section of the City of Oakland that stretches along the eastern and central portions of the city as shown in Figure 3-2. The Project Area lies to the south and east of Oakland's central business district, generally mid-way between Interstate 580 (I-580) and I-880, but also including a portion west of I-880 along the Oakland Estuary. The northerly extent of the Project Area is Jackson Street near the downtown, and the southerly extent of the Project Area is Durant Street at the Oakland/San Leandro boundary. The Project Area is approximately 3,340 acres in size.

Major transportation facilities in the Project Area and vicinity are the Oakland-to-Fremont BART line including the Lake Merritt BART station, I-880, and both passenger and freight railways. Major north-south arterial roadways include Foothill Boulevard, MacArthur Boulevard and International Boulevard. Major east-west arterial roadways include Fruitvale Avenue, High Street, 73rd Avenue and 98th Avenue.

Subareas

For the purpose of Redevelopment Plan development and implementation, the Project Area has been divided into four subareas. The boundaries of these subareas are similar but not coincidental to the neighborhood planning subareas found in the City General Plan Land Use and Transportation Element. Each of these subareas is distinct in its land use, historic development patterns and mix of uses. They also differ from each other in terms of their blight conditions and their opportunities for redevelopment and revitalization. These four distinct subareas, as shown on **Figure 3-3**, are more fully described below:

Eastlake/San Antonio Subarea

This irregularly shaped subarea is located in the northwestern portion of the Project Area and is generally bordered by Jackson Street on the north, the Oakland Estuary on the west, 19th Avenue on the south and the frontage parcels along 20th Street on the east. An irregularly shaped extension of this subarea extends along the Oakland Estuary as far south as 28th Avenue, and another extension of this subarea follows eastward one parcel-depth north along 14th Avenue to a point at 29th Street. Prominent land uses that currently exist within this subarea include the BART Administration Building, Metropolitan Transportation Commission (MTC) offices and Lake Merritt BART station in the north; Laney College in the center; the San Antonio community park in the center; and the Port of Oakland's 9th Avenue Terminal in the west.

Figure 3-3

Figure 3-3 (back)

Generally, land uses within this subarea can be characterized as a mix of residential and commercial uses on the east and south, industrial uses on the west, and office and institutional uses in the north. The most westerly portion of this subarea along the Oakland Estuary is split from the remainder of the subarea by I-880.

This subarea currently contains approximately 6,830 households with a resident population estimate of approximately 19,610 people. This subarea also contains employment opportunities that provide for a total of approximately 8,510 jobs.

Fruitvale Subarea

This subarea is located in the north-central portion of the Project Area and is generally bordered by 19th Avenue on the north, one parcel-depth back from International (14th Street) on the west, 65th Avenue/Fairfax Street on the south, and Foothill Boulevard on the east, inclusive of the eastern frontage parcels along Foothill Boulevard. This subarea is extended in its northeast corner as far easterly as the frontage parcels along 27th Street, between 19th Avenue and the frontage parcels along 23rd Avenue. Two other small extensions stretch eastward several blocks along both Fruitvale Avenue and High Street. This subarea is predominantly residential with a mix of urban residential densities. Foothill Boulevard is a primary commercial corridor through this subarea. Other prominent institutional uses include Fremont High School, St. Elizabeth's Church and campus facilities, Sanborn Recreation Center and the Spanish Speaking Unity Council Building.

This subarea currently contains approximately 6,490 households with a resident population estimate of approximately 25,830 people. This subarea also contains employment opportunities that provide for a total of approximately 2,480 jobs.

Central East Subarea

This subarea is located in the central portion of the Project Area and is generally bordered by 65th Avenue/Fairfax Street on the north, one parcel-depth back from International (14th Street) on the west, 82nd Avenue on the south, and Foothill Boulevard/MacArthur Boulevard on the east, inclusive of the eastern frontage parcels along Foothill/MacArthur Boulevard. This subarea is predominantly residential with a mix of urban residential densities. Foothill Boulevard is a primary commercial corridor through this subarea. Prominent land uses include the Eastmont Town Center at MacArthur Boulevard and 73rd Avenue, the California Concordia College and Frick Junior High School.

This subarea currently contains approximately 7,640 households with a resident population estimate of approximately 25,330 people. This subarea also contains employment opportunities that provide for a total of approximately 2,380 jobs.

Elmhurst Subarea

This subarea is located in the southern portion of the Project Area and is generally bordered by 82nd Avenue on the north, one parcel-depth back from International (14th Street) on the west, Durant Street (the boundary between the City of Oakland and San Leandro) on the south, and MacArthur Boulevard on the east, inclusive of the eastern frontage parcels along MacArthur

Boulevard. This subarea is also predominantly residential with a mix of urban residential densities. Foothill Boulevard is the primary commercial corridor through this subarea, and Bancroft Avenue is a secondary mixed residential/commercial corridor. Other prominent land uses include the Castlemont High School at MacArthur Boulevard, Arrojo Viejo Recreation Center, the Elmhurst Middle School, and Foothill Square Shopping Center at MacArthur Boulevard between 106th and 108th Avenues.

This subarea currently contains approximately 6,300 households with a resident population estimate of approximately 21,410 people. This subarea also contains employment opportunities that provide for a total of approximately 1,320 jobs.

Existing Population and Employment

Currently the entire Project Area contains approximately 27,260 households with a household population of 90,980 people. The total population estimate for the Redevelopment Project Area (including group-housing populations) is approximately 92,180 people. The Project Area also contains employment opportunities that provide for a total of approximately 14,700 jobs, as show in **Table 3-1** below.

Table 3-1: Central City East Redevelopment Area, Subarea Demographic Characteristics

Subarea	Households	Total Population	Employment
Eastlake/San Antonio	6,830 (25%)	19,610 (21%)	8,510 (58%)
Fruitvale	6,490 (24%)	25,830 (28%)	2,480 (17%)
Central East	7,640 (28%)	25,330 (27%)	2,380 (16%)
Elmhurst	6,300 (23%)	21,410 (24%)	1,320 (9%)
Total Project Area	27,260	92,180	14,700

Source: Hausrath Economics Group, as derived from the U.S. Census for Year 2000.

Purpose and Need for the Redevelopment Plan

A primary purpose of the Redevelopment Plan is to alleviate the physical and economic burdens caused by blighted conditions in the area. Blight prevents full utilization of the Project Area and creates a burden on the local community.

Existing Blighted Conditions

A number of blight-related conditions affect the vitality of the Project Area and its potential for revitalization. These blighted conditions have been documented in the Preliminary Report (Keyser Marston Associates [KMA] 2002). The Preliminary Report indicates that these blighted

conditions cannot be alleviated or reversed by private enterprise actions alone. The following types of blighted conditions exist in the Project Area, as described more fully in the Preliminary Report:

- Physical blight, including older buildings that have reached or exceeded their normal lifespan, is exacerbated by lack of repairs and overcrowding (KMA, page 35).

- Physical factors hindering economically viable uses, including older and obsolete spaces affected by declining property maintenance, low property sales prices, low lease rates, high building vacancies, have limited reinvestment in property and resulted in general economic decline (KMA, pages 46 and 47).

- Impaired investments exist, including those properties for which the economic return to the property owner is not sufficient relative to normal market returns in adjacent or competing locations (KMA, page 67).

- Abandoned buildings and excessive numbers of vacant lots indicate an inability of the private sector to alleviate blighting conditions (KMA, page 93).

- Residential overcrowding is measured by Census data and defined as more than 1 person per room. Census data indicates that the Project Area is more overcrowded than the citywide average (KMA, page 96).

- High crime rates are measured on a per capita basis. The rate of crime in the Project Area is high relative to most types of crime throughout Alameda County and the balance of the City (KMA, page 102).

For all of the above reasons, the Redevelopment Agency desires to develop and implement a single comprehensive strategy for the overall rehabilitation, revitalization and redevelopment of the Project Area.

Project Objectives

The following are the Project objectives as derived from the Redevelopment Plan, intended to attain the purposes of the California Community Redevelopment Law:

1. Eliminate blighting influences and correct environmental deficiencies, including, among others, buildings in which it is unsafe or unhealthy for persons to live or work, incompatible or uneconomic land uses, and small and irregular lots.

2. Assemble land into parcels suitable for modern integrated development, with pedestrian and vehicular circulation.

3. Revitalize, redesign or redevelop areas that are stagnant or improperly utilized.

4. Provide opportunities for participation by owners and tenants in revitalization of their properties.

5. Strengthen retail and other commercial functions in the Project Area.
6. Strengthen the economic base of the Project Area by stimulating new investment.
7. Expand employment opportunities.
8. Provide an environment for social and economic growth.
9. Expand and improve housing for low- and moderate-income households.
10. Install new, or replace existing public improvements, facilities and utilities in areas that are currently inadequately served.

Additional Project objectives include:

11. Achieve the aesthetic benefits of a revitalized community.
12. Facilitate implementation of the City of Oakland General Plan, including the growth projections contained in the Land Use and Transportation Element.
13. Facilitate implementation of the goals and purposes of California Community Redevelopment Law.
14. Provide the benefit of tax increment financing.

Detailed Project Description

For purposes of this EIR, the Project as proposed is the adoption and implementation of a Redevelopment Plan for the geographical area described as the Central City East Redevelopment Program Area. Redevelopment plans are authorized under the *California Community Redevelopment Law* (CRL).[1] They are designed to eliminate blight and blighting influences and restore the fabric of a community in terms of its housing resources, its employment opportunities, the economic well-being of its residents, and the condition of its public infrastructure, services, programs and facilities. The definition of redevelopment includes:

> *"Planning, development, replanning, redesign, clearance, reconstruction, or rehabilitation (or any combination of these) of all or part of a survey area, and the provision of residential, commercial, or industrial structures or spaces as may be appropriate or necessary in the interest of general welfare*." (CRL, 33020)

The Redevelopment Plan includes a broadly defined list of potential programs and projects intended to reduce blight, and a funding mechanism via tax increment financing. These potential programs and public and private projects are consistent with the adopted Oakland General Plan

[1] State of California Health and Safety Code, Division 24, 33000 et.seq.

and are intended to enhance the Project Area's function, appearance, and economic vitality in ways that would not be possible through the normal workings of government or the private sector alone.

Potential Redevelopment Programs

The Redevelopment Plan identifies a range of potential redevelopment programs designed to facilitate achievement of the foregoing objectives. These programs can generally be grouped into four major categories including:

- property improvement programs,
- public infrastructure improvement programs,
- assistance in the redevelopment of specific properties, and
- provision of additional affordable housing opportunities.

These general and Project Area-wide programs, as more fully described below, are intended to be general and conceptual in nature and, due to the lengthy time frame for implementation of the Redevelopment Plan, are intended to be flexible and provide the capacity to change in response to the realities of the marketplace. Additional programs will likely be developed over time as opportunities arise. The general strategy for each of these programs is to use public investment to attract and stimulate private investment. The Agency is authorized to use legal agreements to form public/private partnerships leading to development of new uses. These programs are intended to serve as a catalyst to remove blighted conditions, to aid in revitalization efforts, and to spur the preservation, improvement and creation of affordable housing opportunities.

Property Improvement Programs

Generally, property improvement programs are designed to assist and encourage private property rehabilitation and redevelopment efforts, potentially including providing capital (through loans, grants or other funding mechanisms) and developing public programs to assist and support private property improvements. Identified property improvement programs include:

- *Retail and Commercial Recruitment Program*. This program would provide low or no-interest loans and grants to assist property owners with rehabilitation of retail and commercial properties. By creating and improving ground floor retail spaces, the program is designed to attract new tenants to underutilized and vacant buildings. This program may also provide capital for business expansion, equipment replacement or modernization. A primary purpose of this program is to attract businesses to the area to provide a wider range of retail and commercial uses in the Project Area.
- *Façade Improvement Program*. This program would provide matching grants to businesses for storefront improvements and façade treatments to enhance the attractiveness and visibility of the area. By eliminating physical deterioration and improving the appearance of buildings, this program is designed to increase patronage, improve sales, slow business closures and increase property values.

- *Major Employer Incentive Programs*. Under this program the Agency would give loans, grants or tax rebates as incentives to recruit major employers who would reuse and rehabilitate existing buildings within the Project Area. These incentives are designed to overcome impaired investment properties that may not otherwise be rehabilitated due to a lack of an adequate rate of return on investments.

- *Historic Preservation Program*. Agency-sponsored efforts such as a Historic Façade Improvement Program, Unreinforced Masonry Grant program and other Agency assistance may be used to make significant historical buildings into viable retail, commercial or residential properties. The program can both preserve important resources and provide for the reuse of underutilized or vacant properties.

Generally, programs such as those described above would result in improved community conditions, would provide visual quality benefits and would not result in potentially significant environmental effects.

Public Infrastructure Improvement Projects

The Project Area has deficiencies in many basic public infrastructure and facility systems including missing or damaged sidewalks, curbs and gutters, parks in need of renovation and a lack of public streetscape improvements such as lighting, signage, fencing, landscaping, and/or street furniture such as trash receptacles, benches and lights. Identified public improvement programs may include:

- *Community Facilities Program*. This program would provide Agency funds, potentially together with other city, state and/or federal funding programs to provide new or improved community facilities such as parks, community centers, libraries, open space and cultural facilities. These types of investments can encourage further investment in the neighborhoods and make them more desirable places to live and visit.

- *Infrastructure Improvement Program*. Infrastructure improvements may cover a variety of public works projects including correcting utility deficiencies, increasing traffic capacity, providing expanded transit opportunities, undergrounding utilities, and other assorted capital projects. This program may also include constructing new curbs, gutter and sidewalks, street trees and shrubs, roadway median landscaping, and street furniture. By improving the public infrastructure, this program is designed to attract development to the area by eliminating or reducing costs that would otherwise have to be borne by the private sector alone.

Public infrastructure and facility improvements within this existing urban environment generally would not result in potentially significant, long-term environmental effects. However, short-term construction-related environmental consequences may be associated with such public infrastructure improvement projects.

Assistance in Redevelopment of Specific Properties

Redevelopment funds and other redevelopment tools may be used in support of specific types of public and/or private redevelopment projects that may potentially include selective land

acquisition, remediation of groundwater quality or soil contamination from past uses, and land disposition efforts. Identified public/private redevelopment projects may include:

- *Land Assembly and Relocation Program*. The purpose of this program is to assist private, public and non-profit developers in assembling small, underutilized and/or poorly configured properties into sites suitable for development. This program would be applied in selective locations and only upon selection of qualified developers. The Agency may assist in the selective assembly of land through voluntary purchase, negotiated purchase or eminent domain. The Agency may also choose to participate in the assembly of property for improvements to the infrastructure of community facilities. By assembling land, the Agency would reduce the number of inadequately sized parcels in multiple ownership and provide adequate space for new or expanded uses. The Agency would also provide relocation assistance as necessary as required under California Redevelopment Law.

- *Public/Private Development Program*. The Agency may participate in significant private development projects through owner participation agreements or disposition and development agreements whereby grants or loans are provided to developers to assist in new commercial development or expansion of commercial facilities. This program may fund construction, landscaping, façade upgrades, parking improvements, and public works improvements such as fire hydrants or traffic improvements.

According to CEQA Guidelines Section 15180, "All public and private activities or undertakings pursuant to or in furtherance of a redevelopment plan constitute a single project, which shall be deemed approved at the time of adoption of the redevelopment plan by the legislative body." Subsequent chapters of this Program EIR provide an evaluation of the potential environmental effects of all such redevelopment-assisted projects to the extent that such projects are consistent with the growth projections of the General Plan, the Redevelopment Plan objectives and policies, the General Plan land use designations and policies, and the zoning requirements of the City of Oakland. This EIR provides a base of information on which to evaluate the environmental effects of the aggregate of these projects. As also provided under CEQA Guidelines Section 15180, "No subsequent EIRs shall be required for individual components of the redevelopment plan unless a subsequent EIR or a supplement to an EIR would be required by Section 15162 or 15163 [of the CEQA Guidelines]."

Increased Affordable Housing Opportunities

As required by state law and increased under Agency resolution, 25% of the gross tax increment funds received by the Agency must be deposited into a fund used to assist in the production and preservation of affordable housing opportunities. This fund may be used in a variety of ways including participation in land acquisition, land cost write-down, developer recruitment, credit enhancement and other forms of participation resulting in development of affordable housing. It may be used to offer low interest or no interest loans or grants to assist low- and moderate-income homeowners in making repairs to existing residences, thereby preserving the current stock of affordable housing. The fund can also be used to provide direct subsidies to developers to lower the cost of producing housing, or to assist very low- to moderate-income families with first-time homebuyer programs that may include down payments and closing costs for the

purchase of a home. These programs are designed to make home ownership available to more low- and moderate-income residents in the Project Area.

As noted above, this EIR provides a base of information on which to evaluate the environmental effects of all public and private undertakings pursuant to the Redevelopment Plan, including the provision of additional affordable housing opportunities.

Implementation Plans and Strategies

The redevelopment programs described above provide the framework for subsequent and more detailed Implementation Plans. The Implementation Plans will lay out the specific projects to be implemented within the Project Area and will target the financial and other resources necessary for implementation. While the City of Oakland Redevelopment Agency is not required to carry out specific projects as may be identified in the Implementation Plans, the Implementation Plans will identify the manner in which the Redevelopment Agency proposes to target its resources in 5-year increments. The Redevelopment Agency is required to update the Implementation Plans every five years to allow for regular evaluation of new and existing opportunities for redevelopment.

Subsequent discretionary actions that may be included within these Implementation Plans may include:

- Property acquisitions within the Project Area,
- Financial assistance for development projects that are consistent with the Redevelopment Plan,
- Other types of redevelopment projects that fall within the framework of the Redevelopment Plan,
- Subdivisions, disposition and development agreements, and owner participation agreements, and
- Other capital projects such as streetscape improvements, park facilities, landscaping, or other public projects that are consistent with the Redevelopment Plan and the General Plan.

Redevelopment Plan as an Implementation Action of the General Plan

The Redevelopment Plan does not contain specific proposals for redevelopment of individual sites or identify particular actions the Redevelopment Agency will take with regard to specific redevelopment projects. Instead, the basis for future redevelopment activity within the Project Area will be to implement and conform to the City of Oakland General Plan. According to the Preliminary Redevelopment Plan:

> *"Land uses for various properties in the Project Area shall be as described and defined in the goals, policies and land use designations of the General Plan. Such uses may include residential, commercial, industrial and public/quasi-public uses. The layout of principal streets within the Project Area will be as indicated in the LUTE and may include street closures, widening, realignment or otherwise modified streets as necessary for proper pedestrian and vehicular circulation. The population density for residential uses shall be as described and defined in the LUTE, specific plans and local codes and ordinances. Building intensities will be controlled by procedures and criteria established in the LUTE, specific plans, and local codes and ordinances, and building standards shall generally conform to the building requirements of applicable state statutes and local codes and ordinances."* (City of Oakland 2001, pages 1 and 2)

The General Plan's policy directions regarding development and redevelopment within the Project Area are primarily included in:

- the Land Use and Transportation Element (LUTE, City of Oakland, March 1998);
- the *Oakland Estuary Policy Plan* (City and Port of Oakland, June 1999);
- the Open Space, Conservation and Recreation Element (OSCAR, City of Oakland, June 1996);
- the Housing Element (City of Oakland, 1994; update anticipated 2003); and
- the Historic Preservation Element (City of Oakland, 1994 as amended in July 1998).

The policies and objectives of these General Plan elements are implemented through existing or future specific plans, the City's zoning ordinance and, if adopted, the Redevelopment Plan.

Redevelopment activities are anticipated to include targeting investments and activities towards certain catalyst projects, infrastructure improvement projects and infill development projects that are consistent with, and assist in the implementation of, the General Plan. These targeted investments and activities have not been specifically identified at this junction, but rather are described in broad, programmatic terms. Therefore, in order to be conservative in this EIR, this EIR assumes that the Redevelopment Plan would assist either directly or indirectly in the development and redevelopment of all projected growth within the Project Area, consistent with the General Plan land use and population projections. To the extent feasible, all public and private activities or undertakings pursuant to or in furtherance of the Redevelopment Plan are evaluated at a programmatic level in this EIR. Future redevelopment actions will be evaluated against this Program EIR to determine consistency and conformance with the growth projections and assumptions contained herein.

Consistency with, and Implementation of, the Land Use and Transportation Element (LUTE)

The LUTE outlines several central improvement strategies for each subarea within the Project Area. These improvement strategies are anticipated to guide future redevelopment programs,

projects and other activities and form the basis for future growth and development, and are more fully described below for each subarea, and shown on **Figure 3-4 through 3-7**:

*Eastlake/ San Antonio Subarea (see **Figure 3-4**)*

- Strengthen multiple-unit neighborhoods and preserve single-family areas through zoning, housing rehabilitation, and code enforcement.

- Bring vacant and underutilized properties back into productive use to increase employment opportunities and improve economic vitality. Key sites in this subarea include the area along the I-880 corridor and along the waterfront.

- Support private neighborhood commercial uses and revitalization in the East Lake/Clinton Park district through code enforcement, increased parking and traffic calming, and transportation/circulation improvements.

- Reconnect the waterfront to existing neighborhoods, and increase public open space opportunities along the waterfront.

*Fruitvale Subarea (see **Figure 3-5**)*

- As in the Eastlake/San Antonio subarea, strengthen multiple-unit neighborhoods and preserve single-family areas through zoning, housing rehabilitation, and code enforcement.

- Support improvements to the Foothill Boulevard corridor to enhance the neighborhood shopping experience through business retention and attraction efforts as well as through physical streetscape improvements.

- Target investments at the Foothill Boulevard/Fruitvale Avenue intersection and surrounding vicinity. Potential investments may include code enforcement, business assistance, façade improvements, and traffic and circulation improvements to encourage development of this area as a focal point for the Fruitvale community.

*Central East Subarea (see **Figure 3-6**)*

- Maintain and enhance the character of established neighborhoods.

- Create a new mixed-use living and working environment at the location of the Eastmont Town Center. This mixed-use district could provide a focus for revitalization of the subarea, with well-designed, compatible housing and neighborhood commercial and community services.

- Revitalize the historic neighborhood commercial center at Foothill Boulevard/Seminary Avenue through establishment of appropriate new zoning, urban design and economic development assistance.

- Support improvements to the Foothill Boulevard corridor to enhance the neighborhood shopping experience through business retention and attraction efforts as well as through physical streetscape improvements.

Figure 3-4

Figure 3-5

Figure 3-6

Figure 3-7

*Elmhurst Subarea (see **Figure 3-7**)*

- As in the Central East subarea, maintain and enhance the character of established neighborhoods.

- Stimulate both commercial and residential development along MacArthur Boulevard and Bancroft Avenue to enhance commercial nodes and improve neighborhood-shopping opportunities through business retention and attraction efforts as well as through physical streetscape improvements.

- Redevelop and/or revitalize Foothill Square as a major site for enhanced retail and commercial activity, new jobs and local services.

Consistency with, and Implementation of the Estuary Policy Plan

The Oakland Estuary Policy Plan includes detailed planning policy for land use and development of nearly all of the lands along the Oakland waterfront. The Estuary Policy Plan identifies two distinct planning districts: the Oak-to-9th Avenue District and San Antonio/Fruitvale District, both of which are located within the Eastlake/San Antonio subarea of the Redevelopment Project Area as shown in **Figure 3-8**. The following policies apply to the identified subareas of the Estuary Policy Plan:

Oak-to-9th Avenue District:

Policy OAK-1: *Protect and enhance the natural and built components that establish the waterfront's unique environment including wetlands, pedestrian circulation along the water's edge, and remediation of contaminants.*

Policy OAK-2: *Establish a well-structured, integrated system of major recreational facilities including expansion of Estuary Park, creation of a new park at the mouth of the Lake Merritt Channel and rehabilitation of the marina at Clinton Basin. Establish a large civic and cultural event park at the 9th Avenue Terminals to replace the existing Port cargo operations.*

Policy OAK-3: *Link the Estuary to Lake Merritt by enhancing the Lake Merritt Channel as a public open space.*

Policy OAK-4: *Provide for lively, public-oriented activities that compliment the adjacent waterfront park and open spaces,*

4.1: *Preserve and expand the 5th Avenue Point community as a neighborhood of artists and small businesses.*

4.2: *Promote development of educational and interpretive facilities.*

4.3: *Facilitate the relocation of break-bulk cargo operations from the 9th Avenue Terminal.*

Figure 3-8

4.4: Promote development of commercial-recreation uses in the vicinity of Crescent Park and Clinton Basin.

4.5: Encourage a mixed-use district of industrial, manufacturing and live/work studios north of the Embarcadero between the Lake Merritt Channel and Oak Street.

San Antonio/Fruitvale District

Policy SAF-1: Encourage the development of water-oriented commercial uses within Embarcadero Cove, on the waterside of Embarcadero.

Policy SAF-2: Maintain the industrial character and role of Brooklyn Basin (the area inland of Embarcadero Cove) as a place for food processing and manufacturing, retain light industrial uses.

2.1: Encourage development of compatible office, support commercial and institutional uses.

Consistency with, and Implementation of, Other City General Plan Elements

Housing Element

A major overall theme of the Oakland General Plan Housing Element is to encourage the growth of new residential development in Oakland. Pursuant to the strategies of the LUTE, new residential growth is projected to occur along the City's major corridors, within the downtown, at transit-oriented districts near BART stations, along the waterfront, and infill sites that are consistent with the neighborhood character of surrounding areas. The City of Oakland Housing Element (City of Oakland, 1994; update anticipated 2003) includes an inventory of such sites throughout the City suitable for residential development. It identifies that the housing potential on land suitable for residential development is very large, and that there is more than adequate land available to meet identified housing needs. The inventory of suitable sites for future housing includes sites with housing projects recently completed or under construction, sites with housing projects currently in the review process, and additional housing opportunity sites. The inventory of housing opportunity sites focuses on larger sites suitable for multiple-unit housing development. Many of these opportunity sites envisioned for development are along the City's major corridors, in the BART transit village projects and in higher-density and mixed-use developments downtown as part of the City's 10K Housing Initiative.

All housing sites within the Project Area that are either recently completed or under construction, housing projects currently in the review process, or sites identified as housing opportunities under the Housing Element have been included in the projected growth and development within the Project Area.

Historic Preservation Element

The Oakland General Plan Historic Preservation Element provides a broad, multi-faceted historic preservation strategy. This strategy includes mechanisms to identify historic properties that warrant, or may warrant preservation, reuse or restoration. It also sets forth a system of

preservation incentives and protective regulations for potentially designated historic properties. The strategy also incorporates historic preservation into the full range of City programs and activities, and identifies ways to improve public and City staff awareness and appreciation of older properties.

The Redevelopment Plan contains a Historic Preservation Program. Under this program, portions of the Project Area that include significant historic buildings can be made into viable retail, commercial or residential properties through Agency-sponsored efforts such as a Historic Façade Improvement Program, Unreinforced Masonry Grant program and other forms of Agency assistance. Rehabilitation of historic buildings provides for the reuse of valuable properties that may be vacant or underutilized and helps to preserve the character neighborhoods. These objectives of the Redevelopment Plan are consistent with, and assist in implementation of, the goals, objectives and policies of the Historic Preservation Element.

Open Space, Conservation and Recreation Element (OSCAR)

The OSCAR Element is the City of Oakland's official policy document addressing the management of open land, natural resources and parks in Oakland. A major theme of the OSCAR Element is the protection of Oakland's open spaces and natural resources, and bringing these resources into closer proximity to neighborhoods where they do not currently exist. The OSCAR Element demonstrates where recreational and open space needs exist in the City and identifies the types of funding sources that may be used to address these needs. One of the action items included in the OSCAR Element (Action REC-10.5.1) promotes the use of tax increment funds for parks, plazas and open space improvements within redevelopment areas. A wide range of parks and open space improvements are eligible for tax increment financing including street trees, landscaping, streetlights, new open spaces and refurbished park facilities.

The Redevelopment Plan includes a Community Facilities Program that focuses on the need for new or improved community facilities such as parks, community centers, libraries, open space and cultural facilities. Such facilities may be developed using Redevelopment Agency and/or other funds from the City, state or federal governments. Such projects would encourage further investment within Project Area neighborhoods. The Community Facilities Program included in the Redevelopment Plan is consistent with, and assists in implementation of, the goals, objectives and policies of the OSCAR Element.

Consistency with Population and Employment Projections

Based on the growth projections and land use designations contained in the City General Plan,[2] the Redevelopment Plan is projected to assist either directly or indirectly in the following amount of population and employment growth:

- approximately 1,440 net new households,

[2] Including the Land Use and Transportation Element; the Open Space, Conservation and Recreation Element; the Estuary Policy Plan; and the Housing Element.

- an increase in population of approximately 3,780 people, and
- approximately 2,210 net new employment opportunities.

While there is little remaining vacant land within the Project Area, the projected net growth in population and households accounts for anticipated infill development opportunities as well as construction of new, more dense housing opportunities replacing existing blighted properties. Similarly, net growth in employment opportunities represents infill commercial/industrial development, intensification of uses within existing commercial/industrial space, and construction of new employee-generating uses to replace existing blighted properties.

These projections represent the aggregate of all development anticipated to occur within the Project Area, and form the basis of subsequent environmental analysis. Redevelopment is not expected to provide direct assistance to all such new development activity; however, any number of individual projects that comprise this overall development projection may receive direct or indirect benefits from redevelopment by virtue of their location within the Redevelopment Project Area. A summary of projected net growth and development within the Project Area by subarea is shown on **Table 3-2**.

Table 3-2: Summary of Projected Growth and Development within the Central City East Redevelopment Project Area

Residential	**Units**	**Population**
Eastlake/San Antonio	750	1160
Estuary Plan Area	100	210
Subtotal	850	1370
Fruitvale	10	180
Central East	310	1170
Elmhurst	270	1060
Total	**1440**	**3780**

Non-Residential	**Retail**	**Service**	**Mfg.**	**Other**	**Total Employment**
Eastlake/San Antonio	180	180	-30	150	480
Estuary Plan Area	30	760	-20	-90	680
Subtotal	210	940	-50	60	1160
Fruitvale	90	140	0	10	240
Central East	230	130	0	170	530
Elmhurst	280	210	0	-210	280
Total	**810**	**1420**	**-50**	**30**	**2210**

Source: Hausrath Economics Group, 2002

Although the Redevelopment Plan is proposed for a 30-year planning horizon, this Program EIR analyzes those impacts that would be expected to occur over a 20-year period, or by approximately the year 2025. This approach was taken because traffic model projections are not calculated beyond the year 2025 and analysis of other environmental effects beyond the year 2025 was considered too speculative. Therefore, this EIR assumes that buildout of the growth projections presented above would occur by year 2025 within the Project Area. This approach ensures that the aggregate effects of redevelopment within the Project Area are adequately disclosed for this approximately 20-year period. The 30-year time frame for the Redevelopment Plan is primarily a time frame required by the California Community Redevelopment Law, and used for financing bonds and other financial indebtedness.

Intended Uses of this EIR

As more specifically described in Chapter 1: Introduction, the City of Oakland and its Redevelopment Agency will consider the information in this EIR as part of its deliberations on the proposed Redevelopment Plan. Further, this EIR is intended to address any and all subsequent discretionary actions including, but not limited to:

- property acquisition within the Project Area,
- redevelopment projects consistent with the Redevelopment Plan,
- other development projects that falls within the framework of this EIR,
- other discretionary actions including subdivisions, disposition and development agreements, and owner participation agreements consistent with the Redevelopment Plan, and
- capital projects such as streetscape, landscape, park, street or other public projects consistent with the Redevelopment Plan and the City General Plan.

In addition, the City of Oakland Redevelopment Agency and/or private developers may be required to obtain permits or approvals from other jurisdictional agencies. Some of those agencies that may rely on the contents of this EIR in their discretionary decision-making process are more fully described in Chapter 1: Introduction and may include, but are not limited to the following:

- Caltrans,
- Regional Water Quality Control Board (RWQCB) Region 2,
- California Department of Toxic Substances Control (DTSC),
- Bay Area Air Quality Management District (BAAQMD),

All future projects, programs and other activities that encompass the Redevelopment Plan will also use this EIR, once certified, as a base of environmental information and analysis. It may be used as a primary source of information upon which to evaluate the potential environmental impacts of future projects, programs and other activities that will be implemented in furtherance of the Redevelopment Plan.

4

Land Use

Introduction

This chapter of the EIR describes existing land uses within the Central City East Redevelopment Project Area as well as its surrounding areas, and identifies relevant land use planning policies and regulations applicable within the Project Area. It also provides an analysis of the consistency of the Redevelopment Plan with adopted plans and policies of the City and other agencies with jurisdiction within the Project Area. The information contained in this chapter of the EIR has been derived from the following sources:

- Oakland General Plan Land Use and Transportation Element (LUTE), City of Oakland, March 1998.
- *Oakland General Plan Land Use and Transportation Element EIR*, prepared by Environmental Science Associates for the City of Oakland, June 1998.
- *Oakland Estuary Policy Plan,* prepared by the City and Port of Oakland, June 1999.
- Historic Preservation Element of the General Plan, City of Oakland 1994 as amended in 1998,
- Open Space, Conservation and Recreation Element, City of Oakland 1993,
- *Preliminary Report for the Central City East Redevelopment Project,* prepared by Keyser Marston Associates, Inc., for the City of Oakland, October 2002.
- Land use and demographics data base for the *Central City East Redevelopment Project EIR*, prepared by Hausrath Economics Group for Lamphier-Gregory/City of Oakland, September 2002 (see Appendix B).

Environmental Setting

Historical Land Use

The Central City East Redevelopment Project Area is located within three separate general planning areas of the City of Oakland: the Chinatown/Central, San Antonio/Fruitvale and East Oakland planning areas (LUTE, page 182).

The Chinatown/Central planning area is part of the oldest section of the City of Oakland where growth and City annexations occurred during the latter part of the 1800s. Much of the area around downtown and near Lake Merritt had already been developed as early as the 1860s. During the 1920s the Port of Oakland began development of its port activities at the area now known as the 9th Avenue Terminal.

The San Antonio/Fruitvale planning area has a diverse history stretching back to a Spanish land grant that covered much of what are now Berkeley, Oakland and San Leandro. Those portions of this planning area near Lake Merritt became the sites of small pioneer towns of the 1850s that were later consolidated into a town called Brooklyn, which was then annexed to Oakland in 1872. Fruitvale was the location chosen for the homestead of the Antonio Peralta family, grantees of the Ranch San Antonio. The area south of Sausal Creek became a major fruit growing and resort center (hence the name Fruitvale); dense housing and industry developed after the turn of the century.(LUTE, page 211).

The history of the East Oakland planning area began in the 1850s with the small settlements of Fitchburg, Melrose and Elmhurst, which were primarily ranching and farming communities established on the near-water flatlands. This area, along with Fruitvale, was annexed into the City of Oakland in the early 1909. In 1916 General Motors built a Chevrolet assembly plant at 73rd Avenue and Bancroft, and other major industrial employers moved into the area to take advantage of proximity to the railroad tracks. Rapid home construction occurred from the 1920s to the 1940s to provide housing for the industrial and wartime production workers. The General Motors plant was eventually demolished to make way for construction of the Eastmont Town Center (LUTE, page 198).

Surrounding Land Uses

Transportation corridors generally shape and define the Project Area, and land uses along these corridors influence the interactions between the Project Area and its surroundings. The major north-south corridors which influence the area include International Boulevard (immediately east of the Project Area) with its diversity of commercial and retail uses, Foothill Boulevard and MacArthur Boulevard (the Project Area's eastern boundaries), and 12th Street which connects the Project Area with the Downtown. Major east-west corridors include Fruitvale Avenue and High Street which connect the Lower Oakland Hills through the center of the Project Area to I-880 and the City of Alameda, and 73rd Avenue which connects the Eastmont Town Center area directly to the Oakland Coliseum and Oakland Airport.

Because the Project Area is so large and linear is shape, there are a substantial number of land use types that surround the Project Area and influence adjacent land uses. Starting in the northwestern corner and moving clockwise around the Project Area, the major surrounding land uses include the following, as also shown on **Figure 4-1**:

- the northern end of the Project Are is bounded by Lake Merritt, a major urban open space and recreation area also known for being the nation's first wildlife refuge,

Figure 4-1

Figure 4-1 (back)

- the northeastern boundaries of the Project Area transition into the upper San Antonio and Fruitvale neighborhoods and the residential neighborhoods of the Lower Oakland Hills including the Lakeshore, Glenview, Dimond and Laurel neighborhoods,

- Mills College is a major institutional use near the central eastern boundary,

- the adjacent City of San Leandro abuts the Project Area's southern boundary along with the City of Oakland's new Durant Square mixed-use housing and commercial district,

- the Oakland Coliseum and surrounding business and industrial areas are immediately to the southwest of the Project Area,

- the Fruitvale BART station, Fruitvale Station/K-Mart shopping areas and surrounding neighborhoods abut the central western edge,

- the northeastern edge of the Project Area is bounded by the Oakland Estuary and the Inner Harbor Channel, a major shipping corridor and boatway separating the cities of Oakland and Alameda, and

- the most northerly edge of the Project Area abuts the Jack London warehouse/lofts area and the city's produce market.

Existing Land Use, Project Area

The Project Area encompasses approximately 3,340 acres of land stretching in a generally linear direction from its northerly end at 4th Street to as far south as Durant Avenue (just past 108th Avenue), the boundary with the adjacent City of San Leandro. Its western edge is generally defined as one parcel depth back from International Boulevard, and its eastern edge is generally one parcel-depth into the MacArthur Boulevard and Foothill Boulevard frontages. A westerly extension of the Project Area include properties from I-880 to the Oakland Estuary waterfront between 5th Avenue and 23rd Avenue, and an easterly extension including properties from 12th Street to 20th and 27th Streets between 20th Avenue and Lake Merritt.

Excluding streets and public right-of-way, the Project Area encompasses approximately 16,700 parcels that comprise approximately 2,410 acres. As indicated in **Table 4-1** below, the Project Area is primarily developed with single-family residences and a scattering of multi-family apartments (nearly 66% of the land area). Community facilities such as schools, churches, parks and government-owned facilities comprise the second largest land use type in the Project Area (nearly 21% of the land area). Commercial uses located primarily adjacent to the downtown and along International, MacArthur and Foothill Boulevards make up nearly 15% of the land area, while industrial uses located along Embarcadero west of I-880 comprise a small (approximately 2%) portion of the Project Area.

Table 4.1: Project Area Net Land Use [1]

Land Use Type	Buildings	Parcels	Acres	% of Land Area
Residential				
Single Family Res.	13,650	13,824	1,400	59%
Multi-Family Res.	653	822	177	7%
Community Facilities	173	361	495	21%
Commercial				
Commercial	643	734	168	7%
Auto Service	113	129	27	1%
Parking	21	37	6	1%
Industrial				
Light Industrial	56	58	20	1%
Industrial	77	79	31	1%
Other				
Open Space		1	1	0%
Utilities		29	11	0%
Vacant		432	49	1%
Other	26	164	25	1%
Total	15,418	16,675	2,410	100%

Notes: 1. Excludes roads and public right-of-way (estimated at approximately 930 acres, or nearly 18% of the total Project Area land).

Sources: City of Oakland; Alameda County Assessor's files; Keyser Marston Associates Inc. October 2002

Urbanized Land

According to California Redevelopment Law criteria, the entire Project Area (100%) is defined as predominantly urbanized. The Project Area is essentially fully urbanized with a wide variety of long-established residential, commercial and industrial land uses.

Vacant Land

According to County Assessor's data, there are a total of 432 vacant lots in the Project Area, and 41 additional parcels that do not have any assessed value attributed to buildings or structures. This data indicates that there are as many as approximately 473 vacant lots or properties within the Project Area. These vacant lots are scattered throughout the Project Area and are not grouped into any one individual sub-area. Most of these vacant properties are relatively small and irregularly shaped, accounting for only approximately 50 total acres, or less than 2% of the Project Area.

Existing Land Use by Project Area Subareas

The Project Area has been divided into four subareas pursuant to the Redevelopment Plan. These subareas are similar in boundaries, but not coincidental with the City's neighborhood planning areas as defined in the LUTE. Each Redevelopment Plan subarea has its own distinct land use patterns and land use mix. Generally, existing land uses within each of the four subareas can be described as follows (see also Chapter 3: Project Description):

Eastlake/San Antonio Subarea

Prominent land uses that currently exist within this subarea include the BART Administration Building, Metropolitan Transportation Commission (MTC) offices and Lake Merritt BART station in the north; Laney College in the center; and the Port of Oakland's 9th Avenue Terminal in the west. Generally, land uses within this subarea can be characterized as a mix of residential and commercial uses on the east and south, industrial uses on the west, and office and institutional uses in the north. The most westerly portion of this subarea, split from the remainder by I-880, is generally in industrial or service commercial uses. This subarea currently contains approximately 6,830 households and employment opportunities that provide for a total of approximately 8,510 jobs.

Fruitvale Subarea

This subarea is predominantly residential with a mix of urban residential densities. Foothill Boulevard and International Boulevard are the primary commercial corridors through this subarea. Prominent institutional uses include Fremont High School and St. Elizabeth's Church, school and campus facilities. This subarea currently contains approximately 6,490 households and employment opportunities that provide for a total of approximately 2,480 jobs.

Central East Subarea

This subarea is predominantly residential with a mix of urban residential densities. Foothill Boulevard is the primary commercial corridor through this subarea, along with portions of Bancroft Avenue, which is a mixed corridor of commercial and residential uses. Other prominent land uses include the Eastmont Town Center at MacArthur Boulevard and 73rd Avenue. This subarea currently contains approximately 7,640 households and employment opportunities that provide for a total of approximately 2,380 jobs.

Elmhurst Subarea

This subarea is predominantly one and two family homes with a mix of urban residential apartments. Foothill Boulevard is the primary commercial corridors through this subarea, and Bancroft Avenue is a secondary mixed residential/commercial corridor. Other prominent land uses include the Castlemont High School at MacArthur Boulevard, and Foothill Square Shopping Center at MacArthur Boulevard between 106th and 108th Avenues. This subarea currently contains approximately 6,300 households and employment opportunities that provide for a total of approximately 1,320 jobs.

Regulatory and Policy Setting

The California State Lands Commission

The State Lands Commission (SLC) was established in 1938, with authority detailed in Division 6 of the California Public Resources Code. The SLC manages nearly four million acres of submerged land underlying the state's navigable and tidal waterways, including San Francisco Bay. These submerged lands are termed "sovereign lands." Sovereign lands are held in public trust, a concept of management for the public good,[1] and must be used only for public purposes such as fishing, ecological preservation, scientific study, and water-dependent commerce and navigation.

The San Francisco Bay Conservation and Development Commission*: San Francisco Bay Plan*

The San Francisco Bay Conservation and Development Commission (BCDC) is a state agency that generally performs functions equivalent to those performed by the California Coastal Commission in those portions of coastal California adjacent to the San Francisco Bay. 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* (the "Bay Plan"), was adopted by BCDC in 1968, and has been amended several times, most recently in April 2001 (BCDC 1968 as amended 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.

Priority Uses

The Bay Plan defines five special land use designations called "priority uses" that 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 properties are designated a priority use area in the Bay Plan, then those properties are intended to be reserved for that use. In this manner, BCDC exerts limited land use authority in priority use areas through the Bay Plan through its regulatory program.

Within the Project Area, the existing Port of Oakland's 9th Avenue Terminal is designated as a Port Priority Use (**see Figure 4-2**), although this terminal has been closed to cargo vessel operations.

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[1] Historically, the Public Trust Doctrine provided that public waterways were for "commerce, navigation, and fisheries." Later court rulings added hunting, fishing, swimming, and recreational boating, and in 1971 expanded them to include "preservation of those lands in their natural state," in order to protect scenic and wildlife habitat values. A 1983 California Supreme Court ruling (National Audubon Society v. Superior Court, 33 C3rd 419) held the state has an "affirmative duty to take the public trust into account" in making decisions affecting public trust resources, and also the duty of continuing supervision over these resources that allows and may require modification of such decisions.

Figure 4-2

Bay Fill, Dredging and Shoreline Development Permits

In addition to the priority use areas under BCDC's limited land use authority, all tidal areas of San Francisco Bay are subject to the BCDC regulatory program, and BCDC reviews and issues separate permits for filling, dredging, and for shoreline development. BCDC is empowered to grant or deny permits for all Bay filling or dredging in accordance with the provisions of the McAteer-Petris Act and the standards in the Bay Plan. Any public agency or owner of privately owned Bay property is required to obtain a permit before proceeding with fill or dredging. Bay fill is defined to include earth or any other substance or material placed in the Bay, including piers, pilings, and floating structures moored in the Bay for extended periods. Public hearings must be held on all permit applications except those of a minor nature.

BCDC also has limited jurisdiction over development in shoreline areas. This jurisdictional authority is intended to ensure that:

- prime shoreline sites are reserved for priority uses—ports, water-related industry, airports, wildlife refuges, and water-related recreation;
- public access to the Bay is provided to the maximum extent feasible;
- if any salt ponds or managed wetlands are proposed for development, consideration is given to public purchase and return of these areas to the Bay; or alternatively, that any development is in accordance with the guidelines recommended in the Bay Plan;
- shoreline areas not needed for priority uses are developed in ways that do not preclude public access to the Bay; and
- to encourage attractive design of shoreline development.

BCDC jurisdiction in shoreline areas, as defined in the McAteer-Petris Act, is limited to a band measured 100 feet landward of and parallel to the shoreline of the Bay (BCDC 1968 as amended 2001). Within the Project Area, the Bay shoreline extends along both sides of the Oakland Estuary Channel and along the shoreline from the channel to the southern limits of the Eastlake/San Antonio subarea along the Embarcadero.

City of Oakland General Plan

The City of Oakland General Plan provides the primary policy direction for land use and development within the Project Area. The General Plan is comprised of several sections, or Elements, each providing policy direction regarding certain issues. However, the primary policies regarding development and redevelopment within the Project Area are included in the following components of the General Plan:

- Land Use and Transportation Element (LUTE, City of Oakland, March 1998)
- *Oakland Estuary Policy Plan* (City and Port of Oakland, June 1999)
- Open Space, Conservation and Recreation Element (City of Oakland, June 1996)

- Housing Element (City of Oakland, 1994)
- Historic Preservation Element (City of Oakland, 1994 as amended 1998).

The general policy direction established for each subarea within the Project Area is more fully described in Chapter 3: Project Description of this EIR. The following comprises an overview of the General Plan land use designations and their locations within the Project Area, as also shown on **Figure 4-3.**

Detached Unit Residential

This classification is intended to create, maintain and enhance residential areas and applies to a majority of the Central East Oakland and Elmhurst subareas, and a small portion of the San Antonio/Fruitvale subarea near 55th Avenue.

Mixed Housing Type Residential

This classification is intended to create, maintain and enhance residential areas typically located along major arterial roads. It applies to the easterly portions of the Eastlake subarea, the majority of the San Antonio/Fruitvale subarea, portions of the Central East Oakland subarea along Seminary and Bancroft Avenues, and large portions of the Elmhurst subarea.

Urban Residential

This classification is intended to create, maintain and enhance areas of the City appropriate for multi-unit residential structures, and applies to the Lakeside Drive edge of Lake Merritt in the Eastlake/San Antonio subarea and along the Foothill Boulevard and MacArthur Boulevard corridors in the other three subareas.

Neighborhood Center Mixed Use

This classification is intended to create, maintain and enhance mixed-use neighborhood commercial centers, and applies along the Lakeside Drive edge of Lake Merritt and the International Boulevard corridor in the Eastlake/San Antonio subarea, at key intersections along Fruitvale Avenue in the Fruitvale subarea, and along the Foothill Boulevard and MacArthur Boulevard corridors in the Central East and Elmhurst subareas.

Community Commercial

This classification is intended to create, maintain and enhance areas suitable for a wide variety of larger-scaled commercial and institutional operations along major corridors and in shopping districts. This land use classification applies to the 14th Avenue corridor in the Eastlake/San Antonio subarea, along High Street in the Fruitvale subarea, land in the vicinity of the Eastmont Town Center in the Central East subarea and at the Foothill Shopping Center in the Elmhurst subarea.

Central Business District

The Central Business District (CBD) provides for a mix of large-scale offices, commercial, high-rise residential, institutional, open space and other urban uses. This land use classification applies only to the most northerly portion of the Project Area in the Eastlake/San Antonio subarea, between 6th and 9th Streets northerly of the Lake Merritt Channel.

Housing Business Mix

The Housing Business Mix classification allows mixed housing, live-work, low-impact light industry, commercial and service business uses. This land use classification applies only to those portions of the Eastlake/San Antonio subarea between International Boulevard and 7th Street, between 3rd and 14th Avenues.

Business Mix

This classification is intended to create, preserve and enhance areas of the City that are appropriate for a wide variety of businesses and related commercial and industrial establishments. This land use classification applies only to those portions of the Eastlake/San Antonio and Fruitvale subareas located between 7th Street and I-880, between 5th and 22nd Avenues.

Institutional

This land use classification applies to each of the public schools throughout the Project Area as well as to Laney College, which is located in the Eastlake/San Antonio subarea.

Urban Open Space

This land use classification applies to each of the urban parks and open spaces located throughout the Project Area, including lands along both sides of the Lake Merritt Channel from the Oakland Estuary.

A summary of General Plan land use designations by Project subarea is shown in the following **Table 4-2**.

Table 4-2: Summary of General Plan Land Use Designations for the Project Area, by Subarea (acres)

Land Use Classification	Eastlake/ San Antonio	Fruitvale	Central East	Elmhurst	Total
Detached Unit Residential	-	8	586	438	**1,032**
Mixed Housing Type	345	365	187	290	**1,1872**
Urban Residential	74	100	66	64	**304**
Neighborhood Center	46	22	47	10	**125**
Community Commercial	29	20	61	39	**149**
Central Business District	19	-	-	-	**19**
Housing and Business Mix	72	-	-	-	**72**
Business Mix	94	-	-	-	**94**
Institutional	32	27	18	22	**99**
Urban Open Space	50	8	25	12	**95**
Estuary Plan Area	164	-	-	-	**164**
Total	**925**	**550**	**990**	**875**	**3,340**

Figure 4-3

Figure 4-3 (back)

City of Oakland Zoning Ordinance

City General Plan policy directions are principally implemented through the City's zoning ordinance. The zoning ordinance translates the General Plan land use classifications and policy framework into a regulatory framework. The current zoning regulations in the Oakland Planning Code are found in the Oakland Municipal Code, Title 17. The City of Oakland has begun a comprehensive revision of its zoning regulations to make them consistent with the General Plan and to make them more streamlined and tailored to reflect community needs.

Port of Oakland

The Port of Oakland is an agency of City government given the responsibility by the Oakland City Charter[2] to own, develop and manage lands within a specified Port jurisdiction. In its development role the Port acts as a landlord, offering sites to lease to private development community and taking an active role in project development. The Port has the authority to undertake its own land use planning, project planning and project approval. It reviews and approves building projects on private property within its jurisdiction and undertakes its own environmental review and certification process (Estuary Policy Plan, page 14). **Figure 4-4** identifies those portions of the Project Area under Port of Oakland jurisdiction (i.e., within the Port Area). Land use within the Port Area is not subject to City of Oakland zoning or development regulations, but the City Planning Director reviews new uses for consistency with the City General Plan, and makes a written determination.

The jointly prepared *Oakland Estuary Policy Plan* (City and Port of Oakland, 1999) provides the current land use policy direction established by both the City and the Port for those portions of the Project Area that lie within the Estuary Plan boundaries. This policy direction is more fully described in Chapter 3: Project Description of this EIR. The Estuary Plan land use designations and their locations within the Project Area are shown on Figure 3-8 in the previous chapter of this EIR.

[2] Section 706(3) of the City of Oakland Charter vests in the Board of Port Commissioners "complete and exclusive power over all the waterfront properties and lands adjacent thereto or under water, structures thereon, and approaches thereto, storage facilities, and other utilities, and all rights and interests belonging thereto, which are now or may hereafter be owned or possessed by the City, including all salt or marsh or tidelands and structures thereon granted to the City in trust by the State of California for the promotion and accommodation of commerce and navigation."

Figure 4-4

Impacts and Mitigation Measures

Significance Criteria

According to the CEQA Guidelines published by the State Office of Planning and Research and the City of Oakland's environmental review criteria, the Project would have a significant environmental impact if it would result in:

- The physical division of an established community
- A fundamental conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project, including but not limited to the General Plan, specific plans, Local Coastal Program or zoning ordinance adopted for the purpose of avoiding or mitigating an environmental effect
- A conflict with any applicable habitat conservation plan or natural community conservation plan
- A fundamental conflict between adjacent or nearby land uses.

The following analysis concludes that none of the above thresholds would be met as a result of implementation of any of the programs, projects or other activities included in the Redevelopment Plan.

4.1: Compatibility with Established Communities

Redevelopment programs, projects or other activities within the Project Area would not result in the division of an established community, nor the establishment of new incompatible land uses. For the reasons discussed below, this is *not an environmental impact* of the Redevelopment Plan.

Discussion

The Redevelopment Plan, including its implementation programs and projects as described in Chapter 3: Project Description, are intended to be consistent with and assist in further implementation of specific improvement strategies identified in the LUTE for each subarea within the Project Area. As more fully described in Chapter 3: Project Description, the improvement strategies as contained in the LUTE are intended to strengthen multiple-unit neighborhoods and preserve maintain and strengthen single-family areas through zoning, housing rehabilitation, and code enforcement. These strategies also include bringing vacant and underutilized properties back into productive use to increase employment opportunities and improve economic vitality. Commercial strategies are focused on supporting neighborhood commercial uses and revitalization of blighted or underutilized commercial properties. Open space strategies include reconnecting the waterfront to existing neighborhoods and increasing public open space opportunities along the waterfront. None of the improvement strategies identified in the LUTE, and as may be facilitated through redevelopment programs, projects or

other activities would result in the development of new land uses that would either divide an established community or be incompatible with adjacent land uses.

Furthermore, the LUTE contains specific policies regarding compatibility of land uses that must be implemented throughout all of the City's neighborhoods, including those neighborhoods within the Project Area. A list of such applicable policies includes, but is not limited to, the following:

Policy N1.8: The height and bulk of commercial development in Neighborhood Mixed Use Center and Community Commercial areas should be compatible with that which is allowed for residential development.

Policy N2.1: As institutional uses are among the most visible activities in the City and can be sources of community pride, high quality design and upkeep should be encouraged. The facilities should be designed and operated in a manner that is sensitive to surrounding residential and other uses.

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 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, prominent development type and height, scenic values, distance from public transit and desired neighborhood character are among the factors that should be taken into consideration when developing and mapping zoning designations or determining compatibility. These factors should be balanced with the citywide need for housing.

Policy N8.2: The height of development in urban residential and their 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.

All programs, projects and other redevelopment activity pursuant to the Redevelopment Plan is required to be consistent with the land use designations and planning policy of the City of Oakland General Plan. The General Plan contains substantial policy requirements pertaining to land use compatibility. Therefore, implementation of the Redevelopment Plan would not result in development of incompatible land uses or land uses that would result in dividing an established community. This is not considered to be an impact of the Project.

4.2: Compatibility with Land Use Policy

Redevelopment programs, projects or other implementation activities would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project

Area adopted for the purpose of avoiding or mitigating an environmental effect. For the reasons discussed below, this is *not an environmental impact* of the Redevelopment Plan.

Discussion

Oakland General Plan

As noted in Chapter 3: Project Description of this EIR, the Redevelopment Plan does not contain specific proposals for redevelopment of individual sites, or identify particular actions the Redevelopment Agency will take with regard to specific redevelopment projects. Instead, the basis for future redevelopment activity within the Project Area will be to implement and conform to the City of Oakland General Plan. The General Plan's policy directions regarding development and redevelopment within the Project Area are included in the Land Use and Transportation Element (LUTE), the *Oakland Estuary Policy Plan*, the Historic Preservation Element, the Open Space, Conservation and Recreation Element and the Housing Element. These General Plan policy directions then would be more fully implemented through existing or future specific plans and the City's zoning ordinance. Redevelopment implementation programs and projects are anticipated to include targeting investments and activities towards certain catalyst projects, infrastructure improvement projects and infill development projects that are consistent with, and assist in, the implementation of the General Plan. According to the Preliminary Plan:

> *"Land uses for various properties in the Project Area shall be as described and defined in the goals, policies and land use designations of the General Plan. Such uses may include residential, commercial, industrial and public/quasi-public uses. The layout of principal streets within the Project Area will be as indicated in the LUTE and may include street closures, widening, realignment or otherwise modified streets as necessary for proper pedestrian and vehicular circulation. The population density for residential uses shall be as described and defined in the LUTE, specific plans and local codes and ordinances. Building intensities will be controlled be procedures and criteria established in the LUTE, specific plans, and local codes and ordinances, and building standards shall generally conform to the building requirements of applicable state statutes and local codes and ordinances."* (City of Oakland 2001, pages 1 and 2)

Since all of the Redevelopment Plan's implementation programs, project and other activities are required to be consistent with the land use designations and planning policy of the City of Oakland General Plan and all of its elements, this is not considered to be an impact of the Project.

BCDC/MTC Bay and Seaport Plans

As noted in the *Oakland Estuary Plan EIR* (City of Oakland, November 1998, prepared by ESA) development as envisioned under the Estuary Policy Plan would not be consistent with the Port Priority Use designation at the existing 9th Avenue Terminal. The Estuary Policy Plan envisions demolition of the 9th Avenue Terminal and development of waterfront commercial recreational and park uses at this location. Therefore, proposed uses designated in the Estuary Plan, as may

directly or indirectly benefit from the Redevelopment Plan's implementation programs, projects or other activities are not consistent with the Bay Plan's designation for port-related activities.

Given BCDC's limited land use authority over this site, the City and/or Port of Oakland should request that the Bay Plan and Seaport Plan be amended to remove the Port Priority use designation from the 9th Avenue Terminal in favor of waterfront commercial recreation or park use. (See Chapter 11: Cultural and Historic Resources for further discussion of the 9th Avenue Terminal structure.)

4.3: Consistency with Habitat or Community Conservation Plans

The Redevelopment Plan's implementation programs, projects and other activities would not conflict with any applicable habitat conservation plan or natural community conservation plan. For the reasons discussed below, this is *not an environmental impact* of the Redevelopment Plan.

Discussion

Lake Merritt

Lake Merritt is a 155-acre tidal estuary best known for its variety of activities, high intensity use, and positive contribution to the image of downtown Oakland. Lake Merritt was created in 1869 when a dam was built across the tidal marsh at the top of the Oakland estuary. A year after it was created, the lake became the first wildlife refuge in North America. However, this wildlife refuge designation does not include or proscribe appropriate land use designations on adjacent properties. The Redevelopment Plan does not propose to develop or redevelop the lands included in the Lake Merritt wildlife refuge. Under the Oakland Estuary Plan, land uses along the Lake Merritt Channel are designated primarily for waterfront commercial recreation or park uses, which would be compatible with the Lake Merritt wildlife refuge. Since the Redevelopment Plan's implementation programs, projects and other activities would be consistent the Estuary Plan, the Redevelopment Plan would also be compatible with the Lake Merritt wildlife refuge.

Other Conservation Plans and Policies

The Redevelopment Plan is required to be consistent with the Oakland General Plan and the Estuary Policy Plan. The EIRs for these General Plan documents have found these plans to be consistent with all applicable conservation plans including the Federal and State Endangered Species Acts, wetland policies, California Department of Fish and Game policies, the San Francisco Bay Basin Plan, the Countywide Clean Water Program, BCDC policies (except as noted above regarding Port Priority use) and Association of Bay Area Governments (ABAG) regional plans. Therefore, the Redevelopment Plan and its implementation programs, projects and other activities would also be consistent with these plans, policies and programs and not considered an environmental effect.

5

Transportation

Introduction

Transportation analysis provided in this chapter of the EIR includes:

- freeways;
- local roadways;
- transit;
- motor vehicle, bicycle, and pedestrian safety; and
- parking.

Significance thresholds for transportation systems would be reached if the Project would result 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.

Environmental Setting

The Project Study Area includes freeways in the East Bay from northwest Oakland to San Lorenzo. The freeways included are I-880, I-580, State Route (SR) 13, and SR 24. Other potentially affected regional state routes include SR 61, SR 185, and SR 260 at the Posey/Webster Tubes to Alameda. This regional roadway system is shown in **Figure 5-1**. The Study Area was selected to encompass areas within the regional transportation network that could be potentially affected by traffic generated by growth and development as projected for the Project Area. The transportation Study Area also includes local access routes expected to serve as many as fifty peak hour trips generated by new development projected to occur within the Project Area, as more fully discussed below.

Figure 5-1

Regional Setting

Regional Highway System

I-880

I-880 is an eight-lane freeway that serves West Alameda County, the South Bay and southern peninsula, and San Jose. Access to I-880 from the Project Area is provided from ramps at numerous interchanges from Jackson Street to 98th Avenue.

I-580

I-580 is an eight-lane freeway serving Northern Alameda County, Livermore, Stockton, Marin County north and I-5 south. Access to the Project Area is provided via interchanges from Park Boulevard to MacArthur Boulevard. The City of Oakland has placed a heavy truck (over 4.5 tons) restriction on I-580 between Grand Avenue and 106th Avenue. I-580 carries approximately 194,000 vehicles daily east of I-980.

State Routes

State Route (SR) 13 is a four-lane freeway that connects I-580 to SR 24. The route terminates at I-580 on its south end and extends past SR 24 to I-80 as an arterial roadway.

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

SR 61 is a two- to four-lane arterial roadway that extends from SR 12 at Davis Street to SR 260 at Webster Street. SR 61 follows an alignment along Doolittle Drive in San Leandro and Oakland, across the San Leandro Bay to Alameda along Otis Drive, Broadway, Encinal Avenue, and Central Avenue.

SR 185 (International Boulevard in Oakland) is a four-lane arterial roadway that extends from SR 92/SR 238 in Hayward to SR 77 (42nd Avenue) in Oakland. SR 77 completes the state route connection to I-880. SR 185 follows an alignment along Mission Boulevard in Hayward and Alameda County, East 14th Street in San Leandro, and International Boulevard in Oakland.

SR 260 is a four-lane arterial roadway that connects SR 61 to I-880 via Webster Street and the Posey/Webster Tubes, which pass under the Oakland Inner Harbor.

Freeway Conditions

The following discussion of regional freeway conditions was taken from the 2000 Level of Service Monitoring Report prepared by the Alameda County Congestion Management Agency (CMA 2000). The CMA monitors congestion on freeways in the region by measuring the average travel speed during the p.m. peak period (4:00 to 6:00 p.m.). Freeway traffic conditions are then 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 as low as 41 mph. At LOS E, there are virtually no usable gaps in the traffic stream and speeds can drop as low as 30 mph. Below 30 mph, stop-and-go traffic operations often occur and the LOS is F.

As shown in **Table 5-1**, in 2000 during the p.m. peak hour, traffic congestion occurs on most routes leading away from the major employment centers. I-880 southbound is congested south of I-980. I-580 operates at LOS D or better within the Study Area. Eastbound SR 24 operates at LOS E from I-580 to the Caldecott Tunnel.

Table 5-1: Freeway Operations In 2000

	A.M. Peak Hour [a]		P.M. Peak Hour	
Freeway Segment	**LOS**	**Speed (mph)**	**LOS**	**Speed (mph)**
I-880 south of I-980				
Northbound	D	42.2	C	49.3
Southbound	-	-	E	40.3
I-880 north of 42nd Av				
Northbound	-	-	C	49.3
Southbound	-	-	C	51.2
I-880 north of I-238				
Northbound	-	-	B	55.6
Southbound	-	-	D	44.0
I-580 north of High St				
Northbound	-	-	A	64.8
Southbound	-	-	C	54.5
I-580 north of Kellar Av				
Northbound	-	-	A	62.6
Southbound	-	-	A	70.7
I-580 north of I-238				
Northbound	-	-	A	69.3
Southbound	-	-	A	64.1
SR 13 north of Redwood Rd				
Northbound	-	-	A	61
Southbound	-	-	C	53.9

Table 5-1: Freeway Operations In 2000

	A.M. Peak Hour [a]		P.M. Peak Hour	
Freeway Segment	**LOS**	**Speed (mph)**	**LOS**	**Speed (mph)**
SR 24 east of SR 13				
Eastbound	-	-	E	33.4
Westbound	-	-	B	57.2

Note: [a] Missing values (designated with a dash "-") were not reported in the source document from the Alameda County Congestion Management Agency.
Source: Alameda County Congestion Management Agency 2000 Level of Service Monitoring Report

During the a.m. peak period (7:00 to 9:00 a.m.), bottlenecks occur on many of the freeways leading to the major employment centers. SR 24 is congested at its southbound connection to I-580.

Local Setting

This section describes the local transportation setting within the transportation Study Area.

The Local Roadway System

The Project Area is well served by an extensive local roadway system as shown on **Figure 5-2**.

5th Street is a three-lane arterial that provides one-way eastbound access from West Oakland, downtown, and the southbound I-980 Jackson Street exit to the northwest portion of the redevelopment area. The east end of 5th Street is at Oak Street, where it connects directly to the Oak Street on-ramp to I-880 south.

6th Street serves a similar purpose as 5th Street in the reverse direction. From the northbound I-880 Oak Street exit ramp, 6th Street provides a two-lane one-way connection along the north side of I-880 to the northbound I-980 on-ramp at Jackson Street and to downtown and West Oakland.

7th Street is a three- to-four-lane one-way eastbound roadway through downtown Oakland, converting to two-way operations as a six-lane roadway east of Fallon Street through Laney College to 5th Avenue where it becomes 8th Street.

8th Street is a four-lane two-way arterial from 5th Avenue to 14th Avenue. Through downtown, 8th Street is a four-lane one-way westbound arterial roadway.

The Embarcadero is a two-lane roadway that provides local access through Jack London Square. East Embarcadero is located along the west side of I-880 from Oak Street to the 23rd Avenue / I-880 interchange. East Embarcadero is an extension of Oak Street. The western Embarcadero connects at a tee intersection to the Oak Street/East Embarcadero through roadway.

Jackson Street is a two- to-four-lane arterial providing access between downtown and Jack London Square.

Madison Street and Oak Street form a one-way pair north of I-880 parallel to and located just east of Jackson Street also serving destinations from downtown to Jack London Square. South of I-880 both Madison and Oak Streets carry two-way traffic.

Lakeshore Avenue is a four-lane arterial roadway extending from north of I-580 to East 12th Avenue along the Lake Merritt shoreline.

International Boulevard is a four-lane arterial, designated as SR 185 south of 42nd Avenue. International extends from Lakeshore Avenue on the north to E. 14th Street in San Leandro.

Foothill Boulevard is a two-lane one-way northbound arterial from 14th Avenue to Lakeshore Avenue and a four-lane two-way arterial from 14th Avenue to 73rd Street.

42nd Avenue is a four-lane arterial, designated as SR 77 between International Boulevard and I-880. Along the state route section, access is limited and 42nd Avenue passes under 12th Street and San Leandro Avenue. North of International Boulevard, 42nd Avenue becomes Courtland Avenue at Foothill Boulevard. About 1,000 feet east of Foothill Boulevard, Courtland Avenue connects to High Street.

Seminary Avenue is a four-lane arterial that extends from San Leandro Boulevard on the south to I-580 on the north.

MacArthur Boulevard is a four-lane arterial that parallels I-580 south as far as Mills College, where it deviates to the west before rejoining I-580 in San Leandro.

Hegenberger Road is a six- to eight-lane arterial arterial/expressway extending from Doolittle Drive at the Oakland International Airport to International Boulevard, where it becomes 73rd Avenue.

73rd Avenue is a four-lane expressway from International Boulevard to MacArthur Boulevard. From MacArthur Boulevard to Hillmont Drive, 73rd Avenue is a two-lane street. Hillmont Drive and Edwards Avenue complete the Hegenberger/73rd connection between the Oakland International Airport and I-580.

Bancroft Avenue is a four-lane arterial from International Boulevard on its west end to Camden Street. From Camden Street to 106th Avenue, Bancroft Avenue is classified as an expressway. Bancroft Avenue continues to the southeast as a four-lane arterial until its connection to Hesperian Boulevard at International Boulevard in San Leandro.

82nd Avenue is a four-lane arterial that extends from International Boulevard to MacArthur Boulevard where it becomes Golf Links Road.

Golf Links Road is a four-lane arterial that provides travel between MacArthur Boulevard and I-580. North of I-580, Golf Links Road is a two-lane road leading to the Lake Chabot Municipal Golf Course.

Figure 5-2

Figure 5-2 (back)

98th Avenue is a four-lane arterial that connects to Airport Drive on its west end and extends to Golf Links Road at its eastern terminus.

Level of Service (LOS) Analysis

The efficiency of traffic operations at Study Area intersections was evaluated for existing and baseline conditions. Twenty-three intersections, identified as having the greatest potential for traffic impacts due to growth and development within the Project Area, were selected for study (also shown on **Figure 5-2**). LOS at Study Area intersections was analyzed for the a.m. and p.m. peak hours, using methodologies described in the Highway Capacity Manual (Transportation Research Board 1998).[1] The LOS for 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.

All the studied intersections within the Study Area except three are controlled by traffic signals. The Embarcadero / Oak Street Intersection is controlled by stop signs facing eastbound Embarcadero traffic. The I-880 northbound off-ramp is controlled by a stop sign at its intersection with East Embarcadero, which is uncontrolled. The 5th Avenue / Embarcadero intersection is controlled by stop signs for all directions except southbound 5th Avenue.

Existing a.m. and p.m. peak-hour traffic turning movement counts were collected at all of the Study Area intersections within the past three years. Turning movement traffic counts at Embarcadero / Oak Street, Madison / 5th Street, and Madison / 6th Street were collected in 1999; the counts at Oak Street / 5th Street and Oak Street / 6th Street were collected in 2000; the other intersections were counted in 2001 and 2002. The intersection traffic volumes are contained in Appendix C.

Existing Conditions

The existing levels of service at Study Area intersections were determined for the a.m. and p.m. peak hours and are provided in **Table 5-2**. 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).

[1] This version of the Highway Capacity Manual was prepared in 1997 and is commonly referred to as the 1997 Highway Capacity Manual.

Table 5-2: Existing Intersection Operations

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay [a]	LOS	Delay [a]
1. Jackson St & 5th St/I-880 SB on-ramp [b]	A	6.6	A	9.1
2. Jackson St & 6th St/I-880 NB off-ramp [b]	B	10.3	B	13.2
3. Madison St & 5th St [b]	A	8.3	A	7.5
4. Madison St & 6th St [b]	A	5.5	A	6.0
5. Oak St & 5th St/I-880 SB on-ramp [b]	A	8.1	B	10.6
6. Oak St & 6th St/I-880 NB off-ramp [b]	A	9.8	B	10.8
7. Oak St & 7th St [b]	A	8.7	B	11.3
8. Embarcadero & Oak St (TWSC) [b]	A	3.7	A	4.8
9. Embarcadero & 5th Av (AWSC)	B	12.4	C	18.0
10. Embarcadero & I-880 NB Off-Ramp (TWSC)	A	3.6	A	4.0
11. Lakeshore Av & Foothill Blvd.	B	10.6	A	8.5
12. 42nd & International Blvd.	C	34.5	D	38.1
13. High St & International Blvd.	B	17.7	D	39.5
14. Seminary Av & MacArthur/Camden St	C	30.4	C	28.0
15. Seminary Av & MacArthur Blvd.	B	18.7	C	21.2
16. Hegengerger/73 Av & International Blvd.	C	32.6	D	36.4
17. 73rd Av & Bancroft Av	C	29.2	D	35.7
18. 73rd Av & MacArthur/Foothill Blvd.	C	33.1	D	39.2
19. 82nd Av & Bancroft Av	B	14.3	B	15.9
20. 98th Av & International Blvd.	C	29.7	D	38.3
21. 98th Av & Bancroft Av	C	26.9	C	33.0
22. 98th Av & MacArthur Blvd.	C	29.9	D	36.8
23. 98th Av & Golf Links Rd	C	29.2	C	26.1

Source: Dowling Associates 2002

Notes: TWSC = Two-way stop control; AWSC = All-way stop control

[a] Average control delay in seconds per vehicle.
[b] Defined as a downtown intersection.

Pedestrian and Bicycle Facilities

The Project Area is located in a densely populated area where residents depend on walking and transit. There are numerous schools within the Project Area serving many students whose primary means of transportation is on foot. Pedestrian facilities (sidewalks and crosswalks) are commonplace within the Project Area. Sidewalks exist along most streets, and signalized crossings are provided at major intersection. Nevertheless, pedestrian travel in an area where motor vehicle traffic volumes are high can be challenging.

Bicycle facilities throughout the Project Area are limited. A Class I Bike route is provided through Laney College. Class II Bike lanes are provided along Bancroft Avenue from about 50th Avenue to 57th Avenue. Class III Bike routes are identified along Lakeshore Avenue, International Boulevard west of 14th Avenue, 5th Avenue from International Boulevard to Laney College, and along the Oak Street / East Embarcadero. With these exceptions, few streets provide bike lanes or wide curb lanes for bicyclists. Diagonal streets, such as Foothill Boulevard and Bancroft Avenue, create many offset and sharply angled intersections. At-grade railroad crossings create a safety concern for bicyclists.

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 (BART).

BART

The BART system provides 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. Three BART stations are located in or near the Project Area. The Lake Merritt Station is located at the west edge of the Project Area at Oak Street; the Fruitvale Station is located near the south edge of the Project Area at 35th Avenue; and the Coliseum Station is located about 0.6 mile south of the Project Area at Hegenberger Avenue.

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 trans-Bay service. Weekday service is provided on most routes about every 15 minutes during peak periods and 30 minutes other times from 5:30 a.m. to 7:00 p.m. Evening and weekend service is provided on a more limited schedule. More frequent service is provided along some sections of International Boulevard, Foothill Boulevard, and Bancroft Avenue – all of which are designated as regional transit streets. Transbay service for the Project Area is provided along Foothill Boulevard, Seminary Avenue, and MacArthur Boulevard.

Regulatory Setting

Federal

The Federal Highway Administration (FHWA) is the agency of the U.S. Department of Transportation (DOT) responsible for the federally funded roadway system, including the interstate highway network and portions of the primary state highway network. FHWA funding is provided through the Transportation Equity Act for the 21st Century (TEA-21). This act's legislation can be used to fund local transportation improvement projects, such as projects to improve the efficiency of existing roadways, traffic signal coordination, bikeways, and transit system upgrades.

State

The California Department of Transportation (Caltrans) is responsible for planning, design, construction, and maintenance of all state highways. Caltrans jurisdictional interest extends to improvements to roadways at the interchange ramps serving area freeways. Any federally funded transportation improvements would be subject to review by Caltrans staff and the California Transportation Commission.

Local

The Metropolitan Transportation Commission

MTC is the regional organization responsible for prioritizing transportation projects in a Regional Transportation Improvement Program (RTIP) for federal and state funding. The process is based on evaluating each project for need, feasibility, and adherence to TEA-21 policies and the local Congestion Management Program (CMP). The CMP requires each jurisdiction to identify existing and future transportation facilities that would operate below an acceptable service level and provide mitigation where future growth would degrade that service level.

The Alameda County Congestion Management Agency

The Alameda County Congestion Management Agency (CMA) is responsible for ensuring local government conformance with the CMP: a seven-year program aimed at reducing traffic congestion. The CMA has review responsibility for proposed development actions expected to generate 100 or more p.m. peak-hour trips than otherwise would occur. The CMA reviews the adequacy of California Environmental Quality Act (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 models.

The City of Oakland

The City of Oakland has responsibility for constructing and maintaining non-state transportation facilities within and surrounding the Redevelopment Project Area.

Impacts and Mitigation Measures

Project Impact Analysis Methodology

The methodology for determining traffic impacts of projected growth and development within the Project Area is based on the analytical procedures described in the previous section. The analysis of traffic operations at intersections was performed using the 1997 Highway Capacity Manual methodologies. For freeways, the analysis was performed using the methodologies described in the 1984 Highway Capacity Manual, as required by the Alameda County CMA.

Trip Generation and Distribution

Trip Generation

As described in Chapter 3: Project Description, the growth projections for the Project Area as contained in the City General Plan include the following:[2]

- approximately 1,440 net new households,
- an increase in population of approximately 3,780 people, and
- approximately 2,210 net new employment opportunities.

Implementation of the Redevelopment Plan's projects, programs and other activities is anticipated to assist either directly or indirectly in achieving these population and employment growth projections. Although implementation of the Redevelopment Plan is not expected to provide direct assistance to all such new development activity, any number of individual projects that comprise this overall growth projection may receive direct or indirect benefits by virtue of their location within the Redevelopment Project Area. Therefore, as a conservative approach for analysis in this EIR, these projections of the aggregate growth and development projected to occur within the Project Area form the basis for the following traffic impact analysis.

The methodology for determining the number of trips that would be generated by the aggregate of all growth and development within the Project Area is based on use of the Alameda County Congestion Management Agency Countywide Transportation Model. The Countywide Model was used to forecast traffic conditions for the year 2025, both with and without the amount of growth and development projected for the Project Area. The difference between these two traffic forecasts represents traffic generated by growth and development within the Project Area. Based on the traffic model results, future growth and development as projected for the Project Area would generate the following motor vehicle traffic:

- 917 vehicles during the a.m. peak hour
- 1,317 vehicles during the p.m. peak hour

[2] Including the Land Use and Transportation Element; the Open Space, Conservation and Recreation Element; the Estuary Policy Plan; and the Housing Element.

These traffic trips were then added to the existing traffic conditions within the Study Area through the use of the CMA traffic model to determine project-specific impacts.

This methodology does not identify the additional traffic trips that would be generated locally and stay local within specific traffic analysis zones (TAZs). These local, internal trips within a traffic zone were deemed to have no significant effect on the surrounding transportation system as measured in this analysis. However, because the TAZs within the Project Area are relatively small, the number of trips internal to any given TAZ would be similarly small and do not represent a substantial component of total trips.

The number of trips generated by projected growth and development within the Project Area is lower than the traffic that would be anticipated from a comparable amount of growth and development in a non-urban infill area, such as in "greenfield" developments or in suburban locations. Traffic generated by non-urban infill or greenfield sites is typically determined based on application of Institute of Transportation Engineers (ITE) standard trip generation rates. If standard ITE trip rates were applied to the growth and development projected for the Project Area, the resulting trip generation would be about twice as high as identified above. However, this approach is not appropriate for determining traffic generated from within the Project Area for the following reasons:

- The growth and development projected to occur within the Project Area provides a balance of residential and commercial uses in an area where there is already dense development. This "smart growth" development pattern promotes opportunities for employment, shopping and other services in close proximity to housing, thereby reducing the number of vehicle trips and trip lengths.

- The projected growth in housing represents infill development opportunities and construction of new, more densely developed housing opportunities replacing existing blighted properties. The replacement of, and addition to the housing stock would occur in areas already served by transit and in close proximity to commercial services, thereby maximizing opportunities for walking, bicycle trips and transit.

- The net growth in employment opportunities represents infill commercial/industrial development, intensification of uses within existing commercial/industrial space, and construction of new employee-generating uses to replace existing blighted properties. These employment growth opportunities would not, in many cases, represent new uses so much as expansion of existing uses. Expansion of existing employment locations would not generate as much new traffic as development of new employment sites in locations where none exist today.

Trip Distribution

The Alameda Countywide Model determined the distribution of traffic generated by growth and development within the Project Area. Much of the trip distribution determined by the model recognizes the interrelationships between new housing opportunities in close proximity to new employment locations, and matches these trip generators (housing) with trip attractions (employment). In other words, the traffic model assumes that many of the home-to-work, home-

to-shopping, home-to-school and other types of trips generated from the Project Area would also be distributed to locations within the local Project Area.

Cumulative Impact Methodology

The same methods of analysis as described above were used for the analysis of transportation impacts associated with growth and development within the Project Area, in combination with other past projects, other current projects, and probable future projects.

Traffic forecasts were based on the 2001 version of the Alameda Countywide Model. The model provides forecasts of travel demand for the years 2005 and 2025 based on ABAG's *Projections 2000* socioeconomic forecasts. Two levels of analysis were performed for the analysis of cumulative traffic impacts using the Alameda Countywide Model. A Congestion Management Program (CMP) analysis was performed using the model with the ABAG land uses for 2005 and 2025. A summary of the CMP analysis is provided in Appendix D.

A more detailed analysis was conducted for the purposes of assessing cumulative environmental impacts to the transportation system and the extent to which growth and development within the Project Area would contribute to cumulative impacts. In the environmental analysis, a cumulative growth approach was developed for the City, using a forecast-based approach. This approach is based on regional forecasts of economic activity and demographic trends. The updated cumulative growth scenario for the City considered 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 identified based on input from City of Oakland and Port of Oakland staffs, and analysis of economic and real estate market data and trends. Future development projects were identified to include approved, proposed, and potential development projects that are expected by the year 2020, including all growth and development projected for the Project Area.

The 2020 employment and population data developed by the methods described above were compared against 2025 employment and population in the ABAG land use data set, and the former exceeded the latter within the City. The ABAG land use data for the City of Oakland were replaced in the ABAG 2025 land use data set and were used as the basis for the analysis of cumulative conditions.

The Alameda Countywide Model was used with the land use data developed for the City to determine the traffic volumes that would be present with redevelopment in combination with past projects, other current projects, and probable future projects. Because the land use intensity assumed for this environmental impact analysis was greater than the ABAG land use data used in the CMP analysis, the environmental impact analysis yielded more conservative results – an assessment of greater cumulative impacts – than the CMP analysis.

Significance Criteria

Redevelopment would have a significant effect on the environment if it would:

- Cause an increase in traffic which is substantial in relation to the existing or future baseline 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 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)[3] to degrade to worse than LOS D (i.e., E) at a signalized intersection which is located outside the Downtown[4] area;

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

- Cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E (i.e., F) at a signalized intersection outside the Downtown area where the existing or future baseline level of service is LOS E;

- Cause an increase in the average delay for any of the critical movements of six (6) seconds or more, or degrade to worse than LOS E (i.e., 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 (2) or more seconds,

  (b) an increase in average delay for any of the critical movements of four (4) seconds or more, or

  (c) the volume-to-capacity ("V/C") ratio exceeds three (3) percent (but only if the delay values cannot be measured accurately);

- Add ten (10) or more vehicles and after project completion satisfy the Caltrans peak hour volume warrant at an unsignalized intersection for all areas;

- Make a considerable contribution to cumulative impacts (a project's contribution to cumulative impacts is considered "considerable" when redevelopment

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[3] LOS and delay are based on the "1997" *Highway Capacity Manual*, Transportation Research Board, National Research Council, 1998.

[4] Downtown is defined in the Land Use Transportation Element of the General Plan (page 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.

contributes five (5) 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 (3) percent for a roadway segment that would operate at LOS F without redevelopment[5];

- 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;

- Result in inadequate parking capacity – specifically, result in a parking demand (both project-generated and project-displaced) that would not be met by the project's proposed parking supply or by the existing parking supply within a reasonable walking distance of the project site. Project-displaced parking results from the project's removal of standard on-street parking and legally required off-street parking (non-public parking which is legally required);

- 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 (3) percent where the average load factor with the project in place would exceed 125 percent over a peak thirty minute period;

  – Increase the peak hour average ridership on BART by three (3) 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 (3) percent where average waiting time at fare gates would exceed one minute; or

- Cause unreasonable delays to commercial vessels plying their trade.

Not all criteria listed above apply to the proposed 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

[5] LOS and delay are based on the *Highway Capacity Manual*, Transportation Research Board, National Research Council, 1985, as required by the Alameda County CMA.

that results in substantial safety risks; it would not result in the creation of less than two emergency access routes for streets exceeding 1,000 feet in length; nor would it cause unreasonable delays to commercial vessels plying their trade.

5.1: Addition of Traffic to Regional Roadways

Redevelopment would add traffic to roadway segments on the Metropolitan Transportation System. However, the amount of traffic added would be small, and is considered to be *less than significant*.

The Project, in combination with past projects, other current projects, and probable future projects, would cause some roadway segments on the Metropolitan Transportation System (MTS) to operate at LOS F. This cumulative condition would increase the V/C ratio by more than three percent on segments that would operate at LOS F without cumulative development. Although this is considered to be a significant cumulative effect, the Project's contribution to this effect is *less than cumulatively considerable*.

Discussion

Project-Specific Effects on Freeway Segments

New growth and development within the Project Area would add traffic to roadway segments on the MTS. However, the amount of traffic added would be small – fewer than 50 vehicles per hour at any freeway location. This traffic would not cause any freeway segments on the MTS to operate at LOS F, or increase the V/C ratio by more than three (3) percent for segments that would operate at LOS F without traffic generated from within the Project Area. Therefore, the impact of the Project on Study Area freeways is considered to be less than significant.

Cumulative Effects on Freeway Segments

New growth and development within the Project Area, in combination with past projects, other current projects, and probable future projects, would cause some roadway segments on the MTS to operate at LOS F, and would increase the V/C ratio by more than three percent on segments that would operate at LOS F without cumulative development. A summary of freeway operations for cumulative conditions is provided in **Table 5-3**.

Table 5-3: Freeway Operations for Cumulative Conditions

Freeway Segment	Existing Conditions				Cumulative Conditions			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C
I-880 - south of I-980								
Southeast	D	0.790	C	0.747	C	0.648	D	0.832
Northwest	C	0.730	D	0.809	E	0.983	E	0.945
I-880 - north of 42nd Ave.								
Southeast	F	1.070	F	1.011	F	1.077	F	***1.241***
Northwest	E	0.987	F	1.095	***F***	***1.185***	F	1.081
I-880 - north of I-238								
Southeast	D	0.900	D	0.851	C	0.749	E	0.985
Northwest	D	0.831	D	0.922	E	0.946	D	0.852
I-580 - north of High St.								
Southeast	D	0.845	F	1.020	C	0.743	F	***1.082***
Northwest	D	0.915	D	0.904	***F***	***1.018***	D	0.783
I-580 - north of Kellar Ave.								
Southeast	D	0.879	F	1.061	***F***	***1.072***	F	***1.196***
Northwest	E	0.952	E	0.941	***F***	***1.096***	***F***	***1.065***
I-580 - north of I-238								
Southeast	C	0.760	D	0.917	E	0.967	***F***	***1.073***
Northwest	D	0.823	D	0.813	D	0.906	D	0.891
SR 13 - north of Redwood Rd.								
Southeast	C	0.733	D	0.892	***F***	***1.068***	***F***	***1.118***
Northwest	D	0.860	C	0.701	***F***	***1.042***	***F***	***1.086***
SR 24 - east of SR 13								
Eastbound	B	0.524	F	1.048	C	0.606	F	***1.382***
Westbound	F	1.223	C	0.699	F	***1.405***	D	0.809

Source: Dowling Associates 2002

Significant cumulative impacts (i.e., the Project in combination with past projects, other current projects, and probable future projects) are shown in ***Bold Italics***.

Significant cumulative impacts would occur on the following freeway sections:

- I-880 north of 42nd Avenue
- I-580 north of High Street
- I-580 north of Kellar Avenue
- I-580 north of I-238
- SR 13 north of Redwood Road
- SR 24 east of SR 13

New growth and development within the Project Area would add traffic to roadway segments on the MTS. However, the amount of traffic added would be small – fewer than 50 vehicles per hour at any freeway location. Traffic from the Project Area alone would not cause any freeway segments on the MTS to operate at LOS F, or increase the V/C ratio by more than three (3) percent for segments that would operate at LOS F under the cumulative basecase condition. The contribution of traffic from growth and development within the Project Area to the cumulative traffic levels on all freeway segments would not be cumulatively considerable, and the incremental effect of the Project is considered less than significant.

5.2: Effects on Study Area Intersections

New growth and development within the Project Area would add traffic to Study Area intersections. However, the amount of traffic added would be small, and would not result in a significant impact at any signalized intersections within the Study Area. This impact is considered to be *less than significant*.

Cumulative Impact 5.2: Traffic generated by new growth and development within the Project Area, in combination with traffic from past projects, other current projects, and probable future projects, would cause some signalized intersections to operate at unacceptable levels of service. Traffic generated from within the Project Area would contribute to certain intersections described below as having a significant cumulative impact, and the contribution of Project Area traffic would be considered a *cumulatively considerable contribution* to these cumulative effects.

Discussion

Project-Specific Effects on Local Roadways/Intersections

The impacts of projected growth and development within the Project Area, as may be facilitated or assisted by implementation of the Redevelopment Plan, on non-freeway roadways of the MTS were assessed by evaluating traffic operations at intersections where congestion is most likely to occur. The impact of Project Area traffic on Study Area intersections is summarized in **Table 5-4**.

Table 5-4: Intersections Operations, Existing plus Project

Intersection	Existing Conditions				Existing + Project			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay [a]	LOS	Delay [a]	LOS	Delay [a]	LOS	Delay [a]
Jackson St & 5th St/I-880 SB on-ramp [b]	A	6.6	A	9.1	A	6.6	A	9.3
Jackson St & 6th St/I-880 NB off-ramp [b]	B	10.3	B	13.2	B	10.8	B	16.1
Madison St & 5th St [b]	A	8.3	A	7.5	A	8.4	A	7.8
Madison St & 6th St [b]	A	5.5	A	6.0	A	5.6	A	6.5
Oak St & 5th St/I-880 SB on-ramp [b]	A	8.1	B	10.6	A	8.2	B	11.1
Oak St & 6th St/I-880 NB off-ramp [b]	A	9.8	B	10.8	A	9.9	B	11.4
Oak St & 7th St [b]	A	8.7	B	11.3	A	8.5	B	11.1
Embarcadero & Oak St (TWSC) [b, c]	A	3.7	A	4.8	A	5.0	A	5.9
Embarcadero & 5th Av (AWSC) [c]	B	12.4	C	18.0	***B***	***13.1***	***C***	***19.7***
Embarcadero & I-880 NB Off-Ramp [c]	A	3.6	A	4.0	***A***	***3.7***	***A***	***5.4***
Lakeshore Av & Foothill Bl	B	10.6	A	8.5	B	10.8	A	9.7
42nd & International Bl	C	34.5	D	38.1	C	34.7	D	38.3
High St & International Bl	B	17.7	D	39.5	B	17.8	D	42.5
Seminary Av & MacArthur/Camden St	C	30.4	C	28.0	C	35.0	C	28.0
Seminary Av & MacArthur Bl	B	18.7	C	21.2	B	19.4	C	22.1
Hegengerger/73 Av & International Bl	C	32.6	D	36.4	C	33.2	D	36.8
73rd Av & Bancroft Av	C	29.2	D	35.7	C	29.7	D	36.8
73rd Av & MacArthur/Foothill Bl	C	33.1	D	39.2	C	34.7	D	40.3
82nd Av & Bancroft Av	B	14.3	B	15.9	B	14.3	B	15.8
98th Av & International Bl	C	29.7	D	38.3	C	29.7	D	38.9
98th Av & Bancroft Av	C	26.9	C	33.0	C	27.8	C	34.0
98th Av & MacArthur Bl	C	29.9	D	36.8	C	29.9	D	38.9
98th Av & Golf Links Rd	C	29.2	C	26.1	C	30.4	C	26.2

Source: Dowling Associates 2002

Notes: Significant impacts associated with growth and development within the Project Area are shown in ***Bold Italics***.
TWSC = Two-way stop control; AWSC = All-way stop control

[a] Average control delay in seconds per vehicle.
[b] Defined as a downtown intersection.
[c] Significant impacts at unsignalized intersections are based on signal warrants – not average control delay.

As shown in Table 5-4, no intersections other than two non-signalized intersections are shown to exceed acceptable levels of service or exceed identified thresholds of significance under the Existing plus Project condition. Non-signalized intersections are more fully discussed below under Section 5.3.

Cumulative Effects on Local Roadways/Intersections

The impacts of growth and development within the Project Area on non-freeway roadways, in combination with past projects, other current projects, and probable future projects, were assessed using the methods described above. The cumulative impacts on Study Area intersections are summarized in **Table 5-5**.

Table 5-5: Intersections Operations for Cumulative Conditions

Intersection	Cumulative Basecase - Without Project				Cumulative, with Project			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay [a]	LOS	Delay [a]	LOS	Delay [a]	LOS	Delay [a]
Jackson St & 5th St/I-880 SB on-ramp [b]	B	10.1	B	10.8	B	10.2	B	10.9
Jackson St & 6th St/I-880 NB off-ramp [b]	B	14.9	B	17.8	B	16.1	C	23.8
Madison St & 5th St [b]	A	8.1	A	9.4	A	8.3	A	9.6
Madison St & 6th St [b]	A	6.0	A	6.8	A	6.1	A	7.3
Oak St & 5th St/I-880 SB on-ramp [b]	B	10.8	B	15.4	B	11.0	B	16.6
Oak St & 6th St/I-880 NB off-ramp [b]	B	10.5	B	15.8	B	10.6	B	18.6
Oak St & 7th St [b]	A	8.6	B	16.3	A	8.7	C	20.7
Embarcadero & Oak St (TWSC) [b, c]	B	10.5	D	27.1	B	13.7	E	37.4
Embarcadero & 5th Av (AWSC) [c]	D	29.0	E	40.3	***D***	***32.9***	***E***	***46.3***
Embarcadero & I-880 NB Off-Ramp (TWSC) [c]	A	3.6	A	5.2	***A***	***3.8***	***A***	***8.0***
Lakeshore Av & Foothill Bl	B	14.2	A	9.8	B	14.4	B	10.9
42nd & International Bl	D	38.7	D	42.8	D	39.5	D	43.5
High St & International Bl	C	20.2	F	187.6	C	20.4	***F***	***200.7***
Seminary Av & MacArthur/Camden St	D	47.0	E	77.3	D	49.5	E	78.5
Seminary Av & MacArthur Bl	C	22.8	C	31.6	C	24.1	D	35.5
Hegengerger/73 Av & International Bl	D	41.1	D	50.9	D	41.7	D	53.0
73rd Av & Bancroft Av	C	33.2	E	55.2	C	33.7	***E***	***61.3***
73rd Av & MacArthur/Foothill Bl	E	60.1	D	54.6	***E***	***67.5***	***E***	***57.0***
82nd Av & Bancroft Av	B	15.8	B	16.7	B	16.0	B	16.7
98th Av & International Bl	C	31.8	D	50.3	C	31.9	D	52.4
98th Av & Bancroft Av	C	28.0	D	41.0	C	28.8	D	43.7

Table 5-5: Intersections Operations for Cumulative Conditions

Intersection	Cumulative Basecase - Without Project				Cumulative, with Project			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay [a]	LOS	Delay [a]	LOS	Delay [a]	LOS	Delay [a]
98th Av & MacArthur Bl	C	31.7	D	50.0	C	32.6	***E***	***56.1***
98th Av & Golf Links Rd	C	34.6	C	24.2	D	37.1	C	24.2

Source: Dowling Associates 2002

Notes: Significant impacts of the Project are shown in ***Bold Italics***.
TWSC = Two-way stop control; AWSC = All-way stop control

[a] Average control delay in seconds per vehicle.
[b] Defined as a downtown intersection.
[c] Significant impacts at unsignalized intersections are based on signal warrants – not average control delay.

As indicated in Table 5-5, the Project, in combination with past projects, other current projects, and probable future projects, would:

- cause the level of service to degrade to worse than LOS D at signalized intersections located outside the Downtown area,
- cause the total intersection average delay to increase by four seconds at a signalized intersection outside the Downtown area that would otherwise operate at LOS E, and
- cause total intersection average vehicle delay to increase by more than two seconds at signalized intersections that would operate at LOS F.

The contribution of cumulative traffic to the intersections listed above in Table 5-5 would result in cumulatively significant impacts. The incremental effect associated with implementation of the Redevelopment Plan in assisting or facilitating growth and development within the Project Area would have a cumulatively considerable contribution to these cumulative impacts. The specific impacts associated with growth and development within the Project Area at signalized intersections within the Study Area include:

- High Street & International Boulevard, where the intersection would operate at LOS F under the cumulative basecase condition, and traffic generated from within the Project Area would increase the total intersection average delay by more than 13 seconds during the p.m. peak hour.
- 73rd Avenue & Bancroft Avenue, where the intersection would operate at LOS E under the cumulative basecase condition, and traffic generated from within the Project Area would increase the total intersection average delay by more than 6 seconds during the p.m. peak hour.
- 73rd Avenue & MacArthur/Foothill Boulevard, where the intersection would operate at LOS E under the cumulative basecase condition, and traffic generated from within the

Project Area would increase the total intersection average delay by more than 7 seconds during the a.m. peak hour. Traffic generated from within the Project Area would also cause the level of service to degrade from LOS D to LOS E during the p.m. peak hour.

- 98th Avenue & MacArthur Boulevard, where traffic generated from within the Project Area would cause the level of service to degrade from LOS D to LOS E during the p.m. peak hour.

Mitigation Measures

The following mitigation measures are recommended to address the contribution of traffic resulting from implementation of the Redevelopment Plans' projects, programs and other activities toward cumulative traffic impacts:

- **Mitigation Measure 5.2A: Modify Traffic Signal Phasing at the High Street / International Boulevard Intersection.** Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost to provide protected left-turn phasing for the turn lanes on International Boulevard. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.

- **Mitigation Measure 5.2B: Add a Right-Turn Lane at the 73rd Avenue & Bancroft Avenue Intersection**. Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost to provide a right-turn lane for eastbound traffic on Bancroft Avenue at 73rd Street. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.

- **Mitigation Measure 5.2C: Add a Left-Turn Lane at the 73rd Avenue & MacArthur/Foothill Boulevard Intersection.** Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost to provide a second left-turn lane for northbound traffic on 73rd Street at MacArthur/Foothill Boulevard and increase the signal cycle length to 104 seconds. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.

- **Mitigation Measure 5.2D: Increase the Traffic Signal Cycle Length at the 98th Avenue & MacArthur Boulevard Intersection.** Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost to increase the signal cycle length to 82 seconds. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.

Coordination of improvements with the Leona Quarry Project

The Leona Quarry Project, a 477 unit residential development on a 128-acre site located at Mountain Boulevard, Edwards Avenue and I-580 included a required mitigation measure for improvements to the 73rd Avenue/MacArthur Boulevard intersection. Prior to implementation of the mitigation measures recommended in this EIR, the City shall work to assure that that the improvements required for this intersection are coordinated. In addition, as part of the Leona Quarry Project the City Council authorized consideration of a Traffic Impact Fee along the 73rd Avenue/Edwards corridor to fund needed traffic improvements. To the extent deemed appropriate, the Traffic Impact Fee approach should be considered as part of the implementation program for Mitigation Measures 5.2A through D. Such an approach could provide for the pro-rata share of the costs for these improvements to be distributed to all new development in the Project Area, based on degree of impact.

Resulting Level of Significance

With the exception of traffic congestion at the intersection of High Street/International Boulevard, implementation of these mitigation measures can reduce the cumulative traffic impacts at Study Area intersection to levels of *less than significant.* The Redevelopment Plan's projects, programs and other implementation activities are anticipated to assist in, or to facilitate the projected growth and development within the Project Area. Redevelopment Agency participation in the implementation of those measures identified above would offset the contribution of traffic due to implementation of the Redevelopment Plan to a level that is less than cumulatively considerable.

Mitigation measures were investigated that could reduce cumulative impacts at High Street/International Boulevard to a level that is less than significant. Widening High Street to provide dual left-turn lanes and three through lanes in both directions would completely mitigate this cumulative impact. However, the widening would require the acquisition of a row of businesses along High Street. The secondary impacts of major widening are considered to render that option infeasible. No feasible mitigation measures have been identified that would reduce cumulative impacts to a level that is less than significant; therefore, residual cumulative impacts at the High Street/International Boulevard intersection would be *significant and unavoidable*.

The effects of the mitigation measures described above are shown in **Table 5-6**.

Table 5-6: Intersections Operations for Cumulative Conditions

Intersection	Without Mitigation				With Mitigation			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay [a]	LOS	Delay [a]	LOS	Delay [a]	LOS	Delay [a]
Embarcadero & 5th Av [b]	***D***	***32.9***	***E***	***46.3***	D	37.1	D	37.3
Embarcadero & I-880 NB Off-Ramp [b]	***A***	***3.8***	***A***	***8.0***	B	15.6	C	20.5
High St & International Bl	C	20.4	***F***	***200.7***	C	34.9	***F***	***163.3***
73rd Av & Bancroft Av	C	33.7	***E***	***61.3***	C	33.5	D	42.4
73rd Av & MacArthur/Foothill Bl	***E***	***67.5***	***E***	***57.0***	D	52.1	D	51.4
98th Av & MacArthur Bl	C	32.6	***E***	***56.1***	C	33.0	D	54.9

Source: Dowling Associates 2002

Notes: Significant impacts of redevelopment are shown in ***Bold Italics***.
[a] Average control delay in seconds per vehicle.
[b] Significant impacts at unsignalized intersections are based on signal warrants – not average control delay.

5.3: Addition of Traffic to Unsignalized Intersections

Potential Impact 5.3: Growth and development within the Project Area, as may be assisted by implementation of the Redevelopment Plan, would add more than ten vehicles to intersections where the Caltrans' peak hour volume traffic signal warrants would be satisfied. This is a *potentially significant impact* of the Project.

Discussion

Project-Specific Impacts

New growth and development within the Project Area would add more than ten vehicles to the following intersections where the Caltrans peak hour volume traffic signal warrants would be satisfied:

- Embarcadero / 5th Avenue
- Embarcadero / I-880 NB Off-Ramp

Cumulative Effects

New growth and development within the Project Area, in combination with past projects, other current projects, and probable future projects, would add more than ten vehicles to the same intersections where the Caltrans peak hour volume warrant would be satisfied. The contribution of traffic from the Project Area to impacts at the intersections listed above would be cumulatively considerable and the incremental effect of the Project is considered significant.

Mitigation Measures

The following mitigation measures are recommended to address both Project-specific and cumulative traffic impacts at non-signalized intersections within the Project Area:

- **Mitigation Measure 5.3A: Install a Traffic Signal at the Embarcadero / 5th Avenue Intersection.** Installing a traffic signal at the Embarcadero / 5th Avenue intersection would provide for the orderly movement of traffic. The traffic signal would be equipped with railroad preemption to prevent southbound motor vehicle queues from extending onto the Union Pacific Railroad tracks that cross 5th Avenue just north of the intersection. . Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost for this signal. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.

- **Mitigation Measure 5.3B: Install a Traffic Signal at the Embarcadero / I-880 NB Off-Ramp Intersection.** Installing a traffic signal at the Embarcadero / I-880 NB Off-Ramp would provide for the orderly movement of traffic. The intersection would operate at LOS A during the a.m. and p.m. peak hours after installation of a traffic signal. Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost for this signal. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.

Resulting Level of Significance

Installing a traffic signal at the Embarcadero / 5th Avenue intersection would mitigate the impact to a level of *less than significant*. The intersection would operate at LOS C during the a.m. and p.m. peak hours after installation of this signal. Installing a traffic signal at the Embarcadero / I-880 NB Off-Ramp intersection would mitigate the impact to a level of *less than significant*. The intersection would operate at LOS A during the a.m. and p.m. peak hours after installation of a traffic signal.

5.4: Increase in AC Transit Ridership

New growth and development within the Project Area would increase average ridership on AC Transit by approximately 2.2 percent, which is considered a *less-than-significant* increase.

Cumulative Impact 5.4: New growth and development within the Project Area, in combination with past projects, other current projects, and probable future projects, would be likely to increase average ridership on AC Transit by more than 3 percent. This is a significant cumulative effect. It is possible that the contribution of AC Transit riders from within the Project Area to cumulative ridership on AC Transit would be *cumulatively considerable.*

Discussion

Project Specific Impact

The increase in average ridership on AC Transit lines attributed to new growth and development within the Project Area, as may be facilitated by implementation of the Redevelopment Plan, would be less than 3 percent. This impact on AC Transit operations is considered to be less than significant.

Cumulative Effects

New growth and development within the Project Area, in combination with past projects, other current projects, and probable future projects, would be likely to increase average ridership on AC Transit by more than 3 percent (see detailed analysis in Appendix D, Table 4). This would be a cumulatively significant impact. The precise location of new growth and development within the Project Area is not well defined. Growth and development within the Project Area may increase average ridership on AC Transit lines by three percent where the average load factor under cumulative conditions would exceed 125 percent over a peak thirty-minute period. Thus, it is possible that the contribution of AC Transit riders from within the Project Area would be cumulatively considerable.

Mitigation Measures

None required for project-specific effects. The following mitigation measure is intended to address the Project's contribution to cumulative impacts on the AC Transit system.

- **Mitigation Measure 5.4: Coordination with AC Transit.** The City of Oakland shall coordinate with AC Transit to ensure that the average load factor on any specific AC Transit line does not exceed 125 percent over a peak thirty-minute period. At the Redevelopment Agency's sole discretion, redevelopment financing capabilities could potentially be used to assist AC Transit in meeting this operational threshold.

Resulting Level of Significance

AC Transit is currently working on an impact study for bus routes within the Project Area, and will likely conduct environmental review for any proposed changes along these routes. Redevelopment Agency coordination with AC Transit pursuant to implementation of Mitigation Measure 5.4 above would offset the contribution of AC Transit riders due to implementation of the Redevelopment Plan to a level that is *less than cumulatively considerable*.

5.5: Increase in BART Ridership

The impact of the Project on BART operations is considered to be *less than significant*.

New growth and development within the Project Area, in combination with other transit-oriented development that has been proposed near the Fruitvale BART station, would likely result in cumulatively significant impacts on BART service at fare gates. However, the contribution of

peak hour riders on BART trains due to new growth and development within the Project Area would *not be cumulatively considerable*.

Discussion

Project-Specific Effects

New growth and development within the Project Area would increase peak-hour ridership on BART trains by approximately 90 riders at the Coliseum Station, 140 riders at the Lake Merritt Station, and 230 riders at the Fruitvale Station. These increases in peak-hour ridership would be less than 3 percent of the total ridership on BART trains.

New growth and development within the Project Area would increase average daily ridership by approximately 4 to 5 percent at the Lake Merritt, Fruitvale, and Coliseum BART stations. However, the average waiting time at fare gates at these stations is less than one minute, therefore this increase in ridership is a less than significant impact. The average ridership increases at other BART stations would be less than 3 percent.

Cumulative Effects

New growth and development within the Project Area, in combination with past projects, other current projects, and probable future projects, could increase the peak hour average ridership on BART trains. This cumulative increase in ridership is projected to be approximately 3 percent where the passenger volume would also exceed the standing capacity of BART trains (see detailed analysis in Appendix D, Table 5). This would be a significant cumulative effect. However, the contribution of BART riders from within the Project Area would be less than 3% and would not be cumulatively considerable.

New growth and development within the Project Area, in combination with past projects, other current projects, and probable future projects, would increase the peak hour average ridership at the Lake Merritt, Fruitvale, and Coliseum BART stations by more than 3 percent. Under these cumulative conditions the average waiting time at fare gates could exceed one minute. New growth and development within the Project Area could contribute a cumulatively considerable amount of new riders at these stations should these waiting times exceed one minute.

Mitigation Measures

None required for Project-specific effects. The following mitigation measure is recommended to address the Project's potential contribution to cumulative impacts at BART stations.

- **Mitigation Measure 5.5: Coordination with BART.** The City of Oakland shall coordinate with BART to ensure that adequate fare gate capacity is available at the Fruitvale and Lake Merritt BART stations to accommodate anticipated increases in ridership associated with projected growth and development within the Project Area. To the extent that adequate capacity may be reliant on the addition of one or more new fare gates at the station, the Redevelopment Agency, at its sole discretion, may consider utilizing redevelopment financing capabilities to assist in the financing of such station improvements.

Resulting Level of Significance

Redevelopment Agency participation in the implementation of Mitigation Measure 5.5 above would offset the contribution of BART riders at BART stations due to implementation of the Redevelopment Plan to a level that is *less than cumulatively considerable*.

5.6: Motor Vehicle, Bicycle, and Pedestrian Safety

New growth and development within the Project Area could result in traffic hazards to motor vehicles, bicycles, or pedestrians due to inadequate design features or incompatible uses. However, compliance with City standards should prevent the creation of hazards to motor vehicles, bicycles, or pedestrians due to inadequate design features or an incompatible use to levels of *less than significant*.

The Project Area will include a variety of uses and transportation modes ranging from bicyclists and pedestrians accessing area schools and other public spaces, commuter vehicles traveling to and from employment centers within the Project Area, and commercial vehicles (trucks). Occurrence of safety hazards related to design features or incompatible uses depends on site-specific design not currently defined. However, all new development projects pursuant to implementation of the Redevelopment Plan will be required to comply with City design standards. Compliance with City standards would prevent the creation of hazards to motor vehicles, bicycles, or pedestrians due to inadequate design features or an incompatible use to a level of *less than significant*.

5.7: Support for Alternative Transportation

It is possible that new development projects pursuant to implementation of the Redevelopment Plan could fundamentally conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks). Occurrence of this impact would depend on site-specific design not currently defined. However, since the Redevelopment Plan is intended to be consistent with the City General Plan and the General Plan LUTE Element emphasizes the support of alternative transportation, especially along transit-oriented corridors, this impact is considered *less than significant*.

5.8: Potential Parking Shortages

New growth and development within the Project Area pursuant to implementation of the Redevelopment Plan could result in an inadequate parking supply within the Project Area. Occurrence of this impact would depend on site-specific design not currently defined. However, the Redevelopment Plan is intended to be consistent with the City General Plan and the General Plan's implementing ordinances. Therefore, the number of parking spaces provided within the Project Area will be required to comply with City Code requirements. Compliance with City

parking code requirements would prevent the creation of parking shortages, so this impact is considered *less than significant*.

5.9: Transportation Safety Issues

Implementation of the Redevelopment Plan would not result in a change in air traffic patterns, an increase in air traffic levels or a change in location that results in substantial safety risks related to air traffic. The Redevelopment Plan's projects, programs or other activities do not include any plans for roadway designs that might substantially increase hazards due to a design feature such as sharp curves or dangerous intersections, nor would they induce or encourage incompatible traffic flow uses such as farm equipment.

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6

Air Quality

Introduction

This chapter of the EIR describes existing air quality conditions within the Central City East Redevelopment Project Area and regional vicinity. It also identifies potential impacts associated with projected growth and development within the Project Area as may be facilitated by implementation of the Redevelopment Plan on existing air quality and recommends, where necessary and feasible, mitigation measures to reduce and/or avoid potentially significant air quality impacts. Air quality issues discussed in this section of the EIR include:

- consistency of the Project with the Clean Air Plan;
- emission of regional air pollutants;
- emission of local air pollutants; and
- construction-related air quality impacts.

Significance thresholds for impacts on air quality would generally be reached if future growth and development within the Project Area, as may be facilitated by implementation of the Redevelopment Plan, were to be inconsistent with the Clean Air Plan, or if air pollutants would be emitted above levels established by the Bay Area Air Quality Management District (BAAQMD).

Environmental Setting

Meteorology

Oakland is located in northern Alameda County, which lies within the San Francisco Bay Area Air Basin. Temperatures in Oakland average 58^0F annually, ranging on the average from the mid-40s on winter mornings to the mid-70s on summer afternoons. Daily and seasonal fluctuations in temperature are relatively minor because of the moderating effects of the nearby ocean. In contrast to the steady temperature regime, rainfall is highly variable and confined almost exclusively to the "rainy" period from early November to mid-April. 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 very wet year and near-drought conditions (BAAQMD, 1996; California Air Resources Board [CARB], 1984).

In the Oakland area, the flow of marine air traveling through the Golden Gate, across San Francisco and through the San Bruno Gap is the dominant weather factor. Winds in the Oakland area are typically out of the west, west-northwest, and northwest (about 50 percent of the time). All other wind directions occur no more than seven percent of the time, individually, and calm conditions occur during eight percent of annual observations. Annual average wind speeds are approximately nine miles per hour (BAAQMD, 1996; CARB, 1984).

Air pollution potential in northern Alameda County is lowest close to the Bay, where the Project Area is located, due largely to two factors: good ventilation from winds that are frequently brisk and a relatively low flux of pollutants from upwind areas. The occurrence of light winds in the early morning and late evening occasionally cause elevated levels of pollutants (BAAQMD, 1996).

Emissions and Ambient Air Quality

The BAAQMD estimates emissions of five criteria air pollutants: reactive organic gases (ROG, also known as ozone, O_3), carbon monoxide (CO), particulate matter (PM_{10}), nitrogen oxides (NO_x), and sulfur dioxide (SO_2) from seven use categories: residential, commercial, industrial, infrastructure, construction, transportation, and agricultural sources. Annual average emissions are compiled for each county in the Bay Area Air Basin. $PM_{2.5}$ is not included in this inventory because the federal $PM_{2.5}$ standard was only recently upheld, and Bay Area-wide $PM_{2.5}$ emissions and monitoring data are not yet available. Inventory information presented in **Table 6-1** indicates that within the region, the BAAQMD expects total annual tons of CO, ROGs, and NO_x to decrease over time, and total annual tons of SO_2 and PM_{10} to increase. As presented in Table 6-1, the District expects the percentage of Alameda County's contribution to basin-wide emissions would remain approximately the same per pollutant, except the County's relative contribution to CO is expected to decrease slightly (BAAQMD, 1996).

Table 6-1: Bay Area Emission Inventory Summary and Projections [a] (1995 To 2010)

	1995		2000		2010	
Pollutant	**Bay Area (tons/day)**	**Alameda County's Share[b]**	**Bay Area (tons/day)**	**Alameda County's Share[b]**	**Bay Area (tons/day)**	**Alameda County's Share[b]**
CO	2,425	22%	1,963	21%	1,600	21%
ROG/Ozone	535	22%	464	22%	406	22%
NO_x[c]	454	20%	441	19%	449	20%
SO_2	102	12%	107	11%	115	12%
PM_{10}[d]	462	19%	501	19%	582	19%

Notes:
[a] Data are estimates for 1995 and were taken from BAAQMD CEQA Guidelines (1996).
[b] Percent of Bay Area emissions attributable to Alameda County sources.
[c] Average summer day emissions.
[d] Average winter day emissions.

Source: BAAQMD, 1999

The BAAQMD operates a regional monitoring network that measures the ambient concentrations of six criteria air pollutants: ROG (O_3), CO, particulate matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). Existing and probable future levels of air quality in Oakland can be generally inferred from ambient air quality measurements conducted by the BAAQMD at its monitoring stations in downtown Oakland and San Leandro. **Table 6-2** is a six-year summary of monitoring data (1996-2001) from the BAAQMD's Alice Street station in Oakland and County Hospital in San Leandro. Data from the San Leandro station are included because the Alice Street monitoring station does not monitor PM_{10} concentrations. Final data for 2002 are not yet available. Table 6-2 compares measured pollutant concentrations with state ambient air quality standards, which are more stringent than the corresponding federal standards.

Table 6-2: Oakland Ambient Air Quality Monitoring Summary, 1996 – 2001

Monitoring Station & Pollutant	Standard[a]	Number of Days Standards were Exceeded and Maximum Concentrations Measured					
		1996	1997	1998	1999	2000	2001
Downtown Oakland Data:							
Ozone (ROG)							
1-Hour	>0.09 ppm	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)[b]		0.09	0.08	0.06	0.08	0.07	0.07
Carbon Monoxide							
1-Hour	>20. ppm	0	0	0	0	0	0
8-Hour	>9. ppm	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)		7	8	6	6	5	NA
Max. 8-Hour Conc. (ppm)		3.9	3.6	4.6	5.2	3.4	4.0
San Leandro Data:							
Suspended Particulates (PM10)							
Max. 24-hr. Conc. ($\mu g/m^3$)[b]	>50 $\mu g/m^3$	**59**	**65**	32	- -[d]	- -[d]	- -[d]
Exceedances/Samples[c]		1/61	1/61	0/30	- -[d]	- -[d]	- -[d]
Annual Geometric Mean ($\mu g/m^3$)	30 $\mu g/m^3$	19.1	15.9	- -[d]	- -[d]	- -[d]	- -[d]

Notes: BAAQMD Monitoring Stations, Alice Street, in Oakland and County Hospital in San Leandro.
Bold values are in excess of applicable standard. "NA" indicates that data is not available.

a State standard, not to be exceeded.

b conc. = concentration; ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter

c Indicates the number of exceedances and the number of samples taken in a given year.

d Monitoring discontinued in mid-1998 at San Leandro; Annual Geometric mean cannot be determined for 1998.

SOURCE: California Air Resources Board, 1996-2001, Internet Air Quality Data Summaries.

Ozone (O_3)

O_3 is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_x). The main sources of NO_x and ROG, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) and the evaporation of solvents, paints and fuels. Automobiles are the single largest source of ozone precursors in the Bay Area. O_3 is a regional air pollutant because its precursors are transported and diffused by wind concurrently with O_3 production by the photochemical reaction process. O_3 causes eye irritation, airway constriction, shortness of breath, and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema (BAAQMD, 1999). Table 6-2 shows that exceedance of the state standard of 0.09 parts per million (ppm) and the less stringent federal standard of 0.12 ppm for one hour has not been exceeded during the past six years, according to published data.

Carbon Monoxide (CO)

CO is an odorless, colorless gas usually formed as the result of incomplete combustion of fuels. The single largest source of CO is the motor vehicle, and is highest during low travel speeds, stop-and-go driving, cold starts, and hard acceleration. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause dizziness and fatigue, impair central nervous system function, and induce angina in persons with serious heart disease (BAAQMD, 1999). Table 6-2 shows that no exceedances of state CO standards were recorded between 1996 and 2001. Measurements of CO show low baseline levels, with the hourly maximum averaging less than 40 percent of the allowable state standard. Similarly, maximum eight-hour CO levels average less than 60 percent of the allowable eight-hour standard.

Particulate Matter (PM_{10} and $PM_{2.5}$)

Particulate matter is a class of air pollutants that consists of solid and liquid airborne particles in an extremely small size range. Particulate matter is measured in two size ranges: PM_{10} for particles less than 10 microns in diameter and $PM_{2.5}$ for even smaller particles which are less than 2.5 microns in diameter. Motor vehicles generate about half of Bay Area particulates, through tailpipe emissions as well as brake pad and tire wear. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of fine particulates. Fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. Among the criteria pollutants that the BAAQMD regulates, particulates appear to represent the most serious overall health hazard. Studies have shown that elevated particulate levels contribute to the death of approximately 200 to 500 people per year in the Bay Area. High levels of particulates have also been known to exacerbate chronic respiratory ailments, such as bronchitis and asthma, and have been associated with increased emergency room visits and hospital admissions (BAAQMD, 1996).

Table 6-2 shows that exceedances of the state PM_{10} standard occur relatively infrequently in San Leandro. State PM_{10} standards were exceeded on two measurements out of 152 measurement days during 1996 to 1998 (PM_{10} is not monitored every day). The BAAQMD discontinued monitoring PM_{10} concentrations in San Leandro in mid-1998. Federal PM_{10} standards were not exceeded at the San Leandro monitoring station. PM_{10} concentrations in Oakland would be expected to be similar to those measured in San Leandro. In June 2002, the state proposed more stringent particulate matter standards. For PM_{10}, the annual average standard for PM_{10} is proposed to be lowered from 30 $\mu g/m^3$ to 20 $\mu g/m^3$ while the 24-hour-average standard of 50 $\mu g/m^3$ would be retained. As shown in Table 6-2, the annual average concentrations for PM_{10} did not exceed the proposed standard of 20 $\mu g/m^3$.

In 1997, the U. S. Environmental Protection Agency adopted a new standard for $PM_{2.5}$, which represents the fine fraction of particulate matter; this standard was subject to legal challenge, but was upheld by the U.S. Supreme Court in February 2001. California has proposed a state standard for $PM_{2.5}$ that is more stringent than the new federal standard. The new state standard will be an annual average standard of 12 $\mu g/m^3$, not to be exceeded. This standard will go into effect late 2002 or early 2003, after going through California's review process for new regulations. The BAAQMD began monitoring $PM_{2.5}$ concentrations in 1999 in Fremont, Livermore, Concord, San Francisco, Redwood City, San Jose, Vallejo and Santa Rosa, with no

stations in Oakland or San Leandro. $PM_{2.5}$ data are not yet available, although results of PM_{10} monitoring in San Leandro, as shown in Table 6-2, indicate that there were no exceedances of the federal $PM_{2.5}$ standard between 1996 and 1998 since the PM_{10} standard (which includes $PM_{2.5}$) was not exceeded.

Nitrogen Dioxide (NO_2)

NO_2 is a reddish-brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO_2. The major health effect from exposure to high levels of NO_2 is the risk of acute and chronic respiratory disease. NO_2 is often observed during the same conditions that produce high levels of O_3. NO_2 is a precursor to O_3. The NO_2 standard is being met in the Bay Area, and the latest pollutant trends information suggests that this standard will not be exceeded in the foreseeable future (BAAQMD, 1996).

Sulfur Dioxide (SO_2)

SO_2 is a colorless acid gas with a strong odor. The main source of SO_2 is the combustion of fuels containing sulfur, such as fuel oil, coal and diesel. California has very low levels of SO_2 because most large combustion sources burn natural gas, which contains only trace quantities of sulfur. California regulations also limit the sulfur content of gasoline and diesel fuel. The major health effect from exposure to SO_2 can irritate lung tissue and increase the risk of acute and chronic respiratory disease. The SO_2 standard is being met in the Bay Area, and the latest pollutant trends information suggests that this standard will not be exceeded in the foreseeable future (BAAQMD, 1996).

Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants that may lead to serious illness or increased mortality, even when present in relatively low concentrations. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. 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.

TACs do not have ambient air quality standards, but are regulated by the BAAQMD using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis where human health exposure to toxic substances is estimated and considered, together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risks.

In addition to criteria pollutants, both the BAAQMD and the California Air Resources Board (CARB) operate TAC monitoring networks in the San Francisco Bay Area. These stations measure 10 to 15 TACs, depending on the specific station. The TACs selected for monitoring are those that have traditionally been found in the highest concentrations in ambient air, and therefore tend to produce the most significant risk. The BAAQMD operates an ambient TAC monitoring station at Davie Stadium at 198 Oak Road in Oakland, which is about 1.5 miles to the east of the Project Area. The estimated average lifetime cancer risk resulting from exposure to

TAC concentrations monitored at this station was approximately 160 in one million in 1999, and 150 in one million in 2000. This risk level is close to the Bay Area average for estimated average lifetime cancer risk, which was 186 in one million in 1999, and 167 in one million in 2000 for all Bay Area TAC monitoring stations (BAAQMD, 2000 and 2001). These levels can be compared to a background cancer incidence rate in the United States from all causes that is about 1 in 4, or 250,000 in one million (*Oakland Army Base Area Redevelopment Plan EIR*, City of Oakland, 2002).[1]

Recognizing that children can sometimes be more at risk than adults from the harmful effects of air pollution, changes in state law established specific requirements to examine the impacts of air pollution on children's health. Senate Bill 25 required the CARB to expand its existing monitoring program in six communities around the state and conduct special monitoring. Fruitvale was chosen as one of the six sites for the Children's Environmental Health Protection Program because it is impacted by several categories of pollutant emissions and because of the large school-age population in the area. In November 2001, monitoring began at Lockwood Elementary School, which is located at the western boundary of the Project Area at 6701 International Boulevard. In the initial phase of the study, monitoring is expected to continue until November 2002. This site is collecting information on approximately 70 air pollutants. Analysis of this data is not yet available.

Particulate Matter

In 1998, the CARB formally identified particulate matter emitted by diesel-fueled engines as a toxic air contaminant. Diesel engines emit TACs in both gaseous and particulate forms. The particles emitted by diesel engines are coated with chemicals, many of which have been identified by the U.S. Environmental Protection Agency (EPA) as HAPs, and by the CARB as TACs. The vast majority of diesel exhaust particles are very small (94 percent of their combined mass consists of particles less than 2.5 microns in diameter), and both the particles and their coating of TACs can be inhaled into the lungs. While the gaseous portion of diesel exhaust also contains TACs, the CARB's action was specific to diesel particulate emissions, which, according to supporting CARB studies, represent 50 to 90 percent of the mutagenicity of diesel exhaust (City of Oakland, 2002).

The CARB action was taken at the end of a lengthy process that considered dozens of health studies, extensive analysis of health effects and exposure data, and public input collected during the past nine years. CARB's Scientific Advisory Committee has recommended a unit risk factor of 300 in a million for diesel particulate. The CARB action will lead to additional control of diesel engine emissions in coming years by CARB. The EPA has also begun an evaluation of both the cancer and non-cancer health effects of diesel exhaust (City of Oakland, 2002).

The 1998 ruling prompted the CARB to begin searching for means to reduce diesel PM emissions. In September 2000, the CARB approved the Risk Reduction Plan to Reduce

[1] It is generally believed that a large portion of the total background cancer risk in the United States comes from smoking and other personal habits, genetic susceptibilities, diet, natural radiation including radon, and other lifestyle factors.

Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Diesel Risk Reduction Plan). The Diesel Risk Reduction Plan outlines a comprehensive and ambitious program that includes the development of numerous new control measures over the next several years aimed at substantially reducing emissions from new and existing on-road vehicles (e.g., heavy-duty trucks and buses), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps), and stationary engines (e.g., stand-by power generators) (City of Oakland, 2002).

There is also growing evidence that exposure to emissions from diesel-fired engines (about 95 percent of which come from mobile sources) may result in cancer risks that exceed those attributed to the measured TACs. In 1998, the State of California identified diesel particulate matter (PM) as a TAC and issued a health risk assessment that included estimates of cancer potency of diesel PM. Because diesel PM cannot be monitored directly in the ambient air, cancer risk is estimated using indirect methods based on measurement of surrogate compounds. The BAAQMD has estimated the average cancer risk associated with diesel particulate exposure in the Bay Area, based on CARB estimates of population-weighted average ambient diesel PM concentrations for the Bay Area in the year 2000, to be about 450 in one million (City of Oakland, 2002).

Sensitive Receptors

Land uses such as schools, children's day care centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational uses are also considered sensitive, due to the greater exposure to ambient air quality conditions and because the presence of pollution detracts from the recreational experience. There are residential uses, schools, and day care centers located within the Project Area.

While the presence of sensitive receptors is always a concern, all members of the population can be adversely affected by criteria pollutants, toxic air contaminants, odor, and dust. Therefore, any consideration of potential air quality impacts should include all members of the population.

Regulatory and Policy Setting

Ambient Air Quality Standards

The federal Clean Air Act Amendments of 1970 established national ambient air quality standards, and individual states retained the option to adopt more stringent standards and to include other pollution sources. California had already established its own air quality standards when federal standards were established, and because of the unique meteorological problems in the state, there is considerable diversity between state and national ambient air quality standards (SAAQS and NAAQS, respectively) currently in effect in California, as shown in **Table 6-3**.

Table 6-3: State and Federal Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time	(State) SAAQS[a] Standard	(State) SAAQS[a] Attainment Status	(Federal) NAAQS[b] Standard	(Federal) NAAQS[b] Attainment Status
Ozone	1-hour	0.09 ppm	N	0.12 ppm	N
	8-hour	NA	NA	0.08 ppm	U
Carbon Monoxide	1 hour	20 ppm	A	35 ppm	A
	8 hour	9.0 ppm	A	9 ppm	A
Nitrogen Dioxide	1 hour	0.25 ppm	A	NA	NA
	Annual	NA	NA	0.053 ppm	A
Sulfur Dioxide	1 hour	0.25 ppm	A	NA	NA
	24 hour	0.04 ppm	A	0.14 ppm	A
	Annual	NA	NA	0.03 ppm	A
Particulate Matter (PM_{10})	24 hour	50 $\mu g/m^3$	N	150 $\mu g/m^3$	U
	Annual[c]	30 $\mu g/m^3$	N	50 $\mu g/m^3$	A
Fine Particulate Matter ($PM_{2.5}$)	24 hour	NA	NA	65 $\mu g/m^3$	U
	Annual	12 $\mu g/m^3$ [d]	NA	15 $\mu g/m^3$	U
Sulfates	24 hour	25 $\mu g/m^3$	A	NA	NA
Lead	30 day	1.5 $\mu g/m^3$	A	NA	NA
	Cal. Quarter	NA	NA	1.5 $\mu g/m^3$	A
Hydrogen Sulfide	1 hour	0.03 ppm	U	NA	NA
Visibility Reducing Particles (VRP)	8 hour	see note e	U	NA	NA

Notes: A = Attainment; N = Non-Attainment; U = Unclassified; NA = Not Applicable; ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter.

a SAAQS = State Ambient Air Quality Standards (California). SAAQS for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, particulate matter, and visibility reducing particles are values that are not to be exceeded. All other state standards shown are values not to be equaled or exceeded.

b NAAQS = National Ambient Air Quality Standards. NAAQS, other than ozone and particulates, and those based on annual averages or annual arithmetic means, 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 3-year average of the 4th highest daily concentration is 0.08 ppm or less. The 24-hour PM10 standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than the standard. The 24-hour PM2.5 standard is attained when the 3-year average of 98th percentiles is less than the standard.

c State Standard = Annual Geometric Mean; National Standard = Annual Arithmetic Mean.

d State PM2.5 standard is a proposed standard and will go into effect late 2002 or early 2003 after going through California's review process for new regulations.

e Statewide VRP Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Source: Bay Area Air Quality Management District Internet web site. Standards and attainment status as of January 2002. http://www.baaqmd.gov/planning/resmod/baas.htm

California ambient standards tend to be at least as protective as national ambient standards and are often more stringent.

The ambient air quality standards are intended to protect the public health and welfare, and they specify the concentration of pollutants (with an adequate margin of safety) to which the public may be exposed without adverse health effects. They are designed to protect those segments of the public most susceptible to respiratory distress, known as sensitive receptors, including asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels somewhat above the ambient air quality standards before adverse health effects are observed.

Federal Standards

The 1977 Clean Air Act (last amended in 1990, 42 United States Code [USC] 7401 *et seq.*) required that regional planning and air pollution control agencies prepare a regional Air Quality Plan to outline the measures by which both stationary and mobile sources of pollutants can be controlled in order to achieve all standards within the deadlines specified in the Clean Air Act. For the Bay Area Air Basin, the Association of Bay Area Governments (ABAG), the Metropolitan Transportation Commission (MTC), and the BAAQMD jointly prepared a *Bay Area Air Quality Plan* in 1982, which predicted attainment of all federal clean air standards within the basin by 1987. This forecast was somewhat optimistic in that attainment of federal clean air standards did not occur throughout the entire air basin until 1991. The plan, which is referred to as the State Implementation Plan (SIP), must contain control strategies that demonstrate attainment with national ambient air quality standards by deadlines established in the federal CAA.

The Bay Area Air Basin attainment status with respect to federal standards is summarized in Table 6-3. In general, the Bay Area experiences low concentrations of most pollutants when compared to federal standards, except for O_3 and particulate matter, for which standards are exceeded periodically. In 1995, after several years of minimal violations of the federal one-hour ozone standard, the EPA revised the designation of the Bay Area Air Basin from "non-attainment" to "attainment" for this standard. However, with less favorable meteorology in subsequent years, violations of the one-hour ozone standard were again observed in the basin. Effective August 1998, the EPA downgraded the Bay Area's classification for this standard from a "maintenance" area to an "unclassified non-attainment" area. In 1998, after many years without violations of any carbon monoxide (CO) standards, the attainment status for CO was upgraded to "attainment."

In response to the EPA's redesignation of the basin for the one-hour federal ozone standard, the BAAQMD, ABAG, and MTC were required to develop an ozone attainment plan to meet this standard. The *1999 Ozone Attainment Plan* (OAP) was prepared and adopted by these agencies in June 1999. However, in March 2001, the EPA proposed and took final action to approve portions of the 1999 OAP and disapprove other portions, while also making the finding that the Bay Area had not attained the national 1-hour ozone standard. As a result, a revised OAP was prepared and adopted in October 2001. The 2001 OAP amends and supplements the 1999 OAP, and provides for attainment by 2006.

The 2001 OAP includes control strategies for stationary and mobile sources. Mobile source strategies encourage the retirement of older, more polluting technologies and the introduction of new, less polluting technology; these technological improvements in automobile engines and fuels, which are required by the CARB, have contributed and will continue to contribute the bulk of the quantifiable emission reductions from mobile sources. While CARB-required on-road mobile source emission controls are estimated to decrease VOC and NO_x daily emissions by about 69.6 tons and 81.1 tons, respectively, between 2000 and 2006, the effectiveness of transportation control measures (TCMs) is measured in tenths or hundredths of a ton per day. In the 2001 OAP, TCMs are targeted to reduce VOC and NO_x emissions by 0.5 tons and 0.7 tons, respectively. TCMs include provision of programs and funding to help cities and non-profit agencies link transportation projects with community plans as well as provide for low emission buses and pedestrian/bicycle facilities. Most notably, the 2001 OAP indicates the need to encourage compact, infill and transit-oriented development, which places housing, jobs, shops and services closer together and nearer to public transportation. Only then will walking, bicycling and transit become more attractive options for many daily trips, thereby reducing air pollutant emissions.

State Standards

California Clean Air Act

In 1988, California passed the California Clean Air Act (CCAA, California Health and Safety Code § 39600 *et seq.*) which, like its federal counterpart, called for designations of areas as attainment or non-attainment, based on State Ambient Air Quality Standards rather than federal or national standards. The Bay Area Air Basin attainment status with respect to state standards is summarized in Table 6-3. In general, this table indicates the Bay Area experiences low concentrations of most pollutants when compared to state standards, except for O_3 and particulate matter, for which standards are exceeded periodically.

State Ambient Air Quality Standards

The California Air Resources Board (CARB) is the state agency responsible for regulating air quality. CARB responsibilities include establishing State Ambient Air Quality Standards, emissions standards and regulations for mobile emissions sources (e.g., autos, trucks, etc.), and overseeing the efforts of county-wide and multi-county air pollution control districts, which have primary responsibility over stationary sources. The emission standards most relevant to proposed redevelopment are those related to automobiles, light- and medium-duty trucks, and California heavy-duty truck engines. The CARB also regulates vehicle fuels, with the intent to reduce emissions, and has set emission reduction performance requirements for gasoline (California reformulated gasoline), and limited the sulfur and aromatic content of diesel fuel to make it burn cleaner. The CARB also sets the standards used to pass or fail vehicles in smog check and heavy-duty truck inspection programs.

Bay Area Air Quality Management District

The BAAQMD is the regional agency responsible for air quality regulation within the San Francisco Bay Area Air Basin. The BAAQMD regulates air quality through its planning and review activities. The BAAQMD has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits, and can impose emission limits, set

fuel or material specifications, or establish operational limits to reduce air emissions. The BAAQMD regulates new or expanding stationary sources of toxic air contaminants.

Clean Air Plan

For state air quality planning purposes, the Bay Area is classified by the CCAA as a *serious* non-attainment area for ozone. The *serious* classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that the Bay Area update the Clean Air Plan (CAP) every three years to reflect progress in meeting the air quality standards and to incorporate new information regarding the feasibility of control measures and new emission inventory data. The Bay Area's record of progress in implementing previous measures must also be reviewed. The most recent draft revision to the CAP was completed in 2000. The 2000 CAP applies control measures to stationary sources, mobile sources, and transportation control measures (TCMs). Although the 2000 CAP is an ozone plan, it includes PM_{10} attainment planning as an informational item. The 2000 CAP includes 19 TCMs, which were also included in the 1997 CAP, and many of which were partially implemented during 1998 to 2000. The 2000 CAP continues to implement and expand key mobile source programs included in the 1997 CAP.

Impacts and Mitigation Measures

Significance Criteria

Redevelopment would have a significant impact on the environment if it would:

- Conflict with or obstruct implementation of the applicable air quality plan. This criteria is further defined as:
  - — Resulting 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 and if the contribution of the proposed project is cumulatively considerable when analyzed, then the impacts to air quality should be considered significant.
  - — Fundamentally conflict with the *Bay Area 2000 Clean Air Plan*, because population growth for the jurisdiction exceeds values in the CAP, based on population projections in ABAG's *Projections 2000*.
  - — Fundamentally conflict with the CAP because the rate of increase in vehicle miles traveled (VMT) in the jurisdiction is greater than the rate of increase in population.
  - — Fundamentally conflict with the CAP because the project does not demonstrate reasonable efforts to implement transportation control measures (TCMs) in the CAP.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Expose sensitive receptors to substantial pollutant concentrations;

- Contribute to CO concentrations exceeding the state ambient air quality standards of 9 ppm averaged over 8 hours and 20 ppm for 1 hour;
- Result in total emissions of ROG, NO_x, or PM_{10} of 15 tons per year or greater, or 80 pounds (36 kilograms) per day or greater (there is currently no quantitative significance threshold for $PM_{2.5}$);
- Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Result in a substantial increase in diesel emissions;
- Create objectionable odors affecting a substantial number of people;
- Result in potential to expose persons to substantial levels of toxic air contaminants (TACs), such that the probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million; or
- Result in ground-level concentrations of non-carcinogenic toxic air contaminants such that the Hazard Index would be greater than one for the MEI.

6.1: Consistency with the *Clean Air Plan*

The projected population growth within the Project Area is consistent with the population projections contained in the City General Plan and may be facilitated by implementation of the Redevelopment Plan. This population growth and its associated increase in vehicle miles traveled (VMT) would be consistent with the Clean Air Plan and would *not result in a significant environmental effect.*

Discussion

According to the BAAQMD CEQA Guidelines (1999) the following criteria, as applied to the Project Area, can be satisfied so that the Redevelopment Plan can be determined to be consistent with the CAP:

- Population growth in Oakland will not exceed the values included in the current CAP. Within the Project Area the population is projected to increase by an average of approximately 0.2% per year between 2000 and 2020, with a total population increase over the 20-year period of approximately 5%. This growth in population may be facilitated by implementation of the Redevelopment Plan's projects, programs and other activities. This rate of growth would be less than the Citywide population increase of approximately 0.5% per year, or a total population increase of approximately 11% over the same 20-year period, as projected in ABAG's *Projections 2000* for the period between years 2000 and 2020. Since the 2000 CAP is based on ABAG's *Projections*

2000 population projections, population growth within the Project Area would be less than, and therefore consistent with, the 2000 CAP.

- The rate of increase in VMT (vehicles miles traveled) for Oakland is equal to or lower than the rate of increase in population. The increase in VMT attributable to growth and development within the Project Area is estimated to be less than 1% per year between 2000 and 2020. Since this increase in VMT is equal to or lower than the projected population growth rate for the Project Area (also less than 1%), the Redevelopment Plan would be consistent with regional air quality planning. It would support planned attainment of air quality standards by allowing for population growth at a rate consistent with the CAP, but without a proportionate increase in vehicle use (as represented in vehicles miles traveled).

City General Plan Policies

Existing policies contained in the Open Space, Conservation, and Recreation (OSCAR) Element as well as in the Land Use and Transportation Element (LUTE) would also help reduce potential regional and local air quality emissions by encouraging use of transit, alternative transportation modes, and sustainable development patterns. Future Redevelopment Plan implementation projects, programs and other activities will be required to be consistent with these General Plan policies, including the following:

Policy CO-12.1: *Promote land use patterns and densities which help improve regional air quality conditions by: a) minimizing dependence on single passenger autos; (b) promoting projects which minimize quick auto starts and stops, such as mixed use developments; (c) separating land uses which are sensitive to pollution from the sources of air pollution; and (d) supporting telecommuting, flexible work hours, and behavioral changes which reduce the percentage of people in Oakland who must drive to work on a daily basis.*

Policy CO-12.2: Maintain a coordinated bus, rail, and ferry transit system which provides efficient service to major destinations and promotes alternatives to the single passenger auto.

Policy CO-12.3: Expand existing transportation systems management and transportation demand management strategies which reduce congestion, vehicle idling, and travel in single-passenger autos.

Policy CO-12.4: Require that development projects be designed in a manner which reduces potential adverse air quality impacts. This may include: (a) the use of vegetation and landscaping to absorb carbon monoxide and to buffer sensitive receptors; (b) the use of low-polluting energy sources and energy conservation measures; and (c) designs which encourage transit use and facilitate bicycle pedestrian travel.

Policy CO-12.6: Require construction, demolition and grading practices which minimize dust emissions.

Policy CO-12.7: Coordinate local air quality planning efforts with other agencies, including adjoining cities and counties, and the public agencies responsible for monitoring and improving air quality. Cooperate with regional agencies such as the Bay Area Air Quality Management District (BAAQMD), the Metropolitan Transportation Commission (MTC), the Association of Bay Area Governments (ABAG), and the Alameda County

Congestion Management Agency in developing and implementing regional air quality strategies. Continue to work with BAAQMD and the California Air Resources Board in enforcing the provisions of the State and Federal Clean Air Acts, including the monitoring of air pollutants on a regular and ongoing basis.

Land Use and Transportation Element

Objective T2: Provide mixed use, transit-oriented development that encourages public transit use and increases pedestrian and bicycle trips at major transportation nodes.

Policy T2.2 Encouraging Transit-Oriented Development: Transit-oriented development should be encouraged at existing and proposed transit nodes, defined by the convergence of two or more modes of public transit such as BART, bus, shuttle service, light rail or electric trolley, ferry, and inter-city or commuter rail.

Policy T2.2 Guiding Transit-Oriented Development: 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.

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

Policy T2.5 Linking Transportation and Activities: Link transportation facilities and infrastructure improvements to recreational uses, job centers, commercial nodes, and social services (i.e., hospitals, parks, or community centers).

Policy T3.2 Promoting Strategies to Address Congestion: The City should promote and participate in both local and regional strategies to manage traffic supply and demand where unacceptable levels of service exist or are forecast to exist.

Policy T3.6 Encouraging Transit: The City should encourage and promote use of public transit in Oakland by expediting the movement of and access to transit vehicles on designated "transit streets" as shown on the Transportation Plan.

Policy T3.7 Resolving Transportation Conflicts: The City, in constructing and maintaining its transportation infrastructure, should resolve any conflicts between public transit and single occupant vehicles in favor of the transportation mode that has the potential to provide the greatest mobility and access for people, rather than vehicles, giving due consideration to the environmental, public safety, economic development, health, and social equity impacts.

Policy T4.1 Incorporating Design Features for Alternative Travel: 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 T4.2 Creating Transportation Incentives: Through cooperation with other agencies, work to create incentives to encourage travelers to use alternative transportation options.

Policy T4.3 *Reducing Transit Waiting Times: The City should encourage transit operators to reduce waiting times for users by coordinating schedules and maintaining intervals of fifteen (15) minutes or less between buses during peak daytime periods.*

Policy T4.4 *Developing Light Rail or Electric Trolley: The City supports the development of light rail or trolley bus along Regional Transit streets in high travel demand corridors.*

Policy T4.5 *Preparing a Bicycle and Pedestrian Master Plan: The City should prepare, adopt, and implement a Bicycle and Pedestrian Master Plan as a part of the Transportation Element of this General Plan.*

Policy T4.6 *Making Transportation Accessible for Everyone: Alternative modes of transportation should be accessible for all of Oakland's population. Including the elderly, disable, and disadvantaged.*

Policy T6.1 *Posting Maximum Speeds: Collector streets shall be posted at the lowest possible speed (usually a maximum speed of 25 miles per hour), except where a lower speed is dictated by safety and allowable by law.*

Policy T6.2 *Improving Streetscapes: The City should make major efforts to improve the visual quality of streetscapes. Design of the streetscape, particularly in neighborhoods and commercial centers, should be pedestrian-oriented and include lighting, directional sign, trees, benches, and other support facilities.*

Policy D3.1 *Promoting Pedestrians: Pedestrian-friendly commercial areas should be promoted.*

Policy D3.2 *Incorporating Parking Facilities: New parking facilities for cars and bicycles should be incorporated into the design of any project in a manner that encourages and promotes safe pedestrian activity.*

Policy N1.2 *Placing Public Transit Stops: The majority of commercial development should be accessible by public transit. Public transit stops should be placed at strategic locations in Neighborhood Activity Centers and Transit-oriented Districts to promote browsing and shopping by transit users.*

6.2: Consistency with *Clean Air Plan* Transportation Control Measures (TCMs)

The objectives and policies of the Land Use and Transportation Element (LUTE) were determined to be consistent with the objectives and Transportation Control Measures (TCMs) as outlined in the CAP.[2] Because the Redevelopment Plan would be consistent with the LUTE, and the LUTE is consistent with the CAP, the Redevelopment Plan would be consistent with the CAP and this would *not be an environmental impact* of the Project.

[2] This determination is discussed in detail on pages III.E-17 through III.E-20 in the *Oakland General Plan Land Use and Transportation Element EIR* (City of Oakland, June 1998).

Discussion

As noted in the *Oakland General Plan Land Use and Transportation Element Draft EIR,* the "Transit First" resolution (passed by the City Council on October 29, 1996) is reflected in the adopted policies of that General Plan element. The Land Use and Transportation Element is consistent with the *Clean Air Plan* objectives and TCMs.

In addition, the Bicycle Master Plan (City of Oakland, July 20, 1999), which is a part of the LUTE, encourages bicycle commuting to help reduce traffic congestion and air pollution. A key objective of the Bicycle Master Plan is to increase the bicycle commute mode share to four percent (6,406 daily bicycle commuters based on 1990 employment levels) by 2010. These bicyclists will save an estimated 2.6 million vehicle trips and 9 million vehicle miles per year. According to the Master Plan, the estimated air quality benefit of these future bicycle commuters is a daily reduction of about 425 tons of particulate matter (PM_{10}), 1,225 tons of NO_x, and 1,783 tons of ROG.

Since the policies of the LUTE, including the Bicycle Master Plan, would be implemented pursuant to any implementation projects, programs and other activities of the Redevelopment Plan, the proposed Redevelopment Plan would be consistent with Clean Air Plan's TCMs.

6.3: Effect of Project Emissions on Regional Air Quality

Traffic increases associated with growth and development within the Project Area, as may be facilitated through implementation of the Redevelopment Plan, would not significantly degrade regional air quality. Project-related emissions increases would not exceed BAAQMD project-specific significance thresholds for reactive organic gases (ROG), NOx, and PM_{10}, and therefore, would not significantly contribute to recent (1996 and 1997) exceedances of applicable state PM_{10} standards in the region. This would be a *less-than-significant impact* of the Project.

Discussion

Traffic increases associated with projected growth and development within the Project Area would not significantly degrade regional air quality. As indicated under Section 6-1, the VMT growth rate associated with the Project would be less than 1% per year between 2000 and 2020. This increase in VMT is estimated to result in a total daily increase of approximately 21,215 vehicle miles. The daily incremental increase in mobile source emissions associated with this increase in vehicle miles traveled is presented in **Table 6-4**. As shown in Table 6-4, emissions increases attributable to growth and development within the Project Area would not exceed BAAQMD project-specific significance thresholds for reactive organic gases (ROG), NOx, and PM_{10}. Therefore, this increase would not significantly contribute to recent (1996 and 1997) exceedances of applicable state PM_{10} standards in the region. This table also compares daily emissions associated with projected growth and development within the Project Area by year 2020, and compares them to emissions levels that would result should this growth and development occur by the year 2005. Although this projected growth and development is not projected to occur by year 2005, this scenario is presented for comparison purposes and also to

demonstrate that it would not result in significant regional increases even under worst-case conditions.

There would be an overall increase in regional mobile source emissions in the City of Oakland attributed to all growth and development consistent with the Oakland General Plan. However, emissions increases from projected growth and development within the Project Area would actually be less than would result if this growth occurred elsewhere in the air basin (e.g., in outlying areas). Future growth as may be facilitated by implementation of the Redevelopment Plan would be infill development anticipated to provide new jobs near existing housing, and new housing near existing jobs (i.e., "smart growth"). It is also anticipated that as traffic congestion problems worsen in the region and travel times get longer, people will need to shorten their commute distance in order to maintain the same travel time as they have today. These factors, in addition to some increase in transit use, would tend to reduce trip lengths in the future.

Table 6-4: Estimated Daily Regional Emissions (2005 and 2020)

	Projected Emissions (Pounds per Day)				
	ROG	**NO_X**	**CO**	**SO_X**	**PM-10**
2005	24.1	58.0	290.6	1.4	20.9
2020	7.0	30.9	143.6	1.4	20.6
BAAQMD Threshold	80	80	-	-	80

Source: Orion Environmental Associates, URBEMIS 7-G

6.4: Effect of Project Emissions on Local Air Quality

Traffic generated by projected growth and development within the Project Area would not significantly increase CO emissions along roadways and at intersections within the Project Area or its vicinity. This would be a *less-than-significant* effect of the Project.

Discussion

A micro-scale CO impact analysis was conducted at 23 study intersections distributed throughout the Project Area and its vicinity. These are the same 23 intersections analyzed for traffic impacts in Chapter 5:Traffic and Circulation. Service level operations (used as an indicator of travel speed) were calculated as part of the transportation analysis. A Caltrans screening approach, which is based on the CALINE4 model, was used to estimate CO concentrations along these roadway links (Caltrans, 1988). Carbon monoxide concentrations were calculated at a distance of 25 feet from the edge of each roadway to determine potential impacts based on worst-case conditions (peak hour traffic and theoretical minimum atmospheric mixing). **Table 6-5** compares the one-hour and eight-hour CO exposures for existing (2002) and future (2020) conditions without and with the growth and development projected for the Project Area. Significance of localized CO emissions from mobile sources is determined by modeling the

ambient CO concentration under existing and future conditions, and comparing the resulting one-hour and eight-hour concentrations, both without and with the proposed Project, to the respective state and federal CO standards. A detailed impact analysis using the BAAQMD screening model indicates that the state and federal one-hour ambient standards for CO would not be violated at study intersections during worst-case atmospheric conditions (wintertime conditions when CO concentrations are typically greatest). Modeling results indicate that CO concentrations will decrease in the future due to attrition of older, high polluting vehicles, improvements in the overall automobile fleet, and improved fuel mixtures (as a result of ongoing state and federal emissions standards and programs for on-road motor vehicles).

Table 6-5: Estimated Worst-Case Existing and Future CO Concentrations at Selected Intersections

Intersection	Averaging Period	Existing	Existing + Plan	Future Baseline (2020)	Future+ Plan
1. I-880 Southbound On-Ramp/Jackson St. & 5th St.	1 Hour	8	8	6	6
	8 Hour	4.1	4.1	3.2	3.2
2. I-880 Northbound Off-Ramp/Jackson St. & 6th St.	1 Hour	9	9	7	7
	8 Hour	4.8	4.8	3.5	3.5
3. Madison St./5th St.	1 Hour	9	9	7	7
	8 Hour	4.4	4.4	3.3	3.3
4. Madison St./6th St.	1 Hour	8	8	6	6
	8 Hour	4.2	4.2	3.2	3.2
5. Oak St./5th St.	1 Hour	9	9	7	7
	8 Hour	4.3	4.4	3.3	3.3
6. Oak St./6th St.	1 Hour	8	8	7	7
	8 Hour	4.1	4.2	3.2	3.3
7. Oak St./7th St.	1 Hour	9	9	7	7
	8 Hour	4.3	4.4	3.4	3.4
8. Embarcadero/Oak St.	1 Hour	8	8	6	6
	8 Hour	3.9	3.9	3.0	3.0
9. Embarcadero/5th Ave.	1 Hour	8	9	7	7
	8 Hour	4.2	4.3	3.2	3.2
10. I-880 Northbound Off-Ramp/ Embarcadero	1 Hour	8	8	6	6
	8 Hour	4.2	4.3	3.2	3.2
11. Lakeshore Ave./Foothill Blvd.	1 Hour	9	9	7	7
	8 Hour	4.7	4.7	3.5	3.5
12. International Blvd./42nd Ave.	1 Hour	10	10	7	7
	8 Hour	5.0	5.0	3.6	3.6

Table 6-5: Estimated Worst-Case Existing and Future CO Concentrations at Selected Intersections

Intersection	Averaging Period	Existing	Existing + Plan	Future Baseline (2020)	Future+ Plan
13. International Blvd./High St.	1 Hour	10	10	7	7
	8 Hour	5.0	5.0	3.6	3.6
14. MacArthur Blvd./Camden St./Seminary Ave.	1 Hour	8	8	7	7
	8 Hour	4.2	4.2	3.2	3.2
15. MacArthur Blvd./Seminary Ave.	1 Hour	9	9	7	7
	8 Hour	4.3	4.3	3.3	3.3
16. International Blvd./73rd Ave./Hegenberger Rd.	1 Hour	10	10	7	7
	8 Hour	5.0	5.0	3.6	3.6
17. Bancroft Ave./73rd Ave.	1 Hour	10	10	7	7
	8 Hour	4.9	5.0	3.6	3.6
18. MacArthur Blvd./73rd Ave.	1 Hour	9	9	7	7
	8 Hour	4.6	4.6	3.4	3.4
19. Bancroft Ave./82nd Ave.	1 Hour	9	9	7	7
	8 Hour	4.3	4.3	3.3	3.3
20. International Blvd./98th Ave.	1 Hour	9	9	7	7
	8 Hour	4.8	4.8	3.5	3.5
21. Bancroft Ave./98th Ave.	1 Hour	9	9	7	7
	8 Hour	4.5	4.5	3.4	3.4
22. MacArthur Blvd./98th Ave.	1 Hour	9	9	7	7
	8 Hour	4.5	4.5	3.3	3.4
23. Golf Links Rd./98th Ave.	1 Hour	9	9	7	7
	8 Hour	4.6	4.6	3.4	3.4
Background Levels (included in above numbers	1 Hour	7.4	7.4	6.0	6.0
	8 Hour	3.6	3.6	2.9	2.9
State CO Standard	1 Hour	20 ppm	20 ppm	20 ppm	20 ppm
	8 Hour	9.0 ppm	9.0 ppm	9.0 ppm	9.0 ppm
Federal CO Standard	1 Hour	35 ppm	35 ppm	35 ppm	35 ppm
	8 Hour	9 ppm	9 ppm	9 ppm	9 ppm

Note: The "Existing" and "Future" scenarios are based on existing (2002) and future (2020) traffic volumes presented in Chapter 5: Transportation of this EIR.

For location of selected intersections, refer to Figure 5-3.

Source: Orion Environmental Associates, 2002

6.5: Emissions Generated by Construction Activities

Potential Impact 6-5: Construction associated with the Redevelopment Plan's implementation projects, programs and other activities within the Project Area would generate dust (including the respirable fraction known as PM_{10}) and combustion emissions. These emissions would be a *potentially significant effect* of the Project.

Discussion

Dust Emissions

Potential dust emissions that may be associated with future implementation of the Redevelopment Plan's projects, programs and other activities within the Project Area would be specific to each site. The BAAQMD does not require quantification of construction emissions (BAAQMD, 1999), but considers any project's construction-related impacts to be adequately mitigated if required dust-control measures are implemented. The extent of dust-control measures required by the BAAQMD depends on the size of the project. Since most construction projects would comprise less than one city block (approximately two acres or less), implementation of the BAAQMD's standard dust control procedures would maintain Project construction-related impacts at acceptable levels.

Combustion Emissions

Combustion emissions from construction equipment and vehicles, such as heavy equipment and delivery/haul trucks, air compressors, and generators, may result due to implementation of the Redevelopment Plan's projects, programs and other activities during construction activity. Construction employee vehicles would also result in air pollutant emissions, but the levels would be negligible compared to emissions from on-site heavy equipment and from transport trucks. Equipment exhaust contains both pulmonary irritants and hazardous compounds, which may affect sensitive receptors such as young children, senior citizens, or those susceptible to respiratory disease. Where construction occurs in proximity to residential uses, there may be a potential for unhealthful exposure of sensitive receptors to equipment exhaust.

Similar to dust emissions, the equipment activity level would be related to the project size and extent of earthmoving requirements in site preparation. Emission levels for construction activities would vary depending on the type of equipment, duration of use, operation schedules, and the number of construction workers. Air pollution emissions from construction activity were calculated for a prototype project with a two-acre disturbance "footprint" requiring 200 work-days to complete major construction. Equipment utilization was estimated based on the California Air Resources Board area source emissions factor of 300,000 Brake-Horsepower-Hours (BHP-HR) per acre of residential/commercial development. Emissions from average daily construction activity are shown in **Table 6-6**.

This table indicates that although these emissions, in combination with other existing emissions sources, would temporarily contribute to local air quality degradation, the emissions associated with most future development projects pursuant to implementation of the Redevelopment Plan within the Project Area would be less than significant. Short-term construction emissions for a single prototype project (two acres or less) within the Project Area would typically not exceed BAAQMD significance thresholds, although these thresholds apply to operational, not

construction emissions. However, NO_x and PM_{10} thresholds could be exceeded with development of a project that covers an area larger than two acres, or simultaneous development of more than one future project.

Table 6-6: Average Daily Construction Activity Air Pollution Emissions

	Daily Emissions (pounds/day)				
Activity	**CO**	**ROG**	**NOx**	**SOx**	**PM_{10}**
Soil Disturbance[a]					51.0
Equipment Operations[b]	5.7	1.8	25.8	1.8	0.9
Employee Commuting[c]	42.8	3.3	4.4	Negl.	3.6
Truck Hauling[d]	16.8	2.4	27.1	3.4	57.0
TOTAL	65.3	7.5	57.3	5.3	60.6
BAAQMD Threshold	n/a	80	80	n/a	80

	Emissions Factors					
Activity	**CO**	**ROG**	**NOx**	**SOx**	**PM_{10}**	**Source**
Soil Disturbance (pounds/acre/day)					27.5	BAAQMD
Equipment Operations (pounds/1,000 BHP-HR)	1.9	0.6	8.6	0.6	0.3	SCAQMD
Employee Commuting (grams/mile)	9.7	0.7	1.0	negl.	0.8	BAAQMD
Truck Hauling (grams/mile)	7.6	1.1	12.3	0.7	0.7	EMFAC7G

Notes: Emissions based on two-acre building footprint and 200 days for construction. Equipment utilization was estimated based on the California Air Resources Board area source emissions factor of 300,000 Brake-Horsepower-Hours (BHP-HR) per acre of residential/commercial development. Negl. = Negligible.

[a] 2 acres x 51 lbs/acre/day x 50% for use of "standard" dust control measures.
[b] 2 acres x 300,000 BHP-HR/acre ÷ 200 days = 3,000 BHP-HR/day
[c] 50 employees x 40 miles
[d] 20 trucks x 50 miles
BAAQMD: Bay Area Air Quality Management District, 1999.
SCAQMD: South Coast Air Quality Management District, 1993.
EMFAC7G: California Vehicle Emission Computer Model

Source: Orion Environmental Associates, 2002.

Mitigation Measures

The mitigation measures set forth below are intended to address construction-related air quality impacts that may be associated with implementation of the Redevelopment Plan's projects, programs and other activities within the Project Area.

- **Mitigation Measure 6-5A: Construction Emission Controls.** Contractors for future development projects pursuant to implementation of the Redevelopment Plan shall implement

BAAQMD dust control measures as outlined in BAAQMD *CEQA Guidelines* (1999) or any subsequent applicable BAAQMD updates.

These measures include the following:

Basic Control Measures

The following Basic Control Measures shall be implemented at all construction sites:

- Water all active construction areas at least twice daily.
- Cover all trucks hauling soil, sand, and other loose debris *or* require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

Enhanced Control Measures

In addition to the above, the following Enhanced Control Measures shall be implemented at all construction sites when more than four acres are under construction at any one time:

- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads to 15 miles per hour.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

Resulting Level of Significance

Implementation of adopted Policy CO-12.6 from the OSCAR Element would help reduce short-term emissions associated with future construction activity pursuant to implementation of the Redevelopment Plan within the Project Area. In addition, the measures recommended above would ensure that construction-related impacts are minimized to a *less-than-significant level.*

6.6: Odors

Implementation of the Redevelopment Plan would not create objectionable odors affecting a substantial number of people. The Redevelopment Plan's implementation projects, programs or other activities do not propose any specific new land uses that would generate objectionable odors, and there are no existing odor-generating uses in the vicinity that might affect new residents or workers within the Project Area.

7

Noise

Introduction

This chapter of the EIR describes existing noise conditions within the Project Area. It also identifies potential impacts associated with implementation of the Redevelopment Plan's projects, programs and other activities within the Project Area on existing noise levels and recommends, where necessary and feasible, mitigation measures to reduce and/or avoid potentially significant noise impacts. Noise issues discussed in this section of the EIR include:

- construction noise impacts;
- noise generated by traffic attributed to growth and development within the Project Area; and
- compatibility with City Land Use Compatibility Guidelines and ordinances.

Significance thresholds for noise impacts would generally be reached if implementation of the Redevelopment Plan's projects, programs or other activities were to expose persons to, or generate noise levels in excess of guidelines established in the Oakland General Plan or applicable standards of other agencies. Additionally, thresholds would be reached if implementation of the Redevelopment Plan would conflict with city/state land use compatibility guidelines or violate the City of Oakland Noise Ordinance.

Environmental Setting

Noise Descriptors

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Because sound or noise can vary in intensity by over one million times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies

within the entire spectrum, human response is factored into sound descriptions in a process called "A-weighting," written as "dBA."

Environmental noise is measured in units of dBA. The dBA, or A-weighted decibel, refers to a scale of noise measurement, which approximates the range of sensitivity of the human ear to sounds of different frequencies. On this scale, the normal range of human hearing extends from about zero dBA to about 140 dBA. A 10-dBA increase in the level of a continuous noise represents a perceived doubling of loudness; a 5-dBA increase is readily noticeable, while a 3-dBA increase is barely noticeable to most people.

Time variations in noise exposure are typically expressed in terms of a steady-state energy level (called Leq), which represents the acoustical energy of a given measurement. Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law requires that for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL). CNEL adds a 5-dB penalty during the evening hours (7:00 p.m. to 10:00 p.m.) and a 10-dB penalty during the night hours (10:00 p.m. to 7:00 a.m.). Another 24-hour noise descriptor, called the day-night noise level (Ldn), is similar to CNEL. While each adds a 10-dB penalty to all nighttime noise events between 10:00 p.m. and 7:00 a.m., Ldn does not add the evening 5-dB penalty. In practice, Ldn and CNEL usually differ by less than one dBA at any given location for transportation noise sources.

Human response to noise varies from individual to individual and is dependent upon the ambient environment in which the noise is perceived. The same noise that would be highly intrusive to a sleeping person or in a quiet park might be barely perceptible at an athletic event or in the middle of the freeway at rush hour. Therefore, planning for an acceptable noise exposure must take into account the types of activities and corresponding noise sensitivity of any particular set of land uses. For example, sleep disturbance may occur at less than 50 dB, interference with human speech begins at around 60 dB, and hearing damage may result from prolonged exposure to noise levels in excess of 90 dB.

Existing Noise Sources

The City's Noise Element identifies the major transportation facilities as the primary noise generators within the City (City of Oakland, 1974). Interstate 880 (I-880) is one of the primary major transportation facilities within the City, and it affects the noise environment within Eastlake/San Antonio Subarea and the northwesternmost corner of the Fruitvale Subarea. Other transportation facilities that also contribute to the local noise environment include the following arterial streets (as defined by the LUTE):

- 7th and 12th Streets, 5th and 14th Avenues in the Eastlake/San Antonio Subarea,
- 22nd, 23rd, Fruitvale, 35th Avenues and High Street in the Fruitvale Subarea,
- Seminary Avenue, Havenscourt Boulevard, and 73rd Avenue in the Central East Subarea,
- 98th Avenue in the Elmhurst Subarea,

- International Boulevard (East 14th Street) in all subareas,
- Foothill Boulevard in all subareas with the exception of the Elmhurst Subarea,
- Bancroft Avenue in all subareas except Eastlake/San Antonio, and
- MacArthur Boulevard in the Central East and Elmhurst Subareas

In addition to traffic noise, other major sources of noise in the Project Area include noise associated with train operations of Bay Area Rapid Transit (BART) and Union Pacific Railroad.

BART operations generate noise in the Eastlake/San Antonio Subarea and the northwestern-most corner of the Fruitvale Subarea where tracks are elevated. The Lake Merritt BART Station is located within the Eastlake/San Antonio Subarea, where BART tracks and the station are located underground. Union Pacific Railroad tracks traverse the Eastlake/San Antonio Subarea and the northwestern-most corner of the Fruitvale Subarea.

Existing Noise Levels

In order to characterize the current noise environment within the Project Area, four short-term and two long-term noise measurements were collected. Measurement results are presented in **Table 7-1**. Measurement locations are indicated on **Figure 7-1**. These measurements, as well as other measurements taken previously within the Project Area, indicate that:

- Noise levels are generally highest along the I-880 freeway, with daytime noise levels of 70 dBA (Leq) and CNEL noise levels of 75 dBA at 500 feet from the freeway centerline.
- Noise levels are relatively lower along major arterial streets such as Foothill Boulevard, 73rd Avenue, 98th Avenue, and MacArthur Boulevard, with daytime levels of 67 to 70 dBA (Leq) and CNEL levels of 69 to 72 dBA at 50 feet from roadway centerlines.[1]
- Noise levels in the vicinity of BART tracks (along sections that are elevated) exceed 71 dBA (CNEL) within 100 feet of the tracks.
- In areas away from arterials and freeways (where there are no adjacent major noise sources), noise levels are relatively lower (approximately 60 dBA or less).

When measured noise levels are compared to City noise and land use compatibility guidelines, they indicate that the existing noise environments within approximately 1,000 feet of the I-880 freeway and within 100 feet of elevated BART tracks are generally incompatible with residential and other noise-sensitive uses.

[1] CNEL noise levels of 69 and 70 dBA were measured at two locations. Based on these measurements, CNEL noise levels are estimated to be approximately 2 dBA higher than the short-term daytime (Leq) measurements taken along other major roadways. However, the measurement taken adjacent to the I-880 freeway indicates that the CNEL could be as much as 5 dBA higher than the short-term daytime (Leq) noise level.

Table 7-1: Existing Noise Levels in Project Area

Noise Measurement Locations (see Figure 7-1)	Measured Noise Level[1] Daytime Leq (dBA)	CNEL or Ldn (dBA)[2]	Distance to Centerline or Noise Source (feet)
1. I-880 Freeway (South of Oak Street)	70	75	500
2. I-880 Freeway (South of 10th Avenue)	70[3]	- -	500
3. 7th Street (South of Oak Street)	69[3]	- -	50
4. Foothill Boulevard (At 68th Ave.)	67	69	50
5. 73rd Avenue (East of Bancroft)	70[3]	- -	50
6. 98th Avenue (At Cherokee Ave.)	70[3]	- -	50
7. MacArthur Boulevard (South of 90th Ave.)	68	70	50
8. MacArthur Boulevard (At 108th Ave.))	69[3]	- -	50
9. BART Trains (Elevated Tracks at Fruitvale Station)	- -	70	100

Notes:

[1] Noise measurements were taken using Metrosonics DB-308 meters.

[2] CNEL/Ldn noise levels are based on 24-hour noise measurements taken on Thursday, October 24, 2002 except for Measurement #7, which was taken February 23, 2000. BART noise levels were measured on Thursday, June 27, 1996.

[3] Based on 15-minute noise measurements taken on weekday afternoons (2000-2002).

Source: Orion Environmental Associates, 2002.

Noise levels along many major arterials (including those listed above under Existing Noise Sources and those listed in Table 7-1) approach or meet the threshold for acceptable noise levels for residential uses.

Figure 7-1

Figure 7-1 (back)

Existing Sensitive Receptors

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication, physiological and psychological stress, and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools (which can include childcare centers), hospitals, and nursing homes are considered to be the most sensitive to noise. Neighborhood parks are not considered to be noise-sensitive.

With respect to residential sensitive receptors, the City's Noise Element identifies nine areas, Areas A through I, which were considered to be "critical noise impact areas" in 1974. The Noise Element identifies these areas as areas that are "noisier than is desirable," when compared to noise compatibility criteria developed by U.S. Department of Housing and Urban Development and U.S. Environmental Protection Agency. One of these areas, Area F, includes portions of the Eastlake/San Antonio Subarea generally in the vicinity of the I-880 freeway and Union Pacific Railroad tracks. The Noise Element identifies residential uses near the freeway, Laney College and parks in the vicinity of the Lake Merritt Channel and indicates that freeway noise is audible in these areas. It is noted in the Noise Element that these identified impact areas were areas that were having the "most serious" noise problems in 1974, and identification of these areas is not intended to imply a lack of problems elsewhere.

Regulatory and Policy Setting

State Standards and Guidelines

Noise Insulation Standards

Title 24, Part 2 of the *California Code of Regulations* (CCR) contains requirements for construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as California Noise Insulation Standards (the Standards). For limiting noise transmitted between adjacent dwelling units, the Standards specify the extent to which walls, doors, and floor–ceiling assemblies must block or absorb sound. For limiting noise from exterior sources, the Standards set forth an interior standard of 45 dBA (CNEL or Ldn) in any habitable room with all doors and windows closed, and require an acoustical analysis demonstrating the manner in which dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than 60 dBA (CNEL or Ldn).

California Governor's Office of Planning and Research Guidelines

Section 65302(f) of the CCR establishes the requirement that local land use planning jurisdictions prepare a General Plan. In 1998, the Office of Planning and Research published the most recent edition of its *General Plan Guidelines*. The guidelines advise local jurisdictions in preparing their comprehensive long-term general plans. The Noise Element is a mandatory component of the General Plan and includes general community noise guidelines and specific

planning guidelines for noise/land use compatibility developed by the local jurisdiction. State guidelines are presented in **Table 7-2**.

City of Oakland Planning Guidelines and Noise Standards

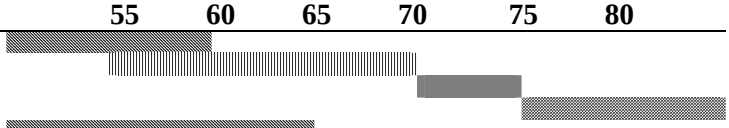
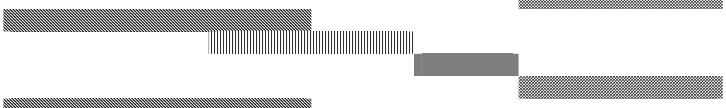
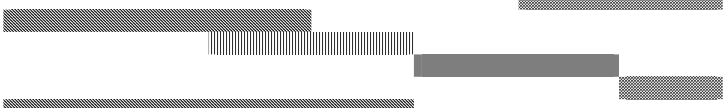
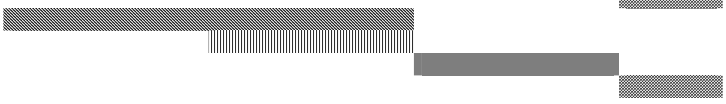
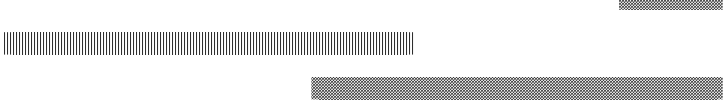
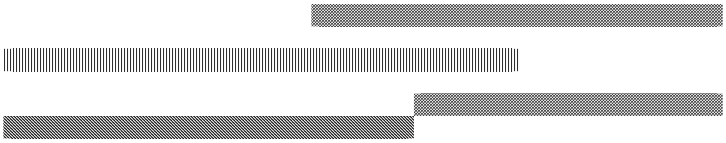
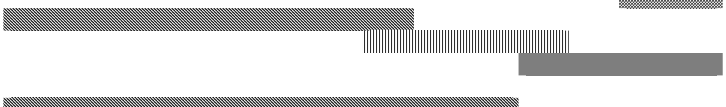
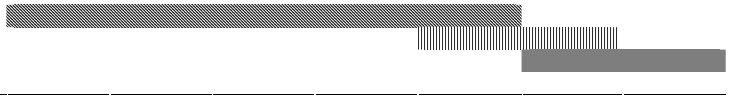
Noise exposure standards are implemented at either the receiver or source, and generally fall into two categories: (1) receiver-based noise compatibility guidelines for various land uses, and (2) ordinance limits for non-transportation-related noise. Since local jurisdictions are preempted from regulating noise generation from noise sources such as cars, trucks, trains, airplanes, etc., the City of Oakland implements noise controls through receiver-based noise compatibility guidelines and its Noise Ordinance. The adopted noise compatibility guidelines identify allowable noise exposures for various land uses from such sources, even if the source itself cannot be regulated. The City's Noise Ordinance regulates activities that may include such sources as mechanical equipment, amplified sounds, or hours of heavy equipment operation. Standards in local noise ordinances may be in the form of quantitative noise performance levels (as they are in the Oakland Noise Ordinance), or they may simply be in the form of a qualitative prohibition against creating a nuisance. Numerical standards are generally preferred because compliance is easier to document utilizing objective, rather than subjective (e.g., nuisance), standards.

City of Oakland Noise Compatibility Guidelines

The City of Oakland noise guidelines recognize the variable sensitivity of certain activities to noise, and establish noise exposure criteria defining acceptable noise levels. The City uses the land use compatibility noise guidelines developed by the State of California (**Table 7-2**). For residential and transient lodging uses, these guidelines indicate that noise levels up to 60 to 65 dBA (Ldn or CNEL) are normally acceptable depending on the type of residential use. For office/commercial uses as well as parks, schools, libraries, churches, hospitals and nursing homes, guidelines indicate that noise levels up to 70 dBA (Ldn or CNEL) are considered normally acceptable. For industrial uses, noise levels up to 75 dBA are considered normally acceptable.

"Normally acceptable" is defined as satisfactory for the specified land use, assuming that normal conventional construction is used in buildings. Under most of these land use categories, overlapping ranges of acceptability and unacceptability are presented, leaving some ambiguity in areas where noise levels fall within the overlapping range. For purposes of this analysis, the most conservative interpretation is followed where noise levels fall within this range (if a noise level falls within the overlapping range for normally and conditionally acceptable, it is identified as conditionally acceptable).

Table 7-2: State Land Use Compatibility Guidelines, Community Noise

Land Use Category	Community Noise Exposure Ldn or CNEL, dBA 55 60 65 70 75 80
Residential - Low Density, Single Family, Duplex, Mobile Homes	
Residential - Multi-Family	
Transient Lodging – Motels, Hotels	
Schools, Libraries, Churches, Hospitals, Nursing Homes	
Auditoriums, Concert Halls, Amphitheaters	
Sports Arena, Outdoor Spectator Sports	
Playgrounds, Neighborhood Parks	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	
Office Buildings, Business Commercial and Professional	
Industrial Manufacturing, Utilities, Agriculture	

Interpretation

	Normally Acceptable. Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable. 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.
	Normally Unacceptable. New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements and needed noise insulation features included in the design.
	Clearly Unacceptable. New construction or development should generally not be undertaken.

Source: California Governor's Office of Planning and Research, 1998.

City of Oakland Noise Ordinance

Section 7710 of the Oakland Planning Code specifies maximum allowable noise levels for various land uses (**Table 7-3**). The first set of standards apply to long-term noise exposure for specific land uses, while the second set of standards apply to temporary exposure to short- and long-term construction noise. Standards also indicate that in areas where the measured ambient noise level exceeds the applicable noise level standard, the ambient noise level becomes the applicable standard.

Table 7-3: City of Oakland Maximum Allowable Receiving Noise Standards

Operational Noise Standards at Receiving Property Line

Receiving Land Use	Cumulative Number of Minutes in One-hour Time Period	Maximum Allowable Noise Level, dBA	
		Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
Residential, School, Child Care, Health Care or Nursing Home, and Public Open Space	20 (L_{33})	60	45
	10 ($L_{16.7}$)	65	50
	5 ($L_{8.3}$)	70	55
	1 ($L_{1.7}$)	75	60
	0 (L_{max})	80	65
Commercial	20 (L_{33})	65	65
	10 ($L_{16.7}$)	70	70
	5 ($L_{8.3}$)	75	75
	1 ($L_{1.7}$)	80	80
	0 (L_{max})	85	85
Manufacturing, Mining, and Quarrying	20 (L_{33})	70	70
	10 ($L_{16.7}$)	75	75
	5 ($L_{8.3}$)	80	80
	1 ($L_{1.7}$)	85	85
	0 (L_{max})	90	90

Noise Level Standards for Temporary Construction or Demolition Activities

Operation/Receiving Land Use	Daily 7 a.m. to 7 p.m.	Weekends 9 a.m. to 8 p.m.
Short Term Operation (less than 10 days)		
Residential	80	65
Commercial, Industrial	85	70
Long Term Operation (more than 10 days)		
Residential	65	55
Commercial, Industrial	70	60

Notes: These standards are reduced 5 dBA for simple tone noise, noise consisting of speech or music, or recurring impact noise. If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.

L_{max} is the maximum noise level; L_{33} is the noise level exceeded 33 percent of time, etc.

Source: City of Oakland, 1996, as revised April 2002.

Impacts and Mitigation Measures

Significance Criteria

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

- Expose persons to or generate noise levels in excess of guidelines established in the 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 Figure 7-2;
- Violate the City of Oakland Noise Ordinance (Oakland Planning Code § 17.120.050) regarding construction noise, except if an acoustical analysis is performed and all feasible mitigation measures imposed, including the standard City of Oakland noise measures adopted by the Oakland City Council on January 16, 2001. These standards include:
  - During the hours of 7 p.m. to 7 a.m. on weekdays and 8 p.m. to 9 a.m. on weekends and federal holidays, noise levels received by any land uses from construction or demolition shall not exceed the applicable nighttime operational noise level standard.[2]
- Violate the City of Oakland Noise Ordinance (Oakland Planning Code § 8.18.020) regarding nuisance of persistent construction-related noise;
- Create a vibration that 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 (a) M-40 zone or (b) M-30 zone more than 400 feet from any legally occupied residential property (Oakland Planning Code § 17.120.060);
- Maintain interior Ldn or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories, or long-term care facilities (and if extended by local legislative action, 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 above levels existing without redevelopment;
- 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

[2] Table 7-3 applies to construction noise, except if an acoustical analysis is performed and all feasible mitigation measures imposed, including standard noise measures adopted by the City Council in January 2001.

- Be located within the vicinity of a private airstrip, and would expose people residing or working in the project area to excessive noise levels.

Not all of the above criteria would apply to the proposed Project. Pile-driving activities during any future construction activities in the Project Area could result in vibration perceptible at residential receptors, but construction activity is exempted from the portion of the Oakland Planning Code that comprises this significance criterion. It is unknown whether any future uses under the Project could generate operational vibration effects. The western boundary of the Project Area is located slightly more than two miles from the Metropolitan Oakland International Airport and outside existing and future (2010) airport noise contours; therefore, excessive airport-related noise is not anticipated in the Project Area.

7.1: Construction Noise Increases

Potential Impact 7.1: Implementation of the Redevelopment Plan's projects, programs and other activities could generate short-term increases in noise and vibration due to construction. This would be a short-term adverse impact, and would be *potentially significant*.

Discussion

During construction that may be required in furtherance of the Redevelopment Plan's implementation projects, programs or other activities, temporary noise increases would result from the operation of heavy equipment. Construction noise levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between noise source and receptor, and presence or absence of barriers between noise source and receptor. Typical construction noise sources range from about 76 to 85 dBA at 50 feet for most types of construction equipment, with slightly higher levels of about 88 to 89 dBA for certain types of earthmoving (e.g., scrapers, pavers). The highest noise levels would be generated by rock drills and pile drivers, which can generate noise peaks of approximately 98 and 101 dBA at 50 feet, respectively. The rate of attenuation is about 6 dBA for every doubling of distance from a point source. Typical noise levels at 50 feet from the noise source for several types of construction equipment and potential noise attenuation with feasible noise controls are shown in **Table 7-4**.

The Oakland Noise Ordinance would limit construction noise levels to certain maximum levels during certain hours. The noise limits vary depending on the affected land use. Depending on the size of future projects, either short-term (less than 10 days) or long-term (more than 10 days) noise limits would be applied, and they require construction noise levels to be limited to 80 dBA (short-term) or 65 dBA (long-term) at the nearest residence during the weekdays (7:00 a.m. to 7:00 p.m.) and 65 dBA (short-term) or 55 dBA (long-term) on weekends (9:00 a.m. to 8:00 p.m.). Except for emergencies or in cases where nighttime roadway construction is carried out to minimize congestion, construction is not allowed during the nighttime hours. In general, construction noise levels (as listed in Table 7-4) would be consistent with Noise Ordinance 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 Ordinance noise

limits. Therefore, in order to comply with Ordinance noise limits at distances of less than 50 feet, operation of heavy equipment will need to be limited to less than 10 days or construction practices may need to be modified to comply with Ordinance limits.

Table 7-4: Construction Noise Levels

Equipment	Noise Level (dBA) @ 50 Feet	With Feasible Noise Control[1]
Earthmoving:		
Front Loader	79	75
Backhoe	85	75
Dozer	80	75
Tractor	80	75
Scraper	88	80
Grader	85	75
Paver	89	80
Materials Handling:		
Concrete Mixer	85	75
Concrete Pump	82	75
Crane	83	75
Stationary:		
Pump	76	75
Generator	78	75
	81	75
Impact:		
Pile Driver	101	95
Jack Hammer	88	75
Rock Drill	98	80
Pneumatic Tools	86	80
Other:		
Saw	78	75
Vibrator	76	75

[1] Estimated levels obtainable by selecting quieter procedures or machines and implementing noise-control features requiring no major redesign or extreme cost.

Source: U.S. Environmental Protection Agency, 1971.

For some types of development projects pursuant to implementation of the Redevelopment Plan, pile driving could be required as part of foundation construction. Conventional unmuffled, unshielded pile drivers generate noise peaks of 101 dBA at 50 feet each time the driver strikes the pile. Depending on the proximity of pile driving to the adjacent sensitive receptors, noise levels could exceed short-term (less than 10 days) and long-term noise limits specified in the Noise Ordinance. Implementation of feasible noise controls (which could provide a 6-dBA reduction) or vibratory pile drivers (which are 15 dBA quieter than impact drivers) could help reduce noise levels at sensitive receptors to acceptable levels depending on their proximity.

Implementation of such measures would be required as necessary to reduce these potential impacts to a less-than-significant level.

Pile driving is known to cause vibrations in adjacent structures. The nature and extent of vibration would depend on a number of factors, including: the type of equipment used (such as impact or vibratory tools); the type of activity, the depth of construction, and the type and conditions of geologic materials. While the potential for structural damage cannot be specifically predicted in the vicinities of future development sites, vibration can be maintained at levels that would not cause structural damage if vibratory pile drivers are used. Pre-drilling of pile holes would also reduce the potential adverse vibration effects of pile driving. With such measures, vibration effects would be noticeable but would not be expected to result in structural damage to buildings if pile driving occurs as part of construction of future development projects within the Project Area.

Mitigation Measures

The following mitigation measures are recommended for all construction projects associated with implementation of the Redevelopment Plan's projects, programs and other activities:

- **Mitigation Measure 7.1: Construction Noise.** Compliance with the City Noise Level Standards for Temporary Construction or Demolition Activities, as shown on Table 7-3 would mitigate construction noise impacts associated with future development projects pursuant to implementation of the Redevelopment Plan to a less-than-significant level. The following measures shall be required as necessary as part of future development projects pursuant to implementation of the Redevelopment Plan in order to comply with the Standards, as well as to minimize any potential pile driving noise and vibration impacts:

    1. Equipment and trucks used for construction should 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. Construction equipment should not generate noise levels above the mitigated levels listed in Table 7-4 (75 dBA to 80 dBA at 50 feet, depending on equipment type).

    2. Equipment used for project construction should be hydraulically or electrical powered impact tools (e.g., jack hammers, pavement breakers, and rock drills) wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust should be used; this muffler could lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves should be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures should be used such as drilling rather than impact equipment whenever feasible.

3. Stationary noise sources should be located as far from adjacent uses as possible, particularly, any adjacent residences receptors. If they must be located near such receptors, they should be adequately muffled and enclosed within temporary sheds.

4. Where existing residences are located within 50 feet of the project construction activities, operation of heavy equipment should be limited to 10 or less days at one time and weekend construction activities should be prohibited.

5. Pile holes should be pre-drilled to reduce potential noise and vibration impacts. City pile driving noise attenuation requirements should be implemented as necessary. Limit pile driving from 8:00 a.m. to 4:00 p.m. Monday through Friday, with no pile driving or other extreme noise-generating activity permitted between 12:30 and 1:30 p.m., or other mid-day hour as established and noticed. Prohibit pile driving or other extreme noise-generating activity on Sundays and holidays. Pile driving on Saturdays will be evaluated on a case-by-case basis, with criteria including the proximity of residential uses and a survey of business preferences for whether Saturday activity is acceptable if the overall duration of the pile driving is shortened. Avoid times when the most disturbance could occur, during business hours (to the extent practically feasible), the noon lunch hour, and evening and nighttime hours (7:00 p.m. to 7:00 a.m.). It is recommended that pile driving activities be limited to 1:00 p.m. to 7:00 p.m. on weekdays and 9:00 a.m. to 8:00 p.m. on Saturdays. Use sonic or vibratory pile drivers where feasible instead of impact pile drivers (sonic pile drivers are only effective in some soils). Vibratory pile drivers could reduce noise levels by as much as 16 dBA, but can cause disturbance to adjacent uses. Use engine and pneumatic exhaust controls on pile drivers as feasible to ensure that exhaust noise from pile driver engines is minimized. Such controls could reduce exhaust noise by up to 6 dBA.

Resulting Level of Significance

Construction-related noise impacts associated with implementation of the Redevelopment Plan would be mitigated to a *less-than-significant* level by implementation of recommended mitigation measures.

7.2: Project-Related Traffic Noise Increases

The increase in traffic noise associated with growth and development within the Project Area, as may be facilitated by implementation of the Redevelopment Plan, would result in future noise levels that are slightly higher than, or generally the same as, future noise levels that would occur without such growth and development. This impact is considered *less than significant*.

Discussion

Future (year 2020) increases in traffic as a result of growth and development within the Project Area would result in slightly higher noise levels along some streets within the Project Area (see

Table 7-5). However, these increased noise levels would generally be an increase of 1 dBA or less along streets within the Project Area. Increases of less than 3 dBA are generally not perceptible to most people and, when compared to significance criteria, future noise increases of 1 dBA or less would be less than significant.

7.3: Noise Compatibility of Future Development

Potential Impact 7.3: Depending on the precise location of new land uses that may be constructed pursuant to the Redevelopment Plan, future noise levels within some portions of the Project Area could be incompatible with such uses. This impact is considered to be *potentially-significant*.

Discussion

Future growth and development within the Project Area, as may be assisted or facilitated by implementation of the Redevelopment Plan, would occur in accordance with the Oakland General Plan and more specifically the LUTE, Estuary Policy Plan, and Housing Element. Consistent with the LUTE and as more fully described in Chapter 3: Project Description, it is anticipated that future residential and commercial infill development pursuant to the Redevelopment Plan would occur primarily along major transit corridors within the Project Area. As indicated in **Table 7-1**, current levels along major arterial streets and the I-880 freeway corridor approach or exceed 70 dBA (Leq or CNEL).

For residential uses, the City's Land Use Compatibility Guidelines for Community Noise indicate that noise levels between 55 and 70 dBA (CNEL) are "conditionally acceptable," while noise levels above 70 dBA (CNEL) are considered "normally unacceptable." For commercial uses, the City's Guidelines indicate that noise levels up to 70 dBA (CNEL) are "normally acceptable," while noise levels between 67 and 77 dBA (CNEL) are "conditionally acceptable." Above 75 dBA (CNEL), noise levels are considered "normally unacceptable" for commercial uses.

As indicated on **Table 7-5**, noise levels adjacent to most major arterials (including those identified in the LUTE and listed above under Existing Noise Sources) could reach 60 to 70 dBA (CNEL). In the future such noise levels would be "conditionally acceptable" for residential and commercial uses. Where noise levels are "conditionally acceptable," a detailed noise analysis is required, but conventional construction with closed windows and fresh air supply systems or air conditioning will normally suffice. Where noise levels exceed 70 dBA (CNEL), such as along 73rd Avenue south of MacArthur Boulevard, on International Boulevard east of High Street and on High Street north of International Boulevard, noise levels would be "normally unacceptable" for residential uses.

Within approximately 500 feet of the I-880 freeway (with a direct line-of-sight to the freeway), noise levels could exceed 75 dBA (CNEL), which would be considered "normally unacceptable" for commercial uses. Noise levels within approximately 1,000 feet of the freeway could exceed 70 dBA (CNEL), which would be considered "normally unacceptable" for residential uses.

Based on the significance criteria outlined above (which include these guidelines), any future residential or commercial development located near the I-880 freeway corridor would be "conditionally acceptable" or "normally unacceptable."

BART facilities extend through the Eastlake/San Antonio Subarea, and noise levels exceed 70 dBA within approximately 100 feet of elevated sections of BART tracks, which would be "normally unacceptable" for residential uses and "conditionally acceptable" for commercial uses. Based on the significance criteria outlined above (which include these guidelines), any future commercial development located within approximately 200 feet of elevated sections of BART tracks (where noise levels could exceed 67 dBA, CNEL) would be "conditionally acceptable" for commercial uses.

General Plan Policies

The following General Plan policies would apply to all new development within the Project Area, including development pursuant to implementation of the Redevelopment Plan:

Policy I/C4.2: Minimizing Nuisances: The potential for new or existing industrial or commercial uses, including seaport and airport activities, to create nuisance impacts on surrounding residential land uses should be minimized through efficient and appropriate implementation and monitoring of environmental and development controls.

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

Policy N3.9: Orienting Residential Development: Residential developments should be encouraged to face the street and 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, and avoiding undue noise exposure.

Compliance with the General Plan Policies identified above would address the issues of noise and land use compatibility, but may not be capable of effectively reducing noise impacts to levels of *less-than-significant*. Therefore the following mitigation measure is recommended:

Table 7-5: Future Noise Levels Along Selected Roadways

Street Segment	Existing (2002)	Future Noise Level (CNEL @ 50 feet from Roadway Centerline)				
		With Project (2002)	DBA Change	Cumulative Baseline (2020)	Cumulative Plus Project (2020)	dBA Change
6th Street (Oak St. to Madison St.)	58.8	60.0	1.2	60.6	61.4	0.8
6th Street (East of Oak St.)	63.6	63.9	0.3	64.6	64.8	0.2
Oak Street (South of 6th St.)	64.1	64.6	0.5	67.2	67.5	0.3
7th Street (East of Oak St.)	68.2	68.6	0.4	69.8	70.0	0.2
Embarcadero (West of I-880 NB Off-ramp)	67.5	68.1	0.6	67.9	68.5	0.6
Embarcadero (West of I-880 NB Off-ramp)	66.5	67.3	0.8	66.8	67.5	0.7
Bancroft Avenue (West of 73rd Ave.)	67.6	67.9	0.3	68.7	68.9	0.2
73rd Avenue (North of Bancroft Ave.)	69.6	69.6	0.0	69.3	69.3	0.0
73rd Avenue (South of MacArthur Blvd.)	69.4	69.5	0.1	70.2	70.3	0.1
98th Avenue (North of MacArthur Blvd.)	68.6	68.7	0.1	69.3	69.4	0.1
MacArthur Blvd. (West of 98th Ave.)	69.0	69.1	0.1	69.1	69.2	0.1
International Boulevard (East of High St.)	69.4	69.5	0.1	70.4	70.5	0.1
High Street (North of International Blvd.)	69.5	69.5	0.0	70.2	70.2	0.0
Seminary Avenue (North of MacArthur/Camden)	66.8	66.9	0.1	67.3	67.4	0.1

Notes: Estimates were calculated using noise modeling techniques specified by the Federal Highway Administration (FHWA-RD-77-108 with updated California Vehicle Noise Emission [CALVENO] factors) and traffic volumes in this report. The "Existing" scenario represents 2002 baseline (without project) road link volumes (refer to the traff section for more information). Noise levels assume 3% heavy trucks, 2% medium trucks, travel speeds of 30 to 40 miles per hour depending on the street, and a building reflection factor of 1.5 dBA. Noise measurements collected within the Plan Area (and Oakland area in general) suggest that noise levels may actually be higher than nois model estimates. Noise measurements taken in the Plan Area indicate that actual noise levels could be as much as 3 dBA higher than those listed above, depending on location.

Source: Orion Environmental Associates, 2002.

Mitigation Measure

- **Mitigation Measure 7.3: Noise Compatibility.** The City of Oakland Land Use Compatibility Guidelines for Community Noise set limits on the level of noise that receiving land uses may be suscepted to, and requires analysis and mitigation should these noise levels be exceeded. In accordance with these guidelines, the following specific mitigation measures would apply to new development projects that may be in furtherance of implementation of the Redevelopment Plan.

1. Future residential development that may be proposed within 5,000 feet of the I-880 freeway corridor, along major arterials identified in the LUTE, or along collector roads where noise levels exceed 60 dBA CNEL (if a direct line-of-sight is available) shall be required to complete a detailed analysis of noise reduction requirement.

2. A detailed analysis of noise reduction requirements shall also be required if any future commercial uses are proposed within approximately 1,500 feet of the I-880 freeway corridor, adjacent to major arterials identified in the LUTE, or within approximately 200 feet of elevated sections of BART tracks where noise levels could exceed 67 dBA CNEL (if a direct line-of-sight is available).

3. Recommended noise insulation features shall be included in the designs of such future development.

Resulting Level of Significance

The impacts of noise on future development projects pursuant to the Redevelopment Plan can be mitigated to a *less-than-significant* level by implementation of the above recommended mitigation measure.

7.4: Noise Compatibility of Mixed Use Developments

Implementation of the Redevelopment Plan would encourage development of mixed-use projects along key corridors, transit-oriented districts and neighborhood activity centers where noise levels may be appropriate for commercial uses but only conditionally acceptable for residential use. However, implementation of City Noise Ordinance limits and General Plan policies would reduce the potential for noise compatibility problems in mixed-use developments to a *less-than-significant level*.

Discussion

The Redevelopment Plan's projects, programs and other activities, in accordance with the LUTE, would encourage development of mixed-use projects along key corridors, transit-oriented districts, and neighborhood activity centers. In mixed-use developments, noise compatibility would be a concern due to the proximity of residential uses with other uses (including commercial and employment uses). Sources of noise typically associated with commercial uses

can include loading/unloading activities, delivery trucks, parking cars, garbage trucks, and use of refuse bins. Stationary sources of noise from commercial uses can include refrigeration, air conditioning, and heating units. Depending on the type of commercial or employment activities, noise generated during the evening or nighttime hours can result in noise conflicts between residential and commercial uses.

The Oakland Noise Ordinance sets limits on the level of noise that any noise source could generate at any adjacent receiving residential uses. Implementation of Ordinance limits combined with the following General Plan policies would reduce the potential for noise compatibility problems in mixed-use developments to a less-than-significant level:

Policy I/C4.1: Protecting Existing Activities: 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 uses.

Policy I/C4.2: Minimizing Nuisances: The potential for new or existing industrial or commercial uses, including seaport and airport activities, to create nuisance impacts on surrounding residential land uses should be minimized through efficient and appropriate implementation and monitoring of environmental and development controls.

Policy D11.2: Locating Mixed-Use Development: Mixed-use development should be allowed in commercial areas, where the residential component is compatible with the desired commercial function of the area.

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

Policy N3.9: Orienting Residential Development: Residential developments should be encouraged to face the street and 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, and avoiding undue noise exposure.

7.5: Airport and Aircraft Noise

The Project Area is not located within an airport land use planning area, although portions of the Project Area are within two miles of the Oakland International Airport. Implementation of the Redevelopment Plan would not expose people residing or working in the Project Area to excessive noise levels from airport or aircraft operation.

8

Hazards and Hazardous Materials

Introduction

This chapter of the EIR describes the following topics pertaining to hazardous materials relative to the Redevelopment Plan:

- a definition of hazardous materials and waste;
- an overview of the most relevant regulations pertaining to hazardous materials and waste that may apply to the Project Area;
- a description of general soils and groundwater conditions in the Project Area; and
- a general description of hazardous building materials that are present within the Project Area.

This discussion addresses hazardous materials that may be encountered during implementation of the Redevelopment Plan's projects, programs and other activities, and provides a program-level analysis of potential impacts with respect to hazards and hazardous materials together with identification of program-level mitigation measures.

Information on toxic air contaminants is not included within this chapter, but is addressed in Chapter 6: Air Quality.

Definitions

Hazardous materials and hazardous wastes are defined in the California Code of Regulations, Title 22, Sections 66260 through 66261.10. As defined in Title 22, hazardous materials are grouped into four general categories: toxic (causes human health effects); ignitable (has the ability to burn); corrosive (causes severe burns or damages materials); or reactive (causes explosions or generates toxic gasses). They are generally considered to be substances with certain chemical or physical properties that may pose a substantial present or future hazard to human health or the environment when improperly handled, stored, disposed or otherwise managed. In general, discarded, abandoned, or inherently waste-like hazardous materials are referred to as hazardous wastes. A hazardous material or waste can be present in a liquid, semi-solid, solid, or gaseous form.

Environmental Setting

This section describes general environmental conditions in terms of potential sources of hazardous materials in soil or groundwater that may affect future development in the Redevelopment Area. The discussion of environmental conditions is based primarily on information from a review of environmental databases conducted for this EIR (Environmental Data Resources, Inc. [EDR], 2002). Appendix F presents the name and date of each database reviewed for this inventory and describes each database. The following potential sources of hazardous materials are present in the Project Redevelopment Area:

- historic land uses which involved the use of hazardous materials;
- existing permitted uses of hazardous materials including underground storage tanks (USTs) and permitted handling of hazardous wastes; and
- sites where soil or groundwater that has been affected or is suspected to be affected by a chemical release(s) from past or present site uses (environmental cases).

Historic Land Uses

Historically, the Project Area has been used for a variety of uses that may have involved use or handling of hazardous materials, including residential uses that may have had USTs, farming and ranching uses, with some industrial uses. Historic industrial activity in the area has included a Chevrolet assembly plant constructed at 73rd and Bancroft Avenues in 1916, later demolished to construct the Eastmont Mall. Historically, rail activity has occurred along portions of International Boulevard, including a power plant and roundhouse at the corner of 98th Avenue and International Boulevard. The former Durant Motor Company that was located at the corner of International Boulevard and 104th Avenue manufactured trucks and was later converted to a cotton warehouse. Additionally, the waterfront along the Oakland Estuary has historically been used as a transportation corridor with associated use and storage of hazardous materials. The historic uses of hazardous materials at such locations were generally not well regulated, and it is likely that a release of hazardous materials to the soil and/or groundwater could have occurred at these facilities that was neither documented nor remediated.

Current Land Uses

The Project Area currently includes numerous facilities that use hazardous materials or handle hazardous wastes, but comply with current hazardous materials and hazardous waste regulations. Permitted uses of hazardous materials identified in the Project Area that are tracked by regulatory databases include facilities that:

- have permitted or historic USTs;
- have registered aboveground petroleum storage tanks;
- manufacture or handle materials regulated under the Toxic Substances Control Act (TSCA);
- are registered pesticide producing facilities; or

- conduct dry cleaner-related operations.

Permitted uses associated with handling of hazardous wastes includes generators, transporters, and disposal facilities permitted under the federal Resource Conservation and Recovery Act (RCRA) and facilities that have submitted hazardous waste manifests to the California Department of Toxic Substances Control (DTSC).

In addition, the City of Oakland maintains an inventory of sites that have filed Hazardous Materials Business Plan or Risk Management and Prevention Plan, have registered USTs, or have registered as a hazardous waste generator or hazardous waste treatment facility. These sites are categorized by approximate risk to the public:

- P1 sites are considered high hazard sites. These sites store acutely hazardous chemicals or hazardous chemicals in high quantities (including hazardous waste generators generating greater than 1,000 kg/month of waste or a UST site with more than four tanks), or are sites with an independent operator with on-site contamination or a poor inspection history.
- P2 sites are considered medium hazard sites, such as auto body shops and drycleaners.
- P3 are considered low hazard sites and are any site included in the Office of Emergency Services database that do not meet the criteria for classification as P1 or P2.

Current hazardous materials use and hazardous waste handling activities are well regulated to generally ensure safe handling of these materials. Because the use and handling of hazardous materials at permitted sites are subject to strict regulation, the potential for a release of hazardous materials from these sites is considered low. However, permitted sites are nevertheless potential sources of hazardous substances to the soil and/or groundwater because of accidental spills, incidental leakage or spillage that may have gone undetected.

Table 8-1 summarizes the number of permitted facilities within each subarea of the Project Area identified in the record search for each regulatory database. Appendix F includes a summary of each regulatory database reviewed. As indicated in this table, the primary permitted uses of hazardous materials identified within the Project Area include small quantity generators permitted under RCRA (RCRIS SQG); underground storage tanks which would typically contain petroleum products (UST, CA FID UST, and HIST UST); and facilities that have transported hazardous wastes off-site (HAZNET). The database review also identified three large quantity generators permitted under RCRA, one facility with an above ground storage tank (AST), one facility that manufactures or imports chemical substances regulated under the Toxic Substances Control Act (TSCA), one registered pesticide-producing facility (SSTS), and 13 identified dry cleaner-related facilities (CLEANERS). The Facility Index System (FINDS) typically includes pointers to facilities identified in other regulatory databases. A total of 10 Category P1 sites, considered high hazard sites by the City of Oakland, were identified within the Project Area.

Table 8-1: Summary of Permitted Facilities Using Hazardous Materials by Subarea

No. of Facilities on List*				
Eastlake Subarea	**Fruitvale Subarea**	**Central Subarea**	**Elmhurst Subarea**	**Name and Description of Regulatory Database**
0	1	0	2	Resource Conservation and Recovery Act Information System Large Quantity Generators (RCRIS LQG) – facilities permitted to generate more than 1,000 kilograms per month of non-acutely hazardous waste.
39	8	9	12	RCRIS Small Quantity Generators (RCRIS SQG) – facilities permitted to generate more than 100 kilograms per month but less than 1,000 kilograms per month of non-acutely hazardous waste.
139	56	44	38	Hazardous Waste Information System (HAZNET) – facilities that have filed hazardous waste manifests with the DTSC.
35	19	21	11	Underground Storage Tanks (UST) – facilities permitted to maintain underground storage tanks.
28	10	8	7	Facility Inventory Database (CA FID UST) – facilities on a historical listing of active and inactive USTs.
24	11	8	11	Hazardous Substances Storage Container Database (HIST UST) – facilities on a historic list of UST sites.
1	0	0	0	Aboveground Petroleum Storage Tank Facilities (AST) -– facilities with registered above ground storage tanks.
1	0	0	0	Toxic Substances Control Act (TSCA) – facilities that manufacture or import chemical substances included on the TSCA Chemical Substances Inventory list.
1	0	0	0	Federal Insecticide, Fungicide and Rodenticide Act (SSTS) – registered pesticide-producing facilities that have filed reports pursuant to Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act.
3	5	3	2	Dry cleaner-related facilities (CLEANERS)
61	12	15	15	Facility Index System (FINDS) – a database that includes information on facilities included in other, more detailed databases.
5	0	3	2	City of Oakland Category P1 Sites.

* Some facilities may appear on more than one list

Source: Orion Environmental Associates and Environmental Data Resources, 2002.

Environmental Cases

Environmental cases are those sites suspected of releasing hazardous substances or that have had cause for hazardous substances investigations and are identified on regulatory agency lists. Identification of hazardous substances at these sites is generally due to site disturbance activities such as removal or repair of an underground storage tank, a spill of hazardous substances, or excavation for construction. The status of each environmental case varies and can be either active (ongoing investigations or remediation), closed (remediation or clean-up completed and approved by the regulatory agency), or unknown. However, the status of each case can change with time, and as discussed below under Impacts and Mitigation Measures, it would be necessary to update the status of environmental cases as well as identify any additional cases in the future when site-specific development occurs.

Table 8-2 summarizes the number of environmental cases within each subarea of the Project Area identified in the record search of regulatory databases. Appendix F_ includes a summary of each regulatory database reviewed.

Table 8-2: Summary of Environmental Cases by Subarea

No. of Cases on List*				
Eastlake Subarea	**Fruitvale Subarea**	**Central Subarea**	**Elmhurst Subarea**	**Name and Description of Regulatory List**
1	0	0	0	List of Deed Restrictions (DEED) – sites that have been issued a deed restriction because of the presence of hazardous substances.
1	0	0	0	California Bond Expenditure Plan (CA BOND EXP PLAN) – sites with a site-specific expenditure plan for the appropriation of state funds.
10	1	0	0	Spills, Leaks, Investigation, and Cleanup Cost Recovery Listing (SLIC Reg2) – sites under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board.
53	22	26	12	Leaking Underground Storage Tanks (LUST).
2	0	1	0	Federal Insecticide, Fungicide, and Rodenticide/TSCA (FTTS) – administrative, enforcement, and compliance actions related to the Federal Insecticide, Fungicide, and Rodenticide Act.
0	0	0	1	Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) of potential Superfund sites. These are generally sites with documented releases of hazardous materials.
4	0	0	1	CERCLIS No Further Action Planned (CERCLIS NFRAP) – sites previously identified under CERCLIS but designated for no further action.
4	0	0	1	Cal Sites (CAL-SITES) – potential hazardous waste sites identified by the DTSC.
7	3	1	1	Proposition 65 Records (NOTIFY 65) – facilities that have reported a release that could threaten a drinking water source.
0	0	1	0	Solid Waste Information System (SWF/LF) – active, inactive, or closed solid waste disposal sites.
44	20	15	6	Cortese Hazardous Waste and Substances Site List (CORTESE) – a compilation of sites listed in the LUST, SWF/LF, and CAL-SITES databases.
22	1	4	4	Emergency Response Notification System (ERNS) – cases that are usually spills or releases of chemicals reported to federal authorities
11	4	5	6	California Hazardous Materials Incident Reporting System (CHMIRS) – hazardous materials spills and releases reported to the California Office of Emergency Services.
1	0	0	0	Hazardous Materials Incident Reporting System (HMIRS) – hazardous materials spills and releases reported to the U.S. Department of Transportation.

* Some cases may appear on more than one list.

Source: Orion Environmental Associates and Environmental Data Resources, 2002.

As summarized in Table 8-2, the primary environmental cases identified within the Project Area include sites with leaking underground storage tanks (LUST), sites under the jurisdiction of the RWQCB (SLIC), potential hazardous waste sites identified by the DTSC (CAL-SITES), and sites that have reported a release that could threaten a drinking water source (NOTIFY 65). The SLIC and CAL-SITES sites would generally include those with contaminants other than petroleum products; these sites are primarily located within the industrially zoned portions of the Project Area. The database review also identified:

- 1 site with a deed restriction (DEED),
- 1 site identified under the California Bond Expenditure Plan (CA BOND EXP PLAN),
- 3 sites with an administrative, enforcement, or compliance action related to the Federal Insecticide, Fungicide, and Rodenticide Act (FTTS),
- 1 potential Superfund site (CERCLIS),
- 5 sites identified under the Comprehensive Environmental Response, Compensation, and Liability Information System but designated for no further action (CERCLIS NFRAP), and
- 1 active, inactive or closed solid waste disposal site (SWF/LF).

The CORTESE database lists sites that are included in other databases including LUST and CAL-SITES. There have been hazardous materials spills reported within much of the Project Area (ERNS, CHMIRS, and HMIRS).

Hazardous Building Materials

Hazardous building materials are included in this discussion because future implementation projects, programs and other activities may development would likely involve demolition or renovation of existing structures. Some building materials commonly used in older buildings could present a public health risk if disturbed during demolition or renovation of an existing building. Hazardous building materials include asbestos, electrical equipment such as transformers and fluorescent light ballasts that contain polychlorinated biphenyls (PCBs), fluorescent lights containing mercury vapors and lead-based paints. Asbestos and lead-based paint may also present a health risk to existing building occupants if they are in a deteriorated condition. If removed during demolition of a building, these materials would also require special disposal procedures.

Regulatory and Policy Setting

Hazardous materials and hazardous wastes are subject to numerous federal, state and local laws and regulations intended to protect health and safety and the environment. Many of these regulations would apply to future redevelopment activities within the Redevelopment Area. The overall regulatory framework for hazardous materials is discussed in Appendix E. The sections below focus on those regulatory and policy-based initiatives that may be implemented to ensure safe handling of hazardous materials; and to facilitate cleanup of abandoned, idled, and

underutilized properties such as those that would be encountered within the Project Area, also known as "brownfields."

Brownfields Initiatives

Abandoned, idled, or underused industrial and commercial facilities are referred to as "brownfields" and expansion or redevelopment of these facilities is complicated by real or perceived contamination. Historically, development of these sites has not been favored because of the unknown costs associated with cleanup of existing contamination and because of the potential for taking on long-term liability associated with contamination at a property. Faced with these unknowns, developers have often preferred development of "greenfields"[1] in outlying areas where there are no contamination concerns but where there is generally a greater overall burden on the environment.

Federal Regulations

The U.S. Environmental Protection Agency (U.S. EPA) has developed numerous "brownfield" programs to promote and expedite the cleanup of brownfields while reducing the potential liability to lenders and developers of contaminated properties. These programs are more fully described in Appendix E.

State of California Regulatory/Policy Setting

The California Department of Toxic Substances Control (DTSC) has also developed "brownfield" programs to promote and expedite the cleanup of brownfields. Those state programs developed with or in association with the DTSC most applicable to the Project Area are further described below.

Polanco Redevelopment Act

The Polanco Redevelopment Act, applicable only in redevelopment areas, authorizes a redevelopment agency to take action to require the investigation and clean up of an identified release of hazardous materials in accordance with applicable state and federal laws. The redevelopment agency may also perform the cleanup itself with the oversight of the DTSC, the San Francisco Bay Regional Water Quality Control Board (RWQCB) or local agency if the site owner or operator refuses to do so. If the clean up is completed in accordance with an approved clean up plan and is performed to the satisfaction of the responsible agency, redevelopment agencies, developers, subsequent land owners, and lenders receive immunity from liability for the contamination under this legislation. This act also includes cost recovery provisions to allow the redevelopment agency to pursue cost reimbursement from the responsible party for actions taken by the agency. Senate Bill 1684, passed in September 2002, was enacted to make this act permanent.

[1] Greenfields are land where there have been no previous commercial or industrial land uses.

In the San Francisco Bay Area, examples of where redevelopment agencies have used the Polanco Redevelopment Act to expedite the clean up "brownfield" sites include a 12-acre industrial site in Emeryville, a former 3-acre trucking and fuel distribution facility in San Leandro, and a former gas station and asphalt manufacturing facility site in Redwood City (California Redevelopment Association, 2002). Advantages of invoking the Polanco Act for these cleanups include speeding up the cleanup process, immunity from liability to facilitate financing for the development projects and shifting the cleanup costs to the responsible parties.

California Land Environmental Restoration and Reuse Act

The California Land Environmental Restoration and Reuse Act (CLERRA) was enacted on October 12, 2001, to promote the restoration and reuse of brownfields sites in California. This act authorizes local regulatory agencies to require property owners to provide information related to potential past or present hazardous material releases at a property and to require a Phase I environmental assessment if a release is indicated. In the event that a potential release is indicated by the Phase I environmental assessment, the act requires the California EPA to assign the DTSC, RWQCB, or a local agency as the lead oversight regulatory agency for further investigation and remediation of the site. These actions include a preliminary endangerment assessment, additional site investigations, and implementation of remedial action in accordance with an approved Remedial Action Plan (RAP). Oakland has not completed the process to authorize a local agency under the CLERRA. The City is in the process of designating a specific City agency to take on the responsibility to implement this act.

City of Oakland Regulatory/Policy Setting

Oakland Urban Land Redevelopment Program

The Oakland Urban Land Redevelopment Program is a collaborative effort by the City of Oakland and other principal agencies charged with enforcing environmental regulations in Oakland[2] to streamline the clean up and redevelopment of moderately contaminated sites (City of Oakland Public Works Agency, 2000). The program provides a consistent set of guidelines for the application of risk-based corrective actions by clarifying environmental investigation requirements, standardizing the regulatory process, and establishing Oakland-specific, risk based corrective action cleanup standards for qualifying sites. Benefits of standardizing this process include reduced investigation, remediation, and overall project costs; more accurate cost estimating; expedited regulatory approval of the corrective action plans; expedited regulatory site closure; and earlier realization of development goals.

The Urban Land Redevelopment Program includes a three-tiered approach to the investigation of Oakland sites and identification of risk-based cleanup standards.

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[2] Specifically, the program was developed by the Oakland Public Works Agency, Environmental Services Division with assistance from the Alameda County Department of Environmental Health, California Department of Toxic Substances Control, San Francisco Regional Water Quality Control Board, US Environmental Protection Agency, a community panel, Spence Environmental Engineering, and volunteer environmental consultants.

- Tier 1 Risk Based Screening Levels (RBSLs) and Tier 2 Site Specific Target Levels (SSTLs) are specified for the protection of human health at Oakland sites that meet specific eligibility requirements, where commonly found contaminants are present, and the contaminants are considered to present a relatively low risk. RBSLs and SSTLs are identified for residential and commercial/industrial land uses. These levels are typically lower (more stringent) for residential land uses than for commercial/industrial land uses.
- For more complicated sites that do not meet the eligibility requirements, a Tier 3 analysis using site-specific information would be required to identify SSTLs for the appropriate land use. RBSLs and SSTLs are based on an acceptable carcinogenic risk of 10-5 and non-carcinogenic hazard index of 1.0.

A risk management plan would be prepared to specify containment measures[3] where contaminants would be left at concentrations greater than the most stringent RBSL. These measures would be used to prevent exposure to any hazardous materials left in place and/or institutional controls that would be employed to ensure the future protection of human health.[4] The site would also be included in the City of Oakland Permit Tracking System and future permit applications for work that might alter the conditions of site closure would undergo special review by the City of Oakland Fire Department. Implementation of this program is intended to provide assurance that human health and environmental resources will be protected without needlessly delaying future construction and development projects.

Throughout most of Oakland, humans are the primary receptor that may be exposed to hazardous materials because most of the city is urbanized. Ecological receptors such as wildlife and endangered species are generally not of concern. Based on this, the Urban Land Redevelopment Program does not include provisions for development of cleanup levels for sites where there is an existing or potential exposure pathway to ecological receptors or sensitive habitats such as wildlife refuge areas, wetlands, surface water bodies, or other protected areas. For sites where ecological receptors or sensitive habitats may be exposed to hazardous materials, an ecological risk analysis would be required to identify cleanup levels that would be protective of these receptors.

Community Right To Know Laws

In accordance with Community Right to Know laws, businesses that handle specified quantities of hazardous materials prepare a Hazardous Materials Business Plan (HMBP) that details hazardous substance inventories, site layouts, training and monitoring procedures, and emergency response plans. Businesses that handle specified amounts of acutely hazardous

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[3] Containment measures are engineering controls that can be used to reduce or eliminate exposure to hazardous materials at a site. Typical containment measures include vapor barriers, asphalt caps, moisture barriers, and slurry walls. Implementation of these measures can reduce human health risks at a site and are typically less expensive and easier to implement than techniques used to physically remove contaminants from a site.

[4] Institutional controls that are commonly used include deed restrictions, land use restrictions, access controls, recording notices, and contractual obligations.

materials must implement a Risk Management and Prevention Plan (RMPP). The RMPP must include information on the submitting facility, reference to the facility's business plan, process designation, identification of acutely hazardous materials handled and their quantity, and a general description of processes and principal equipment. Requirements for these programs are further discussed in Appendix E. Additional City regulations pertaining to response to a chemical release or improper handling of hazardous materials at a regulated facility and closure of facilities permitted for hazardous materials are included under the Certified Unified Program Agency regulations. The Oakland Fire Department, Office of Emergency Services, is the designated Certified Unified Program Agency responsible for implementing these programs within the City of Oakland.

Use of Hazardous Substances Within ¼ Mile of a Sensitive Receptor

To protect sensitive receptors from public health effects from a release of hazardous substances, the Oakland Municipal Code allows the City, at its discretion, to require facilities that handle hazardous substances within 1,000 feet of a residence, school, hospital, or other sensitive receptor to prepare a hazardous materials assessment report and remediation plan (HMARRP). The HMARRP must include public participation in the planning process,[5] along with the following requirements:

- identify hazardous materials used and stored at the property and the suitability of the site;
- analyze off-site consequences that could occur as a result of a release of hazardous substances (including fire);
- include a health risk assessment; and
- identify remedial measures to reduce or eliminate on-site and off-site hazards.

Impacts and Mitigation Measures

Significance Criteria

Under CEQA Guidelines, implementation of the Central City East Redevelopment Plan would have a significant impact on the environment if it were to:

- Create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a substantial hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

[5] An industrial facility that changes ownership is also required to disclose whether it will handle, store, or produce any substance presenting a threat to public health. If so, then the facility can also be required to prepare an HMARRP.

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, materials, or waste within ¼ mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, or be another known or suspected contaminated site that would (1) create a significant hazard to the public or the environment, (2) exceed the acceptable excess cancer risk range of $1 \times 10\text{-}5$ for commercial or industrial land uses as set forth in the City of Oakland Urban Land Redevelopment Program Guidance Document (City of Oakland, 2000), or (3) exceed the acceptable excess cancer risk range set in the National Contingency Plan ($1 \times 10\text{-}6$ to $1 \times 10\text{-}4$) for other uses;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- 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 safety hazards for people residing or working in the project area.

Definition, identification and determination of threshold levels of hazardous materials and wastes are provided in Title 40 of the Code of Federal Regulations (40 CFR) and in Title 22 of the California Code of Regulations. Determination of "substantial" hazard or "insignificant" levels of hazardous materials is performed by the regulatory agencies on a case-by-case basis, depending on the proposed uses, potential exposure, and degree and type of hazard.

8.1: Potential Long-Term Impacts

Implementation of the Redevelopment Plan's projects, programs and other activities could result in accidental release of hazardous materials or wastes during normal operations. However, compliance with existing hazardous materials laws, regulations and policies would ensure that any such Redevelopment Plan implementation activity would not create a substantial hazard to the public or the environment. Therefore, this impact is considered to be *less than significant*.

Discussion

Implementation of the Redevelopment Plan could encourage introduction of additional businesses involving the handling of hazardous materials in those areas zoned for commercial or industrial uses, some of which are located adjacent to residential areas. It is likely that some of these businesses could require construction and use of on-site aboveground or underground storage tanks for the storage of hazardous materials or fuel products or may result in the production of hazardous wastes. Even though these businesses would be required to comply with applicable federal, state and local regulations, there would remain the potential for an accidental release of hazardous materials or petroleum products, such as a tank leak, spill or rupture, to occur. However, as discussed below, compliance of businesses with federal and state hazardous material regulations, City Municipal Code, and existing General Plan policies would

minimize the risk of accidental releases, ensure safe handling of hazardous materials at permitted facilities, and protect nearby residences from the potential effects of an accidental release.

Current zoning regulations allow residential and commercial land uses within the majority of the Project Area. Areas zoned for industrial uses are located within the waterfront portions of the East Lake/San Antonio and Fruitvale/San Antonio subareas and some industrially zoned areas outside of the Project Area are near much of the Project Area's western boundary. In some portions of the Project Area, these land uses are adjacent to or near areas zoned for residential use. Many activities allowed in areas zoned for commercial use could handle hazardous materials including laundries, medical commercial services, construction sales and service, automotive service and repair, transporting and warehousing commercial services, animal care, undertaking, and commercial scrap operations. Activities allowed in areas zoned for industrial use commonly involve the handling of hazardous materials.

While the introduction of new businesses that handle hazardous materials may increase the use of hazardous materials in the area, the increase does not necessarily correspond to an increase in risk associated with their use or handling or in generation of hazardous waste. Increased risks associated with an increase in volume or type of hazardous materials used in the Project Area would be offset with the newer and improved technology for handling and storage practices that would likely be implemented by new businesses in the future.

Compliance with Regulations

Similar to existing conditions, any new businesses that handle or store hazardous materials or petroleum products would be required to comply with the City Municipal Code. This Code designates the Office of Emergency Services as the Certified Unified Program Agency responsible for permitting and overseeing activities that involve the handling of hazardous materials in the City of Oakland. As described in the Setting section of this chapter of the EIR, the Office of Emergency Services would require facilities that handle hazardous materials greater than threshold quantities to prepare an HMBP and facilities that handle acutely hazardous materials would be required to prepare an RMPP. Compliance with these requirements as well as state and federal regulations would minimize potential exposure of site personnel and the public to any accidental releases of hazardous materials or waste and would also protect the area from potential environmental contamination.

To further protect residences from exposure to hazardous materials, the City Municipal Code includes the following measures addressing the compatibility of residential and industrial or commercial land uses involving hazardous materials use:

- Chapter 17.101 of the City Municipal Code, the S-16 Industrial-Residential Transition Combining Zone regulations, includes requirements to provide a transition between residential and industrial land uses. Limited civic, commercial, and small manufacturing activities are allowed within this zone. The City, on a case-by-case basis, may conditionally approve additional uses, including live-work accommodations.
- Chapter 17.114 of the City Municipal Code allows the City to control, improve, or terminate uses that do not conform to the zoning regulations.

In addition, the Land Use and Transportation Element of the Oakland General Plan contains the following policies to reduce the potential of adverse effects from an accidental release of hazardous materials:

Policy I/C4.1: Protecting Existing Activities. 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.

Policy W1.3: Reducing Land Use Conflicts. Land uses and impacts generated from Port or neighborhood activities should be buffered, protecting adjacent residential areas from the impacts of seaport, airport, or other industrial uses. Appropriate siting of industrial activities, buffering (e.g., landscaping, fencing, transitional uses, etc.), truck traffic management efforts, and other mitigations should be used to minimize the impact of incompatible uses.

Policy W2.2: Buffering of Heavy Industrial Uses. Appropriate buffering measures for heavy industrial uses and transportation uses on adjacent residential neighborhoods should be developed and implemented.

Policy W9.1: Defining Mixed Use Along the Estuary. Mixed-use areas are areas of developments where residential uses are integrated with other non-residential uses such as commercial, recreation, and industrial areas. Live/work units are appropriate mixed-use developments and unique residential opportunities for the waterfront.

Policy N5.1: Environmental Justice. The City is committed to the identification of issues related to the consequences of development on racial, ethnic, and disadvantaged socio-economic groups. The City will encourage active participation of all its communities, and will make efforts to inform and involve groups concerned about environmental justice and representatives of communities most impacted by environmental hazards in the early stages of the planning and development process through notification and two-way communication.

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

Project Benefits/Mitigation Measures Incorporated

Adoption and subsequent Redevelopment Plan implementation projects, programs and other activities could facilitate the addition of new businesses to the Project Area. Any new business that handles or stores hazardous materials would be required to comply with all federal, state and local hazardous materials regulations, including structural requirements for handling, storing, secondary containment and disposing of hazardous materials. An indirect benefit of redevelopment would be the use of newer and improved technology for handling and storage practices that would likely be implemented by new businesses in the future, and replacement of older businesses using older technology. This would provide an incremental increase in protection to public health and the environment against future accidental releases of hazardous materials.

This environmental issue is considered to be less than significant because compliance with existing regulations for permitting hazardous materials uses, City Municipal Code, and existing General Plan policies would reduce the potential for accidental releases of hazardous materials and would protect nearby residents from the effects of a release.

8.2: Accidental Release of Hazardous Materials or Wastes during Normal Transport Operations

Compliance with existing hazardous materials laws, regulations, and policies would minimize the risk for accidental releases during normal transport operations to levels considered *less than significant*.

Discussion

As described in the previous impact discussion, the Redevelopment Plan's implementation projects, programs and other activities could result in an increase of use of hazardous materials in the Project Area. This in turn could result in an increased potential for transportation-related accidents in the area. Even though transporters of hazardous materials and wastes are required to comply with applicable federal, state and local regulations, there would remain the potential for an accidental release of hazardous materials or wastes to occur along a truck route within the Project Area. However, compliance with federal and state hazardous materials transportation regulations and existing General Plan policies would minimize the risk for accidental releases during normal transport operations.

The California Highway Patrol and the California Department of Transportation (Caltrans) are the primary state agencies with responsibility for enforcing federal and state regulations pertaining to transport of hazardous materials within California. The U.S. Department of Transportation regulates the transport of chemicals and hazardous materials by truck between states. These agencies regulate container types and packaging requirements as well as licensing and training for truck operations, chemical handling and hazardous waste haulers.

City General Plan Policies

In addition, the Land Use and Transportation Element of the Oakland General Plan contains the following policy related to transport of hazardous materials:

Policy T1.6: *Designating Truck Routes. An adequate system of roads connecting port terminals, warehouses, freeways and regional arterials, and other important truck destinations should be designated. This system should rely upon arterial streets away from residential neighborhoods.*

This environmental effect is considered to be less than significant because compliance with existing regulations for transport of hazardous materials and existing General Plan policies would minimize risk of accidental releases during normal transport operations.

8.3: Use of Hazardous Materials within ¼ Mile of a School

Compliance with existing hazardous materials laws, regulations, and policies would ensure that the Project would not create unacceptable risks within ¼ mile of an existing or proposed school, reducing this potential impact to a level of *less than significant*.

Discussion

As discussed in the Land Use Setting, there are 16 schools operated by the Oakland Unified School District within the Project Area, and an additional 17 schools located within ¼ mile of the Project Area boundaries. The Redevelopment Plan's implementation programs, projects and other activities could facilitate the addition of new businesses that handle hazardous materials within this area. Without proper planning and handling, the use of hazardous materials within ¼ mile of these schools could result in unacceptable health risks to these sensitive receptors.

However, compliance with City regulations will require hazardous material handlers within 1,000 feet of a school or other sensitive receptor to disclose the use of hazardous materials, conduct assessments of potential off-site risks, and implement remedies to reduce identified risks. These requirements would reduce the potential for an unacceptable release of hazardous materials within ¼ mile of a school or other sensitive receptor.

As discussed under Section 8.1, current zoning regulations allow residential and commercial land uses within the majority of the Project Area. Areas zoned for industrial uses are located within the waterfront portions of the East Lake/San Antonio and Fruitvale/San Antonio subareas, and some industrially zoned areas outside of the Redevelopment Project Area are near much of its western boundary. Many activities allowed in areas zoned for commercial and industrial use commonly involve the handling of hazardous materials.

Compliance with Regulations

As discussed in the Environmental Setting, the City of Oakland Municipal Code requires any facility that handles hazardous or acutely hazardous materials in excess of specified quantities to file a disclosure form (commonly referred to as an HMBP). This form must contain information needed for City emergency services to adequately prepare for response to an emergency at that facility. Facilities that handle acutely hazardous materials must also complete a Risk Management and Prevention Plan (RMPP) to assess potential off-site consequences of a release of hazardous materials. In addition, facilities that handle hazardous materials within ¼ mile of a school, hospital, or residence can be required to complete an hazardous materials assessment report and remediation plan (HMARRP). The HMARRP must identify hazardous materials used at the facility and the suitability of the site, the potential on-site and off-site risks, and remedial measures to be implemented to reduce or eliminate on-site and off-site risks. The HMARRP is subject to review and approval by the City and public review and comment to ensure that potential threats to public health are adequately addressed.

The Bay Area Air Quality Management District (BAAQMD) using a risk-based approach regulates toxic air contaminants. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. The BAAQMD operates a monitoring network for air pollutants in the Bay Area, including monitoring of ambient toxic air

contaminants. Data from the monitoring stations are used to determine level of risk associated with exposure to toxic air contaminants (see Chapter 6: Air Quality for further discussion).

This potential impact is considered to be less than significant because compliance with existing regulations for the handling of hazardous materials within 1,000 feet of a school and other sensitive receptors will substantially lessen or avoid significant impacts.

8.4: Exposure to Hazardous Materials as a Result of Land Use Changes

Compliance with existing regulations and policies would ensure that any change in land use resulting from implementation of the Redevelopment Plan's programs, projects or other activities would not create a substantial hazard to the public or the environment. This would *not be a significant impact* of the Redevelopment Plan.

Discussion

At any of the known sites where remediation has been completed or in the cases where closure has been granted, regulatory agencies would have approved health-based clean up levels that are based on current land uses. In some cases, containment controls could have been used to prevent unacceptable exposure to hazardous materials, allowing the site owner to leave hazardous materials in the soil and/or groundwater at concentrations higher than the applicable cleanup level. If land uses change to a more sensitive use as a result of implementation programs, projects or other implementation activities of the Redevelopment Plan, such as changing from existing industrial or commercial use to a new residential use, then more strict clean up levels would apply. Without additional remediation, new site occupants could be exposed to unacceptable levels of hazardous materials in the soil and/or groundwater. However, compliance with City policy requiring a risk management plan and tracking of the sites that have obtained conditional closure in the Oakland Permit Tracking System would reduce the risk of unacceptable exposure to hazardous materials.

As described in the Setting, a risk management plan is required in accordance with the Urban Land Redevelopment Program for sites where institutional controls or containment were used to prevent unacceptable contact with soil or groundwater containing hazardous materials. The plan would specify how remaining contamination would be managed to ensure the continued protection of human health and the environment. A copy of the plan would be placed on file with the lead regulatory agency for the cleanup of the site and with the City Fire Department, and the site would be included in the City of Oakland Permit Tracking System. Under this system, any future work that might alter conditions of site closure would undergo special review by the City of Oakland Fire Department to ensure that proper actions are taken to prevent unacceptable exposure to hazardous materials as a result of changed site conditions.

This impact is considered to be less than significant because compliance with the City of Oakland Permit Tracking System would substantially reduce the risk of unacceptable exposure to hazardous materials.

8.5: Exposure to Hazardous Materials in Soil or Groundwater during Construction

Compliance with existing hazardous materials laws, regulations and policies during construction would ensure that the Project would not create a substantial exposure hazard to the public or the environment from either existing soil or groundwater contamination. This impact is considered to be *less than significant*.

Discussion

Based on the environmental database review conducted for this EIR, there are many known or suspected environmental cases within each subarea. These cases are primarily leaking underground storage tank sites that would typically be associated with releases of petroleum products. There are additional sites under the jurisdiction of the RWQCB and the DTSC located within the industrial portions of the Eastlake/San Antonio and Fruitvale/San Antonio subareas (see Environmental Setting). Each of these sites with a known release of hazardous materials is in a stage of site investigation or remediation (cleanup). In addition to these known sites, there is potential for Redevelopment Plan projects, programs or other activities to be implemented at or adjacent to sites where previously unidentified releases of hazardous materials in the soil and/or groundwater have occurred, particularly in light of historic land uses in the Project Area.

The Redevelopment Plan's implementation projects, programs and other activities would encourage new development in the Project Area. Depending on the specific location and nature of such new development, construction activities associated with excavation, grading and dewatering may result in exposure of workers or the community to hazardous materials currently present in soils or groundwater at sites where a chemical release has occurred. However, new development within the Project Area would also promote identification and remediation of known and previously unidentified environmental cases through implementation of the Polanco Act and the CLERRA.

General Process for Identification and Remediation of Hazardous Materials

As described in the Setting, the City may trigger the requirement for a Phase I environmental assessment through either the Polanco Act or CLERRA, and require a site owner to conduct further investigations and remediation if a release of hazardous materials is indicated by the Phase I environmental assessment. These acts implement state and federal regulations, described in Appendix E, and would require the following general process to address chemical releases and reduce the potential threat to human health and the environment:

1. The potential for hazardous materials at a site proposed for development would be evaluated through completion of a site-specific Phase I environmental site assessment prior to development. The site assessment includes visual inspection of the property, review of historical documents, and review of environmental databases to assess the potential for contamination from sources such as underground storage tanks, current and historical site operations, and migration from off-site sources. Phase I environmental site assessments are commonly conducted to comply with the due diligence requirements of the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

2. Where a Phase I site assessment indicates evidence of a chemical release, a lead regulatory agency would be assigned (the ACDEH, RWQCB, or DTSC) and additional data would be gathered during a Phase II investigation. This would include actual sampling and laboratory analysis of the soil and groundwater for the suspected chemicals to identify the nature and extent of chemicals in soil and/or groundwater. Appropriate cleanup levels for each chemical, based on current and planned land use, would be determined in accordance with procedures described in the Urban Land Redevelopment Program or accepted procedures adopted by the lead agency providing oversight of the investigation and remediation. At sites where there are ecological receptors such as sensitive species that could be exposed to hazardous materials, clean up levels would be determined according to the accepted ecological risk assessment methodology of the lead agency, and would be protective of ecological receptors known to be present at the site.

3. If the agreed upon clean up levels are exceeded, a remedial action plan would be prepared to describe remedial alternatives considered for the site. This remedial action plan and the proposed remedial approach would be presented for review and approval by the lead regulatory agency. The plan would include proposed methods to remove or treat identified chemicals to the approved cleanup levels or containment measures to prevent exposure to chemicals left in place at concentrations greater than approved cleanup levels.

4. Upon determination that a chemical release has not occurred or that a site remediation has been successfully completed to the most stringent cleanup levels, the lead agency would issue a "no further action" letter to the site owner. For sites that were cleaned to levels that do not allow unrestricted land use, or where containment measures were used to prevent exposure to hazardous materials, a letter of "conditional site closure" would be issued. Under this scenario, a risk management plan would be prepared and the site would be tracked in the City's Permit Tracking System as described in Section 8.4.

Underground Storage Tank (UST) Closure Process

If removal of a permitted or previously unidentified, abandoned or no longer used underground storage tank is required, tank closure would be required in accordance with City of Oakland requirements. Such requirements would include:

1. Removing and properly disposing of any remaining hazardous materials in the tank, and having the tank removal supervised by the City.

2. Sampling of the soil within the tank excavation.

3. Recycling or disposing of the discarded tank, and filing a tank removal closure report with the City.

4. If a chemical release were indicated on the basis of sampling within the tank excavation, assessment of soil and groundwater quality and remediation, if required, would be conducted as described above for hazardous materials.

Alternatively, the tank could be abandoned in place if removal were infeasible.

Process for Disposal of Contaminated Soil or Groundwater

Where remediation would require off-site transport of contaminated soil or groundwater, these materials could be classified as a restricted or hazardous waste under state or federal regulations, and there would be the potential for accidents during transport, which could expose the public and the environment to the chemical compounds. The generator of the hazardous wastes would be required to follow state and federal regulations for manifesting the wastes, using licensed waste haulers, and disposing of the materials at a permitted disposal or recycling facility. The BAAQMD may also impose specific requirements to protect ambient air quality from dust, lead, hydrocarbon vapors or other airborne contaminants during site remediation activities.

Process for Dewatering of Contaminated Groundwater

Where construction would require dewatering of contaminated groundwater, a release of hazardous materials could occur, potentially resulting in exposure to the public and the environment. If dewatering is required:

1. The construction contractor would obtain necessary permits from the Regional Water Quality Control Board, San Francisco Bay Region; East Bay Municipal Utility District; and/or the City of Oakland Department of Public Works for the discharge of groundwater during dewatering to the storm or sanitary sewer.

2. During the dewatering, the contractor would comply with any requirements for sampling of the groundwater to identify the concentrations of any chemicals present. Depending on the concentrations, pretreatment of the groundwater may be necessary prior to discharge. If the groundwater does not meet discharge requirements, on-site pretreatment may be required before discharge to the sewer system. If standards could not be met with on-site treatment, off-site disposal by a certified waste hauler would be required.

Procedures for Protection of Workers

Potential health and safety impacts associated with site investigations, site remediation, underground storage tank removals, excavation, dewatering, and construction of improvements within sites where a chemical release has occurred would be minimized by implementing legally required health and safety precautions. For hazardous waste workers, federal and California Occupational Safety and Health Administration (Cal/OSHA) regulations mandate an initial training course and subsequent annual training. Site-specific training may also be required for some workers. Preparation and implementation of the Site Health and Safety Plan and compliance with applicable federal, state, regional, and local regulations would minimize impacts to public health and the environment. The plan would include identification of chemicals of concern, potential hazards, personal protection clothing and devices, and emergency response procedures as well as required fencing, dust control or other site control measures needed during excavation. In protecting the workers, who would be closest to potential sources of hazardous materials, the health and safety measures would also serve to protect others who live, work, or visit the area during the temporary construction period. These measures, along with application of cleanup standards, would serve to protect human health and the environment during site activities, thus minimizing impacts associated with exposure to hazardous materials.

Underground Utility Construction Process

Redevelopment would also involve the improvement of underground utilities and could also include the installation of new utilities by the City. There is the potential to encounter hazardous materials in soil and/or groundwater from adjacent chemical release sites during work on underground utilities which could potentially expose workers, the public, or the environment to hazardous materials. In the event of this, the City would not be responsible for completing a full site remediation, but would require the construction contractor to follow proper health and safety precautions and to dispose of contaminated soil and groundwater safely and legally, as discussed above. This would ensure the safe handling of contaminated materials during improvement of or installation of underground utilities.

General Plan Policies

In addition to the above regulations and procedures, the Land Use and Transportation Element of the Oakland General Plan contains the following policy related to the cleanup of chemical release sites:

Policy I/C2.1: Pursuing Environmental Cleanup. The environmental clean up of contaminated industrial properties should be actively pursued to attract new users in targeted industrial and commercial areas.

The following OSCAR Element policy and action also apply to the cleanup of chemical release sites:

Policy CO-1.2: Soil Contamination Hazards. Minimize hazards associated with soil contamination through appropriate storage and disposal of toxic substances, monitoring of dredging activities, and cleanup of contaminated sites. In this regard, require soil testing for development of any site (or dedication of any parkland or community garden) where contamination is suspected due to prior activities on the site.

Action CO-1.2.1: Further Study of Soil Contamination. Conduct further study of soil contamination and toxics during update of the Oakland General Plan Safety Element.

Project Benefits/Mitigation Measures Incorporated

Much of the Project Area is located in areas with known environmental cases or in areas where previous land uses may have resulted in chemical releases to the soil or groundwater. However, the Redevelopment Plan's implementation projects, programs and other activities would encourage and expedite clean up of sites where a chemical release has occurred, which may otherwise not be remediated. The remediation or clean-up of contaminated soil or groundwater can be further enhanced and encouraged with implementation of a well-coordinated development project utilizing brownfields (contaminated and underutilized properties) within the Project Area. Such an approach could be invoked through the Polanco Act or the CLERRA. Advantages of using this approach include:

- development of a coordinated and cost-effective approach to investigation and cleanup of the brownfields properties;
- coordinated regulatory oversight which simplifies the regulatory process;

- immunity from liability for the Redevelopment Agency as well as the developers and their successors; and
- providing the legal ability for the Redevelopment Agency to recuperate costs from the responsible party(ies).

The U.S. EPA Brownfields Program (described in Appendix E) can also facilitate this coordinated approach through providing pilot grants and partnering with state and local agencies to remove the obstacles to redevelopment.

This impact is considered to be less than significant because compliance with existing laws, regulations, and policies will substantially lessen or avoid significant impacts.

8.6: Disturbance of Sensitive Habitats

Compliance with existing hazardous materials laws and with regulatory agency permit requirements would ensure that the Project would result in a *less-than-significant* hazard to the environment.

Discussion

Implementation of site investigations and remediations as a result of the Redevelopment Plan's programs, projects or other activities could take place within sensitive habitat areas, including wetlands and near the Oakland Estuary shoreline. If this were to occur, site activities would need to comply with applicable environmental requirements as determined on a case-by-case basis by the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game, San Francisco Bay Regional Water Quality Control Board, and the Bay Conservation and Development Commission. Compliance with agency requirements and remediation of contaminated sites within sensitive habitats would provide long-term protection and benefits to the habitats and associated wildlife (also, refer to discussion under Section 8.5 above), thereby substantially lessening or avoiding any potentially significant effect.

8.7: Exposure to Hazardous Building Materials

Compliance with standard practices and existing hazardous materials laws regarding the abatement of hazardous building materials would ensure that any of the Redevelopment Plan's implementation projects, programs or other activities would not create a substantial hazard to the public or the environment.

Discussion

Implementation of the Redevelopment Plan's projects, programs and other activities would promote new construction within the Project Area, which would likely include demolition and/or renovation of existing structures. Hazardous building materials are likely to be present in older structures within the Project Area and could include asbestos-containing material, lead-based

paint, polychlorinated biphenyls (PCBs), and fluorescent lights containing mercury vapors. Demolition and renovation of existing structures could result in potential exposure of workers or the community to hazardous building materials during construction, without proper abatement procedures, and future building occupants could be exposed if hazardous building materials are left in place. Hazardous building materials could also contaminate soils around structures if these materials were released to the environment.

Hazardous Building Material Abatement Process

Pursuant to existing regulations, the Redevelopment Agency would be required to ensure that a hazardous building material survey(s) or audit(s) is conducted for all subsequent Redevelopment Plan projects, programs or other implementation activities involving demolition or renovation to existing structures and facilities. The survey is required to be completed by a Registered Environmental Assessor or a registered engineer prior to construction or demolition activities.

If hazardous building materials are identified during the survey, compliance with state and federal regulations regarding abatement of hazardous building materials (described in Appendix E) would be required. In particular:

1. The Project Sponsor would be required to comply with BAAQMD requirements for the removal of friable and non-friable asbestos-containing materials as well as other requirements of Cal/OSHA, BAAQMD, and the Contractors Licensing Board for abatement of asbestos prior to demolition.

2. Any PCB-containing equipment or fluorescent lights containing mercury vapors would also be removed and disposed of properly.

Project Benefits/Mitigation Measures Incorporated

Implementation of the Redevelopment Plan's projects, programs and other activities would promote new construction within the Project Area, which would likely include demolition and/or renovation of existing structures. Compliance with required abatement procedures for hazardous building materials during demolition and renovation activities would result in reduced exposure to hazardous building materials and long-term improvement in public health protection within the Project Area.

This impact is considered to be less than significant due to required compliance with standard practices and existing hazardous materials laws.

8.8: Airport Hazards

The Project Area is not located within an airport land use planning area. Implementation of the Redevelopment Plan would not result in a safety hazard for people residing or working in the Project Area, even though portions of the Project Area are within two miles of the Oakland International Airport. The Project Area is not located within the vicinity of a private airstrip. Airport-related safety hazards are not a significant effect associated with implementation of the Redevelopment Plan.

8.9: Emergency Response Plan

Implementation of the Redevelopment Plan's projects, programs or other activities would not impair implementation of, nor physically interfere with, an adopted emergency response plan or emergency evacuation plan. The Redevelopment Plan is to be consistent with the existing General Plan, and the General Plan incorporates the City of Oakland's Emergency Response Plan. Therefore, implementation of the Redevelopment Plan would not impair or interfere with City emergency response or evacuation plans.

8.10: Wildland Fires

Implementation of the Redevelopment Plan's projects, programs or other activities would not 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. The Project Area is a fully urbanized area and generally surrounded by urban development or the Oakland Estuary. No wildlands are located in the vicinity of the Project Area. In addition, fire suppression systems would be required under applicable building code provisions for all new construction activity, including any construction that may be in furtherance of the Redevelopment Plan. Therefore, implementation of the proposed Redevelopment Plan would not expose people to significant risks associated with wildland fires.

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Public Infrastructure

Introduction

This chapter of the EIR describes existing public infrastructure within the Central City East Redevelopment Project Area. It also identifies the increased demand on existing infrastructure based on projected growth and development within the Project Area and recommends, where necessary and feasible, mitigation measures to reduce and/or avoid potentially significant infrastructure constraints. Public utility infrastructure discussed in this section of the EIR include:

- water supply and distribution;
- wastewater collection, treatment and disposal; and
- drainage and stormwater quality.

Significance thresholds for utility systems would generally be reached if future growth and development, as may be facilitated by or in furtherance of the Redevelopment Plan's projects, programs or other activities, would result in an increased demand for utility capacities that cannot be met by existing or planned utility infrastructure. The amount of growth and development that may be facilitated by implementation of the Redevelopment Plan is consistent with the growth projections of the City General Plan. Therefore, the impacts of Redevelopment Plan implementation are no greater than those impacts identified in the *Land Use and Transportation Element EIR* (City of Oakland, 1998) as incorporated herein by reference.

Environmental Setting

Water

Water Supply

The East Bay Municipal Utility District (EBMUD) serves all of Oakland including the Project Area with potable and reclaimed water. Water consumption by EBMUD customers has remained relatively constant in recent years despite increased growth and development within its service area as a result of increased conservation and use of reclaimed water. Between 1987 and 2002, water consumption has ranged from a low of 170 million gallons per day (mgd) in 1989, to

a high of 220 mgd in 1987. EBMUD's total service area customer demand in year 2000 was 230 mgd, but when adjusted for conservation and the use of reclaimed water, net customer demand in year 2000 was estimated at 216 mgd. EBMUD projects that by year 2020 the water demands within its service area will reach 277 mgd, but can be reduced to 229 mgd with successful water conservation and recycling programs.

EBMUD has water rights and facilities to divert up to a maximum of 325 mgd from the Mokelumne River, subject to availability of runoff and prior water rights of other users. Conditions that restrict EBMUD's ability to use its 325-mgd entitlement include:

- upstream water use by prior rights holders,
- downstream water use by riparian and senior water appropriators and other downstream obligations, including protection of public trust resources,
- drought, or less than normal year rainfall for more than one year, and
- emergency outages.

EBMUD has prepared an *Urban Water Management Plan* (EBMUD 2000) that indicates that with aggressive conservation and use of reclaimed water, EBMUD can meet its obligation to serve its current and future customers in normal rainfall years through the year 2020. However, during periods of drought, runoff from the Mokelumne River is insufficient to supply the 325-mgd entitlement. EBMUD studies indicate that with current water supply and the water demands expected in 2020, deficiencies in supply of up to 67% could occur during multiple year droughts. Therefore, supplemental water supplies are needed. EBMUD has established the objective of obtaining sufficient water supplies necessary to limit customer deficiency to 25% in a multiple year drought while continuing to meet the requirements of senior downstream water rights holders and fishery release requirements.

EBMUD's *Water Supply Master Plan* (EBMUD 1993) identifies three main options to meet projected water needs and to increase water reliability. These options include: 1) development of conveyance facilities necessary to take delivery of the EBMUD-Central Valley Project contract for delivery of an American River supplemental supply; 2) groundwater conjunctive use; and 3) additional surface water storage. More recently, EBMUD has entered into an agreement with the City of Sacramento, County of Sacramento and the U.S. Bureau of Reclamation to study a joint regional water project on the Sacramento River near Freeport to replace an American River diversion. Such a project would allow for a future groundwater conjunctive use component, and along with planned water recycling and conservation measures, would ensure a reliable water supply to meet projected water demands for current and future EMBUD customers. Without such a supplemental water supply source, deficiencies in supply during drought years are projected.

Water Distribution System

The Project Area is located within the EBMUD Central Pressure Zone. Water for this zone is treated at the Orinda Treatment Plant in Orinda and the Upper San Leandro Filter Plant in Oakland. This water is stored in the Central Reservoir and Duinsmuir Reservoir, where it then

flows via gravity throughout the EBMUD water transmission system. Within the Project Area, EBMUD owns and maintains water transmission mains that provide water service to this area.

Reclaimed Water

EBMUD projects that in 2020, customers throughout its service area will use approximately 14 mgd of reclaimed water for landscape irrigation and for some industrial and commercial uses. The potential supply of EBMUD reclaimed water from its Main Wastewater Treatment Plan in Oakland far exceeds this demand. Reclaimed water therefore provides a stable source of non-potable water not subject to rationing for landscape irrigation and other potential uses. EBMUD is considering regulations that would require its customers and applicants to use recycled water when such water is of adequate quality and quantity, available at a reasonable cost, not detrimental to public health, and not injurious to plant, fish, or wildlife (EBMUD 1999). Currently, EBMUD reclaimed water lines are not extended into the Project Area and therefore are not currently available to serve the Project Area at a reasonable cost.

Wastewater Collection, Treatment and Disposal

Wastewater Collection

Generally, the City of Oakland maintains and operates a citywide sewage collection service. The Oakland Public Works Department provides sewage collection services for approximately 39 square miles within the city, including five pump stations and approximately 4.5 million linear feet of pipeline ranging in size from 6 inches to 72 inches in diameter. Generally, the existing local sanitary sewer system adequately collects wastewater generated within the Project Area.

The City of Oakland has instituted an Inflow and Infiltration Correction Program to reduce wet weather overflows into the sanitary sewer system. This program is anticipated to increase the capacity of the collection system to allow an approximately 20% increase in wastewater flows for each subarea within the City. However, projected flow increases must stay below the base-flow increase allowance for each sub-basin of the system.

The City of Oakland sewage collection system discharges into EBMUD's sewer interceptor system, comprising approximately 29 miles of large-diameter pipeline, ranging in size from 9 to 12 feet in diameter. Wastewater from the Project Area is area is collected into an EBMUD 42-inch interceptor and the EBMUD Wastewater Pumping Station G. Dry weather flows are then transported via the South Interceptor to the Main Wastewater Treatment Plant. Wet weather flows are stored and treated in facilities along the South Interceptor.

Wastewater Treatment and Disposal

EBMUD provides all sewage treatment and discharge services within the City of Oakland. The EBMUD interceptor system transports sewage to the Main Wastewater Treatment Facility (WWTF), located in northwest Oakland immediately south of the I-80/I-880/I-580 interchange. The Main WWTF treats domestic, commercial, and industrial wastewater. It currently experiences an annual average flow of approximately 80 mgd. The WWTF has a dry weather capacity of 120 mgd, can provide secondary treatment for a maximum flow of 168 mgd, and

primary treatment for up to 320 mgd. Storage basins provide plant capacity for a short-term hydraulic peak of 415 mgd.

Treated effluent is discharged from the WWTF to San Francisco Bay south of the Bay Bridge approximately one mile from the East Bay shoreline via a 102-inch-diameter deep-water outfall pipeline (EBMUD 2001). EBMUD discharges in compliance with conditions of permits granted by the Regional Water Quality Control Board (RWQCB) under the National Pollutant Discharge Elimination System (NPDES) Program.

Regulatory and Policy Setting

Federal Regulations

Water Quality

The Safe Drinking Water Act (SDWA, 42 USC §§ 300f *et seq.*) is the primary federal law regulating drinking water quality; it establishes standards intended to protect public health, safety, and welfare. The U.S. Environmental Protection Agency (U.S. EPA) implements the SDWA, which delegates its authority to the State of California. The Clean Water Act (CWA, 33 United States Code [USC] §§ 1251 *et seq.*) is intended to restore and maintain the integrity of the nation's waters, including requirements for states to establish water quality standards to protect designated uses for all waters of the nation. Many aspects of the CWA have been delegated to the state, including the regulation of discharges from private industry and public facilities such as wastewater treatment plants.

State of California Regulatory/Policy Setting

Water Supply

The California Urban Water Management Planning Act[1] requires that an understanding of urban water demands and efficient use of water are to be actively pursued by water suppliers, including the requirement for every urban water supplier to prepare and adopt an Urban Water Management Plan (UWMP). Each UWMP must describe the suppliers' services area; identify and quantify existing and planned water sources; describe the reliability of water supplies; describe opportunities for exchanges or transfers of water; quantify past, current, and projected water use; and describe and evaluate the supplier's water demand management measures. These plans are updated every five years (see discussion above regarding EBMUD Urban Water Management Plan).

[1] Division 6, Part 2.6 of the California Water Code.

Water Quality

The Department of Health Services (DHS) regulates drinking water, implements the Safe Drinking Water Act and oversees public water systems in California. The state requires that public water systems meet two groups of water quality standards: primary and secondary drinking water standards. Primary drinking water standards, known as Maximum Contaminant Levels (MCLs), are legally enforceable standards that regulate contaminants which could threaten public health. Secondary drinking water standards are used to regulate contaminants that affect the taste, odor, and appearance of water, and are enforceable for new potable water sources.

The California RWQCB, San Francisco Bay Region, has established water quality objectives to define the level of water quality to be maintained for designated beneficial uses. Water designated for uses such as domestic or municipal supply shall not contain concentrations of constituents in excess of the limits specified in Title 22 of the California Code of Regulations.

Recycled Water

The Recycled Water in Landscaping Act requires municipalities to adopt ordinances requiring use of recycled water for landscaping uses where recycled water of appropriate quality is made available.

City of Oakland Regulatory / Policy Setting

The Land Use and Transportation Element (LUTE) of the Oakland General Plan describes Oakland services and utilities, identifies providers, and presents an outlook on the long-term provision of services. The General Plan does not include specific goals or policies regarding service systems or utilities.

The City of Oakland has adopted the Water Reuse Ordinance, which applies to development projects that are located within a Water Reuse Area and where new water hook-ups from EBMUD are required.

Impacts and Mitigation Measures

Significance Criteria

Under CEQA Guidelines, a project would have a significant environmental impact if it were to:

Water Supply and Distribution

- 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.

- Require or result in the construction of new water treatment or distribution facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Wastewater Collection, Treatment and Disposal

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the 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 has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Storm Drainage

- Require or result in construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects.

9.1: Water Supply

Implementation of the Redevelopment Plan's projects, programs and other activities is intended to stimulate increased investment and new development within the Project Area. Such new development would result in an increased demand for water supply. However, for the reasons discussed below, this increased water demand would be a *less-than-significant impact.*

Discussion

The increase in water demand associated with growth and development within the Project Area, as may be facilitated by implementation of the Redevelopment Plan's projects, programs and other activities, can be estimated by applying multipliers to the amount of household and employment growth projected for the Project Area. These growth projections are consistent with the growth projections contained in the City of Oakland's General Plan. Most growth and development within the Project Area that may be facilitated by implementation of the Redevelopment Plan will be characterized as an increase in the intensity of existing uses, or the replacement of currently blighted properties with newer and more modern uses. Multipliers commonly applied to new development activity (i.e., multipliers applied to the square footage of new space or to acres of new development) are not applicable to such redevelopment activity. Therefore, multipliers have been derived based on a per capita water demand for residences and employment types within the Project Area. Based on this methodology, the increased water demand associated with projected growth and development within the Project Area is conservatively estimated to be approximately 0.54 mgd, as below shown in **Table 9-1**:

Table 9-1: Project Area Projected Increased Water Demands, 2020

Land Use Type	Increased Population/ Employment [1]	Multiplier [2]	Increased Water Demand
Residential Population	3,780	90 gpd/resident	340,200 gpd
Retail Employment	810	35 gpd/employee	28,350 gpd
Service Employment	1,420	115 gpd/employee	163,300 gpd
Manufacturing Employment	-50	50 gpd/employee	-2,500 gpd
Other Employment	30	175 gpd/employee	5,250 gpd
Total			**534,600 gpd, or 0.54 mgd**

Notes: 1. Table 3-1, Project Description.
2. Source of multipliers: *Commercial and Industrial Water Use in California*, Dziegielewski et.al., 2000.

By way of comparison, increased water demands associated with growth and development throughout the City of Oakland and throughout the regional area served by EBMUD are as follows:

- According to the LUTE EIR (City of Oakland, 1998), citywide growth and development is projected to result in a demand for approximately 6.2 mgd by the year 2015. Therefore, the increase in water demand projected from within the Project Area represents approximately 9% of the projected increase in citywide water demand.[2]
- EBMUD projections indicate that the EBMUD service area's gross customer demand (not adjusted for conservation or use of reclaimed water) will increase from a current year 2000 demand level of approximately 230 mgd, to as much as 277 mgd by the year 2020 (EBMUD 2000). This represents an increase of approximately 47 mgd during the next twenty-year period. The increase in water demand projected from within the Project Area represents approximately 1% of this projected increase in water demand throughout the EBMUD service area.

The City of Oakland-certified LUTE EIR concluded that the citywide increase in water demand of approximately 6.2 mgd was a less-than-significant environmental impact due to existing General Plan policies that require water conservation and encourage reclaimed water use. The increased water demand attributable to the Project Area is included in this citywide estimate and

[2] It should be noted that citywide demand estimates are for the year 2015, whereas the Project Area water demands are forecasted to the year 2020. Therefore, citywide water demands by the year 2020 would actually include an additional 5 years of growth not accounted for in this estimate. The Project Area's proportional share of this citywide growth would therefore be substantially less than the 9% described in this comparison.

represents less than 9% of this increase in citywide demand. Therefore, this EIR concludes that the increased water demand associated with projected growth and development within the Project Area, as may be facilitated by implementation of the Redevelopment Plan, is similarly a less-than-significant impact.

On a cumulative and regional basis, the addition of new urban infill housing and employment opportunities as projected for the Project Area represents less than 1% (or a less-than-significant) increase in EBMUD's total customer water demand. It also represents a more efficient land use pattern for the use of water than a comparable level of growth and development in outlying communities where per capita water consumption levels are traditionally much higher. Therefore, projected growth and development within the Project Area, as may be facilitated by implementation of the Redevelopment Plan, has a less than considerable impact on cumulative water demands.

Nevertheless, in order to meet all of its cumulative water demands, EBMUD will need to achieve ambitious water conservation and reclamation programs throughout its service area as set out in its Water Supply Management Program (WSMP).

City General Plan Policies

The City of Oakland General Plan Open Space, Conservation and Recreation Element (OSCAR) includes policies and actions intended to reduce impacts on potable water consumption within all parts of the City, primarily by embarking on aggressive water conservation and reclamation measures. These policies and actions include:

Policy CO-4.1: Emphasize water conservation and recycling strategies in efforts to meet future water demand.

Action CO-4.1: Implement the water conservation strategies and programs outlined in the 1991 EBMUD Urban Water Management Plan at the local level. Develop a strategy to reduce the City's water consumption by 20% by year 2005.

Action CO-4.2: Maintain regular contact with EBMUD to promote public education and outreach efforts on water conservation.

Policy CO-4.2: Require use of drought-tolerant plants to the greatest extent possible, and encourage the use of irrigation systems which minimize water consumption.

Reclaimed water is not currently available and is not anticipated to become available under reasonable economic conditions within the Project Area. However, all new redevelopment projects, programs and activities pursuant to the Redevelopment Plan shall be required to be consistent with the planning policy of the City of Oakland General Plan, including the conservation policies identified above. Therefore, the Redevelopment Plan's projects, programs and other activities would be required to include implementation of identified water conservation strategies and would result in a *less-than-significant impact* on water demand.

9.2: Water Distribution and Wastewater Collection Infrastructure

Potential Impact 9.2: Implementation of the Redevelopment Plan's projects, programs and other activities is expected to facilitate or assist in the construction of new residential and/or commercial development within the Project Area. Such new development may require localized improvements to the water delivery and wastewater collection systems to provide adequate pipeline capacity, particularly along major transit corridors. For the reasons discussed below, these potential localized infrastructure capacity constraints represent a *potentially significant impact.*

Discussion

Water Distribution

Many of the water mains serving the Project Area are small in size (8 inches in diameter or less) and quite old. Most of the water delivery lines located within the right-of-way of major transportation corridors within the Project Area were built in the 1920s and 1930s. There has not only been an increase in system-wide water demand since that time, but new fire flow requirements have also increased substantially, requiring greater amounts of water at higher pressures to be delivered throughout the system. In order to meet these requirements, localized pipeline extensions or replacements may be required on a site-specific, project-by-project basis.

Wastewater Collection

Increased development in the Project Area, as may be facilitated by or in furtherance of the Redevelopment Plan, may require localized investment in new or upgraded local City-owned sanitary sewer infrastructure, or in the larger EBMUD-owned sanitary sewer transmission infrastructure. Some of the sub-basins that are within the EBMUD sewer system are already at capacity and may require substantial infrastructure upgrades. Additionally, both the City and EBMUD are currently implementing a long-range plan to minimize sewer system inflow and infiltration problems system-wide. Improvement projects included in these long-range plans may need to be re-prioritized depending on the achievement of redevelopment objectives within the Project Area.

City General Plan Policy

The City of Oakland General Plan Land Use and Transportation Element (LUTE) includes policies intended to reduce impacts on water and wastewater infrastructure pipelines within all parts of the City. These policies focus primarily on requiring that the adequacy of infrastructure be considered prior to approval of new development projects and by prioritizing City capital improvements. These General Plan policies include:

Policy I/C 1.9: *Adequate public infrastructure should be ensured within existing and proposed industrial and commercial areas to retain viable uses, improve the marketability of existing, vacant or underutilized sites, and encourage future use and development of these areas with activities consistent with the goals of the General Plan.*

Policy T5.1 *Funding for infrastructure projects should be long-term and include operating and maintenance as well as capital development.*

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.*

Agenda Item a.1: *Establish procedures to link the General Plan to the City's investments and resource allocations including the adopted budget, the capital improvement program and bond measures.*

Based on these policies and established procedures of the City and EBMUD, some of the costs for localized water and sewer improvements are offset by hook-up or connection fees collected from developers as projects are constructed. However, these fees may not fully offset the full costs of required improvements.

Mitigation Measures

Implementation of City General Plan policies and payment of hook-up and connection fees may not fully mitigate site-specific impacts on the capacity of local water and sewer lines. This impact was also identified in the LUTE EIR (City of Oakland, 1998, pages IIID-7 and –12). The following mitigation measure, derived from the LUTE EIR is intended to fully address this infrastructure capacity impact:

- **Mitigation Measure 9.2**: Major new development projects pursuant to or in furtherance of the Redevelopment Plan shall be reviewed to determine projected water and wastewater loads as compared to available capacity. Where appropriate, determine capital improvement requirements, fiscal impacts and funding sources prior to project approval.

Potential Benefits of Redevelopment

The Redevelopment Plan includes a number of programs intended to alleviate blight throughout the Project Area, including an infrastructure improvement program. Infrastructure improvements under this program may cover a wide variety of public works projects, potentially including correcting water and sewer infrastructure deficiencies. The City Redevelopment Agency may find, on a site-specific basis, that improvements to the local infrastructure system may attract development to the area, increase building activity and thereby improve property values. Under such a scenario, redevelopment funds may be used as a source of funding for these improvements, thereby eliminating costs that would otherwise be borne by the private sector.

Resulting Level of Significance

With implementation of City General Plan policies and the additional Mitigation Measure 9.2 above (including the potential use of redevelopment funds to offset infrastructure improvement costs), site-specific impacts on the capacity of local water and sewer lines can be mitigated to a level of *less than significant*.

9.3: Wastewater Treatment and Disposal

Implementation of the Redevelopment Plan's projects, programs and other activities is intended to stimulate increased investment and new development within the Project Area. Such new development would result in an increased demand for wastewater treatment and disposal. However, for the reasons discussed below, this increased demand would *not be a significant impact.*

Discussion

The increase in wastewater generated as a result of future growth and development within the Project Area, as may be facilitated or in furtherance of the Redevelopment Plan, can be estimated by applying a general factor to the increased water demands estimated for the Project Area, as identified above. Based on typical wastewater generation figures, approximately 80% of the water used would enter the wastewater system. This represents approximately 0.43 mgd.[3] These projected wastewater flows would not exceed allowable sewer collection sub-basin allocations nor exceed the capacity of the sewer treatment system.

EBMUD's projections for future flows and its corresponding design for WWTP capacity are based on assumptions about the amount of development that will take place within the service area. In areas considered to be fully developed, such as the Project Area, EBMUD has assumed a 20% increase in sanitary sewer flow to account for infill development and intensification. As noted in the Project Description of this EIR, the anticipated amount of residential growth within the Project Area is estimated to be approximately 1,440 net new households, representing an increase of only approximately 5% over the number of existing households. Employment growth is projected to increase at a higher rate, with a nearly 15% increase in employment over existing conditions. However, both the household and employment growth projected for the Project Area, as may be facilitated or in furtherance of the Redevelopment Plan, are well below the limits of what EBMUD has assumed. Thus, the increased amount of wastewater generated by projected growth and development within the Project Area would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities. Nor would these wastewater flows result in a determination by EBMUD that it has inadequate capacity to serve this projected demand in addition to its existing commitments, or exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. Thus, this is not considered to be an impact of the Project.

City General Plan Policy

Although this impact is determined to be less than significant, the City of Oakland General Plan (OSCAR) includes policies and actions intended to reduce cumulative impacts on wastewater impacts. These policies include:

Action 4.1.1: *Implement the water conservation strategies and programs outlined in the 1991 EBMUD Urban Water Management Plan at the local level. Develop a strategy to*

[3] 534,600 gallons per day of water demand (from Table 9-1) times 80% equals approximately 427,000 gallons per day of wastewater generated (average annual dry weather flow).

reduce the City's water consumption by 20% by year 2005. Reductions in water consumption will reduce the amount of wastewater reaching the WWTP, thereby extending the capacity of the plant to accommodate additional development.

Action CO-5.3.11: *Reduce water pollution from sanitary sewer collection and treatment systems, including wastewater collection lines and the regional treatment plant. Continue the system-wide improvement program to correct inflow and infiltration problems in the EBMUD and City sewer systems.*

All projects, programs and other implementation activities pursuant to the Redevelopment Plan shall be required to be consistent with the planning policy of the City of Oakland General Plan, including the water conservation and wastewater system improvement policies identified above. Therefore, the Redevelopment Plan's projects, programs and other activities would be required to include implementation of these identified strategies, thereby resulting in a less-than-significant impact on wastewater treatment capacity.

9.4: Alteration of Drainage Patterns and Water Quality Effects

Required review by regulatory agencies and compliance with permit requirements would reduce potential impacts associated with implementation of the Redevelopment Plan related to altered drainage patterns and water quality to a level of *less than significant.*

Discussion

Creeks traversing the Project Area include Sausal Creek, Peralta Creek, Courtland Creek, Seminary Creek, Lion Creek, Arroyo Viejo, Elmhurst Creek and Stonehurst Creek, which all drain from the Oakland Hills and flow to the Oakland Estuary and San Francisco Bay. The creeks, all located within urbanized areas in the Project Area, are generally buried and/or contained within manmade channels.

Development within streambeds and other "waters of the United States" is well regulated by federal and state agencies. Compliance with these regulations would ensure that any project, program or other implementation activity of the Redevelopment Plan would not unacceptably alter the drainage pattern of the Project Area, result in substantial on- or off-site erosion or siltation, or otherwise adversely affect water quality. The agencies with jurisdiction over activities that can affect water quality and drainage patterns and their authorities include:

- The U.S. Army Corps of Engineers (the Corps) has jurisdiction over projects involving the "waters of the United States" and reviews projects involving construction in either creeks or wetland areas that are under jurisdiction of Section 404 of the Clean Water Act, and in some cases may require a permit for such activities. The Corps also has jurisdiction over fill, dredging, and disposal of dredge spoils under Section 10 of the Rivers and Harbor Act and Section 404 of the Clean Water Act.
- The California Department of Fish and Game (CDFG) has jurisdiction over any activity that could affect the bank or bed of any stream that has value to fish and wildlife. If any

changes are proposed along a creek or waterway within their jurisdiction, a Stream Bed Alteration Agreement is required under Fish and Game Code Sections 1601 and 1603.

- The San Francisco Regional Water Quality Control Board has jurisdiction over projects located adjacent to or in the Bay or in a waterway with a defined bed. Under Section 401 of the Clean Water Act, this agency is required to provide water quality certification for projects under their jurisdiction, certifying that the proposed activity will not violate State or Federal water quality standards.
- The Bay Conservation and Development Commission has jurisdiction over any projects requiring dredging or filling within 100 feet of the Bay. Projects within this shoreline band are required to obtain a permit from this agency to prevent unnecessary filling of the Bay and to promote public access to the Bay. Water Quality Certification is a requirement for granting a permit from the Bay Conservation and Development Commission.

Thus, in the event that Redevelopment Plan implementation projects, programs or other activities are proposed in or adjacent to water bodies in the Project Area, review by these regulatory agencies and compliance with any permit requirements would reduce potential impacts related to altered drainage patterns and water quality to less than significant.

9.5: Stormwater Runoff Effects

All future development pursuant to or in furtherance of implementation of the Redevelopment Plan would be required to comply with existing policies, ordinances and regulations. Compliance with the policies, ordinances and regulations would mitigate potentially significant water quality impacts related to stormwater discharges to *less-than-significant* levels.

Discussion

A major source of contaminants to waters in Oakland is from non-point sources such as construction site runoff and polluted stormwater runoff. Implementation of the Redevelopment Plan's projects, programs and other activities could contribute to an increase in such non-point source pollution and associated surface water quality impacts. For example, construction and earthmoving activity near creeks would expose soil to wind and water erosion, potentially leading to downstream sedimentation and siltation to local creeks unless proper control measures are implemented. Urban land uses such as those throughout the Project Area could contribute various pollutants to stormwater runoff, including fuel leaks, oil and grease, sediments, detergents, cleaning fluids, pesticides, fertilizers and miscellaneous trash and debris, which could then be carried to local creeks, the Estuary and eventually the Bay.

Previously Identified Mitigation Measures

The *LUTE EIR* includes mitigation measures requiring all projects to be in compliance with the National Pollutant Discharge Elimination System (NPDES) for the regulation of stormwater discharges. Compliance with this program would continue to mitigate potential water quality

impacts resulting from stormwater runoff. The information below provides for an update of these NPDES requirements.

In the San Francisco Bay Region, the San Francisco Bay Regional Water Quality Control Board regulates storm water discharges under the NPDES permit program. 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. Any Redevelopment Plan implementation activity would be subject to all NPDES permit requirements for stormwater management and discharges under the County permit. The 2002 permit incorporates updated state and federal requirements related to the quantity and quality of stormwater discharges from new development and redevelopment projects.

In accordance with these updated requirements, any applicable Redevelopment Plan implementation project, program or other activity will be required to incorporate treatment measures and other appropriate source control and site design features to reduce the pollutant load in stormwater discharges and to manage runoff flows. Projects that involve the creation or replacement of one or more acre of impervious surfaces are required to comply with these requirements by April 15, 2004. Projects that involve the creation or replacement of 5,000 square feet or more of impervious surfaces are required to comply with these requirements by April 15, 2005.

Stormwater discharges regulated by the NPDES permit are managed in accordance with the Draft Stormwater Management Plan prepared by the Alameda Countywide Cleanwater Program (Alameda Countywide Cleanwater Program, 2001). In addition, the 2002 NPDES permit requires the agencies to complete the following:

- Implement an operations and maintenance verification program;
- Modify the development project approval process as needed to address stormwater management requirements;
- Prepare a description of how the proposed standards will be implemented (such as an ordinance requiring approval of stormwater management programs, a review and approval process, and adequate enforcement);
- Prepare a Hydrograph Modification Management Plan describing a process to limit changes in stormwater flows that could have a harmful affect on downstream beneficial uses by excessive erosion of the bed and bank of downstream water courses;
- Prepare a guidance document specifying design standards related to stormwater quality and flows;
- Prepare a guidance document for the implementation of source controls;
- Incorporate water quality and watershed protection principles and policies applicable to development projects into the General Plan; and
- Revise the environmental review processes (CEQA review) to evaluate water quality impacts of stormwater runoff from new development and significant redevelopment, as needed.

Construction projects of greater than 5 acres that are in furtherance of the Redevelopment Plan would also be required to comply with the NPDES General Permit for Stormwater Discharges which requires preparation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would specify measures to be used to prevent runoff from entering the storm drain system. Construction projects affecting greater than one acre will also be required to prepare a SWPPP in accordance with NPDES regulations under anticipated future NPDES requirements.

The City of Oakland also implements the following ordinances that are intended to protect water quality and water resources:

- the Grading Ordinance (Ordinance No. 10312) requiring grading permits to have, among other requirements, an erosion and sedimentation control plan;
- the Sedimentation and Erosion Control Ordinance (Ordinance No. 10446) that requires appropriate preventative measures to control erosion from any grading or clearing operation; and
- the Creek Protection, Stormwater Management and Discharge Control Ordinance (Ordinance No. 12204) that establishes comprehensive guidelines for the regulation of discharge into the City's storm drain system.

In addition to these federal, sate and local regulations, the following General Plan policies and mitigation measures (as derived from the LUTE EIR, page III.I-5 through -9 and the Oakland Estuary Plan EIR pages III.I-2 through -8) would apply to all Redevelopment Plan implementation activity within the Project Area:

LUTE EIR, 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 wastes, illicit dumping, and marina live-aboards; and improve water quality in Lake Merritt to enhance the lake's aesthetic, recreational and ecological functions.

LUTE EIR, Policy CO-6.1: Protect Oakland's remaining natural creek segments by retaining natural vegetation, maintaining creek setbacks, and controlling bank erosion. Design future flood control projects to preserve the natural character of creeks and incorporate provisions for public access, including trails where feasible. Strongly discourage projects which bury creeks or divert them into concrete channels.

LUTE EIR, Policy CO-6.2: Strictly enforce local, state and federal laws and ordinances on the maintenance of creeks and watercourses. Abate health and safety hazards along and within creeks through a variety of measures, including creek cleanup programs, stronger enforcement of litter and anti-dumping laws, and vegetation maintenance programs for properties along creeks.

LUTE EIR, Policy CO-6.4: Manage Oakland's lakes to take advantage of their recreational and aesthetic potential while conserving their ecological functions and resource values. Discourage new recreational uses which impair the ability of lakes to support fish and wildlife. Support improvements which enhance water circulation, water quality and habitat value,

provided they are cost effective and are compatible with established recreational activities.

LUTE EIR and Estuary Policy Plan EIR, Policy CO-6.5: Protect the surface waters of the San Francisco Bay Estuary system, including San Francisco Bay, San Leandro Bay and the Oakland Estuary. Discourage shoreline activities which negatively impact marine life in the water and marshland areas.

LUTE EIR, Policy CO-6.6: Prohibit bay fill unless there is compelling evidence that its benefits will outweigh the environmental and other costs. In such instances, support compliance with the mitigation requirements of the BCDC and other regulatory agencies.

As determined in these previously prepared EIRs, compliance of future developments in the Redevelopment Area with these policies, ordinances and regulations would effectively mitigate potentially significant water quality impacts related to stormwater discharges to less-than-significant levels.

10

Public Services

Introduction

This chapter of the EIR describes existing public services within the Central City East Redevelopment Project Area. It also identifies the potential impacts of projected future growth and development from within the Project Area on these services and recommends, where necessary and feasible, mitigation measures to reduce and/or avoid potentially significant impacts. Public services discussed in this section of the EIR include:

- parks,
- schools,
- police services,
- fire protection, and
- solid waste.

Significance thresholds for impacts on public services would generally be reached if future growth and development, as may be facilitated by the Redevelopment Plan's projects, programs or other activities, would result in an increased demand for such services that cannot be met by existing or planned facilities. The amount of growth and development that may be facilitated by implementation of the Redevelopment Plan is consistent with the growth projections under the City General Plan. Therefore, the impacts of Redevelopment Plan implementation are no greater than those impacts identified in the *Land Use and Transportation Element EIR* (City of Oakland, 1998) and the *Open Space, Conservation and Recreation Element Mitigated Negative Declaration* (City of Oakland, 1995) as incorporated herein by reference.

Environmental Setting

Parks

Parks and recreation services within the City of Oakland are provided by two separate agencies, the City of Oakland's Office of Parks and Recreation and the East Bay Regional Park District (EBRPD). The City's Office of Parks and Recreation is generally responsible for developing and maintaining local and community parks and recreational facilities within the city boundaries.

EBRPD is responsible for acquisition and development of regional parks, open space areas and regional trails.

Within the City of Oakland, there are approximately 2,943 acres of parkland and an additional 131 acres of school property playfields, amounting to approximately 8.26 acres of parks per every 1,000 residents. These parklands are divided among over 130 parks and athletic field complexes, ranging from undeveloped open space lands to intensely developed urban spaces. The City of Oakland's Open Space, Conservation and Recreation Element (OSCAR) of the General Plan establishes a total park acreage standard of 10 acres per 1,000 residents (City of Oakland 1996). The City as a whole, including all parkland in the City regardless of ownership or function, is short of meeting this standard.

The OSCAR Element also establishes a local-serving parkland standard of 4 acres per 1,000 residents for all parks that meet the active recreational needs of the community. Oakland presently provides only 1.33 acres of local-serving park acreage per 1,000 residents. In order to achieve the 4-acre per 1,000 population standard, the City would need to acquire nearly 1,000 acres of relatively flat land. As noted in the OSCAR Element, "While this [acquisition of nearly 1,000 acres] will be impossible without massive redevelopment, major gains toward that standard can be made through expansion of existing parks, improvement of creeks and shoreline access, acquisition of vacant parcels, and incorporation of new parks in major redevelopment projects" (OSCAR, page 4-9).

Park Classification System and Neighborhood Planning Areas

The OSCAR Element identifies ten neighborhood planning areas for park and recreation planning within different communities in Oakland. Generally, although not precisely, the Redevelopment subareas correspond to separate neighborhood planning areas for parks and recreation planning as defined in OSCAR, as shown in **Figure 10-1** and compared below.

Project Area Subarea	**Generally Corresponding Neighborhood Planning Area**
Eastlake/San Antonio	Chinatown/Central and San Antonio
Fruitvale	Fruitvale
Central East	Central East Oakland
Elmhurst	Elmhurst

The OSCAR Element also identifies ten categories of parks, which emphasize neighborhood, community and regional parks as the building blocks of the City's recreation system. The OSCAR Element states (OSCAR, page 4-4) that each of the City's neighborhood planning areas should have a major community park that provides opportunities for active and passive recreation, social interaction, education and cultural enrichment. A series of neighborhood parks should serve smaller areas within the City.

Figure 10-1

Figure 10-1 (back)

Currently, the greatest deficiencies in park service in Oakland are in the San Antonio, Fruitvale and Central East Oakland neighborhood planning areas. In these areas, nearly 100,000 residents are served by a handful of small neighborhood parks. Even in the San Antonio and Fruitvale areas where there are major concentrations of parks, most of these parks are only an acre in size, lack facilities or amenities typically found in neighborhood parks, and are located in those portions of the City with the highest concentrations of children. These parkland deficiencies are illustrated in **Table 10-1**, which compares local-serving park acreage per capita for each of the neighborhood planning areas:

Table 10-1: Local-Serving Park Acreage per Capita

Neighborhood Planning Area	Acres per 1,000 residents
Neighborhoods included in Project Area:	
Chinatown/Central	1.65
San Antonio	0.78
Fruitvale	0.68
Central East Oakland	0.86
Elmhurst	1.73
Neighborhoods Outside of Project Area	
West Oakland	2.43
North Hills	2.35
Lower Hills	1.20
North Oakland	1.18
City-wide Average	1.33
Adopted Standard	4.00

Source: OSCAR Element, page 4-12, City of Oakland, 1996.

Existing Parks within the Project Area

Currently there are a total of 23 parks and recreation facilities within the Project Area. These parks and recreation facilities, also shown on Figure 10-1, are described below by subarea.

Eastlake/San Antonio

Existing parks and recreation facilities in this Redevelopment subarea include:

- San Antonio Park, which is this subarea's only community park. San Antonio Park is the area's largest park and is under great pressure to accommodate more intense recreational activity. It is designated as an historic landmark, so improvements to this park need to be planned carefully so its character does not change.

- Clinton Square is a traditional urban square that is heavily used and currently planned for renovation. Other urban squares/plazas in this area include Morgan Plaza, Park Boulevard Plaza and Athol Plaza (with adjacent tennis courts).
- Smaller neighborhood parks serving the local community also include Franklin Park, Vantage Point Park, Embarcadero Cove Park and Madison Square Park. Madison Square Park has a Chinese theme design that gives the park character and creates a sense of ownership in the neighborhood.
- Channel Park, located along the water channel connecting Lake Merritt to the Oakland Estuary is an important open space element in the City park system.

Three other city parks are located immediately adjacent to, but not within, the Project Area. These include the Lake Merritt Lakeside Park, which is a heavily used recreational park that draws visitors from throughout the Bay Area; the Estuary Park located adjacent to the Oakland Estuary; and the Rancho Peralta Park adjacent to the Kaiser Convention Center.

Fruitvale

There are only four existing parks and recreation facilities in this redevelopment subarea, all of which are small neighborhood parks. These parks include Sanborn Park, Garfield Park, and the Foothill Meadows/Foothill Meadows Annex Parks.

Central East

This large portion of the Redevelopment Project Area is highly underserved by existing park and recreation facilities, with only two parks in his area. These parks include the Fremont Pool, which is the only swimming site in Central East Oakland, and Rainbow Park Recreation Center, which is a smaller neighborhood active recreation site.

Elmhurst

There are eight existing parks and recreation facilities in this subarea including:

- Arroyo Viejo Park, which is one of the Project Area's only two community parks. Arroyo Viejo has been a recreational focal point for nearly 60 years, but could benefit from a master-planning process to improve the park's visibility, possibly restore the creek, and improve security.
- The Castlemont High and Elmhurst Junior High's Lions Park provide important recreational facilities at the athletic fields associated with these schools.
- Smaller neighborhood parks serving the local community also include Verdese Carter, Brinson, 88th Avenue and Holly Parks.

East Bay Regional Park District Parks

EBRPD manages over 73,000 acres of parkland in 47 East Bay parks. These parks complement those provided by the City of Oakland by providing larger park areas, more isolated and wild settings, and an emphasis on naturalist activities as opposed to active recreation. Four of their

regional parks are located entirely in Oakland and five are located immediately to the east, outside the City limits.

Schools

Oakland Unified School District, Overview

Public schools and education services in Oakland are provided by the Oakland Unified School District (OUSD or District). The District serves over 54,000 students in 80 kindergarten to 12th grade school facilities, and fourteen alternative and adult schools. It also provides early childhood education services for preschool children with 41 programs throughout Oakland, and houses administration and support services in 18 buildings at four sites. The general condition of the Districts' facilities is similar to most urban school districts in California; overcrowded, inadequate and in need of repair (OUSD 2000).

The District's overall enrollment is projected to be stable or perhaps growing slightly. OUSD projections indicate that elementary school enrollment peaked during 1998/99 and is expected to remain stable or decline in the near future. However, the '98/'99 elementary school enrollment peak will begin affecting middle school and high school enrollment as these students transition through grade levels. Middle school enrollment is projected to peak at about 13,500 students by about 2004, and high school enrollment is projected to peak at about 13,500 students by year 2007.

The school facilities in the southern portion of Oakland will be most affected by these changes in student enrollment. Schools in this portion of the City do not have an adequate number of classrooms to house students living within the area as they progress though the school system. Currently, schools in the southern portion of the City (including those schools within the Project Area) have an imbalance between the elementary students who reside in this portion of the City and the number of classrooms available. This imbalance has been addressed by extensive use of portable classrooms and by students attending schools outside of the neighborhood where they live (OUSD 2000).

High School Attendance Areas

The OUSD divides its kindergarten through high school facilities into high school attendance areas (HSAAs). Generally, although not precisely, the redevelopment subareas correspond to separate HSAAs as defined by the OUSD, as shown in **Figure 10-2** and compared below.

Project Area Subarea	**Generally Corresponding OUSD HSAA**
Eastlake/San Antonio	Oakland High
Fruitvale	Oakland High (25%)/Fremont High (75%)
Central East	Fremont High (25%)/Castlemont High (75%)
Elmhurst	Castlemont High

A brief description of each of the three HSAAs within the Project Area, as derived from the *Long-Range Facilities Master Plan* (OUSD 2000), summarizes the major concerns and opportunities within these HSAAs.

Castlemont HSAA

Existing schools located within the Project Area and within this HSAA include:

- Three elementary schools (Cox, Webster and Markham),
- Elmhurst Middle School, and
- Castlemont High School.

This attendance area has very crowded school facilities even though it has more schools than any other HSAA. The number of students residing in this area exceeds the number of classrooms available. Thus, many students from this area attend schools outside of their neighborhood either by necessity or by choice. This area will experience the most capacity pressure when the vast numbers of current elementary school students begin to attend middle and high school in the future. Within this enrollment area current school capacity,[1] enrollment and utilization rates as aggregated for all schools (not just those in the Project Area) are as follows:

Schools Type	Capacity	Year 2000 Enrollment	Space Available
Elementary	9,361	8,591	8%
Middle Schools	3,524	2,926	17%
High School	2,040	1,840	10%
Total	14,925	13,357	11%

Fremont HSAA

Existing schools located within the Project Area and within this HSAA include:

- Two elementary schools (Hawthorn and Whittier),
- Frick Middle School (located in the Redevelopment Project Area at the boundary between the Fremont and Castlemont HSAA), and
- Fremont High School (located within the Project Area).

[1] Includes those schools on multi-track year-round education (MTYRE) which provides an additional 20% of capacity to the traditional capacity measure for those schools.

Figure 10-2

Figure 10-2 (back)

The Fremont High attendance area has the fewest number of total schools compared to all other HSAAs in the District, even though it has the highest density of residential uses of all city neighborhoods. The schools in this area have the largest student populations, have the most portable classrooms, and are currently the most overcrowded in the District. Most of the District's year round schools are located in this area. Within this enrollment area (not just the Project Area) current school capacity, enrollment and utilization rates as aggregated for all schools are as follows:

Schools Type	Capacity	Year 2000 Enrollment	Space Available
Elementary	5,961	5,673	5%
Middle Schools	2,180	2,031	7%
High School	2,173	2,228	-5%
Total	10,322	9,986	3%

Oakland HSAA

Existing schools located within the Project Area and within this HSAA include:

- Three elementary schools (Franklin, Garfield and La Escuelita), and
- Roosevelt Middle School.

Oakland High School is located within this HSAA, but is not located within the Project Area.

This attendance area has the second smallest number of schools of any of the HSAAs. In terms of capacity, fewer students reside in this area than there are classrooms available. However, because of its location near downtown, numerous households bring their children to those schools that are near the offices where they work. Demand for elementary school space has been addressed by developing portable schools in the District's parking lot. Within this enrollment area, the current school capacity, enrollment and utilization rates as aggregated for all schools (not just those in the Project Area) are as follows:

Schools Type	Capacity	Year 2000 Enrollment	Space Available
Elementary	5,611	5,310	5%
Middle Schools	2,217	1,888	15%
High School	2,176	2,339	7%
Total	10,004	9,537	5%

Regulatory and Policy Setting

State of California Regulatory/Policy Setting

Parks/Park Funding

A California law known as the Quimby Act[2] enables cities and counties to require the dedication of land, or payment of fees in-lieu of land dedications, for park and recreation purposes. Under this law, the dedication of land or in-lieu fees is not to exceed the proportionate amount necessary to provide 3 acres of neighborhood and community parkland per 1,000 persons. Dedication requirements may be increased if the existing ratio of parkland per 1,000 population at the time of adoption of a City's local park land dedication ordinance exceeds that ratio, but may not exceed 5 acres per 1,000 population. Local jurisdictions (cities and counties) may require builders of residential subdivisions to dedicate land for parks and recreation areas, or to pay an in-lieu fee.

The City of Oakland is one of the only cities in the Bay Area that does not currently have a park dedication requirement pursuant to the Quimby Act. Before the City could adopt such a fee, it would need to demonstrate a strong connection between new development, the need for parks and the way in which any fees are spent.

Schools/School Funding

School districts throughout California are regulated by a number of statewide regulations and policies affecting such issues as classroom size and operational and facilities funding. In regard to land use planning and environmental impact issues, Proposition 1A (implemented through Senate Bill 50 as enacted into law in February 1999) is one of the key state laws relating to school facility funding. First, this law prohibits local agencies, such as the City of Oakland, from denying land use approvals on the basis that school facilities are inadequate. Second, this regulation established a statewide cap on school funding via developer fees on residential, commercial and industrial development. Under this regulation developer fees may generally be imposed up to an amount equal to 50% of the state's contribution for the cost of school construction and site acquisition. If state funds for new school facility construction are not available, a school district may impose fees up to an amount equal to 100% of the state formula for determining school construction costs. Additionally, this regulation foreclosed alternative methods (such as "Mira" agreements or Mello-Roos districts) for collecting the funds necessary to fully mitigate the impacts of new development on schools, even if those amounts were in excess of the state fee cap.

To provide for the remaining school facilities funding needs, a statewide program for funding new school construction and school modernization projects was established, the School Facilities Program (SFP). The state SFP includes a new construction program that provides school districts with a 50% matching grant for the construction of new schools based on a state-established formula of need. It also includes a school modernization program that provides 80%

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[2] *California Subdivision Map Act, California Government Code, Section 66477.*

matching grants to school districts for modernizing existing school campuses. Modernization is determined on a site-by-site basis, and the grants can be used to extend the useful life of, or to enhance, the physical environment of a school.

Local Regulatory / Policy Setting

Parks

The City of Oakland's Open Space, Conservation and Recreation Element of its General Plan (City of Oakland, 1996) sets the policy framework for parks and recreation services in the City. The OSCAR Element provides an assessment of existing park and recreation services, identifies deficiencies in that system, and establishes policies and actions for closing the gap between needs and capacity. However, the OSCAR is not intended to be a Master Plan for the City parks and recreation system. In fact, the OSCAR itself calls for the City to establish a master plan to specifically address such issues as capital improvements, funding sources, park administration and program changes. The park and recreation portion of the OSCAR Element is guided by twelve overall principals (OSCAR, page 4-24), three of which are particularly relevant to land use, development/redevelopment and environmental issues:

1. A park should be available within walking distance of every Oakland resident. No person should have to travel too far from home to gain access to recreational services.

2. Oakland's existing parks should be regarded as a limited and precious resource. They should be carefully managed and conserved in the future. Zoning and master planning should be used to protect and manage park resources.

3. Recreation needs created by new development should be offset by resources contributed by that growth. In other words, new development should pay its fair share to meet the increased demand for parks resulting from that development.

The major conclusions and recommendations derived from the OSCAR Element for the Project Area is that the Project Area is highly underserved by park and recreation facilities, and that opportunities for expanding existing parks or finding new park sites are needed. Improved security at existing parks is also a high priority.

Schools

OUSD Master Plan

The Oakland Unified School District has prepared a *Long-Range Facilities Master Plan* (OUSD 2000). This Master Plan includes a description of existing classroom facilities, reviews enrollment trends and projections, considers demographic data that may impact school facility use, and identifies funding options for potential solutions to facility needs. The Master Plan is intended to assist the District in providing adequate facilities for its students over the next 20 years. Preparation of this Master Plan included seven public hearings throughout Oakland and a general town hall televised meeting. Public input received through the hearing process was a main factor in prioritizing issues to ultimately be addressed by the Master Plan.

School Impact Fees

As noted above, the state legislature allows the OUSD to collect school impact fees from developers of new residential and non-residential building space. The City imposes this fee through building permits, and the District collects the fees on all permits issued within the District's boundaries (which are co-terminus with the City boundaries). The developer fee revenue is used together with other District funds (i.e., state grants, general obligation bonds, etc.) to support efforts to complete eligible capital improvements. The amount of the fee is established through the District's Developer Fee Justification Study.

Impacts and Mitigation Measures

Significance Criteria

Under CEQA Guidelines,[3] a project would have a significant environmental impact if it were to:

- Result in the need for new or physically altered parks or recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.
- Result in the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.
- Result in the need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.
- Result in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.
- Be served by a landfill with insufficient permitted capacity to accommodate the project's 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 any applicable federal, state and local statutes and regulations related to solid waste.

[3] CEQA required that an EIR focus on substantial adverse changes in the physical environment. While the EIR discusses the need for new physical facilities, such as schools and parks, it does not directly address the financial issues related to these improvements.

10.1: Park Demand

Implementation of the Redevelopment Plan's projects, programs and other activities is intended to stimulate increased investment and new development within the Project Area. Such new development would result in increased population growth consistent with the growth projections contained in the City General Plan. This projected growth in population would result in an increased demand for parks and recreation facilities. For the reasons discussed below, this increased parks demand would be a *less-than-significant impact* of the Project.

Cumulative Impact 10.1: On a cumulative basis, the growth and development that may be facilitated by, or be in furtherance of, the Redevelopment Plan would *contribute to a cumulatively considerable deficit* in existing parkland as more fully discussed below.

Discussion

Park Demands

Based on the household and population projections contained in the Project Description and derived from the growth projections of the City General Plan, the Project Area is projected to grow by approximately 1,440 new households and approximately 3,780 people by year 2025. Using the City's adopted standard of 4 acres of active parkland per 1,000 persons, this growth and development would generate an increased demand for approximately 15 acres of new parkland.[4] This parkland demand would occur incrementally over the 20-year planning horizon of this analysis. There is also no site-specific location for any of this projected new growth, and therefore the distribution of park demand cannot be predicted with any certainty.

Park Supply Pursuant to the General Plan

The Redevelopment Plan's implementation projects, programs and other activities are intended to be consistent with and assist in the implementation of the City of Oakland General Plan, including the Land Use and Transportation Element (LUTE), the OSCAR Element and the Estuary Policy Plan. The OSCAR and the Estuary Policy Plan call for over 43 acres of additional parkland to be developed within the Project Area, as shown in **Table 10-2** below.

[4] 3,780 new residents times 4 acres per 1,000 residents.

Table 10-2: Proposed New Parkland in the Oakland Estuary Plan–portion of the Redevelopment Project Area

Parkland	Proposed Acres
Open Meadow	11.0
Clinton Basin	8.4
Crescent Park	11.0
Channel Park	4.4
Union Point Park	8.5
Total Parkland, Estuary Plan-portion of the Redevelopment Project Area	**43.3**

Source: *Oakland Estuary Plan EIR*, prepared by ESA for the City of Oakland, 1998, Table III.D-1, page II.D-19.

According to these estimates, implementation of the Oakland Estuary Policy Plan, as may be assisted or facilitated by implementation projects, programs and other activities pursuant to the Redevelopment Plan, would result in creation of approximately 43 acres of new parkland. This is nearly three times the amount of new parkland that the projected new residential development within the Project Area anticipated under the General Plan would demand (12 acres). This would be considered a beneficial effect, and not a potential impact. Therefore, the demand for new park and recreation facilities is not considered a direct, significant impact related to implementation of the Redevelopment Plan.

Cumulative Parks and Recreation Demand

On a cumulative basis, the addition of new residents to the area, particularly to those portions of the Project Area not adjacent to or connected to the Estuary Planning Area, will contribute to the current deficit in the availability of parks and recreation facilities. This is especially true in the Elmhurst and Central City East subareas, where existing residents are already underserved by park facilities.

City General Plan Policies, Parkland

To address this cumulative park deficit, the LUTE and OSCAR Elements of the Oakland General Plan contain specific policies regarding development of new parklands that are to be implemented throughout all of the City's neighborhoods, including those neighborhoods within the Project Area. These General Plan policies include:

Policy REC-10.2: *To the extent permitted by law, require recreational needs created by future growth to be offset by resources contributed by that growth. In other words, require mandatory land dedication for large-scale residential development and establish a park impact fee for smaller-scale residential development projects, including individual new dwelling units. Calculate the dedication or fee requirement based on a standard of 4 acres of local-serving parkland per 1,000 residents.*

Policy OS-2.5: *Increase the amount of urban parkland in the 7 flatland planning areas, placing a priority on land in areas with limited public open space, land adjacent to existing*

parks, land with the potential to provide creek or shoreline access, land with historical or visual significance, and that can be acquired at no cost or reduced cost, land in areas with dense concentrations of people or workers, and land that is highly visible from major streets or adjacent to public buildings.

Policy REC-10.1: Continue to provide General Fund support for park and recreational services, acknowledging the importance of these services to the quality of life in Oakland.

Policy REC-3.1: Use level of service standards of 10 acres of total parkland and 4 acres of local-serving parkland as a means of determining where unmet needs exist and prioritizing future capital investments.

Policy REC-3.2: Follow a systematic process in allocating park and recreation funds. In general allocate the greatest expenditures to those areas with the highest unmet needs, and place a priority on projects that maximize reductions in deficiency for the amount of money spent. However, maintain the flexibility to consider such factors as site opportunities, the availability of grants or matching funds, and linkages to other kinds of projects.

However, the City of Oakland has not yet adopted a park dedication or in lieu fee, nor can there be any certainty that new parklands will be developed concurrent with incremental growth and development. Therefore, the amount of growth and development that may be facilitated by implementation of the Redevelopment Plan's projects, programs and other activities would have a cumulatively considerable effect on the current park and recreation deficit within the Project Area. Additionally, this cumulative effect is considered potentially significant in that mitigation for this impact would likely result in physical changes to the environment, such as construction of new parks and recreational facilities.

City General Plan Policies, New Park Construction and Design

Environmental review for new park and recreation facility expansion, construction and development would be conducted on a project-specific basis. The City Office of Parks and Recreation will conduct appropriate environmental review for new park facility construction, including identifying appropriate site-specific mitigation measures, at such time as specific improvements are proposed. However, the OSCAR Element includes policies that, if implemented, would reduce potential environmental consequences associated with new park facilities to less-than-significant levels. These policies include:

Policy REC-2.3: Protect sensitive natural areas within parks including creeks and woodlands, and integrate them into park design. Require new recreational facilities to respect existing park character, be compatible with the natural environment and achieve a high standard of quality design.

Policy REC-2.4: Manage park facilities and activities in a manner which minimizes negative impacts on adjacent residential, commercial or industrial areas.

Policy REC-2.5: Plan and design parks in a way that maximizes their visibility while minimizing conflicts between pedestrians, bicyclists and automobiles.

Policy REC-2-6: Respect historic park features when designing park improvements or programming new park activities.

Mitigation Measures

The following additional mitigation measures are recommended to address the cumulative effect that growth and development within the Project Area, as may be facilitated by implementation of the Redevelopment Plan, would have on the current park and recreation facility deficits. These mitigation measures have been derived from the OSCAR Element, but re-stated to apply to the Redevelopment Agency and redevelopment-related activity.

- **Mitigation Measure 10.1A**: The City of Oakland Redevelopment Agency shall coordinate with the Office of Parks and Recreation to develop and initiate a land acquisition program for new parks in underserved areas. As with schools, the biggest challenge will be to find available land in appropriate areas to serve new residents. The Redevelopment Agency may be able to assist through the use of redevelopment tools in the identification and acquisition of appropriate new park sites.

- **Mitigation Measure 10.1B**: The City of Oakland Redevelopment Agency shall coordinate with the City Office of Parks and Recreation and the OUSD, local churches, private recreation providers and local non-profit agencies to promote joint use agreements and joint use partnerships that maximize the use of non-park recreational facilities.

- **Mitigation Measure 10.1C**: The City of Oakland and its Redevelopment Agency shall identify and pursue local funding opportunities to augment existing General Fund monies. At the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used for parkland acquisitions and improvements.

Potential Benefits of Redevelopment

Although not included in the current Redevelopment Plan, California Redevelopment Law enables redevelopment agencies to pay all or part of the value of land, and for the cost of construction of publicly owned facilities, including parks. However, the Agency must find that the park or park improvements would be of benefit to the Project Area, no other reasonable means of achieving financing for such land acquisition or improvement is available, and that the park or park improvement would assist in the elimination of blighting conditions.

Resulting Level of Significance

The growth and development within the Project Area as projected under the General Plan has the potential to occur with or without implementation of the Redevelopment Plan. However, the Redevelopment Plan's implementation programs, projects and other activities are expected to facilitate this growth and development. Implementation of Mitigation Measures 10.1A through 10.1C above would mitigate the Redevelopment Plan's contribution to the existing parks and recreation facilities deficit in the Project Area to a level of *less than cumulatively considerable.*

Through implementation of the General Plan policies identified above, the potential impacts of new park construction or expansion can be mitigated to levels of *less than significant*.

10.2: School Facilities

Implementation of the Redevelopment Plan's projects, programs and other activities is intended to stimulate increased investment and new development within the Project Area. Such new development would result in increased population growth consistent with the growth projections contained in the City General Plan. This population growth would result in an increase in the number of school-age children projected to attend public schools. For the reasons discussed below, this increased school demand would be a *less-than-significant impact* of the Project.

Cumulative Impact 10.2: On a cumulative basis, the growth and development that may be facilitated by, or be in furtherance of the Redevelopment Plan, would *contribute to a cumulatively considerable deficit* in existing school capacity as more fully discussed below.

Discussion

Student Generation

Based on household and population projections as contained in the City General Plan, new growth and development, as may be assisted or be in furtherance of the Redevelopment Plan, is projected to result in the addition of approximately 1,440 new households and approximately 3,780 people into the Project Area. Using a statewide average student yield factor of 0.7 students per household, this growth and development is projected to generate an increase of approximately 1,010 new students by year 2020, as shown below in **Table 10-3**.

Table 10-3: Student Generation and Distribution

Redevelopment Subarea	New Households [1]	Student Yield [2]	HSAA Distribution (students)[3]
Eastlake/San Antonio	850	590	590 – Oakland HSAA
Fruitvale	10	10	10 – Oakland HSAA
Central East	310	220	110 – Fremont HSAA
			110 – Castlemont HSAA
Elmhurst	270	190	190 – Castlemont HSAA
Total	**1,440**	**1,010**	**600 students – Oakland HSAA**
			110 students – Fremont HSAA
			300 students – Castlemont HSAA

Notes:
1. From Table 3-2 of this EIR, Project Description.
2. Student yield based on statewide average of 0.7 students per household.
3. Distribution approximated based on coincidence of HSAA boundaries and Redevelopment Area subarea boundaries.

The addition of these students would occur incrementally over the 20-year planning horizon of this analysis, and would not be fully realized within a short-term planning projection period. Additionally, the site-specific location of any of this projected new growth, the distribution of students throughout grade levels at any particular point in time, and changing demographic characteristics throughout the school district will all affect the availability of classroom capacity to serve these new students. Under current City and School District policies, all new development within the Project Are a would be required to pay school impact fees to offset the costs of new school facilities, and payment of these fees would effectively mitigate this increased school capacity demand. If classroom capacity within the specific schools serving the Project Area were found to be unavailable at the time students from the Project Area enter into the school system, the District may make other options available to accommodate these students. Such options may include reassigning students among school districts, expanding year-round schooling, adding more portable classrooms, bussing students to less crowded schools, or finding opportunities to more efficiently utilize existing or abandoned school facilities. Therefore, the addition of these new students is not considered a direct, significant impact of the Redevelopment Plan.

Cumulative School Capacity and Demand

On a cumulative basis, the addition of new students will contribute to a current deficit in the availability of classrooms to serve student populations, particularly in the Castlemont and Fremont HSAAs. The OUSD *Long-Range Facilities Master Plan* (OUSD 2000) has assessed the District's immediate and projected future facility needs, and presents options and recommendations to address these needs. Current assumptions indicate that the District has, or will have, the need for the following facilities within the HSAAs located within the Project Area:

- Within the Castlemont HSAA, the District projects the need for 4 or 5 new elementary schools, 1 new middle school, 1 new high school and the removal of portable classrooms over time.
- Within the Fremont HSAA, the District projects the need for 3 new elementary schools, 1 new middle school, 1 new high school and the expansion of the existing Fremont High School campus, and the removal of existing portable classrooms over time.
- Within the Oakland HSAA, the District projects the need for 3 or 4 new elementary schools, 1 new middle school to relieve Roosevelt, the removal of portable classrooms over time, and a determination of the best long-term use of its administrative complex.

The costs for these facility needs combined with the facility needs throughout the entire District is estimated at approximately $881 million. The District has approximately $263.5 million potentially available if it maximizes pursuit of state grant monies. This leaves a currently unfunded amount of approximately $617.6 million. Because these funds are unavailable, the OUSD predicts continued overcrowding and capacity constraints in much of the District. The addition of new students generated by growth and development within the Project Area would increase enrollment in the already overcrowded school facilities within each of the identified HSAAs, contributing to this cumulatively considerable classroom capacity deficit.

Mitigation Measures

Classroom overcrowding has been determined to be a cumulatively significant environmental impact because it is likely to result in physical changes to the environment, such as new school construction. Environmental review for new school construction is the responsibility of the OUSD. The OUSD will conduct appropriate environmental review for new school facility construction, including identifying appropriate site-specific mitigation measures, at such time as facility construction is proposed.

The following mitigation measures are recommended to address the contribution toward cumulative school capacity deficits that may be exacerbated by implementation of the Redevelopment Plan. These mitigation measures have been derived from the OUSD *Long-Range Facility Master Plan*, but re-stated in such a way as to apply to the Redevelopment Agency and redevelopment-related activity.

- **Mitigation Measure 10.2A**: The City of Oakland and its Redevelopment Agency shall coordinate with the OUSD to develop and initiate a land acquisition program for new schools. The School District's biggest challenge will be to find available land in appropriate areas to serve new student populations. The City and Agency may be able to assist, through the use of redevelopment tools, in the identification and acquisition of appropriate sites.

- **Mitigation Measure 10.2B**: The City of Oakland, its Redevelopment Agency, and public and private land developers within the Project Area shall work with the OUSD to identify possible joint use opportunities. Joint use may take many different forms. Examples of joint use may include the lease or sale of air rights above or below existing school grounds or facilities to private developers, or joint venturing with private developers, public entities or other parties in the development of surplus school property. Other standard joint use opportunities include joint ventures with the City parks department in the development of shared school grounds/public park space.

- **Mitigation Measure 10.2C**: The City of Oakland and its Redevelopment Agency shall coordinate with the OUSD to identify and pursue local funding opportunities to match potential state grants. At the Redevelopment Agency's sole discretion, local funds could potentially include the use of redevelopment funds.[5]

Potential Benefits of Redevelopment

California Redevelopment Law (CRL) enables redevelopment plans to include significant capital improvement projects to alleviate or eliminate school overcrowding. Additionally, CRL

[5] It should be noted that California Redevelopment Law (Section 33607.5) establishes specific mechanisms and formulas for payments to be made by redevelopment agencies to school districts to alleviate any financial burden that the district may incur as a result of redevelopment. Section 33607.5 of the CRL also specifically provides that such payments are the exclusive payments required to be made by a redevelopment agency to a school district. A Redevelopment Agency shall not be required, as a mitigation measure or as part of any settlement agreement or judgement, to make any other payments to a school district.

authorizes or enables redevelopment agencies, should they so choose, to build and lease school buildings to a school district with title to vest in the school district upon termination of the lease.

Resulting Level of Significance

The growth and development within the Project Area as projected under the General Plan has the potential to occur with or without implementation of the Redevelopment Plan. However, the Redevelopment Plan's implementation programs, projects and other activities are expected to facilitate this growth and development. Implementation of Mitigation Measures 10.2A through 10.2C above would offset the Redevelopment Plan's contribution to the cumulative effects of school overcrowding in the Project Area to a level of *less than significant and less than cumulatively considerable.*

10.3 Police Services

Implementation of the Redevelopment Plan's projects, programs and other activity would result in an increase in population and employment, thereby potentially increasing the demand for police service. The need for additional police staff, facilities and equipment would likely increase primarily along transit-oriented corridors where most new development activity under the General Plan is anticipated, and where the number of emergency calls may increase. Alternatively, implementation of the Redevelopment Plan would create more economic vitality, provide more jobs, and make more efficient use of currently vacant or obsolete structures, all of which could potentially beneficially affect crime rates in the Project Area. Substantial alterations to Police Services Agency facilities or operations would not result due to implementation of the Redevelopment Plan. Redevelopment Plan projects, programs or other implementation activity is not expected to result in the need for new or physically altered police facilities, the construction of which could cause significant environmental impacts

Previously Identified Mitigation Measures

To address potential increased demand for police service, the following General Plan policies and mitigation measures (as derived from the LUTE EIR, page III.D-23) would apply to all Redevelopment Plan implementation activity within the Project Area.

LUTE Policy N13.1: The development of public facilities and staffing of safety-related services should be sequenced and timed to provide a balance between land use and population growth, and public services at all times.

LUTE Policy N13.5: In its capital improvement and public service programs, the City should give special priority to reducing deficiencies in, and disparities between, existing residential areas.

LUTE Mitigation Measure D.5-1a: In reviewing major land use or policy decisions, consider the availability of police and fire protection services, . . . in the affected areas, as well as the impact of the project on current service levels.

LUTE Mitigation Measure D.5-1b: Develop target ratios of police officers and firefighters to populations for annual budgeting purposes. These ratios should be used to assess the feasibility and

merits of service fees on new development, which finance additional police officers and fire fighters.

LUTE Mitigation Measure D.5-1c: Increase police foot patrols and cruisers in high visibility downtown areas and locate funding sources to support them.

LUTE Mitigation Measure D.5-1e: Solicit comments from the Oakland Police Service Agency and Oakland Fire Department on major new development proposals to ensure that law enforcement and fire protection impacts are appropriately addressed and mitigated.

As determined in the LUTE EIR (City of Oakland, 1998, page III.D-22), implementation of these policies and mitigation measures would effectively mitigate potentially significant effects on police service to less-than-significant levels.

10.4 Fire Protection

The Redevelopment Plan's projects, programs and other implementation activity would facilitate an increase in population and employment, thereby increasing the demand for fire protection and emergency services. The need for additional fire protection services would increase primarily along transit-oriented corridors where most new development activity is anticipated under the General Plan. Currently, fire protection response times from existing fire stations within the Project Area are acceptable.

Redevelopment Plan implementation activity could also reduce certain fire hazards by renovating, reusing or removing existing derelict structures, and replacing older structures with new buildings that incorporate sprinkler systems and other fire prevention measures.

Previously Identified Mitigation Measures

Redevelopment Plan implementation activity is not expected to result in the need for new or physically altered fire stations, the construction of which could cause significant environmental impacts. However, to address potential increased demand for fire protection and emergency service, the following General Plan policies and mitigation measures (as derived from the LUTE EIR, page III.D-28) would apply to all Redevelopment Plan implementation activity within the Project Area.

LUTE EIR, Policy N13.1: The development of public facilities and staffing of safety-related services should be sequenced and timed to provide a balance between land use and population growth, and public services at all times.

LUTE EIR, Policy N13.5: In its capital improvement and public service programs, the City should give special priority to reducing deficiencies in, and disparities between, existing residential areas.

LUTE EIR, Mitigation Measure D.6-1a: In reviewing major land use or policy decisions, consider the availability of police and fire protection services, . . . in the affected areas, as well as the impact of the project on current service levels.

LUTE EIR, Mitigation Measure D.6-1b: Develop target ratios of police officers and firefighters to populations for annual budgeting purposes. These ratios should be used to assess the feasibility and merits of service fees on new development, which finance additional police officers and fire fighters.

LUTE Mitigation Measure D.6-1d: Solicit comments from the Oakland Police Service Agency and Oakland Fire Department on major new development proposals to ensure that law enforcement and fire protection impacts are appropriately addressed and mitigated.

As determined in the LUTE EIR (City of Oakland, 1998, page III.D-28), implementation of these policies and mitigation measures would effectively mitigate potentially significant effects on fire protection services to less-than-significant levels.

10.5 Solid Waste

The Redevelopment Plan's projects, programs and other implementation activity would facilitate an increase in population and employment, thereby increasing the demand for solid waste services. Additionally, any Redevelopment Plan implementation activity that results in the removal of existing structures would generate construction/demolition waste including concrete, asphalt and wood products, as well as certain wastes requiring special handling, such as asbestos and lead paint. However, landfill capacity at the Altamont and Vasco Road landfills should be capable of accommodating the additional volume of solid waste, provided that the City continues to implement programs included in its Source Reduction and Recycling Element.

Previously Identified Mitigation Measures

Although landfill capacity is anticipated to be available to meet the needs of projected new development as may be facilitated by the Redevelopment Plan's implementation projects, programs and other activities, the following mitigation measures (as derived from the LUTE EIR, page III.D-20) would apply to all Redevelopment Plan implementation activity within the Project Area.

LUTE EIR, Mitigation Measure D.4-1a: Continue to implement programs that reduce the amount of solid waste generated by the City by encouraging recycling, composting and other activities consistent with the City's Source Reduction and Recycling Element.

LUTE EIR, Mitigation Measure D.4-1b: Support solid waste collection, recycling and disposal rates that are sufficient to cover the costs of adequate and efficient service delivery.

LUTE EIR, Mitigation Measure D.4-1c: Establish guidelines and incentives for the recycling of construction and demolition debris and the use of recycled concrete and other recycled products in the construction of new buildings, roads and infrastructure.

As determined in the LUTE EIR (City of Oakland, 1998, page III.D-20), implementation of these mitigation measures would effectively mitigate potentially significant effects on solid waste services to less-than-significant level.

11

Cultural and Historic Resources

Introduction

This chapter of the EIR briefly describes existing cultural and historic resources within the Central City East Redevelopment Project Area. It also identifies potential impacts that implementation of the Redevelopment Plan may have on existing historic and cultural resources and recommends, where necessary and feasible, mitigation measures to reduce and/or avoid potentially significant impacts to these resources. Historic and cultural resources discussed in this section of the EIR include:

- paleontological sites,
- prehistoric or historic archaeological sites, and
- properties of cultural or historic significance.

Significance thresholds for impacts on cultural and historical resources would generally be reached if redevelopment activity would disrupt or adversely affect the resources, further defined as alteration or destruction of the site, including both physical and aesthetic effects.

Environmental Setting

Overview of Oakland's History and Development [1]

Archaeology/Prehistoric Cultural Pattern

There is much debate as to the place of the San Francisco Bay Area in regional cultural schemes. Historically, the debate centers on whether Bay Area prehistoric cultural patterns are totally separate from, parallel to, or convergent with the cultural evolutions of the Lower Sacramento region. The chronological sequence for central California and the Lower Sacramento Valley begins with the

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[1] An overview of the history and development of the City of Oakland is contained in the *City of Oakland Historic Preservation Element* (1994, as amended in 1998, pages 1-2 through 1-9), and is hereby incorporated by reference. A brief summary of the Project Area's history as derived from the Historic Preservation Element is adapted into the following discussion, with particular reference to historic influences and development within the Project Area.

Windmiller Pattern (Fredrickson 1973). Sites from this period date from about 4,500 to 3,500 before present (B.P.). Although earlier sites no doubt exist, sites from the "Paleo-Indian Period," dating from about 12,000 to 8,000 B.P., and sites from an unnamed phase dating from about 8,000 to 4,500 B.P., are thought to be buried under Holocene alluvial deposits and are not well documented in this part of California (Ragir 1972). Scholars have suggested that *Windmiller* sites are associated with an influx of peoples from outside of California who brought with them an adaptation to river-wetland environments (Moratto 1984:207). *Windmiller* sites are often situated in riverine, marshland and valley floor settings on small knolls above prehistoric seasonal floodplains.

The subsequent *Berkeley Pattern* (previously part of the "Middle Horizon") covers a period from about 3,500 to 1,500 B.P. in the San Francisco Bay region. This pattern overlaps somewhat with *Windmiller* attributes at the beginning and with Late Prehistoric attributes at the end. *Berkeley Pattern* sites are much more common and well documented, and therefore better understood, than *Windmiller* sites. The sites are distributed in more diverse environmental settings, although a riverine focus is common.

The late prehistoric period (formerly the "Late Horizon") ranges from about 950 to 150 B.P. This period, characterized as the *Augustine Pattern* (Fredrickson 1973), is typified by intensive fishing, hunting and gathering (particularly acorns), a large population increase, increased trade and exchange networks, increases in ceremonial and social attributes, and the practice of cremation (in addition to flexed burial). Certain artifact types also typify the pattern: bone awls for use in basketry manufacture, small notched and serrated projectile points indicative of use of the bow-and-arrow, occasional pottery, clay effigies, bone whistles, and stone pipes. The *Augustine Pattern* and the late prehistoric period can be characterized as the apex of Native American cultural development in this part of California.

Native American Period

There is a considerable body of ethnographic literature on the Native American inhabitants of the project region. This section provides a brief overview of the ethnography of the area and is intended to provide a general background only. The project area lies within the region occupied at the time of historic contact by the Ohlone or Costanoan group of Native Americans (Kroeber 1970). Although the term Costanoan is derived from the Spanish word Costaños, or "coast people," its application as a means of identifying this population is based in linguistics. The Costanoans spoke a language now considered one of the major subdivisions of the Miwok-Costanoan, which belonged to the Utian family within the Penutian language stock (Shipley 1978: 82-84). Costanoan actually designates a family of eight languages spoken by tribal groups occupying the area from the Pacific Coast to the Diablo Range, and from San Francisco to Point Sur. Modern descendants of the Costanoan prefer to be known as Ohlone. The name Ohlone is derived from the Oljón tribal group that occupied the San Gregorio watershed in San Mateo County (Bocek 1986:8). The two terms (Costanoan and Ohlone) are used interchangeably in much of the ethnographic literature.

On the basis of linguistic evidence, it has been suggested that the ancestors of the Ohlone arrived in the San Francisco Bay Area about 500 A.D., having moved south and west from the Sacramento-San Joaquin Delta region. The ancestral Ohlone displaced speakers of a Hokan language and were probably the producers of the artifact assemblages that constitute the Augustine Pattern described above (Levy 1978). Although linguistically linked as a "family," the eight Costanoan languages actually comprised a continuum in which neighboring groups could probably understand each other.

However, beyond neighborhood boundaries, each group's language was unrecognizable to the other. Each of the eight language groups was subdivided into smaller village complexes or tribal groups. The tribal groups were independent political entities, each occupying specific territories defined by physiographic features. Each tribal group controlled access to the natural resources of the territories. Although each tribal group had one or more permanent villages, their territory contained numerous smaller campsites used as needed during a seasonal round of resource exploitation.

The arrival of the Spanish in the San Francisco Bay Area in 1775 led to a rapid and significant reduction in native California populations. Diseases, declining birth rates, and the effects of the mission system served to eradicate aboriginal lifeways. Brought into the missions, the surviving Ohlone, along with former neighboring groups of Esselen, Yokuts, and Miwok were transformed from hunters and gatherers into agricultural laborers (Levy 1978; Shoup and Milliken with Brown 1994). With abandonment of the mission system and the Mexican takeover in the 1840s, numerous ranchos were established. Generally, the few Indians who remained were then forced, by necessity, to work on the ranchos. Today, descendants of the Ohlone live throughout the Bay Area. Several of these Ohlone groups (e.g., Muwekma and Amah) have banded together as modern tribelets to seek Federal recognition. Many Ohlone (both individuals and groups) are active in reviving and preserving elements of their traditional culture such as dance, basketry, and song.

Spanish and Mexican Periods (1777-1848)

Lands that eventually became Oakland were part of a Spanish land grant given to Luis Maria Peralta in 1820 as a rancho, which were then divided among his four sons in 1842. The rancho's first dwelling unit was an adobe hacienda constructed in 1821. This structure was destroyed in the 1868 earthquake, but the house built to replace it in 1870 still exists today as part of a City-owned park and archeological site located at the intersection of 34th Avenue and Paxton Street, just north of the Project Area. A small settlement and embarcadero was established in the area that is now lower 14th Avenue (most of which is in the Project Area) to serve the rancho and import provisions. A plaza used for bullfights and other entertainment was located at what is now San Antonio Park (within the Project Area).

Gold Rush to 1906 Earthquake

In the 1840s some of the first non-native, non-Hispanic settlers came to east Oakland. Among them were several men who formed a lumber operation on land leased from the Peralta family's land grant. This lumber operation eventually formed the beginnings of a small town known as Clinton located west of the Rancho San Antonio embarcadero. The town of Clinton was platted in 1852, incorporating an area currently within the Project Area. Another town centered on a mercantile operation located nearer to the Rancho San Antonio, known as the town of San Antonio, was begun in 1854, which is also now part of the Project Area.

West of the Clinton and San Antonio settlements another town was incorporated in 1852 as the City of Oakland. The original city included what is now downtown and West Oakland up to about 22nd Street. In 1856, a bridge was erected over what is now the Lake Merritt Channel, connecting Oakland to San Antonio and Clinton. Ferry boat service was established between Oakland and San Francisco and railroad operations were established from what is now West Oakland to downtown. In 1865, railroad service was extended east to Clinton and San Antonio.

Railroads continued to strongly influence the growth and development of Oakland and when the first transcontinental railroad established its terminus in Oakland in 1869, it stimulated a development boom. Major rail service yards located in West Oakland brought large numbers of railroad workers, including a significant number of African American residents who worked in various railroad occupations.

In 1870 the towns of Clinton, San Antonio and Lynn near Lake Merritt incorporated into a town known as Brooklyn, also often called "East Oakland." Brooklyn had its own quasi-downtown area including a concentration of wood-frame Victorian commercial buildings around 13th Avenue, East 12th Street and East 14th Street. In 1872, Brooklyn was annexed to the City of Oakland.

The extension of railroad stops to the east helped to spawn settlements that became Fruit Vale, Melrose, Fitchburg and Elmhurst. Fruit Vale was developed around what were then fruit orchards, and featured large Victorian homes surrounded by spacious landscaped grounds lining East 14th Street and Fruitvale Avenue (portions of which are included in the Project Area). Industries and warehouses also located in Fruit Vale along the waterfront and railroad, including the California Cotton Mills, which supported a working class Victorian neighborhood now called "Jingletown," below East 11th Street and between 23rd and 29th Avenues.

1906 Earthquake to World War II

The 1906 earthquake and San Francisco fire generated a major population increase and development boom in the East Bay. In 1909, most of the remainder of what is now Oakland was annexed, including the towns of Melrose, Fruitvale and Elmhurst and the rest of the area between Brooklyn and San Leandro. The first several years of post-earthquake boom resulted in extensive development of the "East of the Lake" neighborhoods nearest to Lake Merritt. In the 1910s and 20s industrial development along the estuary drew residential development into east Oakland, exemplified by the distinctive Havenscourt Boulevard development (within the Project Area). Much of this development was led by an organization known as the Realty Syndicate led by Francis Marion "Borax" Smith.

The extensive rail network and expanding port operations in Oakland made the city one of the West Coast's leading industrial and warehousing centers. These activities became especially prominent in East Oakland where several automobile assembly plants were established, including the Durant Motor Company whose facilities still exist on International Boulevard at the San Leandro border (immediately adjacent to the Project Area).

In the 1920s, the Mutual Stores tower and warehouse complex was constructed on East 14th Street (International Boulevard) designed in a fanciful Beaux Arts style, one of the Bay Area's leading examples of the City Beautiful Movement's concept of dressing up utilitarian structures with historic ornamentation. Other examples of the Period Revival included Picardy Drive and the Court of All Nations in Central East Oakland along 73rd Avenue (within the Project Area), built to accommodate auto and factory workers. After the Wall Street crash in 1929, the boom in east Oakland tapered down.

World War II to the Present

During World War II, the City of Oakland became a major shipbuilding and military center. The migration of shipyard workers mostly from the south increased Oakland's population to its all-time high of 405,300 in 1945. As wartime immigrants settled in established homes and businesses, Oakland experienced a minor building boom in the late 1940s.

From about the mid-1950s the proliferation of the automobile, freeway construction and resulting suburbanization led to a decline of Oakland and other older urban cities. Freeway construction and redevelopment, especially in West Oakland and downtown, destroyed major portions of Oakland's historic fabric. However, new buildings in modernist styles were built during this period and are now becoming old enough to be appreciated for their historic and architectural value.

Archaeological Resources

A record search of the Project Area (File No.02-367) was conducted on November 25, 2002, by the staff at the Northwest Information Center in Rohnert Park, California. Records on all known archaeological sites and previous cultural resource surveys within a ¼-mile radius of the Project Area boundary were gathered. The National Register of Historic Places, the California Inventory of Historic Resources, and California Historical Landmarks Register were examined to determine whether any county, state, or federal historic landmarks or National Register of Historic Places properties were located in the Project Area. Record search information indicates that a total of 12 surveys or investigations have been conducted within the Project Area, resulting in the recording of two prehistoric sites. Originally recorded about 1910 by Nels Nelson, a researcher from UC Berkeley, site CA-ALA-10 and site CA-ALA-315 are described as "midden containing shell and charcoal fragments; site now badly destroyed; buildings and streets on site." Site CA-ALA-10 is generally located on East 14th Street between 8th and 9th Avenue. Site CA-ALA-315 is located north of the north end of the Alameda Tube.

A total of 18 surveys or investigations have taken place outside of the Project Area, but within a ¼-mile radius, resulting in the recording of one prehistoric site. Originally recorded about 1910 by Nels Nelson, site CA-ALA-5 is located on the southwest side of Lake Merritt and described as having "buildings on site."

Historic Resources

Designated Historic Resources

The following specific buildings, districts or areas have been previously identified or listed as "designated" historic resources within the Project Area. There may be others not yet identified or designated. Outside of the Eastlake/San Antonio subarea few East Oakland properties have been nominated for historic designation as compared to the numbers in West and Central Oakland. However, many others, including those on the Local Register (rated "A", "B". 1+, or 1*) would qualify if nominated.

National Register of Historic Places

The following properties located within the Project Area (as shown on **Figure 11-1**) are included on the National Register of Historic Places:

1. Asa White House located at 604 East 17th Street,
2. Alfred H. Cohen House located at 1440 29th Avenue,
3. Melrose Branch Carnegie Library located at 4805 Foothill Boulevard,
4. 23rd Avenue Brach Carnegie Library located at 1441 Miller Avenue, and
5. the Relief Lightship, located in the Brooklyn Basin.

Other properties included on the National Register and in close proximity to, but not within, the Project Area include the Antonio Maria Peralta House and Adobe Headquarters of the Rancho San Antonio (north of the Project Area at the 2400 block of 34th Avenue). Adjacent to the Project Area are Lake Merritt, the nation's first wildlife refuge; the Camron-Stanford House located along the east shore of Lake Merritt; and the Waterfront Warehouse district.

City of Oakland Landmarks

In addition to the National Register properties (which are also Oakland Landmarks), eight other properties located within the Project Area have been designated as Oakland Landmarks. These Landmarks, also shown on Figure 11-1, include:

6. Jack London House at 1914 Foothill Boulevard,
7. the Brooklyn Fire House at 1235 East 14th Street/International Boulevard,
8. William Bamford House at 1235 East 15 Street,
9. James Presho House at 1806 10th Avenue,
10. St. James Episcopal Church and Parish Hall at 1540 12th Avenue,
11. Brooklyn Presbyterian Church and Parish Hall at 1433 12th Avenue,
12. Tower (Saxtorph) House at 1937 8th Avenue, and
13. Our Savior Danish Lutheran /7th Avenue MBC located at 1740 7th Avenue.

Preservation Districts

Two areas within the Project Area have been designated as S-7 Preservation Districts. These two Preservation Districts, shown also on Figure 11-1, include:

14. Downtown Brooklyn Preservation District, and
15. Portions of the 10th Avenue Preservation District.

Figure 11-1

Figure 11-1 (back)

Study List Properties

Additionally, the following properties within the Project Area (also shown on Figure 11-1) have been formally placed on the Landmark Board's Preservation Study List:

16. Tubbs-Henshaw House at 544 International Boulevard,
17. Howard House at 1227 International Boulevard,
18. Fowler-Fenner House at 1241 International Boulevard,
19. Fowler-Block house at 1249 International Boulevard,
20. Site of the Alameda County Courthouse at 1952 International Boulevard,
21. Hogan House at 1807 East 24th Street,
22. Property at 1819 East 24th Street,
23. Gincosta House at 1416 through 1420 13th Avenue
24. Trinity Lutheran Church at 1431 through 1445 17th Avenue,
25. Site of the Alameda County Jail at 1417 20th Avenue, and
26. Property at 1471 34th Avenue.
27. Properties at 2101 through 2570 Havenscourt Boulevard (includes a total of 56 properties).

Potentially Designated Historic Properties

Oakland Cultural Heritage Survey

As more fully discussed in the Regulatory/Policy Setting, 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 pursuant to the Cultural Heritage Survey (Survey) to "warrant consideration for possible preservation." If they are not already designated, all properties meeting these minimum significance thresholds are called Potentially Designated Historic Properties (PDHPs). The Planning Department's Cultural Heritage Survey has identified the following additional potentially designated historic properties within the Project Area:

- Six areas within the Project Area have been identified as Areas of Primary Importance (two large districts and four complexes containing a total of 54 buildings). As discussed more thoroughly in the Regulatory Setting section, these areas are historically or visually cohesive areas or property groupings that contain a high proportion of individual properties that appear eligible for the National Register of Historic Places.

- Additionally, the 9th Avenue Terminal building at 9th Avenue appears eligible for listing on the National Register but is not currently listed or designated.
- 52 separate areas within the Project Area have been identified as Areas of Secondary Importance. These areas contain a total of 2,314 buildings. As discussed more thoroughly in the Regulatory Setting section, these areas are similar to Areas of Primary Importance but do not appear eligible for the National Register.
- Ten of the buildings that are included under the "designated historic category" above are rated under the Survey's five-tier rating system as "A" (highest importance). Additionally, 78 other properties have been rated as "B". All "A" rated properties and most "B" rated properties are likely to be individually eligible for the National Register.
- Additionally, there are as many as 3,049 other Potential Designated Historic Properties (PDHPs) that have been rated as "C", or "contingency C", or contributors to Areas of Secondary Importance.

Based on all of the above criteria, nearly one-fifth of all buildings within the Project Area meet the broad definition of "historic" under the Historic Preservation Element. According to the Cultural Heritage Survey's research, the Project Area has approximately 1,044 19th Century buildings including five as early as the 1850s, among the very oldest in Oakland.

Over 80% of the City's Victorian buildings (approximately 836 buildings) are located in the City's San Antonio planning area. With another 1,162 buildings from the 1900s, well over half of the buildings in the San Antonio planning area were built before 1910 and almost half of those (1,533 buildings) are in areas designated or identified as potential historic districts. The San Antonio planning area also has the highest number of landmarks, districts and properties on the City's Local Register. Buildings in the Fruitvale planning area date predominantly from the 1890s to 1920s, with scattered earlier buildings from its rural era as a district of farms, health resorts and suburban estates. The Central East and Elmhurst planning areas were generally developed later, with 1920s bungalows following the spread of industry through the area. Clusters of earlier building mark the villages of Elmhurst, Melrose and Fitchburg. Several of the 1920s residential tracts encompassing close to 600 buildings are identified by the Survey as potential historic districts.

Local Register of Historic Resources

All "A" and "B" rated buildings and all Areas of Primary Importance identified by the Survey are included in Oakland's Local Register, along with all designated historic properties. A combined list of designated and identified Local Register properties, totaling approximately 185 properties, is included as Appendix G.

Regulatory and Policy Setting

Federal Regulations

National Register of Historic Places, National Historic Landmarks and the National Historic Preservation Act

The National Historic Preservation Act (NHPA)[2] addresses those concerns pertinent to the affect of federal actions on cultural resources. The NHPA sets forth the federal government's policy on historic preservation, including establishing the National Register of Historic Places (National Register). The National Register is the federal government's list of historic properties warranting preservation. Under the NHPA, historic properties include " . . . any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places."[3] Under the NHPA, a district, site, building, structure, or object is eligible for listing in the National Register when:

- the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity, including location, design, setting, materials, workmanship, feeling, and association; and

- the districts, sites, buildings, or objects are associated with events that have made a significant contribution to the broad patterns of our history; or are associated with the lives of persons significant in our past; or embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or have yielded, or may be likely to yield, information important in prehistory or history.[4]

Guidance for determining the eligibility of structures and historic districts is published by the National Park Service (NPS); the National Register Bulletins 15 (1991a), 16A (1991b), 16B (1991c), and the *Secretary of Interior's Standards and Guidelines for Evaluation* (1983: 44723-26). These guidelines provide instructions for evaluating and nominating National Register Historic properties.

Approximately 50 individual properties and three districts in the City of Oakland are listed on the National Register and several hundred properties have been officially determined eligible.

Section 106 of the NHPA requires federal agencies to provide for review of any federal actions (including federally-assisted grants or loans) that may adversely affect properties listed or

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2 16 USC § 470 *et seq.*

3 16 USC 470w(5).

4 36 CFR Section 60.4.

determined eligible for listing on the National Register. This review is to be conducted by the federal Advisory Council on Historic Preservation and/or the State Historic Preservation Officer.

State of California Regulatory/Policy Setting

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires lead agencies in California to consider the effects of proposed actions on historic resources, defined as those resources that meet the criteria for listing on the California Register of Historic Places (California Register). The California register was created in 1992 and is intended as an authoritative guide for identifying the states' historical resource and to indicate what properties should be protected from substantial adverse change. The criteria for listing on the California Register include the following:

- Criterion A: is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Criterion B: is associated with lives of persons important in our past;
- Criterion C: embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Criterion D: has yielded, or may be likely to yield, information important in prehistory or history.[5]

In addition, the definition of "historical resource" includes archaeological resources listed in or formally determined eligible for listing in the California Register as well as resources listed or eligible for listing in the National Register or local registers. It also includes historical resources determined by the lead agency to be significant. Section 15064.5 of CEQA also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered.[6]

City of Oakland Regulatory/Policy Setting

Oakland Planning Code

The Oakland Planning Code provides for three types of historic designations; landmarks, S-7 preservation combining zones (historic districts), and preservation study list. It also establishes the Landmarks Preservation Advisory Board to oversee these properties.

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[5] These criteria are set forth in Sections 15064.5 and 15126.4 of CEQA.

[6] These procedures are detailed under Public Resources Code (PRC) 5097.94 and 5097.98.

Oakland Landmarks

Properties designated as Oakland landmarks are those having "special character or special historical, cultural, educational architectural, aesthetic or environmental interest or value."[7] This definition is more specifically interpreted in the Landmark Preservation Advisory Board's "Guidelines for Determination of Landmark Eligibility" (City of Oakland, 1994). Landmarks are protected by Landmark Board review of exterior alterations, and demolition of landmarks can be delayed by up to 280 days. There are approximately 130 designated landmarks in the City.

S-7 Preservation Combining Zone

The S-7 Preservation Combining Zone is the City's historic preservation zoning district. Areas eligible for S-7 designation are those having "special importance due to historical association, basic architectural merit, or the embodiment of a style or special type of construction, or other special character, interest or value."[8] Demolition and design regulations pertaining to S-7 properties are the same as for landmarks as described above. A new preservation district, the S-20 Preservation Combining zone, is in process of adoption for large residential districts.

Preservation Study List

The Preservation Study List is defined as "a list of facilities under serious study for possible landmark designation or for other appropriate preservation action."[9] The Landmarks Board, the Planning Commission or the Planning Director can add properties to the list. There are about 350 properties on the list as of 2002. For new designations, the Preservation Study List is being superceded by Heritage Properties, as more fully described below.

Historic Preservation Element

The City of Oakland General Plan contains a Historic Preservation Element (City of Oakland 1994),[10] which sets forth goals, policies and actions for using "historic preservation to foster economic vitality and quality of life in Oakland." The Historic Preservation Element proposes dividing landmarks into three classes, and each of these classes is to be afforded a different level of consideration.[11] These landmark classifications include:

- Class 1 landmarks are those properties rated "A" under the Landmark Board's Guidelines and which are on, or are determined eligible for, the National Register.
- Class 2 landmarks are those properties rated "A" under the Landmark Board's Guidelines but which are not on, or do not appear eligible for, the National Register; - or are rated

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7 Section 17.07.030(p), City of Oakland Planning Code

8 Section 17.84, City of Oakland Planning Code

9 Section 17.102.060, City of Oakland Planning Code

10 Adopted in 1994 by City Council Resolution No. 70807, and amended in 1998.

11 For detailed descriptions of the restrictions and allowances for each of the landmark classes, refer to the Historic Preservation Element (City of Oakland 1994 as amended 1998), Tables 4-1 and 4-2.

"B" under the Landmark Board's Guidelines and which are on, or are determined eligible for, the National Register.

- Class 3 landmarks are those properties rated "B" under the Landmark Board's Guidelines and which are not on, or do not appear eligible for, the National Register.

Heritage Properties

The Historic Preservation Element (Policy 25) creates Heritage Property designation. This designation is as a lesser designation available to any properties with a Survey rating of "A," "B" or "C" from an intensive survey, or "A" or "B" from a reconnaissance survey, or which contribute to any area meeting the Preservation District eligibility guidelines. The Planning Director can postpone demolition of Study List or Heritage Properties for up to 60 days, during which time landmark or other preservation district designations may occur or other means to preserve the property are investigated.

Potentially Designated Historic Properties

The city considers any property that has at least a contingency survey 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 Potentially Designated Historic Properties (PDHPs). PDHPs are a large group comprising over a fifth of the buildings in Oakland. They are meant to be "numerous enough to significant influence the city's character." Properties with contingency ratings are classified as PDHPs to highlight their value as restoration opportunities. District contributors and potential contributors are classified as PDHPs to promote preservation of Oakland's distinctive neighborhoods and districts.

Local Register

The historic Preservation Element was amended in 1998 to define a Local Register of Historic Resources (Local Register). For purposes of environmental review under CEQA, the following designated historic properties constitute the City of Oakland's Local Register of Historical Resources (City of Oakland 1994 as amended in 1998, Policy 3.8, page 5-10):

- Oakland Landmarks,
- S-7 Preservation Combining Zone properties,
- Preservation Study List properties,
- all other Designated Historic Properties (e.g., National Register, State Historic Landmarks, Heritage Properties, or S-7 and -20 zones), and
- those Potential Designated Historic Properties (PDHPs) that have an existing rating of "A" or "B" under the Oakland Cultural Heritage Survey (the Survey) system (see discussion below), or are located within an Area of Primary Importance.

Oakland Cultural Heritage Survey

The City of Oakland Community and Economic Development Department has maintained the Oakland Cultural Heritage Survey (Survey) since 1979. The Survey provides an inventory of historic resources throughout the City.

- For individual properties, the Survey uses a five-tier rating system, ranging from "A" (highest importance) to "E" (of no particular interest), plus the symbol "✻" indicating properties not rated, recent or modern. This system provides an Individual Property Rating of a building based on a number of criteria including exterior design and interior design; construction style or type; association of person or organizations; the age of the building; continuity of the building within a district; and an evaluation of the building's condition. All "A" rated properties and most "B" rated properties are likely to be individually eligible for the National Register.

- Areas of Primary Importance (APIs) are historically or visually cohesive areas or property groupings that contain a high proportion of individual properties with ratings of "C" or higher and appear eligible for the National Register of Historic Places, either as a district or as a historically-related complex. At least two-thirds of the properties must be "contributors" to the API, reflecting the API's principal historical or architectural themes, and must not have undergone major alterations.

- Areas of Secondary Importance (ASI) are similar to APIs, however removed buildings that are potential contributors to the ASI are counted for purposes of the two-thirds threshold as well as contributors. ASIs do not appear eligible for the National Register.

- Individual properties are also given a Multiple Property Rating (1, 2, or 3) based on an assessment of the significance of the area in which the property is located. Properties within an Area of Primary Importance (an area that appears eligible for the National Register) are rated "1"; those in an Area of Secondary Importance are rated "2"; and those outside an identified district are rated "3." A plus (+) or minus (-) sign indicates whether the property contributes or not to the API or ASI.

The Survey assists National Register nominations and Section 106 reviews (see above under federal programs), and is used by the Landmarks Board as well as local project review to assist landmark designations and as a basis for adding properties to the Preservation Study List. Detailed intensive survey documentation has been completed in large portions of the City, and a preliminary reconnaissance or "windshield" survey covering the entire City was completed in two phases in 1985-86 and 1996-97. Inclusion of a property in the Survey has no direct regulatory effect.

Impacts and Mitigation Measures

Significance Criteria

Under CEQA Guidelines, a project would have a significant environmental impact if it were to:

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- Disturb any human remains, including those interred outside of formal cemeteries; or
- Cause a substantial adverse change in the significance of a historical resource including unique archaeological resources as defined in CEQA Guidelines Section 15064.5. Substantial adverse changes include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings so that the significance of the historical resource would be materially impaired. Section 15064.5 of the CEQA Guidelines further defines that the significance of a 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 in, or eligibility for inclusion on, the California Register of Historical Resources;
  - account for its inclusion in a local register of historical resources or its identification in a historical resources survey form; or
  - convey its historical significance and that justify its inclusion on, or eligibility for inclusion on, the California Register of Historical Resources as determined by the lead agency; or
  - if it violates environmental provisions of the general plan.

11.1: Known Archaeological Resources

Potential Impact 11.1: Implementation of the Redevelopment Plan's projects, programs and other activities could result in new development involving excavation within the Project Area. Such excavation could unearth archaeological resources at currently known archaeological sites. Some of these remains could have scientific or cultural importance. Although a potentially significant impact if left unmitigated, this would be *a less-than-significant impact* with implementation existing development requirements, the policies of the Historic Preservation Element, and implementation of measures identified in this EIR.

Discussion

Two prehistoric archaeological sites (CA-ALA-10 and CA-ALA-315) are located within the Central City East Redevelopment Project Area, and one (CA-ALA-5) is located within ¼-mile of the Project Area. These archaeological sites have been recorded as having been totally destroyed. However, some of these resources could have intact, subsurface deposits that could

contain information important to the understanding of Bay Area prehistory and to the resolution of specific archaeological research considerations. None of these known archaeological sites have been evaluated in terms of the criteria for eligibility to the California Register of Historical Resources (CEQA Section 15064.5); some of these properties have the potential to be important historic resources under CEQA.

These sites should be avoided, if possible, during implementation of the Redevelopment Plan. If avoidance is not feasible, subsurface archaeological testing should be conducted to determine the subsurface extent and integrity of the site as discussed below.

Recommended Mitigation Measures

Should implementation of the Redevelopment Plan's programs, projects or other activities involve new development in the vicinity of known archaeological resource sites, those sites should be examined by a qualified archaeologist and/or architectural historian to determine if there are important historic resources that could be impacted by development activity. Significant sites should be avoided, if possible, during Redevelopment Plan implementation.

- **Mitigation Measure 11.1A: Avoidance.** In accordance with CEQA, all cultural resources deemed significant should be avoided during project implementation whenever possible.

- **Mitigation Measure 11.1B: Characterization and Research.** If avoidance is not feasible, additional mitigation will be required for potential impacts to be considered less-than-significant. Should subsequent Redevelopment Plan projects, programs or other activities be proposed at archaeological properties, mitigation consisting of subsurface archaeological characterization should be conducted to define the subsurface extent and integrity of the site. Additional archival research may also be conducted as a means of corroborating the archaeological data collected. This additional data-gathering phase at each site may be sufficient, on an individual basis, to consider loss of the resource during development as a less-than-significant impact.

- **Mitigation Measure 11.1C: Data Recovery.** Some sites may prove to be inherently complex or significant so that testing alone will not be considered adequate mitigation to permit loss. In those cases, data recovery may be warranted, wherein a more comprehensive subsurface examination, based on a Research Design formulated to address pertinent research topics, may be required.

Resulting Level of Significance:

With implementation of the sequenced measures identified in Mitigation Measures 11.1A through 11.1C, this impact would be substantially mitigated and the resulting impact would be *less than significant.*

11.2: Subsurface Cultural Resources

Potential Impact 11.2: Future development activities pursuant to the Redevelopment Plan's implementation projects, programs or other activities within the Project Area have the potential to encounter previously unknown subsurface cultural resources during ground-disturbing activities. This is a *potentially significant impact* of the Redevelopment Plan.

Discussion

Those portions of the Project Area located over fill material, such as within the Oakland Estuary Policy Planning area, have a very low potential to encounter unknown subsurface cultural resources. However, the majority of the Project Area is not located on fill, and potential exists that archaeological resources, paleontological resources or human remains could be encountered during construction-related excavation. Prehistoric resources include chert or obsidian flakes, projectile points, mortars and pestles, and dark, friable midden soil containing bone and shell; historic resources include glass, ceramics, brick, metal, wood, bone, and features such as foundations and privies. Because these resources are not specifically known to occur in the area, the impact is considered potential. Awareness of potential archaeological resources could be especially important along the San Antonio shoreline where factories and the early commercial areas at Larue's Landing before the land was completely reshaped by fill, freeways and railroad tracks.

Mitigation Measure

- **Mitigation Measure 11.2:** In accordance with CEQA Section 15064.5, should previously unidentified cultural resources be discovered during construction, the project sponsor is required to cease work in the immediate area until such time a qualified archaeologist and the City of Oakland can assess the significance of the find and make mitigation recommendations, if warranted.

Resulting Level of Significance

With implementation of Mitigation Measure 11.2, the impact could be substantially mitigated and the resulting impact could be made *less-than-significant.*

11.3: Potential Removal or Alteration of Historic Resources

Potential Impact 11.3: The Redevelopment Plan, as an implementation tool of the General Plan, does not propose any specific removal or alteration of historic structures, although the estuary policy Plan foresees possible removal of the 9th Avenue Terminal building. However, future redevelopment activities may increase economic pressures to remove or demolish older buildings, potentially including historic properties within the Project Area. While removal and/or substantial alteration of historic properties would be considered a significant environmental effect, this potential effect would be reduced to *less-than-significant* levels through implementation of existing City policies and regulations.

Discussion

As an implementation tool of the Oakland General Plan (including the LUTE, the Historic Preservation Element and the Estuary Policy Plan), the Redevelopment Plan emphasizes redevelopment activities primarily along transit corridors and along the waterfront. Along transit corridors and other locations within the Project Area, there are many older structures, including those historic resources discussed above. There may also be additional buildings within the Project Area that may be eligible for National Register or local listing, but not yet identified or designated.

Among its other objectives, the Redevelopment Plan's projects, programs and other activities are intended to enhance and increase property values within the Project Area, providing a stimulus for property investment and building rehabilitation. Structures may be historic resources, yet also suffer from blighted conditions. If these blighted conditions were removed as a result of implementation of the Redevelopment Plan, then private interest in rehabilitation and property investment may increase. Economic pressures may motivate property owners to seek to remove or substantially alter many of these older buildings, including those buildings identified as historic or potentially historic resources.

City General Plan Policy

The City of Oakland General Plan, Historic Preservation Element (1994, as amended in 1998) includes policies intended to reduce the potential risk of redevelopment activities on historic structures. These policies are spelled out in action steps which focus on several key strategies including:

- using historic preservation as a means to foster economic vitality and quality of life, consistent with many of the objectives of redevelopment,
- identifying historic properties,
- creating and continuing regulatory safeguards and financial incentives for the protection, rehabilitation and restoration of historic resources,
- increasing the number of structures within the City that are protected by regulations and incentives,
- incorporating preservation into on-going City activities such as permit review and code enforcement,
- promoting preservation information and education.

Historic Preservation Element policies include:

Policy 2.1: *The City will use a combination of incentives and regulations to encourage the preservation of significant older properties and areas which have been designated as Landmarks, Preservation Districts or Heritage Properties. The regulations will be applied according to the importance of each property, with the more important properties having stronger regulations.*

Policy 2.4:

a) Demolition and removal of landmarks and 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.

Policy 2.5: Properties which definitively warrant preservation, but are not landmarks or Preservation Districts will be eligible as Heritage Properties. Demolition, removal or specified major alterations of Heritage Properties may normally be postponed for up to 120 days.

Policy 2.6: Landmarks and all properties contributing to a Preservation District will be eligible for all of the following preservation incentives:

i) Mills Act contracts for reducing property tax assessments,

ii) State Historical Building Code and other related alternative codes for older buildings such as the Uniform Code for Building Conservation to provide more flexible standards for preservation;

iii) Conservation easements to reduce property tax assessments or obtain income tax deductions;

iv) Broader range of permitted or conditionally permitted uses;

v) Transfer of development rights;

vi) Priority for economic development and community development project assistance and eligibility for historic preservation grants for low-income housing;

vii) Eligibility for acquisition, rehabilitation and other development assistance from a possible historic preservation revolving fund or possible historical rehabilitation bond program; and

viii) Fee waivers or reduction for City permits for demolition, new construction or alterations.

Policy 3.4: Where all other means of preservation have been exhausted, the City will consider acquiring by eminent domain if necessary, existing or potential designated historic properties, or portions thereof, in order to preserve them. Such acquisition may be in fee title, as conservation easements or a combination thereof.

Policy 3.5: *For additions or alterations to Heritage Properties or Potentially Designated Historic Properties, requiring discretionary City permits, the City will make a finding that:*

i) The design matches or is compatible with, but not necessarily identical to, the property's existing or historical design, or

ii) 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

iii) The existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood.

For any projects involving complete demolition of Heritage Properties or Potentially Designated Historic Properties requiring discretionary City permits, the City will make a finding that:

i) The design quality of the proposed project is at least equal to that of the original structure and is compatible with the character of the neighborhood, or

ii) The public benefits of the proposed project outweigh the benefits of retaining the original structure, or

iii) The existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood.

With implementation of these and other General Plan policies, potential impacts to historic resources throughout the Project Area can be avoided or substantially lessened to a level of less than significant, and no mitigation measures are required. However, the Historic Preservation Element does include a number of policies that direct the City to implement future actions intended to protect, preserve or restore historic resources. Through implementation of the Redevelopment Plan's projects, programs and other activities, the Redevelopment Agency could initiate many of these City-directed policies and actions within the Project Area. The Historic Preservation Element includes numerous actions that could be undertaken pursuant to the Redevelopment Plan, and the following list identifies a few examples that could serve to further reduce impacts or provide beneficial environmental consequences on historic resources.

- The City's practice of waiving all design review fees for Landmark and S-7 properties could be extended to additional properties contributing or potentially contributing to Preservation Districts as a preservation incentive (HPE Action 2.6.9). However, since permit fees pay the City's permit processing costs, fee reductions would require alternate funding sources. The Redevelopment Agency could consider use of redevelopment tax increment revenues for such funding.

- Existing policy (HPE Policy 3.3) requires that projects involving existing or Potential Designated Historic Properties that are to receive financial assistance from the City shall be required to submit applications prior to issuance of a building permit or transfer of title. The Redevelopment Agency could consider requiring that such applications and survey evaluations be made prior to providing any financial or other assistance to ensure that historic character is considered at the earliest stages of the planning and development

process. This measure would not apply to projects which are small-scale or which do not change exterior appearance.

- Existing policy (HPE Policy 3.6) requires that City-sponsored or assisted projects involving existing or Potential Designated Historic Properties be selected and designed to avoid or minimize adverse effects on these properties consistent with the Secretary of Interior's Standards. The Redevelopment Agency could consider establishing procedures that would give priority for redevelopment assistance to those projects that preserve or enhance an existing or Potential Designated Historic Property, and conversely give lower priority to projects that adversely affect such resources.

- Existing policy and action items (HPE Policy 5.1 and subsequent actions) are intended to assist citizens to make informed decisions on preservation and building-related matters. These actions address the opportunity to educate owners, contractors, occupants and the real estate community about the value of well maintained historic buildings and about cost effective and authentic ways of rehabilitating them. The Redevelopment Agency could actively participate in these programs.

- Existing policy (HPE Policy 3.2 and 3.5) provide that, to the extent consistent with other General Plan objectives, the City will ensure that all City-owned or controlled properties warranting preservation will in fact be preserved. The Redevelopment Agency could set an example for private owners by designating and maintaining the City's historic properties and educating the public about the process.

Other Potential Benefits of Redevelopment

The Redevelopment Plan includes a Historic Preservation Program. Under this program, Agency-sponsored efforts such as Historic Façade Improvements, Unreinforced Masonry Grants and other Agency assistance may be used to make significant historical buildings into viable retail, commercial or residential properties. The program can both preserve important resources and provide for the reuse of underutilized or vacant properties.

11.4: Potential Removal of the 9th Avenue Terminal Building

Potential Impact 11.4: The Redevelopment Plan is intended to implement the City of Oakland General Plan, including the Oakland Estuary Plan. Redevelopment assistance with implementation of that portion of the Estuary Plan pertaining to creation of an 11-acre Crescent Park at the site of the 9th Avenue Terminal would result in demolition of the terminal building. The 9th Avenue Terminal building has been determined eligible for the National Register of Historic Places (City of Oakland, 1998 page III.G-9), and its demolition could be a significant impact.

Discussion

The Redevelopment Plan does not contain any specific proposal for demolishing or altering the 9th Avenue Terminal or any other historic resource within the Estuary planning area. However, the Redevelopment Plan is proposed as one of many planning tools that may be used by the City

to implement the General Plan, including the Oakland Estuary Policy Plan. The Oakland Estuary Policy Plan includes a policy (Policy OAK-2.4, page 90) that calls for "establishing a large park in the area of the existing 9th Avenue Terminal to establish a location for large civic events and cultural activities." The park is envisioned as primarily an open, unobstructed green field that is flexible in use, and oriented to maximize access and views to the Estuary. The Estuary Policy Plan also recognizes that "the 9th Avenue Terminal Shed, or portions thereof, may be suitable for rehabilitation and adaptive reuse. However, the terminal building impedes public access to and views of a key area of the Estuary." The Policy Plan also calls for the City and the Port to investigate the feasibility of keeping and reusing the building (or portions thereof) pursuant to preparation of a specific plan for the entire District. The Oakland Estuary Policy Plan provides a policy-level, conceptual plan that could result in subsequent, more detailed plans that might propose demolition or substantial alteration to the 9th Avenue Terminal.

The environmental impact of demolishing or substantially altering the 9th Avenue Terminal building in order to create a new Crescent Park has been fully analyzed and addressed in the Oakland Estuary Plan EIR (pages III.G-9 through 11). As noted in that analysis, the 9th Avenue Terminal building was constructed in 1927 and is the last remaining example of pre-war municipal port buildings in Oakland. The building has been evaluated by the Oakland Cultural Heritage Survey and has received a rating of "B+," placing the property on the City's Local Register of Historic Resources. Demolition of the terminal building would be a significant environmental impact according to CEQA criteria and the City's Historic Preservation Element.

Mitigation Measures

The Oakland Estuary Plan EIR notes that "at the time that development is proposed for the site, certain potential mitigation may be required to lessen the impact." The mitigation measures listed in the Oakland Estuary Plan EIR are identified as "potential measures" since no specific project that would involve demolition or alteration to the 9th Avenue Terminal building had been proposed at that time. Similarly, the feasibility of these measures was not known since no specific development proposal was included in the Estuary Policy Plan. The Estuary Policy Plan EIR also notes that," at such time as a development project is proposed that may involve demolition or substantial alteration to the 9th Avenue Terminal, additional and more specific measures may be identified. This EIR recommends adoption of those measures as recommended in the Oakland Estuary Plan EIR, and to the extent feasible, recommends implementation of these measures, as indicated below:

- **Mitigation Measure 11.4:** Consistent with the recommendations of the Estuary Policy Plan EIR, the following mitigation measures shall be adopted and, to the extent feasible, implemented pursuant to any Redevelopment Plan's implementation project, program or other activity involving demolition or substantial alteration to the 9th Avenue Terminal building.

    1. Modify the project design to include restoration of a portion of the historic character of the property.

    2. Modify the design to incorporate or replicate elements of the building's original architectural design.

3. Salvage and preserve significant features and materials of the structure in a local museum or within the new project.
4. Document in an Historic American Building Survey or other appropriate format: photographs, oral history, videos, etc.
5. Place a plaque, commemorative marker or artistic or interpretive display on the site providing information on the historical significance of the resource.
6. Contribute to a Façade Improvement Fund, the Historic Preservation Revolving Loan Fund, the Oakland Cultural Heritage Survey, or other program appropriate to the character of the resource.
7. Additional mitigation measures may be developed at the time a specific proposal is considered that would involve demolition or substantial alteration to this building.

Resulting Level of Significance

Demolition of the 9th Avenue Terminal building remains a potential significant impact associated with implementation of the Oakland Estuary Policy Plan, as may be assisted by or in furtherance of subsequent implementation of the Redevelopment Plan. The recommended mitigation measures could reduce but not fully avoid such impacts. Therefore, this impact is considered *significant and unavoidable.*

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Other CEQA Considerations

Introduction

Sections 15126 through 15130 of the California Environmental Quality Act (CEQA) Guidelines identify the following subjects that must be addressed in an EIR, in addition to an evaluation of project alternatives. These subjects include:

- effects determined to be less than significant;
- significant environmental effects and mitigation measures to avoid or reduce significant impacts;
- significant environmental effects that cannot be avoided;
- cumulative environmental effects;
- significant irreversible environmental changes; and
- the potential to induce growth and associated secondary impacts.

Chapters 4 through 11 of this document include detailed discussions pertaining to the issues of land use, traffic and circulation, air quality, noise, hazardous materials, public infrastructure, public services and cultural/historic resources. Within these issue areas, certain environmental effects have been found to be less than significant, significant but mitigable, significant environmental effects that cannot be avoided, and cumulatively significant effects. The remainder of this chapter (Chapter 12) presents information regarding the CEQA-required impact discussions not addressed elsewhere in this document, and also summarizes some of the key findings from the previous chapters. Subjects addressed in this chapter of the EIR include:

- significant and unavoidable impacts of the proposed Project;
- effects found not significant and not addressed elsewhere in this document, and potentially significant effects previously found to be mitigated to less-than-significant levels pursuant to City-certified environmental documents including the *Land Use and Transportation Element EIR*, the *Oakland Estuary Policy Plan EIR* and the *Open Space, Conservation and Recreation Element Mitigated Negative Declaration*;
- potentially considerable cumulative environmental effects, as summarized from previous sections;

- significant irreversible environmental changes that would occur with implementation of the Project; and
- potential for the Project to induce growth and associated secondary impacts.

The following Chapter 13 of this EIR includes a discussion of alternatives to the proposed project, including alternatives to avoid or reduce significant impacts.

Significant Unavoidable Impacts

As indicated in previous chapters of this EIR, there are two significant environmental impacts associated with implementation of the Project that cannot be mitigated to levels of less than significant. These impacts are more fully discussed below.

Significant and Unavoidable Cumulative Traffic Impacts

The intersection of High Street/International Boulevard is projected to operate at LOS F without the contribution of traffic projected as a result of future growth and development within the Project Area. The contribution of traffic generated from within the Project Area, together with traffic generated by other cumulative development, would increase the total intersection average delay by more than 13 seconds during the p.m. peak hour. Since the Redevelopment Plan's implementation projects, programs and other activities are intended to assist and facilitate in the growth and development projected within the Project Area, this impact is a cumulatively significant environmental effect, and the incremental effect, as facilitated by implementation of the Redevelopment Plan, is considered cumulatively considerable.

The mitigation measure recommended to reduce traffic impacts at this intersection is as follows:

- **Mitigation Measure 5.2A: Modify Traffic Signal Phasing at the High Street / International Boulevard Intersection.** Individual development projects pursuant to, or in furtherance of, implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund on a pro-rata fair share basis the cost to provide protected left-turn phasing for the turn lanes on International Boulevard. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.

Implementation of this measure would reduce traffic congestion at this intersection during the p.m. peak hour, but would not reduce cumulative impacts to a level that is less than significant. Widening High Street to provide dual left-turn lanes and three through lanes in both directions would completely mitigate this cumulative impact. However, the widening of High Street would require the acquisition of additional right-of-way along High Street, including acquisition and demolition of several existing businesses along this street. The secondary impacts of major widening render this measure infeasible. No feasible mitigation measures have been identified that would reduce cumulative impacts to a level that is less than significant. Therefore, cumulative impacts at this intersection are *significant and unavoidable*.

Significant and Unavoidable Impacts to Historic Resources

The Redevelopment Plan does not contain any specific proposal for demolishing or altering any historic resources. However, the Redevelopment Plan is one of many planning tools that may be used by the City to implement the General Plan, including the Oakland Estuary Policy Plan. The Oakland Estuary Policy Plan provides a policy-level, conceptual plan that could result in demolition or substantial alteration to the 9th Avenue Terminal in order to create a new Crescent Park. The 9th Avenue Terminal building was constructed in 1927 and is the last remaining example of pre-war municipal port buildings in Oakland. The 9th Avenue Terminal building is on the City's list of Potential Designated Historic Properties, and has been determined eligible for the National Register of Historic Places and the California Register of Historic Resources.

The Oakland Estuary Plan EIR notes that "at the time that development is proposed for the site, certain potential mitigation may be required to lessen the impact. The mitigation measures listed in the Oakland Estuary Plan EIR are identified as "potential measures" since no specific project that would involve demolition or alteration to the 9th Avenue Terminal building had been proposed at that time. This EIR recommends adoption of those measures as identified in the Oakland Estuary Plan EIR, as follows:

- **Mitigation Measure 11.4:** Consistent with the recommendations of the Estuary Policy Plan EIR, the following mitigation measures shall be adopted and, to the extent feasible, implemented pursuant to any Redevelopment Plan's implementation project, program or other activity involving demolition or substantial alteration to the 9th Avenue Terminal building.

    1. Modify the project design to include restoration of a portion of the historic character of the property.

    2. Modify the design to incorporate or replicate elements of the building's original architectural design.

    3. Salvage and preserve significant features and materials of the structure in a local museum or within the new project.

    4. Document in an Historic American Building Survey or other appropriate format: photographs, oral history, videos, etc.

    5. Place a plaque, commemorative marker or artistic or interpretive display on the site providing information on the historical significance of the resource.

    6. Contribute to a Façade Improvement Fund, the Historic Preservation Revolving Loan Fund, the Oakland Cultural Heritage Survey, or other program appropriate to the character of the resource.

    7. Additional mitigation measures may be developed at the time a specific proposal is considered that would involve demolition or substantial alteration to this building.

These mitigation measures could reduce but not fully avoid such impacts. Therefore, this impact is considered *significant and unavoidable*.

Effects not Found to be Significant, and Potentially Significant Effects Previously Found to be Mitigated to Less-than-Significant Levels

CEQA Guidelines, Section 15128 requires EIRs to contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. The following possible effects have not been found to be significant.

Additionally, according to CEQA Guidelines, Section 15063 (c)(3)(D), earlier environmental analysis may be used where an effect has been adequately analyzed in an earlier EIR or negative declaration. In such cases, the EIR shall identify and state where such earlier analyses are available for public review. The EIR shall also identify which effects are within the scope of, and adequately analyzed in, an earlier document pursuant to legal standards, and shall identify whether such effects were addressed by mitigation measures based on such earlier analyses. If mitigation measures were addressed, they shall be described and the EIR shall state the extent to which they address the specific conditions of the current project.

As noted in Chapter 3: Project Description of this EIR, the Central City East Redevelopment Plan is intended to be consistent with, and assist in further implementation of, specific improvement strategies as identified in the Oakland General Plan. Those portions of the Oakland General Plan that are particularly relevant to the Central City East Redevelopment Plan include the Land Use and Transportation Element (LUTE); the Open Space, Conservation and Recreation Element (OSCAR); the Historic Preservation Element; and portions of the Oakland Estuary Policy Plan. Accordingly, certain potentially significant impacts that might result from implementation of the Redevelopment Plan have been adequately addressed in previously certified EIRs. The two primary EIRs that have been relied on for this purpose include:

- The *Oakland General Plan Land Use and Transportation Element EIR*, including the Draft EIR dated October 31, 1997, and the Final Addendum dated 1998, as certified by the City of Oakland.
- The *Oakland Estuary Policy Plan EIR*, including the Draft EIR dated June 5, 1998, and the Final Addendum dated November 20, 1998, as certified by the City of Oakland.

Copies of these previously certified EIRs are available for public review at the City of Oakland Community and Economic Development Agency offices located on the 3rd Floor of 250 Frank Ogawa Plaza, Suite 3315.

Mitigation measures or General Plan policies adopted for the purpose of mitigating environmental effects have been identified in these previous environmental documents and have since been adopted by the City. Any new development and/or Redevelopment Plan projects, programs and other implementation activity pursuant to the Redevelopment Plan would also be required to comply with these policies and/or mitigation measures.

The following section of this EIR indicates those environmental issues for which an effect has been included and adequately analyzed in these earlier EIRs, and identifies the extent to which mitigation measures recommended in these previous EIRs address the potential effects associated with implementation of the Redevelopment Plan.

Aesthetics

Light and Glare

Implementation of the Redevelopment Plan would not create new sources of substantial light or glare, which would adversely affect day or nighttime views in the area. The Project Area is a highly urbanized environment that is already subject to extensive night lighting for security reasons. The Redevelopment Plan's projects, programs and other implementation activities would not substantially change or affect day or nighttime views as a result of increased light or glare. Additionally, the design of all new development projects pursuant to, or in furtherance of, the Redevelopment Plan will be subject to standard project review and approval processes as required by the City of Oakland and may require additional design review approvals. Standard conditions of approval for all zoning permits within the City of Oakland would require exterior lighting to be focused and face downward to minimize light and glare to surrounding properties. Accordingly, potential impacts resulting from new sources of light and glare would not be significant.

Scenic Vistas and Highways

Potential Impact

The Scenic Highways Element of the *City of Oakland General Plan* (City of Oakland, 1974) designates I-580 through Oakland as a scenic route. New development that may occur in the Project Area that is also within the Scenic Corridor would be subject to the provisions of the Scenic Highways Element. Only the extreme southeasterly portion of the Project Area (bounded by 106th Avenue, Foothill Boulevard, 108th Avenue and MacArthur Boulevard) falls within the boundaries of the Scenic Corridor. This approximately 20-acre site is the Foothill Square neighborhood shopping center, containing an Albertson's grocery store as an anchor tenant and numerous smaller shops, restaurants, and non-profit and community service agencies. A portion of this site could support additional new residential, commercial, office or mixed-use development. Renovation of existing structures within this shopping center or the addition of new uses and structures, including signage, are all potential redevelopment activities pursuant to the Redevelopment Plan. Depending upon the specific design of any potential Redevelopment Plan implementation project, program or other activity that may be proposed for this site, implementation of the Redevelopment Plan could potentially adversely affect scenic vistas or scenic resources within the scenic corridor.

Previously Identified Mitigation Measures

No specific Redevelopment Plan activities, programs or projects have been proposed for this site at this time. Consequently no site-specific measures intended to address scenic vistas or resources can be formulated. Instead, the following General Plan policies and mitigation measures (as derived from the LUTE EIR, page III.F-8) would apply to all Redevelopment Plan implementation activity within the Project Area.

LUTE EIR, Policy OS-10.1: Protect the character of existing scenic views in Oakland, paying particular attention to: (a) views of the Oakland Hills from the flatlands; (b) views of downtown and Lake Merritt; (c) views of the shoreline; and (d) panoramic views from Skyline Boulevard, Grizzly Peak Boulevard, and other hillside locations.

LUTE EIR, 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.

As determined in this previously prepared EIR, these policies would effectively mitigate potentially significant impacts to scenic corridors to less-than-significant levels. Additionally, the following policies from the City of Oakland Scenic Highways Element would apply to any Redevelopment Plan implementation activity within the I-580 Scenic Corridor, further reducing potential impacts:

The Scenic Highways Element, Policies Related to MacArthur Freeway: Signs within the scenic corridor that are visible from the freeway should be for identification purposes only; no advertising should be permitted. Visual intrusions within the scenic corridor should be removed, converted, buffered or screened from the motorist's view. Panoramic vistas and interesting views now available to the motorist should not be obliterated by new structures. New construction within the scenic corridor should demonstrate architectural merit and a harmonious relationship with the surrounding landscape. The ban of truck traffic on the MacArthur Freeway should continue indefinitely.

Compliance with these existing policies of the City of Oakland General Plan would further ensure that potential impacts on scenic vistas and scenic resources within the scenic highway corridor would be mitigated to levels of less than significant.

Visual Character

Potential Impact

Implementation of the Redevelopment Plan would not substantially degrade the existing visual character or quality of the site and its surroundings. One of the major objectives of the Redevelopment Plan is to maintain and enhance existing established neighborhoods throughout the Project Area through a variety of intervention strategies. The implementation actions contemplated under the Redevelopment Plan are intended to improve the physical appearance of existing structures and public spaces by eliminating blighted conditions.

However, implementation of the Redevelopment Plan's projects, programs and other activities would encourage/facilitate significant new development/redevelopment throughout the Project Area, particularly along transit-oriented corridors. The scale and design of these Redevelopment Plan implementation projects could potentially interrupt views or impact the visual character or quality of its surroundings by being architecturally incompatible.

Previously Identified Mitigation Measures

No specific Redevelopment Plan implementation activities or projects have been designed at this time. Consequently no site-specific measures intended to address such impacts can be formulated. Instead, the following General Plan policies and mitigation measures (as derived from the LUTE EIR, page III.F-11 and the Oakland Estuary Policy Plan EIR) would apply to all Redevelopment Plan implementation activity within the Project Area.

OSCAR Element, 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.

LUTE Policy N1.8: The height and bulk of commercial development in Neighborhood Center and Community Commercial areas should be compatible with that which is allowed for residential development.

LUTE 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.

LUTE 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.

LUTE 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 so that the interface between the different types of development are compatible.

LUTE Mitigation Measure F.3a: Standard design guidelines for all Neighborhood Commercial areas should be developed that require continuous or nearly continuous storefronts located along the front yard setback, promote small scale commercial activities rather than large scale establishments at the street level, restrict front yard parking lots and driveways, require small scale pedestrian-oriented signage, have a relatively low height limit, and promote the pedestrian friendly amenities at the street level.

LUTE Mitigation Measure F.3b: Ensure that structures and sites are designed in an attractive manner which harmonizes with or enhances the visual appearance of the surrounding environment by preparing and adopting industrial and commercial design guidelines.

As determined in these previously prepared EIRs, these policies and additional measures would effectively mitigate potentially significant visual character impacts to less-than-significant levels.

Agriculture Resources

Implementation of the Redevelopment Plan would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. It will not conflict with existing zoning for agricultural use or a Williamson Act contract, nor would it involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use. The Project Area has been urbanized since the mid-1800s. There are no agricultural resources or prime agricultural soils located within the Project Area and there are no Williamson Act contracts in effect. Therefore, the effects associated with implementation of the Redevelopment Plan on agricultural or farmland resources are not significant.

Biological Resources

Habitat for Special Status Species

Potential Impact

Pacific herring are known to spawn along the Oakland waterfront. The Pacific herring itself is not listed as a rare, threatened or endangered species, but the herring provides an important food source for the California least tern, which is a listed species. Pacific herring are sensitive to

suspended sediment in the water. Implementation of Redevelopment Plan projects, programs and other activities may include construction of new land uses or roadway improvements along the edge of the San Francisco Bay, and these construction activities could result in erosion or increased sedimentation in the Oakland Estuary.[1]

Wetlands along the Oakland Estuary may provide habitat for special-status species including the clapper rail, least tern and burrowing owls. Development in and around these wetlands could contribute to the loss of habitat for these species (see further discussion of wetland impacts below).

Throughout the remainder of the Project Area, especially along major transit corridors where most new Redevelopment Plan implementation activity is anticipated to occur, impacts to habit of sensitive species would be less than significant. These areas are already heavily urbanized and do not provide habitat for rare or sensitive species.

Previously Identified Mitigation Measures

The following General Plan policies and mitigation measures, as derived from the LUTE EIR (pages III.I-5 through –9) and the *Oakland Estuary Policy Plan EIR* (pages III.H-6 and 7) would apply to all implementation projects, programs and other activities of the Redevelopment Plan within the Project Area.

LUTE EIR, Policy CO-6.5: Protect the surface waters of the San Francisco Estuary system, San Leandro Bay and the Oakland Estuary. Discourage shoreline activities which negatively impact marine life in the water and marsh areas.

LUTE EIR, Policy CO-9.1: Protect rare, endangered and threatened species by conserving and enhancing their habitat and requiring mitigation of potential adverse impacts when development occurs within habitat areas.

LUTE EIR, Action CO-9.1.2: Require large-scale development within habitat of special status species to conduct pre-construction surveys to determine whether these species are present. Require site-specific analysis of the effects of proposed development on theses species where appropriate, along with a plan for minimizing those effects. These surveys and analyses may be included in any environmental documentation for a project.

Estuary Plan EIR, Mitigation Measure H.4: Due to the Pacific herring's particular vulnerability during its spawning season, construction scheduling for redevelopment activities which may result in substantially increased levels of sedimentation into the Bay shall be coordinated with wildlife agencies. Construction may be halted during spawning season if determined necessary by wildlife agencies.[2]

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[1] It should be noted that the primary potential impact to Pacific herring as identified in the Estuary Plan EIR was due to construction of a proposed new pier, involving in-water construction. The location of this proposed pier is an extension of Broadway Street through Jack London Square, and is not located within this Redevelopment Project Area.

[2] This mitigation measure has been refined from the earlier document (underlined portions) to address conditions related to the Redevelopment Plan, pursuant to CEQA Guidelines Section 15063 (c)(3)(D).

As determined in these previously prepared EIRs, these policies and additional measures would effectively mitigate potentially significant impacts to habitat of special species to less-than-significant levels.

Wetlands

Potential Impact

Virtually the entire Oakland Estuary shoreline within the Project Area has been fully urbanized. However, there may be remnants of wetland vegetation in a number of isolated locations including along the Lake Merritt tidal channel. The Estuary shoreline includes a number of vacant parcels, some of which may contain estuarine wetlands, which are dominated by cordgrass and pickleweed. Implementation of the Redevelopment Plan's projects, programs and other activities, potentially including new land uses and roadway improvements in and around these wetlands, could result in loss of these wetlands and their value as habitat for special status species.

Previously Identified Mitigation Measures

The following General Plan policies and mitigation measures, as derived from the *Oakland Estuary Policy Plan EIR* (pages III.H-3 and 4), and the LUTE EIR (page III.I-15 and 16) would apply to all Redevelopment Plan implementation projects, programs and other activity within the Project Area.

Estuary Plan EIR, Policy CO-8.1: Work with federal, state and regional agencies on an ongoing basis to determine mitigation measures for development which could potentially impact wetlands. Strongly discourage development with unmitigated adverse impacts.

Estuary Plan EIR, Action CO-5.3.5: Continue to use the environmental review process to ensure that future road construction and dredging projects incorporate measures to protect water quality in potentially impacted lakes, creeks, wetlands and nearshore waters. Consider developing standard mitigation measures for future road improvements and dredging projects in collaboration with Caltrans and the Port.

Estuary Plan EIR, Action CO-8.1.2: Work with the Port to establish buffers or mandatory setbacks on the perimeter of wetlands.

LUTE EIR, Policy W3.1: Waterfront objectives, policies and actions regarding . . . wetland plant and animal habitats shall be consistent and in compliance with the Open Space, Conservation and Recreation Element of the General Plan.

As determined in these previously prepared EIRs, implementation of these policies would effectively mitigate potentially significant impacts to wetland habitat to less-than-significant levels.

Conflicts with Tree Preservation Ordinance

Potential Impact

The loss of large trees could occur as a result of implementation of the Redevelopment Plan's projects, programs and other activities. Although Oakland's tree removal ordinance requires a

permit before large trees are removed, adverse impacts are still possible. Impacts to trees could include tree cutting or changes to their setting as a result of construction, grading or irrigation.

Previously Identified Mitigation Measures

The following General Plan policy, as derived from the *Oakland Estuary Policy Plan EIR* (page III.H-6) and the LUTE EIR (page III.H-20) would apply to all Redevelopment Plan implementation activity within the Project Area.

LUTE and Estuary Plan EIRs, Policy CO-7.4: Discourage the removal of large trees on already developed sites unless removal is required for biological, public safety or public works reasons.

As determined in these previously prepared EIRs, implementation of this policy would effectively mitigate potentially significant impacts to protected trees to less-than-significant levels. Additionally, the City of Oakland's Protected Tree Ordinance[3] is intended to: " *protect and preserve trees by regulating their removal; to prevent unnecessary tree loss and minimize environmental damage from improper tree removal; to encourage appropriate tree replacement plantings; to effectively enforce tree preservation regulations; and to promote the appreciation and understanding of trees.*" Any Redevelopment Plan implementation project, program or other activity would be required to comply with the provisions of the City of Oakland's Protected Tree Ordinance, including issuance of a permit for development-related removal of a protected tree or construction within 10 feet of a protected tree on the project site. Compliance with these requirements, which is a standard City practice, would further reduce potential biological impacts to protected trees to a less-than-significant level.

Disturbance to Resource Conservation Areas

Potential Impact

Wildlife preserves designated under the General Plan as Conservation Areas are located along the San Leandro Bay and the Lake Merritt Channel. Implementation of Oakland Estuary Policy Plan land uses, as may be facilitated by the Redevelopment Plan at or near these locations, would be primarily oriented toward development of waterfront parks and open space areas, although commercial recreation uses are also anticipated. All of these uses would introduce greater numbers of people near the shoreline, which could negatively impact these wildlife preserves by introducing activity, noise, light, urban runoff and trash into currently inaccessible areas; potentially disturbing the feeding and nesting behavior of shorebirds; and reducing the value of these areas as wildlife habitat.

Previously Identified Mitigation Measures

General Plan policies and additional actions as derived from the *Oakland Estuary Policy Plan EIR* (page III.H-6) and the LUTE EIR (page III.H-20) would apply to all Redevelopment Plan implementation activity within the Project Area. These policies and actions include:

[3] Oakland Municipal Code, §12.36.

LUTE 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 wastes, illicit dumping, and marina live-aboards; and improve water quality in Lake Merritt to enhance the lake's aesthetic, recreational and ecological functions.

Estuary Plan EIR, Action CO-5.3.5: Continue to use the environmental review process to ensure that future road construction and dredging projects incorporate measures to protect water quality in potentially impacted lakes, creeks, wetlands and nearshore waters. Consider developing standard mitigation measures for future road improvements and dredging projects in collaboration with Caltrans and the Port.

LUTE Policy CO-6.4: Manage Oakland's lakes to take advantage of their recreational and aesthetic potential while conserving their ecological functions and resource values. Discourage new recreational uses which impair the ability of lakes to support fish and wildlife. Support improvements which enhance water circulation, water quality and habitat value, provided they are cost effective and are compatible with established recreational activities.

LUTE Policy CO-6.5: Protect the surface waters of the San Francisco Bay Estuary system, including San Francisco Bay, San Leandro Bay and the Oakland Estuary. Discourage shoreline activities which negatively impact marine life in the water and marshland areas.

Estuary Plan EIR, Policy CO-8.1: Work with federal, state and regional agencies on an ongoing basis to determine mitigation measures for development which could potentially impact wetlands. Strongly discourage development with unmitigated adverse impacts.

Estuary Plan EIR, Action CO-8.1.2: Work with the Port to establish buffers or mandatory setbacks on the perimeter of wetlands.

As determined in these previously prepared EIRs, implementation of these policies would effectively mitigate potentially significant impacts on adjacent lands designated for Resource Conservation to less-than-significant levels.

Geology

Landslides

The Project Area consists primarily of flatland areas where slopes are generally less than 5%, with some isolated area with slopes between 5% and 15%. The Association of Bay Area Governments (ABAG) Landslide Map describes the Project Area as "flat land deposits - landslides unlikely."[4] This characterization is consistent with the City's Environmental Hazards Element of the Oakland General Plan (City of Oakland, 1974) and the Open Space Conservation and Recreation Element (City of Oakland, 1996). Neighboring slopes would not result in

[4] Association of Bay Area Governments, Earthquake Maps and Information (2002), found at: http://walrus.wr.usgs.gov/elnino/landslides-sfbay/images/lsmap.gif.

landslides into the Project Area. Therefore, the potential for landslides on or near the Project Area is less than significant.

Geologic Hazards

Potential Impacts

The Project Area is approximately 13 miles west of the Calaveras fault, and approximately 16 miles east of the San Andreas fault. The easterly portions of the Project Area are less than one mile west of the Hayward fault. Geologic hazards such as fault rupture, seismic ground shaking, and liquefaction could potentially affect land uses within the Project Area. The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Seismic Hazards Mapping Act was passed in 1990 following the Loma Prieta earthquake to reduce threats to public health and safety due to earthquake hazards other than fault rupture. Under both of these acts, a geologic report addressing seismic hazards is required prior to approval of a project. The easterly edge of the Central East Oakland and Elmhurst subareas along Foothill and MacArthur Boulevards falls within the Alquist–Priolo Geologic Hazards Special Studies Zone ("Alquist-Priolo") for the Hayward fault.[5] City maps prepared by ABAG indicate that much of the Project Area is underlain by geologic materials that would experience high to very high ground shaking amplification in the event of an earthquake on one of the regional faults (ABAG, 1995a, b). Additional ABAG maps indicate that the area immediately south of Lake Merritt and along Embarcadero Cove is within a "Very High" susceptibility category for liquefaction. The balance of the Eastlake/San Antonio subarea is considered "Low" susceptibility and the remainder of the Project Area is considered "Moderate" in terms of susceptibility to liquefaction. The California Geologic Survey has mapped liquefaction hazard zones within the project area. No earthquake-induced landslide hazard zones are identified within the Project Area (Department of Conservation, 2002a, b, c).

Implementation of the Redevelopment Plan's projects, programs and other activities could encourage development of new structures within a seismically active region, resulting in exposure of increased numbers of people to seismic hazards. However, this potential impact would be less than significant due to existing laws and regulations and existing policies in the General Plan and OSCAR element.

Previously Identified Mitigation Measures

Any Redevelopment Plan implementation projects, programs or other activities proposed within the Alquist-Priolo zone of the Hayward fault would be required to comply with the Alquist-Priolo Earthquake Fault Zoning Act. This Act requires among other items that all proposed new structures for human occupancy maintain a 50-foot setback from the active fault trace, unless site-specific geotechnical studies indicate a smaller setback would be acceptable. All Redevelopment Plan implementation projects would also be required to conduct a geologic investigation to assess potential seismic hazards in accordance with the Seismic Hazards

[5] As shown on Association of Bay Area Governments, Earthquake Maps and Information (2002), found at: http://quake.abag.ca.gov/.

Mapping Act prior to project approval, and measures required to mitigate identified hazards would need to be incorporated into the project design. Also, any Redevelopment Plan implementation activity resulting in new structures would be required to comply with related regulations as contained in Title 24 of the California Code of Regulations, the Uniform Building Code and the Unreinforced Masonry Program. In addition, the following General Plan policies and mitigation measures, as derived from the *Oakland Estuary Policy Plan EIR* (pages III.K-10 and 11), and the LUTE EIR (page III.K-18 through –20), would apply to all Redevelopment Plan implementation activity within the Project Area.

LUTE and Estuary Policy Plan EIR, Policy CO-2.2: Retain geologic features known to be unstable, including serpentine rock, areas of known landsliding and fault lines as open space. Where feasible, allow such lands to be used for low-intensity recreational activities.

LUTE and Estuary Plan EIR, Policy CO-2.3: Require development on fill soils to make special provisions to safeguard against subsidence and seismic hazards.

LUTE and Estuary Plan EIR, Action CO-2.2.1: Maintain Standard Operating Procedures in the Office of Planning and Building which require geotechnical studies for major developments in areas with moderate to high ground shaking or liquefaction potential, or other geologically unstable features.

The standard operating procedures indicated in Action CO-2.2.1 include specific requirements for all project sponsors for new development throughout the City (including within the Project Area), whether public agency or private party. These requirements include submittal of site-specific soil reports and engineering analyses along with detailed engineering drawings to the Building Services Division prior to excavation, grading or construction activities. Where applicable, this process also involves compliance with requirements of the Alquist-Priolo Earthquake Fault Zoning Act. These standard operating procedures ensure that all buildings are designed and built in conformance with seismic requirements of the City of Oakland Building Code and other requirements of the Uniform Building Code. Taken together, these policies and procedures of the City mitigate impacts resulting from rupture of a known earthquake fault, ground shaking, or seismic-related ground failure to a level of less than significant.

Erosion

Potential Impact

Potential impacts related to soil erosion and loss of topsoil could occur during site development or construction activities associated with specific Redevelopment Plan implementation activity. Soil erosion can increase sediment levels in downstream channels, degrading water quality and restricting the capacity of culverts and storm drain pipelines.

Previously Identified Mitigation Measures

The following General Plan policies, as derived from the LUTE EIR (page III.K-17), would apply to all applicable Redevelopment Plan implementation activity within the Project Area.

LUTE EIR, Policy CO-1.1: Regulate new development in a manner which protects soil from degradation and misuse or other activities which significantly reduce its ability to support plant and animal

life. Design all construction activities to ensure that soil is well secured so that unnecessary erosion, siltation of streams, and sedimentation of water bodies does not occur.

LUTE EIR, Policy CO-2.4: Minimize hillside cuts and fills and the removal of desirable vegetation. Limit large scale grading to those areas where it is essential for development. Where hillside grading does occur, reshape the terrain in smooth, natural appearing contours rather than flat, terraced benches. Immediately replant and re-seed graded areas to reduce soil loss.

LUTE EIR, Action CO-2.4.1: Review the grading ordinance every five years and revise it when necessary to keep it current with new knowledge of construction methods.

Additionally, in accordance with the City of Oakland's Grading Ordinance[6] and Sediment and Erosion Control Ordinance,[7] grading permits are required for all earthwork that provides for the movement of greater than 50 cubic yards of soil, and preparation of a sediment and erosion control plan where appropriate. Sediment and erosion control plans are to be submitted to the Building Services Division for approval prior to the issuance of grading and building permits. Typical conditions of grading permit approvals include confining excavation and grading operations as much as possible to the dry season in order to avoid erosion of disturbed soils. Construction sites are also subject to the California Regional Water Quality Control Board requirements under the National Pollution Discharge Elimination System (NPDES) permit program for stormwater discharge. This program, implemented through the Alameda Countywide Clean Water Program, includes specific requirements for construction sites to prevent stormwater pollution and to protect creeks and downstream receiving waters in keeping with federal and state water quality requirements.

As determined in the previously prepared EIR, implementation of these policies, ordinances and regulations would effectively mitigate potentially significant erosion and sedimentation impacts to less-than-significant levels.

Soil Hazards

Potential Impact

Soils within the Project Area, particularly those that are within the planning area of the Oakland Estuary Policy Plan, have been characterized as having moderate to severe development limitations due to expansive or unstable soils. These soil types can result in subsidence and differential settlement potentially leading to cracked or damaged structures and infrastructure, unless appropriate engineering practices are implemented.

Previously Identified Mitigation Measures

The following General Plan policies as derived from the *Estuary Policy Plan EIR* (page III.K-10) would apply to all applicable Redevelopment Plan implementation activity within the Estuary

[6] Ordinance No. 10312.

[7] Ordinance No. 10446.

Policy Plan portion of the Project Area, and other areas which may be susceptible to similar soils hazards.

Estuary Policy Plan EIR, Policy CO-2.3: Require development on fill soils to make special provisions to safeguard against subsidence and seismic hazards.

Estuary Policy Plan EIR, Action CO-1.1.3: Consider soil constraints such as shrink-swell and low soil strength in the design of buildings and roads. Suitable base material and drainage provisions should be incorporated where necessary.

Additionally, all new development projects within the Project Area, including those in furtherance of the Redevelopment Plan, will be required to submit detailed geotechnical studies and engineering drawings to the Building Services Division prior to excavation, grading or construction activity. These requirements are in accordance with standard City of Oakland practice under the City of Oakland Building Code and the applicable provisions of the Uniform Building Code.

As determined in the previously prepared EIR, implementation of these policies, ordinances and regulatory requirements would reduce all potential impacts due to unstable or expansive soils to a less-than-significant level.

Hydrology

Use of Groundwater

The East Bay Plain is an important groundwater basin underlying the Project Area and the City of Oakland, extending from Richmond to Hayward. This basin is identified for municipal, industrial and agricultural water supply by the Regional Water Quality Control Board, and the East Bay Municipal Utility District (the major water purveyor for all of Oakland including the Project Area) is currently conducting studies to determine the feasibility of using groundwater aquifers south of the Project Area for storage and extraction. However, the existing and potential future use of groundwater would not be changed as a result of implementation of the Redevelopment Plan, since the groundwater supply would not be affected by any development activities. All redevelopment would occur in previously developed areas and would not affect any recharge areas.

Inundation by Seiche, Tsunami, or Mudflow

The Project Area is not mapped within an area susceptible to mud flows, seiches, or tsunamis (City of Oakland, 1974).

Flooding from Dam or Reservoir Failure

Flooding could occur as a result of dam failure at one of the reservoirs located within the City upstream of the Project Area. The East Bay Municipal Utility District has four reservoirs located to the east (topographically higher) of the Project Area that could potentially cause flooding within the Project Area in the event of failure. However, flood waters would normally follow existing streambeds or drainage courses, and not likely to affect the Project Area. Separate

studies have been undertaken by the East Bay Municipal Utility District to estimate potential dangers from flooding due to dam failure (City of Oakland, 1974).

Flooding

Potential Impacts

Flood hazard zones have been mapped by the Federal Emergency Management Agency (FEMA) to show areas within the City that would be subject to inundation during a 100-year flood. A 100-year flood represents an unusually high flood level that would be expected to occur once in 100 years or, stated another way, where there would be one-percent chance of reaching this flood level each year. According to the City of Oakland General Plan, Environmental Hazards Element (City of Oakland, 1974), extensive areas of Oakland would be inundated during a 100-year flood, although flooding would occur only as sheet flow with depths of several inches in most areas.

Potential impacts related to flooding would result from Redevelopment Plan projects, programs or other activities at sites within the Project Area that are mapped as being susceptible to 100-year flood events. Within the Project Area, only the Lake Merritt Channel and the waterfront along Embarcadero Cove are shown on FEMA Flood Insurance Rate Maps (FIRM) as being susceptible to a 100-year flood event. Other parts of the Project Area are mapped as being within the even less-frequently flooded 500-year flood hazard zones. Those areas subject to the 500-year flood hazard include the area around Peralta Creek in the Fruitvale/San Antonio subarea, and the area around Arroyo Viejo between International Boulevard and Foothill Boulevard and between 73rd Avenue and 84th Avenue in the Central East subarea.

Previously Identified Mitigation Measures

The Initial Study for the LUTE EIR (LUTE EIR, Appendix 1, page 6) indicates that flooding hazards are a potentially significant effect associated with new development, particularly along the Oakland shoreline. It indicates that environmental review will be required for specific major projects along the waterfront, with mitigation measures for flooding determined as needed depending on the site and characteristics of the project. It also indicates that further mitigation is required by policies of other General Plan elements. The City of Oakland Environmental Hazards Element (City of Oakland, 1974, page 49) states that:

> *All new construction or any major improvements to existing structures should be built at a level equal to or higher than the 100-year flood elevation. The developer or property owner shall be responsible for demonstrating that the elevation of the proposed development would be above the 100-year flood.*

The City of Oakland implements this practice by requiring that detailed architectural and engineering drawings for projects located in a 100-year flood zone shall be submitted to the Building Services Division prior to construction. The Building Services Division ensures that all structures are built at a level equal to or higher than the 100-year flood elevation, in accordance with standard City of Oakland practice, the requirements of the City of Oakland Building Code and the applicable provisions of the Uniform Building Code. Continued compliance with this practice will reduce all potential impacts due to flooding to a less-than-significant level.

Mineral Resources

Implementation of the Redevelopment Plan would not result in the loss of availability of a known mineral resource of value to the region and the residents of the state. It would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The Project Area is an existing urbanized part of the City of Oakland. There are no locally or regionally important mineral resources delineated within the Project Area.

Population and Housing

Housing or Business Displacement

Implementation of the Redevelopment Plan would not result in the displacement of substantial numbers of existing housing or populations that would necessitate the construction of replacement housing elsewhere. However, the Redevelopment Plan's implementation projects, programs and other activities do include the potential for voluntary purchase, negotiated purchase or use of eminent domain to assist in selective land assembly. Such land assembly programs may be used to assist private, public or non-profit developers in assembling small, underutilized and/or poorly configured parcels of property into sites suitable for new development. If the Redevelopment Agency chooses to participate in the acquisition of property through such programs, the Agency will be required to provide relocation assistance pursuant to California State Housing and Community Development regulations[8] and by the City of Oakland Redevelopment Agency guidelines as adopted in the Redevelopment Plan. These regulations and guidelines ensure that uniform, fair and equitable treatment is afforded to displaced businesses or residents as a result of the Redevelopment Agency's land assembly and relocation program. State regulations provide that:

- no eligible person can be required to move from a dwelling unit unless, within a reasonable time prior to displacement, a comparable replacement dwelling is made available,
- relocation assistance including moving expenses, information and referrals, services to ensure nondiscrimination and other types of assistance for eligible residents are made available, and
- displaced businesses are entitled to relocation payments for actual moving expenses, direct loss of tangible property, expenses for searching for a replacement business and expenses to reestablish a displaced business at its new location.

[8] California Code of Regulations, Title 25, Section 6000 *et seq.*

Cumulative Impacts

Introduction

Cumulative effects of the Project have been addressed by topic area in previous chapters of this document. These cumulative effects are summarized and presented together in the following section of this chapter.

CEQA defines cumulative impacts as "two or more individual effects which, when taken together, are considerable, or which can compound or increase other environmental impacts" (CEQA Guidelines, Section 15355). A cumulative analysis is required in EIRs to provide decision-makers and the public with a broader context of the potential environmental effects of a proposed project or program. An individual project, in and of itself, may generate insignificant impacts; however, in combination with other related projects, these cumulative effects may be significant (CEQA Guidelines, Section 15130). Evaluation of cumulative effects should reflect the severity of impacts as well as the likelihood of their occurrence, but the level of detail need not be as great as for evaluation of project-specific impacts. Section 15130 of the *CEQA Guidelines* provides direction regarding cumulative impact analysis as follows:

- An EIR should not discuss cumulative impacts that do not result in part from the proposed action.
- A lead agency may determine that an identified cumulative impact is less than significant, and shall briefly identify facts and analysis in the EIR supporting its determination.
- A lead agency may determine that an action's incremental effect is not cumulatively considerable, and therefore is not significant, and shall briefly describe in the EIR the basis of its determination.
- A lead agency may determine that an action's cumulatively considerable contribution to a significant cumulative impact may be rendered less than cumulatively considerable and therefore residually not significant, if the action implements or funds its fair share of a mitigation measure or measures designed to alleviate the cumulative impact, and shall identify facts and provide analysis supporting its determination.

Cumulative Impact Analysis Methodology

To analyze cumulative impacts for each environmental factor, a lead agency may elect to use a list of other past, current, and probable future projects, including those outside the control of the agency. A lead agency may also elect to use a summary of projections from adopted planning documents (CEQA Guidelines, Section 15130). This EIR relies on projections from adopted planning documents for conducting the cumulative impact analysis. The planning documents used in this analysis are identified below. The time horizon for the cumulative analysis is the year 2020. The physical scope of the analysis generally encompasses the City of Oakland and adjacent jurisdictions.

- *City of Oakland General Plan* last updated to include Estuary Policy Plan Element in 1999. Used for cumulative impact analysis related to land use, traffic, air quality, noise and public services.
- Central City East Cumulative Growth Scenario Update, including an update of existing and future economic and land use projections (included in Appendix B). Update completed October 2002. Used for cumulative impact analysis related to land use, traffic and air quality.
- *Projections 2002* prepared by the Association of Bay Area Governments (2001). This demographic projection for the nine Bay Area counties through 2025 was used for cumulative analyses related to traffic, air quality, noise, population/employment/housing, and public services.
- General Plans for the cities of Alameda and San Leandro.

Potentially Significant Cumulative Impacts

As indicated in previous chapters of this EIR, implementation of the Redevelopment Plan's projects, programs and other activities in and of itself may generate insignificant impacts related to the following topics but, in combination with other related projects, may contribute to cumulative effects that may be significant. The following section of this EIR identifies those cumulative effects to which the Project's contribution may be considerable. It also identifies, where available, the actions that the subsequent Redevelopment Plan projects and programs should implement or fund as their share of a mitigation measure or measures designed to alleviate the cumulative impact.

Traffic

On a cumulative basis, the addition of new residents and businesses to the Project Area, as projected under the General Plan and as may be facilitated or assisted by implementation of the Redevelopment Plan's projects, programs and other activities, will generate new sources of traffic. This traffic, when added to other anticipated cumulative traffic levels, would result in potentially significant cumulative impacts related to the following:

- causing the level of service of signalized intersections to degrade to worse than LOS D at intersections located outside the Downtown area; causing the total intersection average delay to increase by 4 seconds at a signalized intersection outside the Downtown area that would otherwise operate at LOS E; and causing total intersection average vehicle delay to increase by more than 2 seconds at signalized intersections that would operate at LOS F;
- adding more than 10 vehicles to non-signalized intersections where Caltrans peak hour volume warrants would be satisfied;
- increasing average ridership on AC Transit by more than 3%; and
- increasing the peak hour average ridership at the Lake Merritt, Fruitvale, and Coliseum BART stations by 3% where average waiting time at fare gates could exceed 1 minute.

Fair Share Mitigation Measures

The following mitigation measures are recommended to address the contribution of traffic resulting from implementation of the Redevelopment Plans' projects, programs and other activities toward cumulative traffic impacts.

- **Mitigation Measure 5.2A: Modify Traffic Signal Phasing at the High Street / International Boulevard Intersection.** Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost to provide protected left-turn phasing for the turn lanes on International Boulevard. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.

- **Mitigation Measure 5.2B: Add a Right-Turn Lane at the 73rd Avenue & Bancroft Avenue Intersection**. Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost to provide a right-turn lane for eastbound traffic on Bancroft Avenue at 73rd Street. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.

- **Mitigation Measure 5.2C: Add a Left-Turn Lane at the 73rd Avenue & MacArthur/Foothill Boulevard Intersection.** Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost to provide a second left-turn lane for northbound traffic on 73rd Street at MacArthur/Foothill Boulevard and increase the signal cycle length to 104 seconds. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.

- **Mitigation Measure 5.2D: Increase the Traffic Signal Cycle Length at the 98th Avenue & MacArthur Boulevard Intersection.** Individual development projects pursuant to implementation of the Redevelopment Plan's programs or other activities within the Project Area shall fund a pro-rata fair share of the cost to increase the signal cycle length to 82 seconds. Alternatively, at the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used to subsidize these fair-share funding contributions or to implement this improvement.

- **Mitigation Measure 5.4: Coordination with AC Transit.** The City of Oakland shall coordinate with AC Transit to ensure that the average load factor on any specific AC Transit line does not exceed 125 percent over a peak thirty-minute period. At the Redevelopment Agency's sole discretion, redevelopment financing capabilities could potentially be used to assist AC Transit in meeting this operational threshold.

- **Mitigation Measure 5.5: Coordination with BART.** The City of Oakland shall coordinate with BART to ensure that adequate fare gate capacity is available at the Fruitvale BART station to accommodate anticipated increases in ridership associated with projected growth and development within the Project Area. To the extent that adequate capacity may be reliant on the addition of one or more new fare gates at the station, the

Redevelopment Agency, at its sole discretion, may consider utilizing redevelopment financing capabilities to assist in the financing of such station improvements.

With the exception of traffic congestion at the intersection of High Street/International Boulevard, implementation of these mitigation measures can reduce the cumulative traffic impacts associated with projected growth and development within the Project Area to levels of *less than significant.* The Redevelopment Plan's projects, programs and other implementation activities are anticipated to assist in, or to facilitate, the projected growth and development within the Project Area. Redevelopment Agency participation in the implementation of those measures identified above would offset the contribution of traffic due to implementation of the Redevelopment Plan to a level that is less than cumulatively considerable.

Hazardous Materials

Implementation of the Redevelopment Plan's projects, programs and other activities would likely result in a cumulative increase in, and expediting of, hazardous materials investigations and remediation activities in the Project Area. This could result in cumulative increases in potential short-term hazardous materials impacts to public health and the environment associated with site remediation and transportation of hazardous waste. However, compliance with existing federal, state and local hazardous materials and public health and safety regulations would minimize potential exposure of the public and the environment to hazardous materials during site investigation/remediation activities, during any required off-site transport of hazardous wastes, and after the completion of any development activities. Compliance with these regulations would protect public health and the environment regardless of any increase in number or extent of site investigation/remediations. Furthermore, all site remediation activities would provide a long-term benefit to the area by eliminating or restricting future exposure to hazardous materials. Therefore, the cumulative impacts due to increases in site investigation/remediation activities would be less than significant.

Water Supply

On a cumulative and regional basis, the addition of new urban infill housing and new employment opportunities arising from projected growth and development within the Project Area represents less than 1% of the increase in EBMUD's total projected customer water demand over the next 20 years. Such urban infill development would represent a more efficient land use pattern for the use of water than a comparable level of growth and development in outlying communities, where per capita water consumption levels are traditionally much higher. Therefore, such growth and development, as may be assisted or facilitated by implementation of the Redevelopment Plan, would have a less than considerable impact on cumulative water demands. Nevertheless, in order to meet all of its cumulative water demands, EBMUD will need to achieve ambitious water conservation and reclamation programs throughout its service area. These programs are identified in the EBMUD Water Supply Management Program (WSMP). The City of Oakland General Plan Open Space, Conservation and Recreation Element (OSCAR) includes policies and actions intended to reduce impacts on potable water consumption within all parts of the City, primarily by embarking on aggressive water conservation and reclamation measures. Implementation activities of the Redevelopment Plan will be required to be consistent

with, and assist in further implementation of, water conservation policies and actions to reduce the cumulative effects of increased water supply.

Parks and Recreation

The addition of new residents to the Project Area, particularly to those portions of the Project Area not adjacent to or connected to the Estuary planning area, will contribute to the current deficit in the availability of parks and recreation facilities. This is especially true in the Elmhurst and Central City East subareas, where existing residents are already underserved by park facilities.

Fair Share Mitigation Measures

The following mitigation measures are recommended to address the increased demand for parks and recreation services associated with projected growth and development within the Project Area, as may be assisted or facilitated by implementation of the Redevelopment Plans' projects, programs and other activities.

- **Mitigation Measure 10.1A**: The City of Oakland Redevelopment Agency shall coordinate with the Office of Parks and Recreation to develop and initiate a land acquisition program for new parks in underserved areas. As with schools, the biggest challenge will be to find available land in appropriate areas to serve new residents. The Redevelopment Agency may be able to assist through the use of redevelopment tools in the identification and acquisition of appropriate new park sites.
- **Mitigation Measure 10.1B**: The City of Oakland Redevelopment Agency shall coordinate with the City Office of Parks and Recreation and the Oakland Unified School District (OUSD), local churches, private recreation providers and local non-profit agencies to promote joint use agreements and joint use partnerships that maximize the use of non-park recreational facilities.
- **Mitigation Measure 10.1C**: The City of Oakland and its Redevelopment Agency shall identify and pursue local funding opportunities to augment existing General Fund monies. At the Redevelopment Agency's sole discretion, redevelopment funds could potentially be used for parkland acquisitions and improvements.

As part of the 1996 Open Space, Conservation and Recreation (OSCAR) Element, the City of Oakland adopted policies and actions associated with park and recreation facilities. The *OSCAR Element Mitigated Negative Declaration* (City of Oakland, 1996) concluded that these policies would reduce the cumulative parks and recreation impacts that could occur as a result of development pursuant to the Land Use and Transportation Element (LUTE) to levels of *less than significant.* The Redevelopment Plan's projects, programs and other implementation activities are anticipated to assist in, or to facilitate, the projected growth and development as projected under the LUTE within the Project Area. Redevelopment Agency participation in the implementation of those measures identified above would offset the increased parks and recreation demand due to implementation of the Redevelopment Plan to a level that is less than cumulatively considerable.

Schools

On a cumulative basis, the addition of new students within the Project Area will contribute to a current deficit in the availability of classrooms to serve student populations, particularly in the Castlemont and Fremont high school attendance areas (HSAAs). The addition of new students associated with the projected growth and development for the Project area would increase enrollment in the already overcrowded school facilities within both of these HSAAs, contributing to this cumulatively considerable classroom capacity deficit.

Fair Share Mitigation Measures

The following mitigation measures are recommended to address the increased demand for schools that is associated with projected growth and development within the Project Area. This projected growth and development may be assisted or facilitated by implementation of the Redevelopment Plans' projects, programs and other activities.

- **Mitigation Measure 10.2A**: The City of Oakland and its Redevelopment Agency shall coordinate with the OUSD to develop and initiate a land acquisition program for new schools. The School District's biggest challenge will be to find available land in appropriate areas to serve new student populations. The City and Agency may be able to assist, through the use of redevelopment tools, in the identification and acquisition of appropriate sites.

- **Mitigation Measure 10.2B**: The City of Oakland, its Redevelopment Agency, and public and private land developers within the Project Area shall work with the OUSD to identify possible joint use opportunities. Joint use may take many different forms. Examples of joint use may include the lease or sale of air rights above or below existing school grounds or facilities to private developers, or joint venturing with private developers, public entities or other parties in the development of surplus school property. Other standard joint use opportunities include joint ventures with the City parks department in the development of shared school grounds/public park space.

- **Mitigation Measure 10.2C**: The City of Oakland and its Redevelopment Agency shall coordinate with the OUSD to identify and pursue local funding opportunities to match potential state grants. At the Redevelopment Agency's sole discretion, local funds could potentially include the use of redevelopment funds.

With implementation of these mitigation measures, the Redevelopment Plan's contribution to the cumulative effect of school overcrowding can be mitigated to a level of *less than cumulatively considerable.* As part of the 1999 Land Use and Transportation Element (LUTE) and its associated EIR, the City of Oakland adopted policies, actions and mitigation measures associated with school facilities. The LUTE EIR (City of Oakland, October 1997) concluded that these policies and additional mitigation measures would reduce the cumulative school impacts that would occur as a result of development pursuant to the LUTE to levels of *less than significant.* The Redevelopment Plan's projects, programs and other implementation activities are anticipated to assist in, or to facilitate, the projected growth and development as projected under the LUTE within the Project Area. Redevelopment Agency participation in the implementation of those measures identified above would offset the increased school demand due to implementation of the Redevelopment Plan to a level that is *less than cumulatively considerable*.

Significant, Irreversible Environmental Changes of Redevelopment

According to CEQA Guidelines, Section 15126.2(c), irreversible environmental changes may include the following:

- The use of non-renewable resources may be considered irreversible since a large commitment of such resources makes their removal or non-use thereafter unlikely. Irretrievable commitments of resources should be evaluated to ensure consumption is justified.

- Primary impacts and, in particular, secondary impacts (such as a new roadway that provides access to a previously inaccessible area) that generally commit future generations to similar uses.

- Irreversible damage resulting from environmental accidents associated with the project.

Commitment of non-renewable energy resources including fossil-based fuels products would be permanently committed during implementation of certain Redevelopment Plan implementation projects, programs and other activities. The amount of energy consumed to implement the Redevelopment Plan is not expected to be unusually large or wasteful, and its irreversible commitment is not considered significant. Although implementation of the Redevelopment Plan would result in the re-commitment of approximately 3,340 acres of land to a variety of urban uses, the majority of this land is currently urbanized and/or already developed with urban uses. This irreversible commitment of land to urban uses is a less-than-significant effect of the Redevelopment Plan's implementation. Neither the Redevelopment Plan nor any of its anticipated projects, programs and other implementation activities include specific actions that may result in environmental accidents with irreversible damage.

Growth-Inducing Effects

According to CEQA Guidelines, Section 15126.2(d), an EIR must discuss ways in which the project may foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. This discussion should include aspects of the project that would remove obstacles to population growth, or which may encourage and facilitate other activities that may significantly affect the environment. Growth inducement is an inherent impact of redevelopment. The basic premise of the Redevelopment Plan is to foster economic growth by improving business, employment and housing opportunities.

Job generation is a key benefit of implementation of the Redevelopment Plan. Job growth anticipated under the Redevelopment Plan, as may be facilitated by its projects, programs and other implementation activities, would result in modest amounts of increased employment opportunities (approximately 2,210 net new jobs, or an approximate 15% increase in current jobs). This amount of job growth falls well within the estimates of employment growth

projected for Oakland through 2020 by the Association of Bay Area Governments. Persons who already reside in the region would most likely fill these new employment opportunities. The types of new jobs projected for the Project Area are not anticipated to induce growth by attracting new employees from outside the area.

Another key benefit associated with implementation of the Redevelopment Plan is increased housing opportunities. The 1,440 net new housing opportunities projected for the Project Area, as may be facilitated by implementation of the Redevelopment Plan, fall well within the estimates of housing and population growth projected for Oakland through 2020 by the Association of Bay Area Governments. Additionally, implementation of the Redevelopment Plan would generate funds through a 25% tax increment set-aside, to be used in a manner that would foster increased opportunities for affordable housing. The amount of new housing units projected for the Project Area, including any additional units of affordable housing that may be created through implementation of the Redevelopment Plan's projects, programs or other activities, would serve an unmet demand for housing, and in particular an affordable housing demand, within Oakland. Implementation of the Redevelopment Plan would therefore not induce significant new growth in housing or population.

The modest amount of employment and housing growth projected for the Project Area would induce a commensurate modest increases in demand for infrastructure and public services (see Chapters 9 and 10 of this EIR). However, new development projects within the Project Area would be "infill" development. New employment and housing opportunities, as may be facilitated by implementation of the Redevelopment Plan, would be located in an area surrounded by urban development, and already served by existing utilities and public services. While utilities and service systems may need to be upgraded to serve such growth and development, the upgrading of utilities and service systems would be designed to serve only the amount of growth and development as projected under the Land Use and Transportation Element of the General Plan. Utilities and/or service improvements necessary to provide service to meet this projected demand would not be extended into undeveloped areas outside the Project Area. Nor would they include excess capacity that could allow additional growth beyond that envisioned under the General Plan. As such, the provision of additional infrastructure capacity to serve the Project Area would not induce growth beyond that already planned, and would not be significant.

Implementation of the Redevelopment Plan would also facilitate the intensification of land uses, resulting in the need to expand or improve upon existing transportation systems, including improved transit operations and intersection capacities (see Chapter 5 of this EIR). These transportation improvements would substantially increase efficiencies within the Project Area, but would also be offset by increased traffic and transit use demands. Therefore, the growth-inducing impact of transportation and transit improvements which may be part of the Redevelopment Plan's implementation, or identified as necessary to mitigate impacts of growth and development within the Project Area, is considered less than significant.

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Alternatives

Introduction

The California Environmental Quality Act (CEQA, Section 15126d) requires an EIR to include a discussion of a reasonable range of alternatives to the proposed project "which could feasibly attain the basic objectives of the project" and an evaluation of their comparative merits. CEQA also requires that the EIR explain why specific project alternatives that were considered at one time in developing the project proposal were rejected in favor of the project proposal. The selection of alternatives is to be guided by the provision of reasonable choices, and the promotion of informed decision-making and informed public participation. An EIR need not evaluate alternatives that would have effects that cannot be determined, or for which implementation would be remote and speculative.

Among the alternatives to be addressed, CEQA Sections 15126d(2) and 15126d(5) require that the EIR evaluate the "No Project" alternative, and identify an "environmentally superior" alternative based on comparative analysis among project alternatives. The discussion of alternatives is intended to focus on those alternatives that are capable of avoiding any significant environmental impacts or reducing them to a level of less than significant. Such alternatives should be discussed, even if they may "impede to some degree the attainment of the project objectives, or would be more costly" (CEQA, Section 15126d(3)).

Project Objectives

In order to compare the alternatives to the Project objectives as set forth by the Redevelopment Agency and the Project Area Committee, the objectives of the Project are re-stated below:

1. Eliminate blighting influences and correct environmental deficiencies, including, among others, buildings in which it is unsafe or unhealthy for persons to live or work, incompatible or uneconomic land uses, and small and irregular lots.

2. Assemble land into parcels suitable for modern integrated development, with pedestrian and vehicular circulation.

3. Replan, redesign or redevelop areas that are stagnant or improperly utilized.

4. Provide opportunities for participation by owners and tenants in revitalization of their properties.

5. Strengthen retail and other commercial functions in the Project Area.
6. Strengthen the economic base of the Project Area by stimulating new investment.
7. Expand employment opportunities.
8. Provide an environment for social and economic growth.
9. Expand and improve housing for low- and moderate-income households.
10. Install new, or replace existing public improvements, facilities and utilities in areas that are currently inadequately served.

Factors in Selecting Alternatives

Variables under the Redevelopment Plan (i.e., the Project)

The proposed Redevelopment Plan consists of both additional and alternative means by which to enhance the financing capabilities, personnel resources and regulatory powers of the City to assist in elimination of blight and the achievement of economic revitalization of the Project Area.

- The additional financing capabilities included in the Redevelopment Plan consist of establishment of tax increment financing. Under this financing program, enabled by state law, the increment of growth in property tax assessment from within the Project Area is deposited into a fund of the Redevelopment Agency. The Agency may then use this fund to pay the principal of and interest on loans, monies advanced to, or indebtedness incurred by the Redevelopment Agency to finance or refinance, in whole or in part, the Redevelopment Plan.[1]
- The additional personnel and human resources assumed under the Redevelopment Plan include the City of Oakland Redevelopment Agency and its staff, as well as the Project Area Committee comprised of residents, businesses and community organizations from the Project Area. The Redevelopment Plan assumes a commitment of time and effort by the Agency and its staff will be applied toward those projects and programs identified in the Redevelopment Plan and its 5-Year Implementation Plan, together with the input and guidance of the Project Area Committee.
- Also, the Redevelopment Plan would enable use of additional regulatory capabilities and powers by the Redevelopment Agency as authorized under California Redevelopment Law. Examples of such capabilities and powers include the ability to purchase, sell and/or develop property; provide for the relocation of displaced residents and/or businesses; and to monitor and cause hazardous materials to be removed (e.g., the Polanco Act; see Chapter 9: Hazardous Materials).

[1] Pursuant to Article XVI, Section 16 of the California Constitution

Application of Variables under the Project

Under the proposed Redevelopment Plan the financing, personnel and regulatory powers of California Redevelopment Law would be used by the Redevelopment Agency to implement a number of potential projects or programs. These projects and programs, more specifically described in Chapter 3: Project Description of this EIR, include property improvement programs, public infrastructure improvement programs, assistance in the redevelopment of specific properties, and the provision of additional affordable housing opportunities. Under California Redevelopment Law and local ordinance, 25% of the tax increment funds generated from the Project Area must be used by the Agency to increase and improve the supply of affordable housing for persons of low and moderate income.

Application of Variables under the Alternatives

In addition to the CEQA-mandated No Project Alternative, the alternatives presented below are defined as a re-focusing of the capabilities and efforts of the Redevelopment Agency to achieve greater implementation of one or more goals of the Redevelopment Plan, with potentially less implementation of other goals. These alternatives have been selected to satisfy CEQA requirements for a No Project Alternative, to enable informed decision-making, and to define a reasonable range of alternatives that would permit a reasoned choice.

Alternatives Previously Considered

In developing alternatives for this analysis, the EIR authors referred to the following previously prepared EIRs and environmental documents:

- *Oakland General Plan Land Use and Transportation Element EIR* (SCH #97062089), prepared for the City of Oakland by Environmental Science Associates, March 1998; and
- *Oakland Estuary Plan EIR* (SCH #98031116), prepared for the City of Oakland and Port of Oakland by Environmental Science Associates, November 1998;

CEQA Guidelines Section 15126.6(f) states, "where a previous environmental document has sufficiently analyzed a range of reasonable alternatives and environmental impacts for projects with the same basic purpose, the lead agency should review the previous documents. The EIR may rely on the previous documents to help it assess the feasibility of potential project alternatives to the extent that the circumstances remain substantially the same as they relate to the alternatives." Consistent with this guideline, the alternatives considered in these previous documents have been relied on in this EIR, and have not been re-analyzed. The alternatives analysis from these previous EIR are hereby incorporated by reference. The list of alternatives previously analyzed include:

- A No Project Estuary Plan alternative in which the previous Waterfont Mixed Use District land use designations, City zoning and Port development standards would remain in effect,
- An Environmentally Superior Estuary Plan alternative in which specific strategies of the Estuary Plan are altered with the intent of reducing environmental impacts,

- A No Project LUTE alternative in which the 1980 General Plan land uses designations would remain in place,
- An Alternative Designation LUTE alternative which considered alternative land uses for various sites as considered during preparation of the LUTE, and
- An Environmentally Superior LUTE alternative in which specified lower levels of development in areas with environmental constraints.

Alternatives Description and Analysis

Alternative #1, No Project

Description of the Alternative

Under the No Project Alternative, the proposed Redevelopment Plan would not be adopted. Future land use and development within the Project Area would continue to be subject to the policies of the City of Oakland General Plan and to applicable land use regulations as contained in the City zoning code. Without adoption of the Redevelopment Plan, no tax increment would be generated and property taxes would continue to be distributed according to current formulas.

As noted in Chapter 4: Land Use and Planning Policy, the proposed Redevelopment Plan is consistent with the General Plan including but not limited to the LUTE, the Estuary Policy Plan and the Housing Element. Given this consistency, one definition of the No Project Alternative is the ongoing implementation of the City of Oakland General Plan. This definition would include generally the same level of growth and development as projected for the Project (i.e., the development of approximately 1,440 net new households, an increase in population of approximately 3,780 people and approximately 2,210 net new employment opportunities). These projections represent the aggregate of all development anticipated to occur within the Project Area over the next 20-year period.

However, another definition of the No Project Alternative is recognition that enhancement of the Project Area's function, appearance and economic vitality would not be possible through the normal workings of government or the private sector alone. Under this definition, it is only through adoption of the Redevelopment Plan and implementation of its financial, regulatory and other assistance programs that the physical and economic burdens caused by blighted conditions in the Project Area can be overcome. These blighted conditions prevent full utilization of the Project Area and thus full implementation of the General Plan. Without the direct or indirect assistance of the Redevelopment Plan, a subset of subsequent individual projects that comprise full implementation of the General Plan may not be feasible.

Under either definition of the No Project Alternative, the funding mechanism for programs and projects intended to alleviate blight and revitalize the local economy via tax increment financing would not be available.

Environmental Effects

Under the first definition of the No Project Alternative, the growth and development of the Project Area would be the same as projected for the proposed Project. Similarly, the potential environmental consequences associated with this growth and development would be the same as identified in this EIR. However, the potential benefits of redevelopment in assisting with alleviation of these effects would not be realized. For example, no tax increment financing would be available for potential use in funding the preservation of historic resources, implementation of roadway or other infrastructure improvements, or for other public benefits that include reduction of environmental impacts. Additionally, other redevelopment tools, such as the Polanco Act (see discussion under Chapter 9: Hazardous Materials), would not be available for use in remediation of existing environmental hazards.

Under the second definition of the No Project Alternative, the existing economic conditions within the Project Area would continue to suppress economic development and property investment in the area. Although it would be unreasonable to assume that no growth and development would occur, it is reasonable to assume that a subset of the growth and development that will occur would be offset to some degree by increased vacancies, deterioration and deficiencies in housing stock, and other forms of blight. Under this definition, the environmental consequence associated with increased traffic generation, emission of air pollutants, increased noise levels and increased demands on public services and utilities would not be as substantial as indicated in this EIR and may even more closely resemble the status quo.

However, per the first definition of the No Project Alternative, the potential environmental benefits of redevelopment in assisting with alleviation of environmental effects would not be realized. Additionally, continued or exacerbated blighted conditions would result in more significant adverse effects on visual quality.

Implications on Significant Unavoidable Effects

With or without the Redevelopment Plan, the Estuary Policy Plan anticipates demolition of the 9th Avenue Terminal, a structure determined potentially eligible for the National Register. Without changing current Estuary Plan policy, the No Project Alternative would not be capable of reducing or avoiding this significant environmental effect.

The other significant unavoidable impact identified in this EIR is the considerable contribution of Project-generated traffic to the intersection of High Street/International Boulevard. As indicated in Chapter 5: Transportation, this intersection is projected to operate at unacceptable level of service "F" conditions even without traffic generated by the Project. The Project's additional contribution of traffic to this intersection would exacerbate this condition. Under the No Project Alternative, this intersection would still operate at level of service "F," and no feasible mitigation measure has been identified in this EIR that would be capable of reducing this cumulative traffic impact to a less-than-significant level.

Conclusions

The No Project Alternative fulfills CEQA requirements for consideration of the effects of not approving or adopting the proposed Project. The No Project Alternative would not be capable of

accomplishing the basic Project objectives. The *Preliminary Report* (KMA 2002) indicates that enhancement of the Project Area's function, appearance and economic vitality would not be possible through the normal workings of government or the private sector alone.

The No Project Alternative may serve to reduce or avoid certain environmental consequences associated with growth and development. However, such growth and development is not precluded and, in fact, is permitted and encouraged under current policies and regulations. It is likely that under the No Project Alternative this growth and development would take longer to materialize and may occur in a more piecemeal and less coordinated manner.

The No Project Alternative is a feasible alternative and provides opportunities for reasonable decision-making.

Alternative #2, Reduced Project / No Residential Development Assistance

Description of the Alternative

Although there are many ways in which to reduce the extent of growth and development within the Project Area in a manner that could reduce environmental consequences, perhaps the most feasible approach would be to reduce increased housing growth. Under Alternative #2, a Redevelopment Plan would be approved, but it would be amended to eliminate those programs designed to assist in the creation of additional housing units within the Project Area.

Redevelopment Plan Components Retained

Under Alternative #2, many of the projects and programs included in the Redevelopment Plan would be retained. These programs would include those designed to assist and encourage rehabilitation and redevelopment of private commercial property, potentially including providing capital through loans, grants or other funding mechanisms; and other types of public programs to assist and support private commercial property improvements. This alternative would retain the potential for redevelopment assistance in alleviating deficiencies in many basic public infrastructure and facility systems including missing or damaged sidewalks, curbs and gutters, parks in need of renovation and a lack of public streetscape improvements. The emphasis of Redevelopment Agency efforts under this alternative would be commercial vitality, principally along the major transit corridors of Foothill Boulevard and MacArthur Boulevard.

Redevelopment Plan Components Not Retained

Under Alternative #2, redevelopment funds and other redevelopment tools would not be used to support public and/or private residential redevelopment projects such as selective land acquisition, environmental clearance and land disposition efforts. This alternative would not include the land assembly and relocation program or the public/private development program to the extent that these programs would assist in increased housing opportunities. The Affordable Housing Program, as required by state law and local ordinance, would still provide for 25% of the gross tax increment funds received by the Agency to be deposited into a fund used to assist in the production and preservation of affordable housing opportunities. This program could still be used to assist in making home ownership available to more low- and moderate-income residents, but would not be used to create new, additional affordable housing units in the Project Area.

Redevelopment law enables affordable housing funds generated from within the Project Area to be used elsewhere in the City.

As discussed above under the No Project Alternative, the proposed Redevelopment Plan is consistent with the General Plan. Given this consistency, even without redevelopment assistance, it could still be assumed that ongoing implementation of the City of Oakland General Plan would result in some level of residential growth and development, even if not the full approximately 1,440 net new households projected under the Project. However, it is reasonable to assume that the physical and economic burdens caused by blighted conditions in the Project Area would continue to suppress economic development and residential property investment. These economic conditions would likely result in increased housing vacancies, deterioration of existing housing and continued deficiencies in housing stock. These conditions would offset to some degree the residential growth and development that would likely occur without redevelopment assistance, and may closely resemble status quo for housing opportunities.

Environmental Effects

An increase in job opportunities and employment as assisted by redevelopment implementation activities under this alternative would result in environmental consequences similar to those identified for the Project, but to a less substantial degree. For example, the traffic generated by this alternative would not include the increased traffic projected for the housing component of the Project. This would result in nearly a 25% decrease in traffic generation, and would substantially lessen traffic impacts on regional roadways and local intersections. Commensurate with this reduction in trip generation, air emissions and traffic noise would also be substantially reduced under this alternative. With no new residential units constructed with the assistance of redevelopment, the demands on public services and infrastructure would also lessen as compared to the Project. This alternative may also focus more financial resources toward the preservation and restoration of existing housing stock in the Project Area, including older historic buildings, resulting in beneficial effects on historic resources.

Implications on Significant Unavoidable Effects

With or without the residential assistance programs of the Redevelopment Plan, the Estuary Policy Plan anticipates demolition of the 9th Avenue Terminal, a structure determined potentially eligible for the National Register. Without changing current Estuary Plan policy, Alternative #2 would not be capable of reducing or avoiding this significant environmental effect.

The other significant unavoidable impact of the Project identified in this EIR is the considerable contribution of Project-generated traffic to the intersection of High Street/International Boulevard. Under this alternative, the total traffic generated within the Project Area would be reduced by approximately 25%. This traffic reduction would likely be satisfactory to reduce this alternative's contribution to cumulative impacts at the High Street/International Boulevard intersection to less than cumulatively considerable. However, even under this alternative, this intersection would still operate at level of service "F," and no feasible mitigation measure has been identified in this EIR to reduce this cumulative effect to less than significant.

Conclusions

Alternative #2 would not be capable of accomplishing many of the basic project objectives. This alternative would limit the Redevelopment Agency's ability to re-plan, redesign or redevelop residential areas that are stagnant or improperly utilized. It would limit opportunities for participation by owners and tenants in revitalization of their properties. It would substantially reduce opportunities for stimulating new residential investment that could strengthen the economic base of the Project Area. This alternative would specifically not provide for the expansion of housing for low- and moderate-income households within the Project Area.

Although Alternative #2 would reduce certain significant environmental impacts associated with residential growth and development, such residential growth and development is not precluded and is, in fact, permitted and encouraged under current policies and regulations. The level of projected residential growth and development could potentially occur without benefit of the Redevelopment Plan's implementation projects, programs and other activities. This alternative would not assist the City in meeting its demand for new housing opportunities. To the extent that this housing demand is not met within the City via infill development and increased density, it is likely that this demand will then stimulate the need for additional housing development elsewhere in the region. To the extent that this 'displaced' residential development would not be located in infill housing areas, its resulting environmental impacts on traffic, air quality and public services and infrastructure would be equal to or greater than the impacts of the proposed Project.

Under this alternative, the potential tax increment revenue would be far less than anticipated under the Project, and it may not be feasible to meet many of the goals and objectives of the Redevelopment Plan without such funds.

Alternative #3, Parks and Recreation Focus

Description of the Alternative

In November of 2002, the voters of the City of Oakland passed the Oakland Clean Water, Safe Waterfront Parks and Recreation Trust Fund bond measure. This bond measure authorizes funding of improvements to parks, creeks and recreation facilities, including the acquisition of land for new parks and open space. The City anticipates selling approximately $198,250,000 in bonds to fund a broad range of physical improvements to existing parks, acquire land for new parks, develop new parks and recreation facilities, institute clean water protection measures, restore and rehabilitate existing recreation buildings, and implement creek and waterway protection and restoration projects.

Under Alternative #3, the Redevelopment Agency would focus its financial and personnel resources and redevelopment powers to assist in implementation of those projects and programs

included in this bond measure that are located within the Project Area. These projects and programs would include:[2]

- Replacing the 12th Street culvert at Lake Merritt Channel with an arched bridge to increase tidal flows into, and flushing of, Lake Merritt.
- Replacing the 12th Street viaduct with a new, 6-lane boulevard connection of 11th and 12th Street to 1st Avenue, between Oak Street and International Boulevard. Rather than a high-speed through street, 12th Street would become a major arterial with four new intersections created at 13th/14th Streets, 12th Street/14th Street, 12th Street/Kaiser Convention Center, and 12th Street/East 12th Street. The reconfiguration and realignment of this roadway will enable approximately 5 acres of land to be developed into the Lake Merritt Park, including a connection to Lake Merritt Channel.
- Replacement of the current pedestrian tunnels at 12th Street with a new bridge constructed with clearance for pedestrian and bicycles to pass under the street adjacent to the channel. On-street parking and bicycle lanes would be incorporated as feasible.
- Providing continuous public access from Jack London Square to Martin Luther King, Jr. Regional Shoreline, including linkages around the five bridges to Coast Guard Island and Alameda.
- Creating a new, 11-acre Crescent Park at the 9th Avenue Terminal.
- Constructing a new arched bridge to replace the existing culvert at 10th Street, thereby improving water quality and access for both boats and pedestrians along the Lake Merritt Channel.
- Relocating and re-designing the Lake Merritt flood control station under 7th and 8th Streets to improve water quality and open access along the Channel.
- Restoring and rehabilitating segments of Sausal Creek within the Project Area by creating natural meanders, stabilizing banks, removing failing structures and landscaping with native landscape materials.

These projects and programs have been fully funded via the bond measure. Redevelopment Agency funding would not be required for their implementation. Under this alternative, Redevelopment Agency funds could still be used to implement other projects and programs as described in the Redevelopment Plan.

Environmental Effects

The environmental consequences associated with implementation of this bond measure have been previously analyzed in the Addendum for the Oakland Clean Water, Safe Waterfront Parks and Recreation Trust Fund and its Initial Study (Addendum, City of Oakland, June 2002). The

[2] As described and defined in the Addendum for the Oakland Clean Water, Safe Waterfront Parks and Recreation Trust Fund Ballot Measure, City of Oakland, June 2002.

conclusions of this Addendum indicate that "the projects as proposed would create a beneficial impact on the environment through the rehabilitation, renovation and restoration of existing parks, recreation facilities and conservation areas in the City of Oakland. As such, the overall impact of these projects will better the environment through better water quality, restoration and expansion of habitat areas, and restoration of identified historic resources. In addition, it is noted that many of these proposed projects would otherwise be considered as exempt from further CEQA review under minor alterations to existing facilities, environmental restoration projects, minor changes to land, or restoration and rehabilitation of historic resources in compliance with the Secretary of the Interior's Guidelines" (City of Oakland, 2002, page 15). The Addendum also determined that these projects would not result in "new, significant environmental impacts that have not been previously identified in the LUTE EIR, the OSCAR Mitigated Negative Declaration, the Estuary Policy Plan EIR or the Coliseum Redevelopment Plan EIR. Further, there is no demonstrable increase in the severity of impacts, based on the project descriptions and information known at the time of the Addendum, from the levels that have been previously identified."

Implications on Significant Unavoidable Effects

Alternative #3 would specifically focus the efforts of the Redevelopment Agency to assist in creation of the new 11-acre Crescent Park at the site of the existing 9th Avenue Terminal building. Creation of this park will cause demolition of the 9th Avenue Terminal building – a structure determined potentially eligible for the National Register. This alternative would not be capable of reducing or avoiding this significant environmental effect.

Additionally, although this alternative would focus the efforts of the Redevelopment Agency on implementation of parks and open space improvements, residential and commercial growth and development within the Project Area would likely still occur, albeit at a potentially slower pace. This alternative would not preclude Redevelopment Agency funds to be used to assist in redevelopment and revitalization of the Project Area, including property investments for new and improved affordable housing opportunities and revitalized commercial corridors. Under this alternative, the intersection of High Street and International Boulevard would continue to operate at level of service "F," and no feasible mitigation measure has been identified in this EIR to reduce this cumulative impact to a less-than-significant level.

Conclusions

Alternative #3 could potentially reduce the effectiveness of the Redevelopment Agency to accomplish many of the Project objectives. This alternative would focus the Redevelopment Agency's personnel resources and redevelopment powers toward implementation of a discrete list of parks and open space improvements, potentially to the detriment of other projects and programs as identified in the Redevelopment Plan. The other objectives of the Redevelopment Plan would not be precluded under this alternative, but the Agency's ability to manage and effectively implement the wider array of redevelopment objectives as envisioned under the Project may be hindered by the narrower focus of this alternative.

This alternative would result in a beneficial impact on the environment through the rehabilitation, renovation and restoration of existing parks, recreation facilities and conservation areas in the City of Oakland. No new, significant environmental impacts that have not been

previously identified by the City in previous environmental review documents would result, nor would there be any demonstrable increase in the severity of impacts from the levels that have been previously identified.

This alternative could also be added-on to the currently proposed Project by expanding the Project objectives along with the responsibilities and implementation efforts of the Redevelopment Agency.

Alternatives Considered but Rejected

CEQA Guidelines, Section 1526 require that an EIR explain why specific project alternatives that were considered at one time in developing the Project proposal were rejected in favor of the current Project proposal. Specifically, three project alternatives have been considered but rejected by the City from further consideration. These alternatives and the reasons why they have been rejected are described below.

Estuary Policy Plan Amendment Alternative

The Oakland Estuary Policy Plan EIR included an evaluation of an environmentally superior alternative that had the specific intent of reducing environmental impacts associated with implementation of that plan. Under that alternative, the Estuary Plan would have been amended to maintain the existing warehouses and port-related activities at the 9th Avenue Terminal building. The proposed commercial, hotel and conference center and live/work lofts would have been deleted from the Oak-to-9th Illustrative Plan and the entire area would have been maintained with existing uses and open space. The 9th Avenue Terminal building would be preserved. When the Estuary Policy Plan was approved, the City of Oakland rejected this alternative for several reasons, including the following:

- The commercial, hotel conference center and live/work lofts are necessary to support the large investment proposed for expansion of park space and road improvement planned for the area. Elimination of those commercial enterprises would have limited the City and the Port's ability to finance other public improvements for the area.
- Redevelopment of historic terminals and port-related structures for public uses and activities would increase opportunities for the public to experience and enjoy the estuary and the water's edge.

This EIR does not identify any new environmental impacts as a result of the Project's implementation of the Estuary Policy Plan that have not already been disclosed in previous environmental review documents certified by the City. Thus, this EIR presents no new information that would justify the City's reconsideration of an amendment to the Estuary Plan, and this alternative has been rejected from further consideration.

Oakland General Plan LUTE Element Amendment Alternative

The *Oakland General Plan Land Use and Transportation Element (LUTE) EIR* included an evaluation of an environmentally superior alternative that would have added stronger policies regarding mitigation of impacts on air quality, transportation, fire protection and other adverse impacts of the LUTE. This alternative would have reduced the potential for new housing and employment development, and would have proposed more extensive retention and restoration along parts of the shoreline. Acquisition of sensitive lands, congestion-pricing of roads and a variety of other regulatory measures were considered in an effort to achieve local and regional environmental goals.

When the City of Oakland approved the Land Use and Transportation Element of the General Plan, it rejected this alternative because of the economic hardships it would impose and because it might inadvertently create more adverse impacts than positive impacts. If future development in Oakland were constrained or became much more costly to undertake, there is a strong likelihood that growth would simply move elsewhere in the region, resulting in continued urban sprawl throughout the greater Bay Area. This could trigger even greater congestion on Oakland's freeways with attendant air quality impacts that would be detrimental to the whole Bay Area. Higher development costs and economic stagnation could ultimately have physical impacts such as increased blight and abandonment of structures. If the tax base were to decline, local revenues would decrease and City services could be reduced.

This EIR does not identify any new environmental impacts as a result of the Project's implementation of the Oakland General Plan LUTE that have not already been disclosed in previous environmental review documents certified by the City. Thus, this EIR presents no new information that would justify the City's reconsideration of an amendment to the LUTE Element, and this alternative has been rejected from further consideration.

Alternative Location or Alternative Project Area

An alternative location for the Project has not been considered as an alternative for review in this EIR for the obvious reason that no other location would permit achievement of the Project objectives of eliminating blight and restoring economic vitality to the Central City East Oakland Project Area.

Alternative Project boundaries (i.e., a smaller or larger Project Area) have also been rejected from further consideration. The boundaries of the Project Area have been established through a process that has included public participation and documented evidence of blighted conditions. The Project Area boundaries were formally approved by the City Council via resolution on December 3, 2001. This EIR presents no new information that would cause this previous decision of the City to be reconsidered.

Environmentally Superior Alternative

The alternatives examined in this EIR consist of alternative strategies by which the resources and powers of the Redevelopment Agency may be used to implement varying degrees of redevelopment objectives. As indicated under the No Project Alternative, the growth and development that is projected to occur within the Project Area could be realized over time with or without the Project or any of the alternatives. To the extent that the Project or any alternative redevelopment plan facilitates or assists in this growth and development, then the resulting environmental consequences can be attributed to redevelopment.

The No Project Alternative would not facilitate or provide any assistance to future growth and development within the Project Area and thus would result in the least environmental impacts. However, the No Project Alternative would also be incapable of achieving any of the project sponsor's objectives of reducing blight and revitalizing the Project Area's economy.

In the absence of the No Project Alternative, the redevelopment alternative that would focus the least amount of the Redevelopment Agency's resources toward facilitating and assisting in Project Area growth and development is Alternative #3: Parks and Recreation Focus. For this reason, the Parks and Recreation Focus Alternative is the environmentally superior alternative. Under this alternative, the Redevelopment Agency would focus its financing and human resources and redevelopment powers to assist in implementation of parks and open space projects and programs included under in the Oakland Clean Water, Safe Waterfront Parks and Recreation Trust Fund bond measure. However, as a narrowly focused use of Redevelopment Agency resources, this alternative would not meet the more broadly defined list of goals and objectives established for the Project, which include:

- eliminating blighting influences and correcting environmental deficiencies,
- strengthening retail and other commercial functions, strengthening the economic base of the Project Area by stimulating new investment and expanding employment opportunities,
- providing an environment for social and economic growth, and
- expanding and improving housing for low- and moderate-income households.

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