

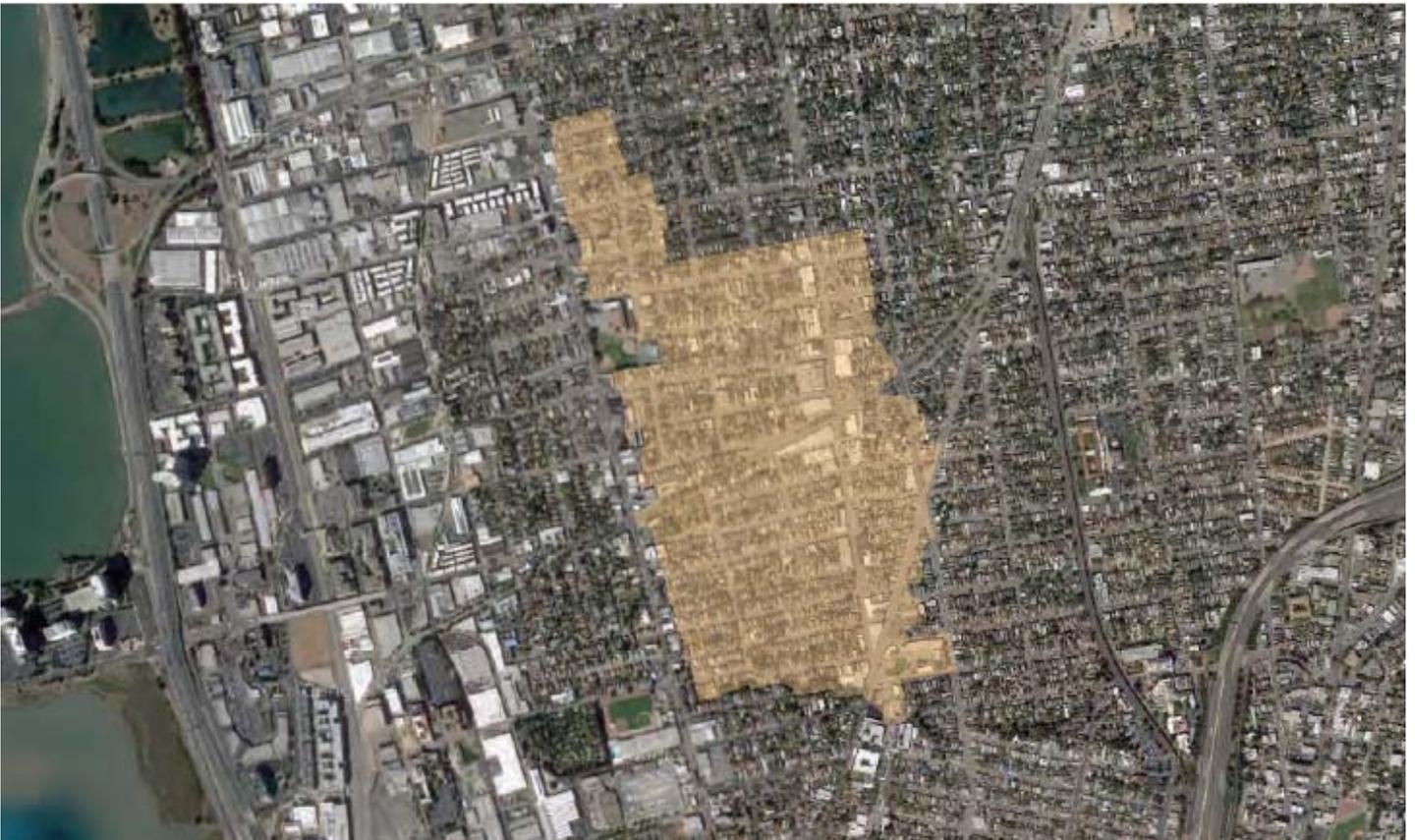
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PROPOSED AMENDMENTS TO THE BROADWAY/ MACARTHUR/SAN PABLO REDEVELOPMENT PLAN

Supplemental Environmental Impact Report
2011 SCH No. 1999052061
2000 SCH No. 99052061

Prepared for
The City of Oakland

August 2011



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TABLE OF CONTENTS

Proposed Amendments to the Broadway/ MacArthur/San Pablo Redevelopment Plan Draft Supplemental Environmental Impact Report

| | <u>Page</u> |
|---|-------------|
| List of Acronyms and Abbreviations | vii |
| 1. Introduction | 1-1 |
| 1.1 Project Overview | 1-1 |
| 1.2 Environmental Review | 1-3 |
| 1.3 CEQA Review and Project Approval | 1-7 |
| 1.4 Redevelopment Law Requirements for Adoption of the Proposed Amendments | 1-7 |
| 1.5 Organization of the Draft SEIR | 1-8 |
| 2. Summary | 2-1 |
| 2.1 Project Overview | 2-1 |
| 2.2 Environmental Impacts, Standard Conditions of Approval and Mitigation Measures | 2-2 |
| 2.3 Alternatives | 2-3 |
| 2.4 Areas of Controversy and Scoping Comments | 2-5 |
| 3. Project Description | 3-1 |
| 3.1 Background | 3-1 |
| 3.2 Project Description | 3-4 |
| 3.3 Location and Site Characteristics | 3-8 |
| 3.4 Proposed Amendments Goals and Objectives | 3-10 |
| 3.5 Redevelopment Plan Implementation and Strategies | 3-12 |
| 3.5 Agency Approvals | 3-12 |
| 4. Environmental Setting, Impacts, Standard Conditions of Approval and Mitigation Measures | 4-1 |
| 4.01 Environmental Topics | 4-2 |
| 4.02 Focus of SEIR Analysis | 4-2 |
| 4.03 Format of Environmental Topic Sections, Impact Statements, and Mitigation Measures | 4-3 |
| 4.04 Thresholds/Criteria of Significance | 4-4 |
| 4.05 Standard Conditions of Approval and Uniformly Applied Development Standards | 4-5 |
| 4.06 Impact Classifications | 4-6 |

| | <u>Page</u> |
|--|-------------|
| 4. Environmental Setting, Impacts, Standard Conditions of Approval and Mitigation Measures (continued) | |
| 4.07 Comparison of Impacts and Conclusions to the 2000 EIR | 4-6 |
| 4.08 Environmental Baseline | 4-8 |
| 4.09 Cumulative Analysis | 4-8 |
| 4.1 Aesthetics, Shadow and Wind | 4.1-1 |
| 4.2 Air Quality | 4.2-1 |
| 4.3 Biological Resources | 4.3-1 |
| 4.4 Cultural Resources | 4.4-1 |
| 4.5 Geology, Soils and Geohazards | 4.5-1 |
| 4.6 Greenhouse Gases and Climate Change | 4.6-1 |
| 4.7 Hazardous Materials | 4.7-1 |
| 4.8 Hydrology and Water Quality | 4.8-1 |
| 4.9 Land Use, Plans and Policies | 4.9-1 |
| 4.10 Noise | 4.10-1 |
| 4.11 Population, Housing, and Employment | 4.11-1 |
| 4.12 Public Services and Recreation Facilities | 4.12-1 |
| 4.13 Transportation and Circulation | 4.13-1 |
| 4.14 Utilities and Service Systems | 4.14-1 |
| 5. Alternatives | 5-1 |
| 5.1 Criteria for Selecting Alternatives | 5-1 |
| 5.2 Significant Impacts | 5-2 |
| 5.3 Alternatives Selected for Consideration | 5-3 |
| 5.4 Alternatives Analysis | 5-5 |
| 5.5 Environmentally Superior Alternative | 5-28 |
| 6. Impact Overview and Growth Inducement | 6-1 |
| 6.1 Significant, Unavoidable and Cumulative Environmental Impacts | 6-1 |
| 6.2 Growth-Inducing Impacts | 6-2 |
| 6.3 Significant Irreversible Environmental Effects | 6-6 |
| 6.4 Effects Found Not to be Significant | 6-8 |
| 6.5 References | 6-10 |
| 7. Report Preparers | 7-1 |
| Appendices (provided on CD) | |
| A. (1) March 16, 2011 Notice of Preparation, Public Scoping, and Comments (2) June 17, 2011 Notice of Preparation and Comments | A-1 |
| B. Major Projects List | B-1 |
| C. Greenhouse Gases, and Noise Supplemental Information | C-1 |
| D. Biological Resources Supplemental Information | |
| E. Findings Required for Demolition of Historic Properties | E-1 |
| F. Transportation and Circulation Supplemental Information | F-1 |
| G. 2000 EIR Impacts and Mitigation Measures Update Table | G-1 |
| H. Impacts and Mitigation Measures from Project-level EIRs completed Since 2000 for Major Projects in the Existing Project Area | H-1 |
| I. Impacts and Mitigation Measures from the Oakland Housing Element EIR | I-1 |

| | <u>Page</u> |
|--|-------------|
| List of Figures | |
| 3-1 Existing Redevelopment Project Area | 3-3 |
| 3-2 Broadway/MacArthur/San Pablo Amendment Area Map | 3-5 |
| 4.2-1 Sources of Toxic Air Contaminants | 4.2-25 |
| 4.4-1 Local Register and Potential Designated Historic Properties within the Amendment Area | 4.4-26 |
| 4.9-1 General Plan Land Use Classifications | 4.9-3 |
| 4.10-1 Effect of Noise on People | 4.10-7 |
| 4.13-1 Project Study Area | 4.13-3 |
| 4.13-2 Existing Transit Service in the Amendment Area Vicinity | 4.13-6 |
| 4.13-3 Existing Pedestrian Facilities Near the Amendment Area | 4.13-10 |
| 4.13-4 Existing and Planned Bicycle Facilities | 4.13-12 |
| 4.13-5 Existing Peak Hour Volumes | 4.13-14 |
| 4.13-6 Existing Intersection Lane Configurations and Controls | 4.13-15 |
| 4.13-7 Existing Bicycle and Pedestrian Volumes | 4.13-16 |
| 4.13-8 Existing Traffic Calming Features | 4.13-20 |
| 4.13-9 Collisions (2006-2010) | 4.13-22 |
| 4.13-10 Project Trip Distribution | 4.13-42 |
| 4.13-11 Weekday PM Peak Hour Project Trip Assignment | 4.13-44 |
| 4.13-12 Net New Project Trips at Study Intersections | 4.13-45 |
| 4.13-13 Existing Plus Project Conditions – Peak Hour Traffic Volumes | 4.13-46 |
| 4.13-14 2015 No Project Conditions – Peak Hour Traffic Volumes | 4.13-49 |
| 4.13-15 2015 Plus Project Conditions – Peak Hour Traffic Volumes | 4.13-50 |
| 4.13-16 2035 No Project Conditions – Peak Hour Traffic Volumes | 4.13-53 |
| 4.13-17 2035 Plus Project Conditions – Peak Hour Traffic Volumes | 4.13-54 |
| 4.13-18 Conceptual Improvements at the 57th Street/Adeline Street/ Market Street Intersection | 4.13-76 |

List of Tables

| | |
|--|--------|
| 2-1 Summary of Impacts, Standard Conditions of Approval, Mitigation Measures and Residual Impacts | 2-6 |
| 3-1 Potential Redevelopment Activities Facilitated by the Proposed Amendments | 3-7 |
| 3-2 Potential Redevelopment Activities Facilitated by the Existing Redevelopment Plan and that May Occur Without the Proposed Amendments | 3-9 |
| 4.2-1 Air Quality Data Summary (2007-2009) for the Project Area, as Amended | 4.2-4 |
| 4.2-2 Ambient Air Quality Standards and Bay Area Attainment Status | 4.2-9 |
| 4.2-3 Transportation Control Measures in the 2010 Clean Air Plan | 4.2-23 |
| 4.3-1 Special-Status Species Considered | 4.3-6 |
| 4.4-1 Archaeological Resources in the Vicinity of the Amendment Area | 4.4-25 |
| 4.5-1 Modified Mercalli Intensity Scale | 4.5-6 |
| 4.5-2 Active Faults in the Region | 4.5-8 |
| 4.6-1 Oakland Community-wide GHG Emissions Summary – 2005 | 4.6-4 |
| 4.6-2 List of Recommended Actions by Sector | 4.6-12 |
| 4.6-3 GHG Emissions Inventory from Existing Uses and Development Facilitated by the Proposed Amendments – “Business as Usual” and Adjusted | 4.6-31 |
| 4.6-4 GHG Emissions Inventory from Development Facilitated by the Redevelopment Plan, as Amended – Adjusted | 4.6-32 |

| | <u>Page</u> |
|---|-------------|
| List of Tables (continued) | |
| 4.7-1 Federal Laws and Regulations Related to Hazardous Materials Management | 4.7-5 |
| 4.10-1 Typical Noise Levels | 4.10-2 |
| 4.10-2 Monitored Noise Environments within the Amendment Area | 4.10-5 |
| 4.10-3 City of Oakland Operational Noise Standards at Receiving Property Line | 4.10-9 |
| 4.10-4 City of Oakland Construction Noise Standards at Receiving Property Line | 4.10-10 |
| 4.10-5 Typical Construction Noise Levels | 4.10-18 |
| 4.10-6 Typical Maximum Noise Levels from Construction Equipment | 4.10-18 |
| 4.10-7 Peak-hour Traffic Noise Levels in the Vicinity of the Amendment Area Existing (2011) Versus Near Term Plus Project (2015) | 4.10-25 |
| 4.10-8 Peak-Hour Traffic Noise Levels in the Vicinity of the Amendment Area Existing (2011) Versus Cumulative Plus Project (2035) | 4.10-29 |
| 4.11-1 Employment, Households, and Population for Amendment Area and Existing Project Area: 2000, 2005, 2010, 2015, and 2035 | 4.11-3 |
| 4.11-2 Households, Population, and Employment for Amendment Area and Adjacent San Pablo Subarea of Existing Project Area, 2010 | 4.11-4 |
| 4.11-3 Employment, Households, and Population for Amendment Area, Existing Project Area, Surrounding Areas, and the City of Oakland: 2000, 2005, 2010, and 2035 | 4.11-6 |
| 4.11-4 Trends in Employment, Households, and Population for Oakland, the East Bay, and Bay Area Region: 1990, 2000, 2005 and 2035 | 4.11-9 |
| 4.11-5 Changes in Housing Stock in Oakland, 1990-2010 | 4.11-10 |
| 4.11-6 Housing Development and Household Growth in Oakland | 4.11-11 |
| 4.11-7 Housing Development in Oakland and Greater Downtown: Units Built, in the Pipeline, and on Opportunity Sites | 4.11-12 |
| 4.11-8 Trends in Jobs and Employed Residents: 1990-2035 | 4.11-14 |
| 4.11-9 Amendment Area: Potential Growth in Employment and Households to be Facilitated by the Proposed Amendments | 4.11-16 |
| 4.11-10 Overall Growth Scenario for Amendment Area Employment and Households, 2010 to 2035 | 4.11-18 |
| 4.11-11 Potential Scenario for Affordable Housing Production Obligations for Amendment Area and the Project Area, as Amended | 4.11-19 |
| 4.11-12 Population and Employment Growth Facilitated by the Proposed Amendments Compared to Future Projections for Oakland | 4.11-28 |
| 4.13-1 AC Transit Service Summary | 4.13-7 |
| 4.13-2 AC Transit Loads, Boardings and Alightings | 4.13-8 |
| 4.13-3 Definitions for Intersection Level of Service | 4.13-17 |
| 4.13-4 Existing Conditions Intersection LOS Summary | 4.13-18 |
| 4.13-5 Existing Conditions Peak Hour Signal Warrant Analysis | 4.13-19 |
| 4.13-6 Project Study Area Collision Data Summary | 4.13-23 |
| 4.13-7 Project Study Area Collision Location Summary | 4.13-24 |
| 4.13-8 Existing Project Study Area Vehicle Trip Generation | 4.13-40 |
| 4.13-9 Project Vehicle Trip Generation | 4.13-41 |
| 4.13-10 Existing Plus Project Conditions Intersection LOS Summary | 4.13-47 |
| 4.13-11 2015 Intersection LOS Summary | 4.13-52 |
| 4.13-12 2035 Intersection LOS Summary | 4.13-55 |
| 4.13-13 2035 Plus Project Mitigated Conditions Intersection LOS Summary | 4.13-63 |
| 4.13-14 AC Transit Maximum Loads (No Project and Plus Project) | 4.13-71 |
| 4.13-15 57th Street/Adeline Street/Market Street Intersection – LOS Summary | 4.13-75 |
| 5-1 No Project (Alternative 1) Compared to Development Facilitated by the Proposed Amendments | 5-6 |

| List of Tables (continued) | | <u>Page</u> |
|-----------------------------------|---|-------------|
| 5-2 | No Project (Alternative 1) Trip Generation Summary | 5-12 |
| 5-3 | Lower Growth (Alternative 2) Compared to Development Facilitated by the Proposed Amendments | 5-13 |
| 5-4 | Lower Growth (Alternative 2) Trip Generation Summary | 5-19 |
| 5-5 | Industrial Use (Alternative 3) compared to Development Facilitated by the Proposed Amendments | 5-21 |
| 5-6 | Industrial Use (Alternative 3) Trip Generation | 5-27 |
| 5-7 | Summary Comparison of Alternatives: Proposed Amendments and Alternatives | 5-32 |

LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|--------------------------|---|
| $\mu\text{g}/\text{m}^3$ | micrograms per cubic meter |
| AADT | Average Annual Daily Traffic |
| AB | Assembly Bill |
| ABAG | Association of Bay Area Governments |
| ACCMA | Alameda County Congestion Management Agency |
| ACCWP | Alameda County Clean Water Program |
| ACDEH | Alameda County Department of Environmental Health |
| ACFCWCD | Alameda County Flood Control and Water Conservation District |
| ACM | asbestos-containing material |
| ACTC | Alameda County Transportation Commission |
| ACWMA | Alameda County Waste Management Authority |
| ADA | Americans with Disabilities Act |
| AEP | Association of Environmental Professionals |
| API | Area of Primary Importance |
| ARB | California Air Resources Board |
| ARDTP | Archaeological Research Design and Treatment Plan |
| ASCE | American Society of Civil Engineers |
| ASHRAE | American Society of Heating, Refrigerating and Air-Conditioning Engineers |
| ASI | Area of Secondary Importance |
| AWSC | All-Way Stop-Controlled |
| BAAQMD | Bay Area Air Quality Management District |
| BART | Bay Area Rapid Transit |
| BCDC | San Francisco Bay Conservation and Development Commission |
| BFE | Base Flood Elevation |
| BGM | Bay Area Greenhouse Gas Model |
| BMP | Best Management Practice |
| B/M/SP | Broadway/MacArthur/San Pablo |
| C&D | construction and demolition |
| Cal EPA | California Environmental Protection Agency |
| California ISO | California Independent System Operator |
| Cal/OSHA | California Occupational Safety and Health Administration |
| CalRecycle | California Department of Resources Recycling and Recovery |

| | |
|-------------------|---|
| Caltrans | California Department of Transportation |
| CAP | Clean Air Plan |
| CAPCOA | California Air Pollution Control Officers Association |
| CAT | Climate Action Team |
| CBC | California Building Code |
| CCAA | California Clean Air Act |
| CCC | California Coastal Commission |
| CCCC | California Climate Change Center |
| CCR | California Code of Regulations |
| CCTP | Climate Change Technology Program |
| CCWD | Contra Costa Water District |
| CDFG | California Department of Fish and Game |
| CDMG | California Department of Mines and Geology |
| CEC | California Energy Commission |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CERES | California Environmental Resources Evaluation System |
| CERCLIS | Comprehensive Environmental Response, Compensation and Liability Information System |
| CERC-NFRAP | CERCLIS No Further Remedial Action Planned |
| CESA | California Endangered Species Act |
| CFR | Code of Federal Regulations |
| CGS | California Geological Survey |
| CH ₄ | methane |
| CHMIRS | California Hazardous Materials Incident Report System |
| CHP | California Highway Patrol |
| CMP | Congestion Management Program |
| CNDDB | California Natural Diversity Database |
| CNEL | Community Noise Equivalent Level |
| CNPS | California Native Plant Society |
| CO | carbon monoxide |
| CO ₂ | carbon dioxide |
| CO ₂ e | carbon dioxide equivalents |
| COP 15 | 15th Conference of the Parties to the United Nations Framework Convention on Climate Change |
| COP/MOP 5 | 5th Meeting of the Parties to the Kyoto Protocol |
| Corps | U.S. Army Corps of Engineers (see also USACE) |
| CPUC | California Public Utilities Commission |
| CRL | California Community Redevelopment Law |
| CRHR | California Register of Historic Resources |
| CUPA | Certified Unified Program Agency |

| | |
|-------------|--|
| CWA | Clean Water Act |
| dB | decibel |
| dba | A-weighted decibel |
| dbh | diameter at breast height |
| DHPs | Designated Historic Properties |
| DHS | Department of Health Services |
| DNL | Day/Night Average Sound Level |
| DOT | U.S. Department of Transportation |
| DPM | diesel particulate matter |
| DPR 523 | California Department of Parks and Recreation Form 523 |
| DSOD | Division of Safety of Dams |
| DTSC | California Department of Toxic Substances Control |
| DWR | California Department of Water Resources |
| EBMUD | East Bay Municipal Utility District |
| EBRPD | East Bay Regional Parks District |
| ECAP | Energy and Climate Action Plan |
| EIR | Environmental Impact Report |
| EPA | Environmental Protection Agency |
| EFH | Essential Fish Habitat |
| ESU | evolutionary significant unit |
| FAR | floor-area ratio |
| Fed/OSHA | Occupational Safety and Health Act of 1970 |
| FEMA | Federal Emergency Management Agency |
| FESA | Federal Endangered Species Act |
| FHWA | Federal Highway Administration |
| FIRM | Flood Insurance Rate Map |
| FIP | Federal Implementation Plan |
| FMP | Fisheries Management Plan |
| FTA | Federal Transit Administration |
| FUDS | Formerly Used Defense Sites |
| g | gravity |
| GHG | greenhouse gas |
| GWP | global warming potential |
| GWh | gigawatt hours |
| HABS | Historic American Building Survey |
| HAP | Hazardous Air Pollutant |
| HBX-1 | City of Oakland Housing and Business Mix-1 Zone |
| HBX-2 | City of Oakland Housing and Business Mix-2 Zone |
| HCM | Highway Capacity Manual |
| HEPA filter | high efficiency particulate air filter |

| | |
|--------|---|
| HERS | Home Energy Rating System |
| HFC | hydrofluorocarbon |
| HMARRP | Hazardous Materials Assessment Report and Remediation Plan |
| HMBP | Hazardous Materials Business Plan |
| HMMP | Hazardous Materials Management Plan |
| HMP | hydrograph modification management plan |
| HOV | high occupancy vehicle |
| HPE | Historic Preservation Element |
| HRA | health risk assessment |
| HV | heating and ventilation |
| Hz | hertz |
| I-580 | Interstate 580 |
| I-880 | Interstate 880 |
| I-980 | Interstate 980 |
| IBC | International Building Code |
| ICC | International Code Council |
| ICLEI | Local Governments for Sustainability (formerly International Council for Local Environmental Initiatives) |
| IPCC | International Panel on Climate Change |
| IRCUP | Inter-Regional Conjunctive Use Project |
| ITE | Institute of Transportation Engineers |
| ITS | Intelligent Transportation System |
| L50 | noise level that is equaled or exceeded 50 percent of the specified time |
| L90 | noise level that is equaled or exceeded 90 percent of the specified time |
| LCFS | Low Carbon Fuel Standards |
| Ldn | Day/Night Average Sound Level, see also DNL |
| Leq | constant sound level, i.e., the average noise exposure level for the given time period |
| LEED | Leadership in Energy and Environmental Design |
| LID | low impact development |
| Lmax | the instantaneous maximum noise level for a specified period of time |
| LOS | level of service |
| LS | Less than Significant |
| LUFT | leaking underground fuel tank |
| LUTE | Land Use and Transportation Element of the Oakland General Plan |
| M | Richter Magnitude |
| mgd | million gallons per day |
| MM | Modified Mercalli |
| MMT | million metric tons |
| mph | miles per hour |
| MPO | metropolitan planning organization |

| | |
|------------------|---|
| MRP | Municipal Regional Stormwater NPDES Permit |
| MRZ | Mineral Resource Zone |
| MSDS | Materials Safety Data Sheet |
| MT | metric tons |
| MTC | Metropolitan Transportation Commission |
| MTS | Metropolitan Transportation System |
| MUTCD | California Manual on Uniform Traffic Control Devices |
| Mw | Moment Magnitude |
| MWWTP | Main Wastewater Treatment Plant |
| N | No Impact |
| N ₂ O | nitrous oxide |
| NAHC | Native American Heritage Commission |
| NASA | National Aeronautics and Space Administration |
| NHPA | National Historic Preservation Act of 1966 |
| NMFS | National Marine Fisheries Service |
| NPL | National Priorities List |
| NO ₂ | nitrogen dioxide |
| NO _x | nitrogen oxides |
| NOP | Notice of Preparation |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resource Conservation Service |
| NRDC | Natural Resources Defense Council |
| NRHP | National Register of Historic Places |
| NWIC | Northwest Information Center |
| O ₃ | ozone |
| OCHS | Oakland Cultural Heritage Survey |
| ODP | Operational Diversion Plan |
| OES | Office of Emergency Services |
| OFD | Oakland Fire Department |
| OHP | Office of Historic Preservation |
| OMC | Oakland Municipal Code |
| OPD | Oakland Police Department |
| OPR | Governor's Office of Planning and Research |
| OSCAR | Open Space, Conservation and Recreation Element of the Oakland General Plan |
| OSHA | U.S. Department of Labor Occupational Safety and Health Administration |
| OUSD | Oakland Unified School District |
| Pb | lead |
| PCB | polychlorinated biphenyl |
| PCM | parallel climate model |
| PDHPs | Potential Designated Historic Properties |

| | |
|-----------------|---|
| PFC | perfluorocarbon |
| PGA | peak ground acceleration |
| PG&E | Pacific Gas & Electric |
| PM | particulate matter |
| PMP | City of Oakland Pedestrian Master Plan |
| PNPL | Proposed National Priorities List |
| PPD | pounds per person per day |
| ppm | part(s) per million |
| PRC | Public Resources Code |
| PS | Potentially Significant |
| PS&E | Plans, Specifications, and Estimates |
| PSHA | probabilistic seismic hazard assessment |
| RBSL | Risk Based Screening Level |
| RCRA | Resource Conservation and Recovery Act |
| RM-2 | City of Oakland Mixed Housing Type Residential Zone - 2 |
| RM-3 | City of Oakland Mixed Housing Type Residential Zone - 3 |
| RM-4 | City of Oakland Mixed Housing Type Residential Zone - 4 |
| RM-4/C | City of Oakland Mixed Housing Type Residential Zone – 4 / Residential Commercial Combining Zone |
| RMP | Risk Management Plan |
| ROG | reactive organic gases |
| ROW | right-of-way, rights-of-way |
| RWQCB | San Francisco Bay Regional Water Quality Control Board |
| S | Significant |
| S-7 | City of Oakland S-7 Preservation Combining Zone |
| S-20 | City of Oakland S-20 Preservation Combining Zone |
| SAB | State Allocation Board |
| SARA | Superfund Amendments and Reauthorization Act |
| SB | Senate Bill |
| SCA | Standard Condition of Approval |
| SCS | Sustainable Communities Strategy |
| SCVWD | Santa Clara Valley Water District |
| SCWA | Sacramento County Water Agency |
| SDC | Seismic Design Category |
| SDI | Oakland Sustainability Community Development Initiative |
| SDWA | Safe Drinking Water Act |
| SF ₆ | sulfur hexafluoride |
| SFPUC | San Francisco Public Utilities Commission |
| SHPO | State Historic Preservation Officer |
| SIP | State Implementation Plan |

| | |
|-----------------|--|
| SLIC | San Francisco Bay RWQCB Spills, Leaks, Investigations, and Cleanup Database |
| SMARA | Surface Mining and Reclamation Act |
| SO ₂ | sulfur dioxide |
| SOV | single-occupant vehicle |
| SPCC | Spill Prevention, Control and Countermeasure |
| SRRE | Source Reduction and Recycling Element |
| SSSC | Side-Street Stop-Controlled |
| SSTL | Site Specific Target Level |
| SU | Significant Unavoidable |
| SWPPP | Stormwater Pollution Prevention Plan |
| SWRCB | State Water Resources Control Board |
| TAC, TACs | Toxic Air Contaminant |
| TAF | thousand acre-feet |
| TAZ | traffic analysis zones |
| TCM | transportation control measure |
| TDM | transportation demand management |
| TMDL | Total Maximum Daily Load |
| UCMP | University of California Museum of Paleontology |
| UNEP | United Nations Environment Programme |
| UNFCCC | United Nations Framework Convention on Climate Change |
| Unified Program | Unified Hazardous Waste and Hazardous Materials Management Regulatory Program of the Cal EPA |
| USACE | U.S. Army Corps of Engineers |
| USC | United States Code |
| USEPA | U.S. Environmental Protection Agency |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| USPS | U.S. Postal Service |
| UST | underground storage tank |
| UWMP | Urban Water Management Plan |
| v/c | volume to capacity |
| VMT | vehicle miles traveled |
| vph | vehicles per hour |
| WBWG | Western Bat Working Group |
| WMAC | Waste Management of Alameda County |
| WRRP | Waste Reduction and Recycling Plan |
| WSA | Water Supply Assessment |
| WSMP | Water Supply Management Program |

CHAPTER 1

Introduction

1.1 Project Overview

The City of Oakland (“City”), as the Lead Agency, prepared this program-level Supplemental Environmental Impact Report (“SEIR”) to address the physical and environmental effects of activities facilitated by the Broadway/MacArthur/San Pablo Redevelopment Plan (referred to throughout as the “**Existing Redevelopment Plan**”) as amended by three proposed amendments (referred to throughout as the “**Proposed Amendments**”). This supplement is prepared to the Broadway/MacArthur/San Pablo Redevelopment Plan Environmental Impact Report that the City certified on July 25, 2000 (referred to throughout as the “**2000 EIR**”). Collectively, the CEQA project analyzed in this SEIR is consistently referred to as the “**Redevelopment Plan, as Amended.**”

Existing Project Area

The Existing Redevelopment Plan Project Area (referred to throughout as the “**Existing Project Area**”) consists of two non-contiguous subareas: the Broadway/MacArthur subarea and the San Pablo subarea. The Broadway/MacArthur subarea incorporates roughly the area between Highway 24 and Broadway, from 27th Street to 42nd Street. The San Pablo subarea incorporates a portion of the Golden Gate neighborhood between Vallejo Street and San Pablo Avenue, from 53rd to 67th streets. The Existing Redevelopment Plan considers programs, tools and funding implemented for approximately 676 acres that is the Existing Project Area. (See Figure 3-1 in Chapter 3, *Project Description*.)

The Proposed Amendments could include development projects, programs, tools and funding implemented for approximately 1,300 parcels on 210¹ acres in North Oakland that make up the Lowell/Gaskill neighborhood (referred to throughout as the “**Amendment Area**”). The Amendment Area generally is located between 67th Street to the north, 53rd Street to the south, San Pablo Avenue to the west, and Adeline and Market streets to the east (see Figures 3-1 and 3-2 in Chapter 3, *Project Description*). The north and south boundaries of the Amendment Area are generally defined by the Emeryville and Berkeley city limits. Throughout this SEIR, the Existing

¹ The March 16, 2011 NOP and June 17, 2011 revised NOP for the Project listed the Amendment Area as 150 acres which is the sum of the parcels. Although the Amendment Area boundaries have not changed since issuance of the NOP, this SEIR refers to the 210-acre area that includes the sum of the parcels as well as the land area of the streets within the Amendment Area.

Project Area combined with the Amendment Area, is referred to as the “**Project Area, as Amended**”.

Proposed Amendments

The Redevelopment Agency of the City of Oakland (“Agency”) is responsible for implementing the Redevelopment Plan. In 2009, the City received a community petition request to have the boundaries of the Existing Project Area expanded to include the Amendment Area described above. On July 20, 2010, the City Council adopted the Amendment Area as a redevelopment survey area to be studied and considered for inclusion in the Existing Project Area. The proposed inclusion of the Amendment Area is the first of the three Proposed Amendments.

The three Proposed Amendments to the Existing Redevelopment Plan are as follows:

The first Proposed Amendment would expand the Existing Project Area boundaries east from the San Pablo subarea to include the approximately 1,300 parcels and 210 acres that is the Amendment Area. Redevelopment activities envisioned for the Amendment Area would focus in the area along Lowell Street and Stanford Avenue and include streetscape improvements, right-of-way adjustments, building renovations, and support for new housing, live/work, industrial incubator, and/or commercial development projects. Housing rehabilitation loan or grant programs may be established for the residential portions of the Amendment Area. Other redevelopment programs within the Amendment Area would be consistent with those currently being implemented through the Existing Redevelopment Plan, including the Façade and Tenant Improvement programs.

The second Proposed Amendment would extend the Agency’s eminent domain authority for the Project Area, as Amended beyond 2012 to 2024.² However, the Agency does not anticipate use of eminent domain to facilitate the redevelopment activities in the Amendment Area.

The Redevelopment Plan includes a cap on bonding capacity, currently set at \$100 million, which is required to implement the Existing Redevelopment Plan. The third Proposed Amendment would increase the maximum dollar amount of bonding capacity set for the Project Area, as Amended to finance proposed redevelopment activities in the Amendment Area without drawing from the existing bonding capacity. Although the Agency has not determined what the bonding capacity increase would be, it would be increased in an amount proportional to the redevelopment needs in the Amendment Area.

² **Eminent domain** is the authority of a government agency to acquire property for public purposes, with payment of just compensation. “Public purposes” include the elimination of blight in the case of redevelopment agencies. During the last 20 years, the Redevelopment Agency used eminent domain for three projects in the City of Oakland. These were the Bermuda Building, an earthquake-damaged building that sat vacant and deteriorating for almost nine years after the Loma Prieta earthquake, the Uptown Project, nine parcels included parking lots, dilapidated single room occupancy residential hotels and auto-related uses, and the Market Square project, three parcels including a grocery store, garment factory and storage facility in old dilapidated structures. The area surrounding these project sites have flourished after the Agency used eminent domain, including the establishment of many new small businesses on Telegraph Avenue, San Pablo Avenue, and Broadway.

Redevelopment Plan Implementation

The Agency is responsible for implementing the Redevelopment Plan, as Amended. Redevelopment plans are authorized under the California Community Redevelopment Law (CRL or “Redevelopment Law”), California Health and Safety Code, Division 24, Section 33000 et seq. Under Redevelopment Law, approval of the Redevelopment Plan, as Amended, would require findings, among other things, that significant blight remains in the Existing Project Area, that significant blight is found in the Amendment Area, and that blight cannot be eliminated without the Proposed Amendments described above.³ Separate from this SEIR, the Agency is also preparing an analysis of the costs of projects and programs required to eradicate this blight and the relationship between this cost and the increase in the cap.

Implementation of the Redevelopment Plan, as Amended, would provide a series of multiple, coordinated actions (e.g., projects, programs, and funding) to eliminate blight and facilitate revitalization and growth throughout the Project Area, as Amended, consistent with actions anticipated by the Redevelopment Plan analyzed in the 2000 EIR. Implementation of actions defined in the Redevelopment Plan, as Amended, could result in housing, public infrastructure and the rehabilitation, reconstruction, or alteration of buildings, as well as other physical changes to the environment.

Redevelopment activities to be facilitated by the Proposed Amendments would generally remain similar to those currently being implemented under the Existing Redevelopment Plan and within the Existing Project Area. Also, the Proposed Amendments would not result in any changes to the physical environment in, or redevelopment activities facilitated by the Existing Redevelopment Plan.

1.2 Environmental Review

SEIR

The City of Oakland is the Lead Agency for this SEIR (pursuant to State and local guidelines for implementing the California Environmental Quality Act [CEQA]), and has prepared this SEIR subject to CEQA (Public Resources Code Section 21000, et seq. and Section 15000, et seq.) and the State CEQA Guidelines (California Code of Regulations) promulgated thereunder (together “CEQA”).

This SEIR is also prepared in accordance with Public Resources Code Section 21166 and CEQA Guidelines Sections 15162 and 15163. Pursuant to Section 15162, the City considers the Proposed Amendments to be “substantial changes” that trigger the need for a supplement to the

³ **Blight** is the substantial and prevalent adverse physical and economic conditions requiring development assistance. As defined in CRL Section 33031, characteristics of blight include unsafe or unhealthy buildings, conditions hindering viable use of buildings or lots, adjacent or nearby incompatible uses, irregular lots in multiple ownership, depreciated or stagnant property values, impaired property values due to hazardous wastes, indicators of economically distressed buildings, serious lack of neighborhood commercial facilities, serious residential overcrowding, excess of problem businesses, and high crime rates.

previously certified 2000 EIR due to the involvement of new significant impacts or a substantial increase in the severity of previously identified significant impacts.

As stated above, the “Project” for CEQA purposes is the “Redevelopment Plan, as Amended” (the “Existing Redevelopment Plan” combined with the “Proposed Amendments”). The “Project Area” for CEQA purposes is the “Project Area, as Amended” (the “Existing Project Area” combined with the “Amendment Area”).

Focus of SEIR Analysis

Pursuant to Public Resources Code Section 21166 and CEQA Guidelines Section 15163, the City has prepared a supplement to the 2000 EIR because conditions in Section 15162 exist, but only minor additions/changes are necessary to make the previous EIR adequately apply to the Redevelopment Plan, as Amended. The minor additions/changes necessary are those related to the Proposed Amendments, and no other changes are proposed to the Existing Redevelopment Plan or the Existing Project Area.

The 2000 EIR already has analyzed the environmental effects of, and identified feasible mitigation measures for, and alternatives to, the Existing Redevelopment Plan, and no changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitate further analysis in this SEIR. As stated above, the Proposed Amendments would not result in any changes to the physical environment in, or redevelopment activities facilitated by the Existing Redevelopment Plan. Further, the Proposed Amendments do not involve any new impacts or trigger the criteria of “changed circumstances” or “new information” in Section 15162 *with respect to the Existing Project Area*. As a result, this SEIR focuses on the activities facilitated by the Proposed Amendments and concludes with the impact of the Redevelopment Plan, as Amended.

In accordance with CEQA Guidelines Section 15163, the SEIR contains only the information necessary to make the 2000 EIR adequate for the Redevelopment Plan, as Amended. This SEIR updates or replaces some of the impact conclusions and mitigation measures in the 2000 EIR to ensure overall conformance within the SEIR and to reflect “new information”, which includes the City’s *Thresholds/Criteria of Significance Guidelines* (initially established in 2008) and new City requirements and analysis methods, such as the incorporation of the City’s *Standard Conditions of Approval and Uniformly Applied Development Standards* established since the 2000 EIR. None of the updates or replacements to impact conclusions in the 2000 EIR made in order to conform with current City requirements and methods are due to changed circumstances or changed environmental conditions in the existing Project Area.

Program EIR

CEQA Guidelines Section 15180(a) states that an EIR for a redevelopment plan may be treated as a Program EIR. Further, Section 15180(c) states that “if the EIR for a redevelopment plan is a Program EIR, subsequent activities in the program will be subject to the review required by Section 15168.” As allowed under CEQA Guidelines Section 15168, this SEIR has been prepared

to consider all actions facilitated by the Redevelopment Plan, as Amended, as one large project because the actions will occur within the same geographic location (i.e., within the two existing redevelopment subareas within North Oakland). In addition, a program-level document is most appropriate for this action specifically because it provides for a more exhaustive consideration of effects and alternatives than would be practical in a project-level document. The program-level document allows the City to consider program-wide mitigation measures and cumulative impacts that might be slighted in a case-by-case analysis approach. Preparation of a program-level document also simplifies the task of preparing subsequent environmental documents for those activities that are facilitated by the Redevelopment Plan, as Amended, but the details of which are currently unknown.

Since 2000, four major projects for which the City prepared and certified respective EIRs have been approved by the City for development within the Existing Project Area. These projects are the MacArthur Transit Village, the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan, the 2935 Telegraph Avenue (Courthouse Condominiums) Project, and the Kaiser Permanente Oakland Medical Center Master Plan. Each of these projects was envisioned generally in the development scenario analyzed in the 2000 EIR. The project-specific environmental review conducted for each of these projects already has analyzed environmental effects (project and cumulative), identified feasible mitigation measures, and considered alternatives for each of the projects. Each of these projects is now either built and in use or currently under construction or site preparation. Further, these projects are “past, present or reasonably foreseeable,” and their setting, environmental effects, and mitigation measures are considered in the cumulative analysis in this SEIR. None of these projects would be changed by the Proposed Amendments.

Initial Study

As stated in the preceding section, the Agency has prepared this Program SEIR to analyze the potential environmental effects of the activities facilitated by the Redevelopment Plan, as Amended. Although the City prepared an Initial Study Checklist to narrow the scope of the 2000 EIR, it has elected not to prepare an Initial Study Checklist to reduce the scope of this SEIR as permitted by Section 15060(d) of the CEQA Guidelines. This SEIR addresses all environmental topics identified in the City’s CEQA Thresholds/Criteria of Significance document. Therefore, in some cases this SEIR presents new EIR-formatted impact statements (i.e., alpha-numerically designated statements in bold text) for topics previously addressed only in the 1999 Initial Study Checklist and for which no impact statement was required.

EIR Scoping

On March 16, 2011, the City issued a Notice of Preparation (NOP), to inform agencies and interested parties of its intent to prepare and distribute a “Draft EIR for Proposed Amendments to the Broadway/MacArthur/San Pablo Redevelopment Plan.” The NOP was distributed to governmental agencies, organizations, and persons interested in the Redevelopment Plan, as Amended. The City sent the NOP to agencies with statutory responsibilities in connection with the Proposed Amendments and requested their input on the scope and content of the

environmental information that should be addressed in the EIR. The City of Oakland Planning Commission held a Scoping Meeting on April 6, 2011 to accept comments regarding the scope of the EIR in response to the NOP. The NOP review period ended on April 18, 2010.

On June 17, 2011, the City issued a revised NOP which was distributed to the same agencies, organizations and persons as the original NOP. The revised NOP was issued to specify that the City would prepare a Supplement to the 2000 EIR. The City provided a 30-day comment period, which ended on July 18, 2011, for the receipt of written responses, comments and/or questions on the NOP.

The NOP, the revised NOP, and written and oral comments that the City received in response to the NOP and the revised NOP are included as **Appendix A** to this Draft SEIR. During the public scoping process, no specific areas of controversy relevant to this CEQA analysis were identified.

Public Review

This Draft SEIR is available for public review and comment for the period identified on the Notice of Release/Availability of Draft Supplement to an Environmental Impact Report accompanying this document (45 calendar days, Friday August 5, 2011 through Tuesday September 20, 2011). During the public review and comment period, written comments on the Draft SEIR may be submitted to the City at the address indicated on the notice. Oral comments may be stated at the public hearing on the Draft SEIR, which will be held as indicated on the above-referenced notice.

Following the public review and comment period for the Draft SEIR, the City will prepare responses that address all written and oral comments on the Draft SEIR's environmental analyses and received within the specified review period. The responses and any other revisions to the Draft SEIR will be prepared as a Responses to Comments document. The Draft SEIR and its Appendices, together with the Responses to Comments document will constitute a Final SEIR (commonly referred to collectively as "SEIR") for the activities facilitated by the Proposed Redevelopment Plan as Amended.

Use of this SEIR

Pursuant to CEQA, this SEIR is a public information document prepared for use by governmental agencies and the public to identify and evaluate potential environmental consequences of the activities facilitated by the Redevelopment Plan, as Amended, to evaluate and recommend mitigation measures that would substantially lessen or eliminate significant adverse environmental impacts, and to examine a reasonable range of feasible alternatives to the activities facilitated by the Redevelopment Plan, as Amended. The information contained in this Draft SEIR is subject to review and consideration by the City of Oakland (see 1.3, *CEQA Review and Approval*, below) and any other responsible agency prior to the City's decision to approve, reject or modify the Proposed Amendments.

1.3 CEQA Review and Project Approval

Prior to approving the Redevelopment Plan, as Amended, the City of Oakland must ultimately certify that it has reviewed and considered the information in the SEIR and that the SEIR has been completed in conformity with the requirements of CEQA. This SEIR must be certified and considered by the Lead Agency before any final Agency decision can be made regarding the Proposed Amendments to the Redevelopment Plan. This SEIR identifies significant effects that would result from the activities facilitated by the Redevelopment Plan, as Amended. Therefore, pursuant to CEQA Guidelines Section 15091, the following findings would be required if the Agency decides to approve the Redevelopment Plan, as Amended:

- (1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final SEIR.
- (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such agency.
- (3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final SEIR.

1.4 Redevelopment Law Requirements for Adoption of the Proposed Amendments

Adoption of the Redevelopment Plan, as Amended, would require the following key elements pursuant to Redevelopment Law:

- **Preliminary Report:** The Preliminary Report, which includes a blight study, is the statement of comprehensive background information on the Proposed Amendments. This document would need to be prepared and submitted for review to the City Council and other governmental bodies, affected taxing entities, community leaders, and the public.
- **CEQA Compliance:** A CEQA document addressing the environmental impacts of the activities facilitated by the Redevelopment Plan, as Amended, (i.e., this SEIR) would need to be prepared and the Draft SEIR circulated for public comment. A Responses to Comments and Final SEIR document would be prepared after the Draft SEIR public comment period. This SEIR will assist the City in satisfying the “CEQA Compliance” requirement.
- **Planning Commission:** A public hearing would be held by the City Planning Commission to review the SEIR and the merits of the Redevelopment Plan, as Amended, and make a recommendation to the Agency and City Council regarding certification of the SEIR, required findings, and the Standard Conditions of Approval / Mitigation Monitoring and Reporting Program (SCAMMRP), and adoption of the Proposed Amendments to the Redevelopment Plan.

- **Redevelopment Agency and City Council Hearing:** This joint public hearing would be held to discuss the merits of the Redevelopment Plan, as Amended.
- **Ordinance Adoption and SEIR Certification:** The City Council and Redevelopment Agency Board would hold a joint public hearing on the Redevelopment Plan, as Amended, and the SEIR. The City Council and the Redevelopment Agency would adopt resolutions certifying the SEIR and would adopt the ordinance amending the Redevelopment Plan.

1.5 Organization of the Draft SEIR

Following this Chapter 1, *Introduction*, this Draft SEIR is organized as follows:

Chapter 2, *Summary*, contains a brief summary of the activities facilitated by the Redevelopment Plan, as Amended, and allows the reader to easily reference the analysis presented in the Draft SEIR. Table 2-1, Summary of Impacts, Standard Conditions of Approval (SCAs), Mitigation Measures, and Residual Impacts, is provided at the end of Chapter 2 as a reader-friendly reference to each of the environmental effects, proposed mitigation measures and residual environmental impacts after mitigation is implemented, presented by environmental topic. Chapter 2 also summarizes the Alternatives analysis, areas of controversy and NOP comments received.

Chapter 3, *Project Description*, generally describes the Existing Project Area and describes in detail the Amendment Area surroundings, applicable background and regulatory context and the activities facilitated by the Proposed Amendments. Background regarding the goals and objectives of the Existing Redevelopment Plan are discussed to provide context, and the goals and objectives of the Proposed Amendments are also described. Since no changes are proposed to the Existing Project Area or proposed activities described and analyzed in the 2000 EIR, Chapter 3 focuses on the Proposed Amendments and the Amendment Area. Chapter 3 also identifies other agencies that must consider or approve aspects of the activities facilitated by the Proposed Redevelopment Plan, as Amended.

Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures*, includes an introduction that explains nomenclature, organization, environmental baseline and cumulative approach applied throughout the analysis subsections of Chapter 4 (e.g., Section 4.10, *Noise*). Within each analysis subsection, Chapter 4 discusses the environmental setting (*Setting*) (existing physical conditions and regulatory framework) and the environmental impacts (*Impacts and Mitigation Measures*) for the Redevelopment Plan, as analyzed in the 2000 EIR, as well as the environmental setting and environmental impacts resulting from the Proposed Amendments and the Redevelopment Plan, as Amended. Chapter 4 summarizes the information from the 2000 EIR, focuses on the Proposed Amendments, and concludes with the impact of the Redevelopment Plan, as Amended. The analysis identifies environmental impacts (project and cumulative conditions before and after implementation of mitigation measures), applicable SCAs, and mitigation measures that after implementation would reduce or eliminate significant impacts of the activities facilitated by the Redevelopment Plan, as Amended. The applicable CEQA thresholds/ criteria used to assess CEQA significance for each environmental topic are identified,

and any changes since the 2000 EIR that affect the analysis and environmental conclusions in this SEIR are discussed. Chapter 4 also discusses for each topic how the analysis relates to the conditions described in Public Resources Code Section 21166 and CEQA Guidelines Section 15162 and 15163 with respect to any changed circumstances, new information or environmental conditions relative to findings in the previous EIR. Additionally, the necessary updates to the 2000 EIR to adequately address the Redevelopment Plan, as Amended, are specified throughout Chapter 4.

Chapter 5, *Alternatives*, focuses on reasonable range of alternatives to the activities facilitated by the Proposed Amendments, and taken together, identifies an environmentally superior alternative for the Redevelopment Plan, as Amended.

Chapter 6, *Impact Overview and Growth Inducement*, summarizes the potentially significant and unavoidable impacts and the cumulative impacts that could result with the activities facilitated by the Redevelopment Plan, as Amended, as they are identified throughout Chapter 4. Chapter 6 also describes the potential for inducing growth.

Chapter 7, *Report Preparation*, identifies the authors of the SEIR, including City staff and the SEIR consultant team. The key consultants who provided technical resources for the SEIR are also identified in this chapter.

Appendices to the Draft SEIR are provided at the end of the document and include the NOPs, comments to the NOPs, as well as certain supporting background documents used for the impact analyses for specific topics. All reference documents and persons contacted to prepare the SEIR analyses are listed at the end of each analysis section in Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval and Mitigation Measures*. The Draft SEIR is available for review by the public at the City of Oakland Community and Economic Development Agency – Planning Department-Strategic Planning Division, under reference Case Number ER 11-001, located at 250 Frank H. Ogawa Plaza, Suite 3315, Oakland, California 94612.

A *List of Acronyms and Abbreviations* used in this SEIR is provided before Chapter 1.

CHAPTER 2

Summary

This chapter summarizes in a stand-alone section the project described in Chapter 3, the impacts and mitigation measures discussed in Chapter 4, and the alternatives analysis presented in Chapter 5¹.

2.1 Project Overview

The City of Oakland (“City”) and the Redevelopment Agency of the City of Oakland (“Agency”) propose three amendments (referred to throughout as the “**Proposed Amendments**”) to the Broadway/MacArthur/San Pablo Redevelopment Plan (referred to throughout as the “**Existing Redevelopment Plan**”). This supplement is prepared to the Broadway/MacArthur/San Pablo Redevelopment Plan Environmental Impact Report that the City certified on July 25, 2000 (referred to throughout as the “**2000 EIR**”). Collectively, the CEQA project analyzed in this SEIR is consistently referred to as the “**Redevelopment Plan, as Amended.**”

This Supplemental Environmental Impact Report (“SEIR”) analyzes the physical and environmental impacts associated with the Redevelopment Plan, as Amended, which is the Existing Redevelopment Plan combined with the Proposed Amendments.

The Existing Redevelopment Plan Project Area (referred to throughout as the “**Existing Project Area**”) consists of two non-contiguous subareas: the Broadway/MacArthur subarea and the San Pablo subarea. The Existing Project Area is located in the North Oakland area of the City of Oakland, in Alameda County, California (see Figures 3-1 and 3-2 in Chapter 3, *Project Description*). The “Project Area” for CEQA purposes is the “**Project Area, as Amended.**”

Implementation of the Redevelopment Plan, as Amended, would implement a series of multiple, coordinated actions (e.g., projects, programs, and funding) to eliminate blight and facilitate revitalization and growth throughout the Project Area, as Amended, consistent with actions anticipated by the Existing Redevelopment Plan analyzed in the 2000 EIR.

In 2009, the City received a community petition request to have the boundaries of the Existing Project Area expanded to include the Amendment Area described above. On July 20, 2010, the City Council adopted the Amendment Area as a redevelopment survey area to be studied and considered for inclusion in the Existing Project Area. The proposed inclusion of the Amendment Area is the first of the three Proposed Amendments described below:

¹ As a summary, this Chapter includes definitions and information detailed in other sections of the Draft SEIR.

1. The first Proposed Amendment would expand the Existing Project Area boundaries adjacent to the San Pablo subarea to include the approximately 1,300 parcels and 210 acres that is the Amendment Area.
2. The second Proposed Amendment would extend the Agency's eminent domain authority for the Project Area, as Amended, beyond 2012 to 2024.²
3. The third Proposed Amendment would increase the cap on bonding capacity proportional to the redevelopment needs of the Amendment Area, in order to finance proposed redevelopment activities in the Amendment Area without drawing from the existing bonding capacity.

Redevelopment activities to be facilitated by the Proposed Amendments would generally remain similar to those currently being implemented under the Existing Redevelopment Plan and within the Existing Project Area. However, the Proposed Amendments would not result in any changes to the physical environment in, or redevelopment activities facilitated by, the Existing Redevelopment Plan.

2.2 Environmental Impacts, Standard Conditions of Approval and Mitigation Measures

All impacts and mitigation measures identified in this SEIR are summarized in **Table 2-1**, Summary of Impacts, Standard Conditions of Approval, Mitigation Measures, and Residual Impacts, at the end of this chapter. Table 2-1 includes all impact statements, standard conditions of approval, recommended mitigation measures, and the level of significance of the impact after recommended mitigation measures are implemented.

This SEIR identifies the following significant and unavoidable (SU) impacts associated with the Redevelopment Plan, As Amended:

SU Air Quality Impacts

- **New Impact AIR-3:** Development facilitated by the Redevelopment Plan, as Amended, could include residential developments that expose occupants to substantial health risk from diesel particulate matter (DPM) from mobile and stationary sources. Although compliance with City's Standard Conditions of Approval would provide that a site specific health risk assessment (HRA) be prepared, and that would reduce exposures to DPM

² **Eminent domain** is the authority of a government agency to acquire property for public purposes, with payment of just compensation. "Public purposes" include the elimination of blight in the case of redevelopment agencies. During the last 20 years, the Redevelopment Agency used eminent domain for three projects in the City of Oakland. These were the Bermuda Building, an earthquake-damaged building that sat vacant and deteriorating for almost nine years after the Loma Prieta earthquake, the Uptown Project, nine parcels included parking lots, dilapidated single room occupancy residential hotels and auto-related uses, and the Market Square project, three parcels including a grocery store, garment factory and storage facility in old dilapidated structures. The area surrounding these project sites have flourished after the Agency used eminent domain, including the establishment of many new small businesses on Telegraph Avenue, San Pablo Avenue, and Broadway.

sources to less than significant, there is no assurance that exposure to gaseous TACs could be reduced to a less-than-significant level at every site.

- **Updated Impact C.5 (AIR):** Development facilitated by the Redevelopment Plan, as Amended, would encourage new residential uses that expose occupants to sources of substantial and frequent odors affecting a substantial number of people and would be guided by City policies to reduce potential odor impacts.

SU Cultural Resources Impacts

- **New Impact CUL-1:** Development facilitated by the Redevelopment Plan, as Amended, would result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources.
- **New Impact CUL-5:** Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, would contribute considerably to a significant adverse cumulative impact to cultural resources.

SU Transportation and Circulation Impacts

- **New Impact TRA-1:** Development facilitated by the Redevelopment Plan, as Amended, would degrade the Powell Street / Christie Avenue intersection (#3) from LOS E to LOS F during the PM peak hour under 2035 conditions.
- **New Impact TRA-2:** Development facilitated by the Redevelopment Plan, as Amended, would increase vehicle delay to a critical movement by more than six seconds at the Stanford Avenue / San Pablo Avenue intersection (#5), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Redevelopment Plan, as Amended.
- **New Impact TRA-5:** Development facilitated by the Redevelopment Plan, as Amended, would increase the vehicle delay to a critical movement by more than six seconds at the 25th Street / San Pablo Avenue intersection (#15), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Redevelopment Plan, as Amended.

The 2000 EIR for the Redevelopment Plan identified one SU impact regarding consistency with air quality planning (Updated Impact C.1 [AIR]), which is identified as less than significant in this SEIR that considers the Redevelopment Plan, as Amended.

2.3 Alternatives

2.3.1 2000 EIR Alternatives

The 2000 EIR analyzed the following reasonable range of alternatives to the Existing Redevelopment Plan:

- **No Project Alternative:** Existing Redevelopment Plan would not have been adopted.
- **Reduced Project Alternative:** Approximately 700 new residential units would be removed from the Redevelopment. Mixed use development would also be restricted, and housing would be limited to infill areas where housing is compatible with surrounding uses and noise levels. (Environmentally Superior Alternative in the 2000 EIR.)
- **Specific Plan Alternative:** Each proposed subarea would be designated a specific plan area, pursuant to State laws, thus development would take place at a much slower pace.

2.3.2 SEIR Alternatives

The Proposed Amendments do not propose changes to the development scenario within the Existing Project Area analyzed in the 2000 EIR. Therefore, this SEIR does not reconsider the alternatives addressed in the 2000 EIR, as they were determined to be a reasonable range and reduce the severity of the environmental impacts identified for the Existing Redevelopment Plan.

The SEIR alternatives focus on the significant impacts that would result from development facilitated by the Redevelopment Plan, as Amended, and thus considers alternative development scenarios specifically for the Amendment Area. The SEIR alternatives supplement, but do not replace or modify, the alternatives analyzed in the 2000 EIR.

The following three alternatives are discussed and analyzed in this SEIR:

- **No Project – Alternative 1:** The Proposed Amendments to the Redevelopment Plan would not be adopted, however, development that could occur even without adoption of the Proposed Amendments is considered, resulting in a slight increase in housing along the Lowell Street corridor, compared to existing conditions.
- **Lower Growth - Alternative 2:** Reduced development at approximately 50 percent less floor area and 50 percent fewer residential units, compared to the Proposed Amendments.
- **Industrial Use – Alternative 3:** Increased new light industrial incubator space (approximately 60 percent more floor area) and less new residential and live-work (approximately 74 percent fewer units) along the Lowell Street corridor, compared to the Proposed Amendments.

2.3.3 Environmentally Superior Alternative

The environmentally superior alternative for the Redevelopment Plan, as Amended, considers the 2000 EIR environmentally superior alternative determination, combined with the analysis of alternatives to the Proposed Amendments presented herein. The environmentally superior alternative for the Redevelopment Plan, as Amended, is described as follows:

- **2000 EIR Reduced Project Alternative for the Existing Project Area, in combination with the Lower Growth Alternative in the Amendment Area.**

This combined environmentally superior alternative scenario would avoid and/or substantially reduce SU impacts of the Redevelopment Plan, as Amended, to the greatest extent compared to each of the other alternatives. However, by restricting new residential development in the Existing Project Area (per the 2000 Reduced Project Alternative), this combined environmentally superior alternative still would not fully meet some of the basic project objectives of the Existing Redevelopment Plan, as disclosed in the 2000 EIR.

2.4 Areas of Controversy and Scoping Comments

The following CEQA topics were among those that were raised in written comments received in response to the initial and revised NOP for this EIR (see Appendix A), and include comments stated during the City's scoping meetings held by the Oakland Planning Commission. Each of these CEQA topics is addressed in this Draft SEIR. Comments that raised non-CEQA topics are noted but not addressed directly in this Draft SEIR. None of the comments received on the NOPs raise areas of controversy or issues to be resolved pertinent to the Proposed Amendments or the Redevelopment Plan, as Amended. Issues addressed in the public comments include:

1. Traffic considerations:
 - traffic impacts and use of actual counts rather than traffic "guesstimates"
 - use of integrated approach to traffic planning, emphasizing needs of pedestrians, transit and bikes
 - safety impacts resulting from development near rail crossings and measures to increase safety
 - use of Alameda Countywide Transportation Demand model to project traffic impacts for 2025 and 2030
 - impacts on the Metropolitan Transit System roadways and public transit systems
 - consider need for improved or expanded bicycle and transportation facilities
2. Parking:
 - commercial vehicle parking
 - implementing restricted parking near railways
3. Right-of-Way uses
 - Pedestrian experience
 - sidewalks to accommodate disabled users and comply with the Americans with Disabilities Act
 - Al fresco dining and other retail incursions into sidewalks
 - Ensuring pedestrian safety near railways
4. Stormwater management issues
5. Water and wastewater service
6. Water recycling and conservation opportunities
7. Potential to encounter contaminated soils during construction
8. Impacts on low-income households in the area
9. Adequate discussion of eminent domain.

**TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS**

| Environmental Impact | Standard Conditions of Approval and Mitigation Measures | Level of Significance after application of Standard Conditions of Approval and Mitigation |
|--|---|---|
| 4.1 Aesthetics, Shadow, and Wind | | |
| Updated Impact AES-1: Development facilitated by the Redevelopment Plan, as Amended, would not adversely affect scenic public vistas or scenic resources. | None Required | Less than Significant |
| Updated Impact AES-2: Development facilitated by the Redevelopment Plan, as Amended, would not substantially degrade the existing visual character or quality of the site and its surroundings. (Less than Significant) | None Required | Less than Significant |
| Updated Impact AES-3: Development facilitated by the Redevelopment Plan, as Amended, would facilitate the creation of new sources of light or glare which would not substantially and adversely affect day or nighttime views in the area. (Less than Significant) | Standard Condition of Approval 40: <i>Lighting Plan</i> | Less than Significant |
| Updated Impact AES-4: Development facilitated by the Redevelopment Plan, as Amended, would not result in substantial new shadow that would shade solar collectors, passive solar heaters, public open spaces, or historic resources or otherwise result in inadequate provision of adequate light. (Less than Significant) | None Required | Less than Significant |
| Updated Impact AES-5: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects in and around the Project Area, as Amended, would not result in impacts to aesthetics, shadow and wind. (Less than Significant) | None Required | Less than Significant |
| 4.2 Air Quality | | |
| Updated Impact C.1 (AIR): Development facilitated by the Redevelopment Plan, as Amended, would not fundamentally conflict with the <i>Bay Area 2010 Clean Air Plan</i> because the projected rate of increase in vehicle miles traveled (VMT) or vehicle trips is not greater than the projected rate of increase in population. (Less than Significant) | None Required | Less than Significant |
| Updated Impact C.2 (AIR): Development facilitated by the Redevelopment Plan, as Amended, would not fundamentally conflict with the <i>Bay Area 2010 Clean Air Plan</i> because that future development under the Redevelopment Plan, as Amended, would incorporate reasonable efforts to implement control measures contained in the CAP. (Less than Significant) | Standard Condition of Approval 25: <i>Parking and Transportation Demand Management</i> | Less than Significant |

Notes:

"New" Impact – Topic and/or Impact Statement not Addressed in 1999 Initial Study or 2000 EIR.

"Updated" Impact – Impact updated from 1999 Initial Study or 2000 EIR to reflect current City requirements and for overall conformance with current standards and practices and this SEIR.

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TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

| Environmental Impact | Standard Conditions of Approval and Mitigation Measures | Level of Significance after application of Standard Conditions of Approval and Mitigation |
|--|---|---|
| <p>New Impact AIR-3: Development facilitated by the Redevelopment Plan, as Amended, could include residential developments that expose occupants to substantial health risk from diesel particulate matter (DPM) from mobile and stationary sources. Although compliance with City's Standard Conditions of Approval would provide that a site specific health risk assessment (HRA) be prepared, and that would reduce exposures to DPM sources to less than significant, there is no assurance that exposure to gaseous TACs could be reduced to a less-than-significant level at every site. (Potentially Significant)</p> | <p>Standard Condition of Approval 25, <i>Parking and Transportation Demand Management</i>, B: <i>Exposure to Air Pollution (Toxic Air Contaminants: Particulate Matter)</i>, C: <i>Exposure to Air Pollution (Toxic Air Contaminants: Gaseous Emissions)</i></p> | Significant and Unavoidable |
| <p>Updated Impact C.5 (AIR): Development facilitated by the Redevelopment Plan, as Amended, would encourage new residential uses that could expose occupants to sources of substantial and frequent odors affecting a substantial number of people and would be guided by City policies to reduce potential odor impacts. (Significant)</p> | No mitigation measures available. | Significant and Unavoidable |
| 4.3 Biological Resources | | |
| <p>Updated Impact BIO-1: Development facilitated by the Redevelopment Plan, as Amended, could adversely affect, either directly or through habitat modifications, species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (Less than Significant)</p> | <p>Standard Conditions of Approval 44: <i>Tree Removal During Breeding Season</i>; D: <i>Bird Collision Reduction</i></p> | Less than Significant |
| <p>Updated Impact BIO-2: Development facilitated by the Redevelopment Plan, as Amended, would not have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means. (Less than Significant)</p> | None Required | Less than Significant |
| <p>Updated Impact BIO-3: Development facilitated by the Redevelopment Plan, as Amended, would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (Less than Significant)</p> | <p>Standard Conditions of Approval 44: <i>Tree Removal During Breeding Season</i> and D: <i>Bird Collision Reduction</i></p> | Less than Significant |

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| <p>New Impact BIO-4: Development facilitated by the Redevelopment Plan, as Amended, could fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code Chapter 12.36) by removal of protected trees under certain circumstances. (Less than Significant)</p> | <p>Standard Conditions of Approval 46: <i>Tree Replacement Plantings</i> and 47: <i>Tree Protection during Construction</i></p> | Less than Significant |
| <p>Updated Impact BIO-5: Construction activity and operations of development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects in and around the Amendment Area and the Project Area as Amended, would not result in impacts on special-status species, wildlife movement corridors, wetlands, and other waters of the U.S. (Less than Significant)</p> | <p>Standard Conditions of Approval 57: <i>Vibrations Adjacent to Historic Structures</i>; 35: <i>Hazards Best Management Practices</i>; 55: <i>Erosion and Sedimentation Control Plan</i>; 75: <i>Stormwater Pollution Prevention Plan</i>; 80: <i>Post-construction Stormwater Pollution Management Plan</i>; 44: <i>Tree Removal During Breeding Season</i>; 45: <i>Tree Removal Permit</i>; 46: <i>Tree Replacement Plantings</i>; 47: <i>Tree Protection during Construction</i>; A: <i>Bird Collision Reduction</i>; 83: <i>Creek Protection Plan</i></p> | Less than Significant |
| 4.4 Cultural Resources | | |
| <p>New Impact CUL-1: Development facilitated by the Redevelopment Plan, as Amended, would result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources. (Significant)</p> | <p>New Mitigation Measure CUL-1:</p> <ul style="list-style-type: none"> a. <i>Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Buildings.</i> <ul style="list-style-type: none"> i. <i>Avoidance.</i> The City shall ensure that all future redevelopment activities allowable under the Proposed Redevelopment Plan as Amended, including demolition, alteration, and new construction, would avoid historical resources (i.e., those listed on federal, state, and local registers). ii. <i>Adaptive Reuse.</i> If avoidance is not feasible, adaptive reuse and rehabilitation of historical resources shall occur in accordance with the Secretary of Interior’s Standards for the Treatment of Historic Properties. iii. <i>Appropriate Relocation.</i> If avoidance or adaptive reuse in situ is not feasible, pursuant to SCA 56, Compliance with Policy 3.7 of the Historic Preservation Element (Property Relocation Rather than Demolition), redevelopment projects able to relocate the affected historical property to a location consistent with its historic or architectural character could reduce the impact to less than significant (Historic Preservation Element Action 3.8.1), unless the property’s location is an integral part of its significance, e.g., a contributor to a historic district. | Significant and Unavoidable |

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| | <p><i>b. Future Site-specific Surveys and Evaluations.</i></p> <p>i. Although most of the Amendment Area has been surveyed by the City of Oakland's OCHS, evaluations and ratings may change with time and other conditions. As such, there may be numerous other previously unidentified historical resources which would be affected by future redevelopment activities, including demolition, alteration, and new construction. For any future redevelopment project that would occur on or immediately adjacent to buildings 50 years old or older, and would occur by 2042 (i.e., buildings constructed prior to 1992), the City shall require specific surveys and evaluations of such properties to determine their potential historical significance at the federal, state, and local levels. As part of the project-specific environmental review process, intensive-level surveys and evaluations shall be completed by a qualified architectural historian who meets the <i>Secretary of the Interior's Standards</i> for architectural history. For all historical resources identified as a result of site-specific surveys and evaluations, the City shall ensure that future redevelopment activities, including demolition, alteration, and new construction, would avoid, adaptively reuse and/or appropriately relocate such historical resources in accordance with measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures), above.</p> <p><i>c. Recordation and Public Interpretation.</i></p> <p>If measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically-significant Structures) is determined infeasible as part of any future redevelopment scenarios, the City shall evaluate the feasibility of recordation and public interpretation of such resources prior to any construction activities which would directly affect them. Should city staff decide recordation and or public interpretation is required, the following activities would be performed:</p> <p>i. Recordation. Recordation shall follow the standards provided in the National Park Service's Historic American Building Survey (HABS) program, which typically requires</p> | |

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| | <p>large-format photo-documentation of historic buildings, a written report, and measured drawings (or photo reproduction of original plans if available), as determined by the City. The photographs and report would be archived at local repositories, such as public libraries, historical societies, and the Northwest Information Center at Sonoma State University. The recordation efforts shall occur prior to demolition, alteration, or relocation of any historic resources identified in the Project Area as Amended, including those that are relocated pursuant to measure “a” (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically-significant Structures). Additional recordation could include (as appropriate) oral history interviews or other documentation (e.g., video) of the resource.</p> <p>ii. Public Interpretation. A public interpretation program would be developed by a qualified historic consultant in consultation with the Landmarks Preservation Advisory Board and City staff, based on a City-approved scope of work and submitted to the City for review and approval. The program could take the form of plaques, commemorative markers, or artistic or interpretive displays which explain the historical significance of the properties to the general public. Such displays would be incorporated into project plans as they are being developed, and would typically be located in a publicly accessible location on or near the site of the former historical resource(s). Public interpretation displays shall be installed prior to completion of any construction projects in the Project Area as Amended.</p> <p>Photographic recordation and public interpretation of historically significant properties prior to their demolition or alteration does not typically mitigate the loss of potentially historic resources to a less-than-significant level [CEQA Section 15126.4(b)(2)].</p> <p>d. <i>Financial Contributions.</i> If measure “a” (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically-significant Structures) and measure “b” (Future Site-specific Surveys and Evaluations) are not</p> | |

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| | <p>satisfied, the project applicants of specific projects facilitated by the Proposed Redevelopment Plan as Amended shall make a financial contribution to the City of Oakland, which can be used to fund other historic preservation projects within the Project Area as Amended or in the immediate vicinity. Such programs include, without limitation, a Façade Improvement Program, or the Property Relocation Assistance Program.</p> <p>This mitigation would conform to Action 3.8.1(9) of the Historic Preservation Element of the City of Oakland General Plan. Contributions to the fund(s) shall be determined by staff at the time of approval of site-specific project plans based on a formula to be determined by the Landmarks Preservation Advisory Board. However, such financial contribution, even in conjunction with measure “c” (Recordation and Public Interpretation), would not reduce the impacts to less-than-significant levels.</p> <p>Only avoidance of direct effects to these buildings, appropriate relocation and/or adaptive reuse in accordance with the Secretary of the Interior’s Standards for the Treatment of Historic Properties, as would be achieved through measure “a” (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically-significant Structures) and measure “b” (Future Site-specific Surveys and Evaluations), would reduce the impacts of development in the Amendment Area to historic resources to a less-than-significant level. Therefore, if demolition or substantial alteration of historically-significant resources is identified by the City as the only feasible option to redevelopment in the Amendment Area, even with implementation of measure “c” (Recordation and Public Interpretation) and measure “d” (Financial Contributions), the impact of development facilitated by the Proposed Amendments would be considered significant and unavoidable.</p> <p style="text-align: center;">Standard Conditions of Approval 56: <i>Compliance with Policy 3.7 of the Historic Preservation Element (Property Relocation Rather than Demolition); and 57: Vibrations Adjacent to Historic Structures.</i></p> | |

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|---|--|--|
| Updated Impact CUL-2: Development facilitated by the Redevelopment Plan, as Amended, could result in significant impacts to unknown archaeological resources. (Less than Significant) | Standard Condition of Approval 52: <i>Archaeological Resources</i> | Less than Significant |
| Updated Impact CUL-3: Development facilitated by the Redevelopment Plan, as Amended, could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (Less than Significant) | Standard Condition of Approval 54: <i>Paleontological Resources</i> | Less than Significant |
| Updated Impact CUL-4: Development facilitated by the Redevelopment Plan, as Amended, could disturb human remains, including those interred outside of formal cemeteries. (Less than Significant) | Standard Condition of Approval 53: <i>Human Remains, and 52:</i> <i>Archaeological Resources</i> | Less than Significant |
| New Impact CUL-5: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects in and around the Amendment Area and the Project Area as Amended, would contribute considerably to a significant adverse cumulative impact to cultural resources. (Significant) | New Mitigation Measure CUL-2: Implement Mitigation Measure CUL-1 (Historical Resources). Standard Conditions of Approval 52: <i>Archaeological Resources, 53:</i> <i>Human Remains; 54:</i> <i>Paleontological Resources; 56:</i> <i>Compliance with Policy 3.7 of the Historic Preservation Element (Property Relocation Rather than Demolition); and 57:</i> <i>Vibrations Adjacent to Historic Structures.</i> | Significant and Unavoidable: Historic Resources Less than Significant: Archaeological, Paleontological, or Prehistoric Resources, and Human Remains |
| 4.5 Geology, Soils and Geohazards | | |
| Updated Impact GEO-1: Development facilitated by the Redevelopment Plan, as Amended, could expose people or structures to seismic hazards such as ground shaking and seismic-related ground failure such as liquefaction, differential settlement, or lateral spread. (Less than Significant) | Standard Conditions of Approval 58: <i>Soils Report</i> and 59: <i>Geotechnical Report.</i> | Less than Significant |
| Updated Impact GEO-2: Development facilitated by the Redevelopment Plan, as Amended, could be subjected to geologic hazards, including expansive soils, subsidence, seismically induced settlement and differential settlement. (Less than Significant) | Standard Conditions of Approval 58: <i>Soils Report</i> and 59: <i>Geotechnical Report.</i> | Less than Significant |
| Updated Impact GEO-3: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects in and around the Amendment Area and the Project Area as Amended, would not | None Required | Less than Significant |

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|--|--|---|
| result in significant cumulative impacts with respect to geology, soils or seismicity. (Less than Significant) | | |
| 4.6 Greenhouse Gases and Climate Change | | |
| New Impact GHG-1: Development facilitated by the Redevelopment Plan, as Amended, would produce greenhouse gas emissions that exceed 1,100 metric tons of CO ₂ e per year and exceed 4.6 metric tons of CO ₂ e per service population annually. (Potentially Significant) | Standard Condition of Approval F: <i>Greenhouse Gas (GHG) Reduction Plan</i> | Less than Significant |
| New Impact GHG-2: Development facilitated by the Redevelopment Plan, as Amended, would not conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing greenhouse gas emissions, but would exceed the numeric threshold for GHG emissions. (Potentially Significant) | Standard Condition of Approval F: <i>Greenhouse Gas (GHG) Reduction Plan; 25: Parking and Transportation Demand Management; 26: Dust Control; 27: Construction Emissions; 41: Asbestos Removal in Structures; 55: Erosion and Sedimentation Control Plan; 75: Stormwater Pollution Prevention Plan; 83: Creek Protection Plan; 12: Required Landscape Plan for New Construction and Certain Additions to Residential Facilities; 13: Landscape Requirements for Street Frontages; 15: Landscape Maintenance (residential); 17: Landscape Requirements for Street Frontages; 18: Landscape Maintenance (new commercial and manufacturing); 46: Tree Replacement Plantings; and 36: Waste Reduction and Recycling</i> | Less than Significant |
| 4.7 Hazardous Materials | | |
| Updated Impact HAZ-1: Development facilitated by the Redevelopment Plan, as Amended, would result in an increase in the routine transportation, use, and storage of hazardous chemicals. (Less than Significant) | Standard Condition of Approval 35: <i>Hazard Best Management Practices; 74: Hazardous Materials Business Plan</i> | Less than Significant |
| Updated Impact HAZ-2: Development facilitated by the Redevelopment Plan, as Amended, would result in the accidental release of hazardous materials used during construction through improper handling or storage. (Less than Significant) | Standard Condition of Approval 35: <i>Hazard Best Management Practices</i> | Less than Significant |
| Updated Impact HAZ-3: Development facilitated by the Redevelopment Plan, as Amended, would result in the exposure of hazardous materials in soil and ground water. (Less than Significant) | Standard Conditions of Approval 68: <i>Best Management Practices for Soil and Groundwater Hazards and 69: Radon or Vapor Intrusion from Soil or Groundwater Sources</i> | Less than Significant |

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| Updated Impact HAZ-4: Development facilitated by the Redevelopment Plan, as Amended, would result in the exposure of hazardous building materials during building demolition or façade improvements. (Less than Significant) | Standard Conditions of Approval 65: <i>Lead-based Paint Remediation</i> and 41: <i>Asbestos Removal in Structures</i> | Less than Significant |
| Updated Impact HAZ-5: Development facilitated by the Redevelopment Plan, as Amended, would require use of hazardous materials within 0.25 mile of a school. (Less than Significant) | Standard Condition of Approval 74: <i>Hazardous Materials Business Plan</i> | Less than Significant |
| Updated Impact HAZ-6: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, would not result in cumulative hazards. (Less than Significant) | Standard Conditions of Approval 66: <i>Other Materials Classified as Hazardous Waste</i> ; 74: <i>Hazardous Materials Business Plan</i> ; and 61: <i>Site Review by Fire Services Division</i> | Less than Significant |
| 4.8 Hydrology and Water Quality | | |
| Updated Impact HYD-1: Development facilitated by the Redevelopment Plan, as Amended, would alter drainage patterns and increase the volume of stormwater, level of contamination or siltation in stormwater flowing from the Project Area, as Amended. (Less than Significant) | Standard Conditions of Approval 55: <i>Erosion and Sedimentation Control Plan</i> ; 75: <i>Stormwater Pollution Prevention Plan</i> ; 80: <i>Post-construction Stormwater Pollution Management Plan</i> ; 81: <i>Maintenance Agreement for Stormwater Treatment Measures</i> , 91: <i>Stormwater and Sewer</i> | Less than Significant |
| Updated Impact HYD-2: Development facilitated by the Redevelopment Plan, as Amended, could be susceptible to flooding hazards in the event of dam or reservoir failure. (Less than Significant) | None Required | Less than Significant |
| Updated Impact HYD-3: Development facilitated by the Redevelopment Plan, as Amended, would not adversely affect the availability of groundwater supplies or interfere substantially with groundwater recharge (Less than Significant) | None Required | Less than Significant |
| Updated Impact HYD-4: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, would not result in potentially significant cumulative impacts to hydrologic resources. (Less than Significant) | None Required | Less than Significant |

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|--|---|---|
| 4.9 Land Use, Plans and Policies | | |
| Updated Impact A.1 (LU): Development facilitated by the Redevelopment Plan, as Amended, would blend with the established communities of the Project Area, as Amended, and would not result in the physical division of an existing community or conflict with nearby land uses. (Less than Significant) | None Required | Less than Significant |
| Updated Impact A.2 (LU): Development facilitated by the Redevelopment Plan, as Amended, would not conflict with applicable land use plans and policies adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant) | None Required | Less than Significant |
| New Impact LU-3: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, does not reveal any significant adverse cumulative impacts in the area. (Less than Significant) | None Required | Less than Significant |
| 4.10 Noise | | |
| Updated Impact D.2 (NOI): Development facilitated by the Redevelopment Plan, as Amended, would result in substantial temporary or periodic increases in ambient noise levels in the Project Area, as Amended, above levels existing without the Redevelopment Plan, as Amended, and in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant) | Standard Conditions of Approval 28: <i>Days/Hours of Construction Operation</i> , 29: <i>Noise Control</i> , 30: <i>Noise Complaint Procedures</i> , and 39: <i>Pile Driving and Other Extreme Noise Generators</i> | Less than Significant |
| Updated Impact NOI-2: Development facilitated by the Redevelopment Plan, as Amended, could expose persons to or create excessive groundborne vibration or groundborne noise levels. (Less than Significant) | Standard Conditions of Approval 38: <i>Vibration</i> , and 57: <i>Vibrations Adjacent to Historic Structures</i> | Less than Significant |
| Updated Impact D.4 (NOI): Development facilitated by the Redevelopment Plan, as Amended, could increase noise levels in the Project Area, as Amended, to levels in excess of standards established in the Oakland Noise Ordinance and Planning Code, which may result in noise compatibility problems due to the proximity of residential uses with other uses (including commercial and employment uses). (Less than Significant) | Standard Conditions of Approval 31: <i>Interior Noise</i> , and 32: <i>Operational Noise (General)</i> | Less than Significant |

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| Updated Impact D.1 (NOI): Traffic generated by development facilitated by the Redevelopment Plan, as Amended, could substantially increase traffic noise levels in the Project Area, as Amended. (Less than Significant) | None Required | Less than Significant |
| Updated Impact NOI-5: Traffic generated by development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, could substantially increase traffic noise levels in the Project Area, as Amended; and construction and operational noise levels in combination with traffic from past, present, and reasonably foreseeable future projects, could increase ambient noise levels. (Less than Significant) | None Required | Less than Significant |
| 4.11 Population, Employment and Housing | | |
| New Impact POP-1: Development facilitated by the Redevelopment Plan, as Amended, could displace a small number of existing housing units and residents, but not in substantial numbers necessitating the construction of replacement housing elsewhere, in excess of that anticipated in the City's Housing Element. (Less than Significant) | None Required | Less than Significant |
| New Impact POP-2: Development facilitated by the Redevelopment Plan, as Amended, could displace existing businesses and jobs, but not in substantial numbers necessitating construction of replacement facilities elsewhere, in excess of that anticipated in the City's General Plan. (Less than Significant) | None Required | Less than Significant |
| New Impact POP-3: Development facilitated by the Redevelopment Plan, as Amended, in combination with past, present, and reasonably foreseeable future projects, would not induce substantial population growth in a manner not contemplated in the General Plan, either directly by facilitating new housing or businesses, or indirectly through infrastructure improvements, such that additional infrastructure is required but the impacts of such were not previously considered or analyzed. (Less than Significant) | None Required | Less than Significant |

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| 4.12 Public Services and Recreation Facilities | | |
| Updated Impact E.1 (PSR): Development facilitated by the Redevelopment Plan, as Amended, could result in an increase in calls for fire protection and emergency medical response services, but would not require new or physically altered fire protection facilities in order to maintain acceptable performance objectives. (Less than Significant) | None Required | Less than Significant |
| Updated Impact E.3 (PSR): Development facilitated by the Redevelopment Plan, as Amended, could increase the use of existing neighborhood and regional parks, including Mosswood Park and the Golden Gate Recreation Center, but not to the extent that substantial physical deterioration of the facilities would occur or be accelerated. (Less than Significant) | None Required | Less than Significant |
| Updated Impact E.5(PSR): Development facilitated by the Redevelopment Plan, as Amended, could result in an increase in calls for police service in the Project Area, as Amended, but would not require new or physically altered police facilities in order to maintain acceptable performance objectives. (Less than Significant) | None Required | Less than Significant |
| Updated Impact E.6 (PSR): Development facilitated by the Redevelopment Plan, as Amended, could add an estimated 537 new students for local schools, but would not require new or physically altered school facilities to maintain acceptable performance objectives. (Less than Significant) | None Required | Less than Significant |
| New Impact PSR-5: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects within and around the Project Area, as Amended, would result in a cumulative increase in demand for police, fire, and school services. (Less than Significant) | None Required | Less than Significant |
| New Impact PSR-6: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, would result in an increased demand for recreational facilities. (Less than Significant) | None Required | Less than Significant |

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TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

| Environmental Impact | Standard Conditions of Approval and Mitigation Measures | Level of Significance after application of Standard Conditions of Approval and Mitigation |
|---|---|---|
| 4.13 Transportation and Circulation | | |
| <p>New Impact TRA-1: Development facilitated by the Redevelopment Plan, as Amended, would degrade the Powell Street / Christie Avenue intersection (#3) from LOS E to LOS F during the PM peak hour under 2035 conditions. (Significant)</p> | <p>New Mitigation Measure TRA-1: Implement the following measures at the Powell Street / Christie Avenue intersection:</p> <ul style="list-style-type: none"> • Reconstruct the westbound approach to provide a second left turn lane. The resulting two left turn lanes should be 250 feet in length. The south side of the Powell Street bridge would need to be widened by about 12 feet to accommodate the second left-turn lane. <p>To implement this measure, the project sponsor shall submit the following to City of Emeryville for review and approval:</p> <ul style="list-style-type: none"> • Plans, Specifications, and Estimates (PS&E) to modify the intersection and accommodate the signal timing changes supporting vehicle travel and alternative modes travel consistent with City of Emeryville requirements. • Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund the cost of preparing and implementing these plans.</p> <p>This improvement is consistent with the finding of the Marketplace Redevelopment Project EIR (City of Emeryville, 2007). Implementation of this mitigation measure would require acquisition of right-of-way. After implementation of this measure, the intersection would improve to LOS E during the PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the delay would be less than under 2035 No Project conditions. The Marketplace Redevelopment Project EIR, did not identify any significant secondary impacts from implementation of this mitigation measure (City of Emeryville, 2007).</p> | <p>Significant and Unavoidable</p> |
| <p>New Impact TRA-2: Development facilitated by the Redevelopment Plan, as Amended, would increase the vehicle delay to a critical movement by more than six seconds at the Stanford Avenue / San Pablo Avenue intersection (#5), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Redevelopment Plan, as Amended. (Significant)</p> | <p>New Mitigation Measure TRA-2: Implement the following measures at the Stanford Avenue / San Pablo Avenue intersection:</p> <ul style="list-style-type: none"> • Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach). • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. This intersection is under the jurisdiction of Caltrans so any | <p>Significant and Unavoidable</p> |

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TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

| Environmental Impact | Standard Conditions of Approval and Mitigation Measures | Level of Significance after application of Standard Conditions of Approval and Mitigation |
|---|---|---|
| | <p>equipment or facility upgrades must be approved by Caltrans prior to installation.</p> <p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division and Caltrans for review and approval:</p> <ul style="list-style-type: none"> • Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal timing changes supporting vehicle travel and alternative modes travel consistent with Caltrans requirements. • Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund, prepare, and install the approved plans and improvements.</p> <p>After implementation of this measure, the intersection would continue to operate at LOS E during the PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the resulting increase in delay for the critical eastbound through movement would be less than the threshold of significance. No secondary significant impacts would result from implementation of this measure.</p> | |
| <p>New Impact TRA-3: Development facilitated by the Redevelopment Plan, as Amended, would increase the intersection average delay by more than four seconds and the vehicle delay to a critical movement by more than six seconds at the 55th Street / Market Street intersection (#11), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Proposed Amendments. (Significant)</p> | <p>New Mitigation Measure TRA-3: Implement the following measures at the 55th Street / Market Street intersection:</p> <ul style="list-style-type: none"> • Increase signal cycle length to 65 seconds during the PM peak period • Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach) • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. <p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> • Plans, Specifications, and Estimates (PS&E) to modify the intersection. All elements shall be designed to city standards in effect at the time of construction and all new or upgraded signals should | <p>Less than Significant</p> |

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TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

| Environmental Impact | Standard Conditions of Approval and Mitigation Measures | Level of Significance after application of Standard Conditions of Approval and Mitigation |
|----------------------|--|---|
| | <p>include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both city standards and Americans with Disabilities Act (ADA) standards (according to Federal and State Access Board guidelines) at the time of construction. Current city standards call for among other items the elements listed below:</p> <ul style="list-style-type: none"> - 2070L Type Controller - GPS communication (clock) - Accessible pedestrian crosswalks according to Federal and State Access Board guidelines - City Standard ADA wheelchair ramps - Full actuation (video detection, pedestrian push buttons, bicycle detection) - Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's Intelligent Transportation System (ITS) Master Plan - Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund, prepare, and install the approved plans and improvements.</p> <p>After implementation of this measure, the intersection would continue to operate at LOS E during the PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the intersection average delay and the delay for the critical southbound left movement would be less than the thresholds of significance. No secondary significant impacts would result from implementation of this measure.</p> | |

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TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

| Environmental Impact | Standard Conditions of Approval and Mitigation Measures | Level of Significance after application of Standard Conditions of Approval and Mitigation |
|---|--|---|
| <p>New Impact TRA-4: Development facilitated by the Redevelopment Plan, as Amended, would increase the vehicle delay to a critical movement by more than six seconds at the 55th Street / Martin Luther King Jr. Way intersection (#12), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Proposed Amendments. (Significant)</p> | <p>New Mitigation Measure TRA-4: Implement the following measures at the 55th Street / Martin Luther King Jr. Way intersection:</p> <ul style="list-style-type: none"> • Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach) • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. <p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> • Plans, Specifications, and Estimates (PS&E) to modify the intersection. All elements shall be designed to city standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both city standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current city standards call for among other items the elements listed below: <ul style="list-style-type: none"> – 2070L Type Controller – GPS communication (clock) – Accessible pedestrian crosswalks according to Federal and State Access Board guidelines – City Standard ADA wheelchair ramps – Full actuation (video detection, pedestrian push buttons, bicycle detection) – Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's ITS Master Plan – Signal timing plans for the signals in the coordination group. | <p>Less than Significant</p> |

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TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

| Environmental Impact | Standard Conditions of Approval and Mitigation Measures | Level of Significance after application of Standard Conditions of Approval and Mitigation |
|--|--|---|
| <p>New Impact TRA-5: Development facilitated by the Redevelopment Plan, as Amended, would increase the vehicle delay to a critical movement by more than six seconds at the 36th Street / San Pablo Avenue intersection (#15), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Redevelopment Plan, as Amended. (Significant)</p> | <p>The project sponsor shall fund, prepare, and install the approved plans and improvements.</p> <p>After implementation of this measure, the intersection would continue to operate at LOS E during the PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the delay for the critical southbound through movement would be less than the threshold of significance. No secondary significant impacts would result from implementation of this measure.</p> <p>New Mitigation Measure TRA-5: Implement the following measures at the 35th Street / San Pablo Avenue intersection:</p> <ul style="list-style-type: none"> • Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach) • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. This intersection is under the jurisdiction of Caltrans so any equipment or facility upgrades must be approved by Caltrans prior to installation. <p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division and Caltrans for review and approval:</p> <ul style="list-style-type: none"> • Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal timing changes supporting vehicle travel and alternative modes travel consistent with Caltrans requirements. • Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund, prepare, and install the approved plans and improvements.</p> <p>After implementation of this measure, the intersection would continue to operate at LOS E during the PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the delay for the critical westbound right movement would be less than the threshold of significance. No secondary significant impacts would result from implementation of this measure.</p> | <p>Significant and Unavoidable</p> |

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|--|---|---|
| New Impact TRA-6: Traffic congestion caused by the traffic generated by development facilitated by the Redevelopment Plan, as Amended, would increase travel time for AC Transit buses. (Less than Significant) | None Required | Less than Significant |
| New Impact TRA-7: Development facilitated by the Redevelopment Plan, as Amended, would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. (Less than Significant) | None Required | Less than Significant |
| New Impact TRA-8: Development facilitated by the Redevelopment Plan, as Amended, would increase traffic volumes on area roadway segments, potentially causing conflicts among motor vehicles, bicycles, or pedestrians. (Significant) | Standard Conditions of Approval 20: <i>Improvements in the Public Right-of-Way (General)</i> and 21: <i>Improvements in the Public Right-of-Way (Specific)</i> New Mitigation Measure TRA-8: Provide continuous sidewalks on both sides of Lowell Street between 62nd and Adeline Streets. Consistent with the City of Oakland's <i>Pedestrian Master Plan</i> , sidewalks on Lowell Street shall be at least six feet wide (five feet acceptable). In addition, a two- to four-foot wide utility zone clear of the pedestrian passageway (to accommodate above-ground public infrastructure such as utility poles, signs, and trees, and to provide a buffer between pedestrians and motor vehicles) should also be provided where the right-of-way is available. Directional curb ramps shall be provided at intersections. Pedestrian facilities shall be consistent with ADA requirements and other appropriate regulations and design standards in effect at the time. | Less than Significant |
| New Impact TRA-9: Development facilitated by the Redevelopment Plan, as Amended, would generate services from emergency vehicles. (Less than Significant) | None Required | Less than Significant |
| Updated Impact B.4 (TRA): Development facilitated by the Redevelopment Plan, as Amended, would generate demand for alternative transportation services. (Less than Significant) | None Required | Less than Significant |
| New Impact TRA-11: Development facilitated by the Redevelopment Plan, as Amended, would generate temporary increases in traffic volume and temporary effects on transportation conditions. (Less than Significant) | None Required | Less than Significant |

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TABLE 2-1 (Continued)
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|--|--|---|
| 4.14 Utilities and Service Systems | | |
| New Impact UTIL-1: The water demand generated by development facilitated by the Redevelopment Plan, as Amended, would not exceed water supplies available from existing entitlements and resources. (Less than Significant) | None Required | Less than Significant |
| New Impact UTIL-2: Development facilitated by the Redevelopment Plan, as Amended, would not exceed the wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination that new or expanded wastewater treatment facilities would be required. (Less than Significant) | Standard Conditions of Approval 91: <i>Stormwater and Sewer</i> | Less than Significant |
| New Impact UTIL-3: Development facilitated by the Redevelopment Plan, as Amended, would not require or result in construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant) | Standard Conditions of Approval 91: <i>Stormwater and Sewer</i> , 80: <i>Post-construction Stormwater Pollution Prevention Plan</i> , 75: <i>Stormwater Pollution Prevention Plan</i> | Less than Significant |
| New Impact UTIL-4: Development facilitated by the Redevelopment Plan, as Amended, would not generate solid waste that would exceed the permitted capacity of the landfills serving the area. (Less than Significant) | Standard Condition of Approval 36: <i>Waste Reduction and Recycling</i> | Less than Significant |
| New Impact UTIL-5: Development facilitated by the Redevelopment Plan, as Amended, would not violate applicable federal, state and local statutes and regulations relating to energy standards; nor result in a determination by the energy provider which serves or may serve the area that it does not have adequate capacity to serve projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities. (Less than Significant) | None Required | Less than Significant |
| New Impact UTIL-6: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present and reasonably foreseeable future projects within and around the Project Area, as Amended, would result in an increased demand for utilities services. (Less than Significant) | Standard Conditions of Approval 36: <i>Waste Reduction and Recycling</i> , 91: <i>Stormwater and Sewer</i> , 75: <i>Stormwater Pollution Prevention Plan</i> , and 80: <i>Post-construction Stormwater Management Plan</i> | Less than Significant |

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|--|---|---|
| 2000 EIR Impacts and Mitigation Measures (modified, as appropriate) that Require No Further Analysis in this SEIR, and that Continue to Apply to the Project | | |
| Air Quality (Updated from 2000 EIR) | | |
| Updated Impact C.3 (AIR): Traffic generated by the Redevelopment Plan, as Amended, would not significantly increase CO emissions along roadways and at intersections within the planning area. (Less than Significant). | None Required. | Less than Significant |
| Updated Impact C.4 (AIR): Cumulative development of future development projects in the Existing Project Area would result in increased stationary source emissions associated with heating and electricity consumption. (Less than Significant) | Standard Condition of Approval F: Greenhouse Gas (GHG) Reduction Plan | Less than Significant |
| Updated Impact C.6 (AIR): Construction activities associated with development projects within the Existing Project Area would generate dust (including the respirable fraction known as PM10) and combustion emissions. (Potentially Significant) | Updated Mitigation Measure C.6 (AIR): Implementation of Policy CO-12.6 of the OSCAR would help reduce short-term emissions associated with future development with the Project area. In addition, Basic Control measures shall be implemented at all construction sites, and enhanced control measures shall be implemented at all construction site when more than four acres are under construction at any one time. In addition, BAAQMD dust control measures would be implemented by contractors as outlined in <i>BAAQMD CEQA Guidelines</i> (1996) or any subsequent applicable BAAQMD updates. Expanded by Standard Condition of Approval A, Construction-Related Air Pollution Controls (Dust and Equipment Emissions); 56: Compliance with Policy 3.7 of the Historic Preservation Element (Property Relocation Rather than Demolition); 57: Vibrations Adjacent to Historic Structures | Less than Significant |
| Land Use, Plans and Policies (Updated from 2000 EIR) | | |
| Updated Impact A.3 (LU): The Redevelopment Plan, as Amended, could result in land use conflicts in Subarea 3, particularly along San Pablo Avenue and Stanford Avenue because of the proximity of schools and parks. (Less than Significant) (Note: Mitigation Measures retained, although not required.) | Updated Mitigation Measure A.3a (LU): The City of Oakland will work closely with the Oakland Public School District to assure that land uses proposed by the Redevelopment Plan, as Amended, are compatible with school and park uses, and will restrict uses near schools and parks that are incompatible with persons under the age of 18. | Less than Significant |

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|---|---|---|
| <i>2000 EIR Impacts and Mitigation Measures (modified, as appropriate) that Require No Further Analysis in this SEIR, and that Continue to Apply to the Project</i> | | |
| | Updated Mitigation Measure A.3b (LU): The City of Oakland will explore the potential rezoning of areas near schools and parks, if necessary, to permanently restrict land uses near public schools, parks and some residential areas that could be incompatible for persons under the age of 18. The City will coordinate its efforts with adjacent municipalities if the proposed rezoning occurs in adjacent areas. | |
| Updated Impact A.4 (LU): The Redevelopment Plan, as Amended, could potentially conflict with the General Plan Historic Preservation Element. (Potentially Significant) | Updated Mitigation Measure A.4 (LU): Same as New Mitigation Measure CUL-1. | Less than Significant |
| Updated Impact A.5 (LU): The Redevelopment Plan, as Amended, could result in land use conflicts between the City of Berkeley, the City of Emeryville and the City of Oakland in Subarea 3. (Less than Significant) (Mitigation Measures retained, although not required.) | Mitigation Measure A.5a (LU): Representatives from the City of Oakland will meet and confer with representatives of the cities of Berkeley and Emeryville to discuss land uses along borders shared with Subarea 3. Such meetings will have the goal of establishing an agreement concerning land uses along the Subarea 3 border, to include present and future uses, building heights, maximum allowable densities, parking, set backs, rehabilitation standards, historic resources, open space requirements and recreational opportunities. Mitigation Measure A.5b (LU): Representatives from the City of Oakland will confer with representatives of the cities of Berkeley and Emeryville, as part of any rezoning of adjacent areas, and as part of ongoing City-wide zoning update efforts. | Less than Significant |
| Noise (Updated from 2000 EIR) | | |
| Updated Impact D.3 (NOI): The Redevelopment Plan, as Amended, would encourage new residential uses as part of mixed-use retail areas within the Project Area, as Amended, and future noise levels in some areas could be incompatible with these new residential uses. (Potentially Significant) | Mitigation Measure D.3 (NOI): A detailed analysis of noise reduction requirements shall be required for any future residential development proposals along arterials or in the vicinity of the MacArthur BART Station, and the design of residential development shall incorporate recommendations of such analyses in the project. | Less than Significant |

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|---|---|---|
| <i>2000 EIR Impacts and Mitigation Measures (modified, as appropriate) that Require No Further Analysis in this SEIR, and that Continue to Apply to the Project</i> | | |
| Public Services and Recreation Facilities (Updated from 2000 EIR) | | |
| Updated Impact E.7 (PSR): Together with other existing and reasonably foreseeable future development in the vicinity in Oakland, the Redevelopment Plan, as Amended, would contribute to cumulative demand for increased fire protection services. (Potentially Significant) | Mitigation Measure E.7(PSR): Cumulative demand for fire protection services in Oakland would be mitigated to less than significant levels through individual project planning, design, and approvals, and, if necessary, through the expansion of fire protection services, through the use of tax increments funds, to accommodate growth. | Less than Significant |
| Transportation and Circulation (Updated from 2000 EIR) | | |
| Updated Impact B.1 (TRA): The addition of project traffic from traffic from the Existing Redevelopment Plan would result in unacceptable level of service at three intersections during the PM peak hour under existing conditions in the Existing Project Area. (Potentially Significant) | <p>Mitigation Measure B.1a (TRA): By providing “protected + permitted” left turn phasing for the southbound left turns on Broadway, the impacts at the intersection of Broadway / Piedmont Avenue can be reduced to less than significant levels. With these improvements, which could be funded through the Redevelopment Plan by earmarking funds for transportation improvements, the intersection would operate at LOS C without the project and LOS D with the project.</p> <p>Mitigation Measure B.1b (TRA): By providing “protected” left turn phasing for all approaches and re-striping the shared through-left lanes to exclusive left turn lanes on MacArthur Boulevard, the impacts at the intersection of Telegraph Avenue / MacArthur Boulevard can be reduced to less than significant levels. With these improvements, which could be funded through the Redevelopment Plan by earmarking funds for transportation improvements, the intersection would operate at LOS C without the project and LOS D with the project.</p> <p>Mitigation Measure B.1c: (TRA) By providing “protected” left turn phasing for all approaches and re-striping the shared through-left lanes to exclusive left turn lanes on 27th Street, the impacts at the intersection of Telegraph Avenue / 27th Street can be reduced to less than significant levels. With these improvements, which could be funded through the Redevelopment Plan by earmarking funds for transportation improvements, the intersection would operate at LOS C without the project and LOS D with the project during the PM peak hour.</p> | Less than Significant |

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|---|---|---|
| <i>2000 EIR Impacts and Mitigation Measures (modified, as appropriate) that Require No Further Analysis in this SEIR, and that Continue to Apply to the Project</i> | | |
| Updated Impact B.2 (TRA): The addition of project traffic from the Existing Redevelopment Plan would result in an unacceptable level of service at three intersections during the PM peak hour under cumulative Year 2020 conditions in the Existing Project Area. (Potentially Significant) | <p>Mitigation Measure B.2a (TRA): By providing “protected + permitted” left turn phasing for the southbound left turns, the impacts at the intersection of Broadway / Piedmont Avenue can be reduced to less than significant levels. With these improvements, which could be funded through the Redevelopment Plan by earmarking funds for transportation improvements, the intersection would operate at LOS C without the project and LOS D with the project.</p> <p>Mitigation Measure B.2b (TRA): By providing “protected” left turn phasing for all approaches and re-striping the shared through-left lanes to exclusive left turn lanes on MacArthur Boulevard, the impacts at the intersection of Telegraph Avenue / MacArthur Boulevard can be reduced to less than significant levels. With these improvements, which could be funded through the Redevelopment Plan by earmarking funds for transportation improvements, the intersection would operate at LOS C without the project and LOS D with the project.</p> <p>Mitigation Measure B.2c (TRA): By providing “protected” left turn phasing for all approaches and re-striping the shared through-left lanes to exclusive left turn lanes on 27th Street, the impacts at the intersection of Telegraph Avenue / 27th Street can be reduced to less than significant levels. With these improvements, which could be funded through the Redevelopment Plan by earmarking funds for transportation improvements, the intersection would operate at LOS C without the project and LOS D with the project during the PM peak hour.</p> | Less than Significant |
| Updated Impact B.3 (TRA): Traffic from the Existing Redevelopment Plan would contribute incrementally to the cumulative impacts on the regional and local roadways. (Less than Significant) | None Required. | Less than Significant |
| Updated Impact B.5 (TRA): Traffic from the Existing Redevelopment Plan would increase vehicular and bicycle traffic along identified bicycle corridors and has the potential to increase pedestrian circulation in the Broadway Auto Row and MacArthur Transit Village subareas. (Less than Significant) | None Required. | Less than Significant |

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CHAPTER 3

Project Description

For purposes of this SEIR, the proposed CEQA project is the activities associated with the Broadway/MacArthur/San Pablo Redevelopment Plan (referred to throughout as the “**Existing Redevelopment Plan**”) as amended by three proposed amendments (“**Proposed Amendments**”) as described in Section 3.2.1, below. Collectively, the CEQA project analyzed in this SEIR is described throughout this document as the “**Redevelopment Plan, as Amended.**”

3.1 Background

3.1.1 Overview of the Existing Redevelopment Plan

The Existing Redevelopment Plan sets forth parameters on the Redevelopment Agency of the City of Oakland’s (“Agency’s”) authority to conduct activities within the Existing Redevelopment Plan Project Area (referred to throughout as “**Existing Project Area**”). The Existing Project Area is one of ten redevelopment project areas in the City of Oakland (“City”).

As introduced in Chapter 1, *Introduction*, the Existing Redevelopment Plan is a planning document that provides the Agency with long-term flexibility to address issues, projects, programs and other activities within the Existing Project Area over the term of the Existing Redevelopment Plan. It provides the Agency with the powers, duties and obligations to implement and further its plan for the redevelopment, rehabilitation and revitalization of the Existing Project Area. The Existing Redevelopment Plan contains specific measures which provide financing authority to the Agency through activities such as collecting tax increment funds and issuing bonds. It also provides the authority for use of eminent domain in the Existing Project Area through 2012. Implementation of the Existing Redevelopment Plan provides a series of multiple, coordinated actions (e.g., tools, programs, and funding) to eliminate blight and facilitate revitalization, growth and the creation of temporary and permanent jobs in the Existing Project Area. These activities could include some or all of the following:

- assembly of blighted and underutilized properties into sites suitable for new sustainable development or sustainable rehabilitation of existing blighted and underutilized properties;
- disposition of properties for rehabilitation or new construction;
- low-cost or market-rate loans and/or grants;
- tax increment and other subsidies;

- improvements that support rehabilitation of blighted structures or new construction on blighted properties;
- façade and tenant improvement programs as part of a retail attraction and assistance program;
- public art installations; and
- infrastructure improvements, including streetscape improvements, installation of utilities, traffic capacity projects, mass-transit improvements, parking facilities, public parks, public facilities, and storm drainage improvements, among others.

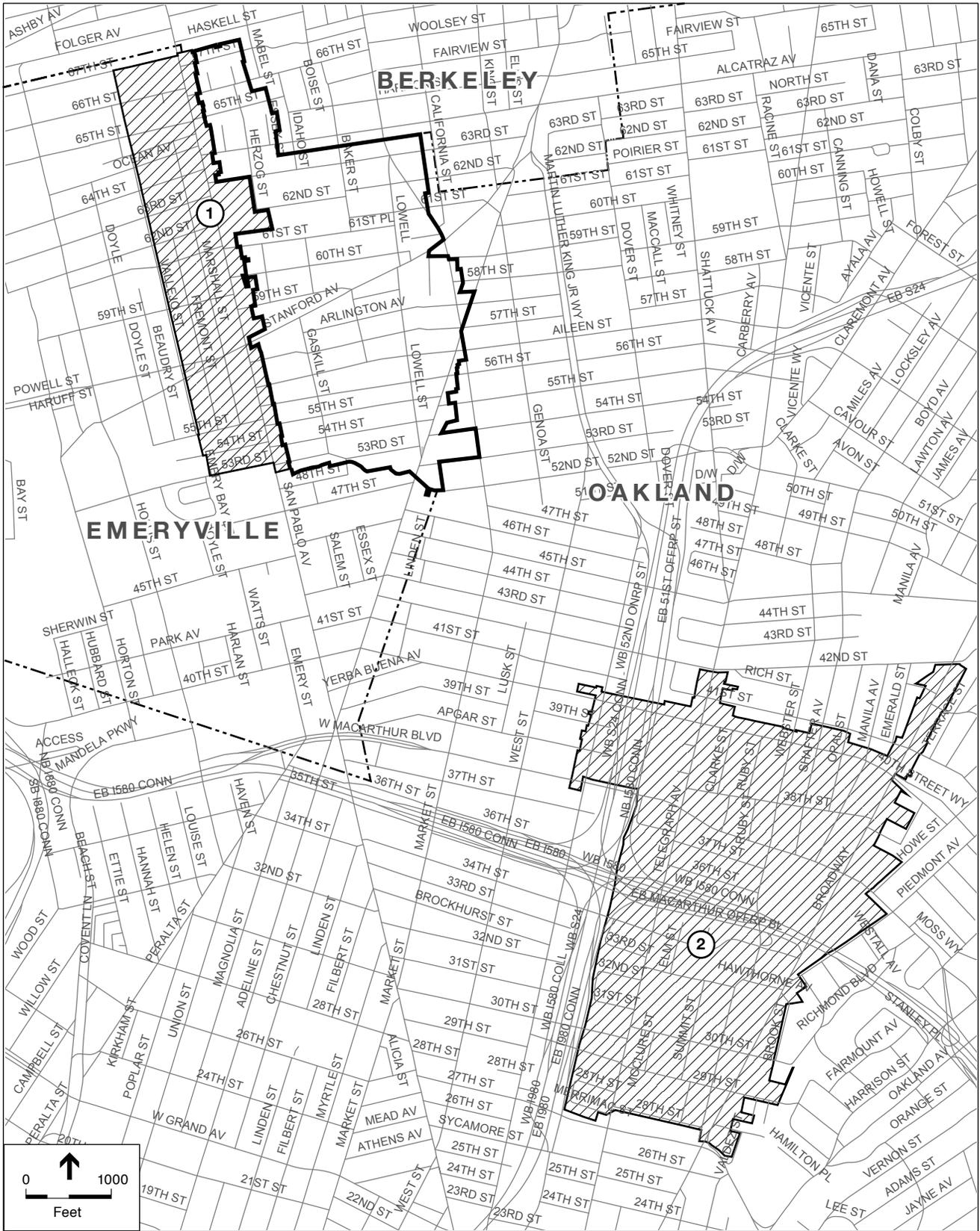
Redevelopment activities also would support the development of additional low- and moderate-income housing.

The City certified an EIR for the Existing Redevelopment Plan on July 25, 2000 (referred to throughout as “**2000 EIR**”). The Existing Redevelopment Plan was adopted by the City on July 25, 2000, and subsequently amended for policy revisions on March 6, 2007. As described in detail in Section 3.3 below, the Existing Project Area is located in the North Oakland area of the City of Oakland, in Alameda County. The Existing Project Area consists of two non-contiguous subareas: the Broadway/MacArthur subarea (referred to in the 2000 EIR as “subarea 1” and “subarea 2”) and the San Pablo subarea (referred to in the 2000 EIR as “subarea 3”). Together, the two subareas include approximately 676 acres. As shown in **Figure 3-1**, Existing Redevelopment Project Area, the Broadway/MacArthur subarea incorporates roughly the area between Highway 24 and Broadway from 27th Street to 42nd Street. The San Pablo subarea incorporates a portion of the Golden Gate neighborhood between Vallejo Street and San Pablo Avenue from 53rd to 67th streets.

In 2009, the City received a community petition request to have the boundaries of the Existing Project Area expanded to include approximately 1,300 parcels that make up the Lowell/Gaskill neighborhood (referred to throughout as the “**Amendment Area**”). On July 20, 2010, the City Council adopted the Amendment Area as a redevelopment survey area to be studied and considered for inclusion in the Existing Project Area.

3.1.2 Purpose and Need for the Existing Redevelopment Plan and the Proposed Amendments

A primary purpose of the Existing Redevelopment Plan is to correct health and safety concerns and to address economic and physical blight conditions in the Existing Project Area. Redevelopment project areas can only be established in a blighted area. Blight is defined by California Community Redevelopment Law as substantial and prevalent adverse physical and economic conditions that substantially hinder viable use of buildings or lots, impair property values, result in nearby incompatible land uses and abnormally high vacancies and ultimately cause a lack of proper utilization of an area. These conditions must constitute a serious physical and economic burden on the community that cannot reasonably be expected to be reversed by public or private action, acting individually or together, without the assistance of redevelopment. Further, these types of conditions and others adversely affect the community and are a hindrance



-  Existing Redevelopment Project Area
-  Amendment Area
- ① San Pablo subarea
- ② Broadway/MacArthur subarea

SOURCE: City of Oakland, 2009

Proposed Amendments to B/M/SP Redevelopment Plan . 210505.02

Figure 3-1
Existing Redevelopment Project Area

to business investments that would otherwise bring tax revenues to support services in the area. Blight conditions identified in the Existing Project Area and the Amendment Area included deteriorated and dilapidated buildings, depreciated or stagnant property values, high crime rates, and inadequate public improvements.

3.2 Project Description

The “Project” for CEQA purposes in this SEIR is the “Redevelopment Plan, as Amended” (the “Existing Redevelopment Plan” combined with the “Proposed Amendments”). The “Project Area” for CEQA purposes in this SEIR is the “Project Area, as Amended” (the “Existing Project Area” combined with the “Amendment Area”). This supplement is prepared to the 2000 EIR.

3.2.1 Proposed Amendments

This SEIR analyzes the environmental impacts of changes in the environment resulting from the Redevelopment Plan, as Amended. The 2000 EIR already has analyzed the environmental effects of, and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan, and no changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitate further analysis in this SEIR. Further, the Proposed Amendments do not involve any new impacts or trigger the criteria of “changed circumstances” or “new information” in Section 15162 *with respect to the Existing Project Area*. As a result, this SEIR focuses on the activities facilitated by the Proposed Amendments and concludes with the impact of the Redevelopment Plan, as Amended.

The three Proposed Amendments to the Existing Redevelopment Plan are as follows:

The first Proposed Amendment is in response to the 2009 community petition and would expand the Existing Project Area boundaries east from the San Pablo subarea to include the approximately 1,300 parcels and 210 acres that is the Amendment Area (see **Figure 3-2**). Redevelopment activities envisioned for the Amendment Area would focus in the area along Lowell Street, Stanford Avenue, and Adeline Street and include streetscape improvements, right-of-way adjustments, building renovations, and support for new housing, live/work, industrial incubator, and/or commercial development projects. Housing rehabilitation loan or grant programs may be established for the residential portions of the Amendment Area. Other redevelopment programs within the Amendment Area would be consistent with those currently being implemented through the Existing Redevelopment Plan, including the Façade and Tenant Improvement programs.

The second Proposed Amendment would extend the Agency’s eminent domain authority for the Project Area, as Amended beyond 2012 to 2024. However, the Agency does not anticipate use of eminent domain to facilitate the redevelopment activities in the Amendment Area.

The Existing Redevelopment Plan includes a cap on bonding capacity, currently set at \$100 million, which is required to implement the Existing Redevelopment Plan. The third Proposed Amendment would increase the cap on the bonding capacity to finance proposed

redevelopment activities in the Amendment Area without drawing from the existing bonding capacity. Although the Agency has not determined what the bonding capacity increase would be, it would be increased in an amount proportional to the redevelopment needs in the Amendment Area. The proposed increase in the bonding capacity cap will be determined based on the analysis in the Preliminary Report to be completed by Seifel Consulting, Inc., separate from this SEIR.

Overall, the redevelopment projects and programs to be facilitated by the Proposed Amendments would generally remain similar to those currently being implemented under the Existing Redevelopment Plan and within the Existing Project Area. As with the Existing Redevelopment Plan analyzed in the 2000 EIR, the Proposed Amendments do not contain specific development proposals for individual sites, nor does it mandate particular actions the Agency would take with regard to specific projects. Thus, the activities associated with implementation of Proposed Amendments include a broad list of potential programs, projects and strategies intended to reduce blight in the Amendment Area. These potential programs, projects and strategies are consistent with the adopted Oakland General Plan and applicable zoning regulations (see Section 3.5, below) and are intended to enhance the Amendment Area's function, appearance, and economic vitality in ways that would not otherwise be available – all consistent with and contributing as part of the Redevelopment Plan, as Amended.

3.2.2 Potential Redevelopment Activities Facilitated by the Proposed Amendments

As stated above, this SEIR analyzes the environmental impacts of the redevelopment activities to be facilitated by the Redevelopment Plan, as Amended. Activities associated with the Existing Redevelopment Plan are discussed in Section 3.2.3, below. As previously described in Section 3.2.1, the Proposed Amendments would not result in any changes to the physical environment in or redevelopment activities facilitated by the Existing Redevelopment Plan, therefore this description focuses on the potential activities that could be facilitated by the Proposed Amendments, which are the substantial changes that trigger the need for a supplement to a previously certified EIR.

Table 3-1, below, lists the potential redevelopment activities that could be facilitated by the Proposed Amendments. Implementation of the Proposed Amendments would provide a series of multiple, coordinated actions (e.g., projects, programs, and funding) to eliminate blight and facilitate revitalization and growth in the Amendment Area. Implementation of actions defined in the Existing Redevelopment Plan and the Proposed Amendments (both discussed below) could result in housing, public infrastructure and the rehabilitation, reconstruction, or alteration of buildings, as well as other physical changes to the environment. Several of these programs are the same as those that currently exist under the Existing Redevelopment Plan for the Existing Project Area.

The redevelopment activities facilitated by the Proposed Amendments could include some or all of the following in the Amendment Area:

- assembly of blighted and underutilized properties into sites suitable for new development;

**TABLE 3-1
POTENTIAL REDEVELOPMENT ACTIVITIES FACILITATED BY
THE PROPOSED AMENDMENTS**

| Name | Location | Description |
|--|--|---|
| Programs Facilitated by the Proposed Amendments | | |
| Lowell Street Site Acquisitions | Focused along Lowell Street | Purchase of opportunity parcels for redevelopment purposes. |
| Lowell Street Project Support | Focused along Lowell Street | Support of redevelopment activities in the Amendment Area including development of up to 110,000 square feet of industrial incubator space, potential small commercial projects, and remediation assistance. |
| Housing Development Support | Focused along Lowell Street | Support development of up to 280 residential and 90 live/work units in opportunity sites. ^a |
| Lowell Street/Stanford Avenue Façade Improvement Program | Focused along Lowell Street and Stanford Avenue | Provide grants and design assistance to existing businesses for making storefront and façade improvements. |
| Amendment Area Neighborhood Projects Initiative Program | Amendment Area | Community grant program to fund one-time, small-scale, community-initiated physical improvement projects such as planting projects, lighting improvements, surveillance cameras, murals and other beautification projects. |
| Lowell Street/Stanford Avenue Streetscape Improvements | Focused along Lowell Street and Stanford Avenue | Construction of public improvements to complement existing and future redevelopment projects, and to attract new public and private investment to the Amendment Area. Improvements could include right-of-way adjustments, sidewalks, curbs, gutters, lighting, landscaping and other basic infrastructure. |
| Adeline Bike Lane Project | Adeline from the border with Emeryville to its intersection with 61st Street | Reduce automobile lanes from four to two. Replace traffic lanes with bike lanes in either direction. |
| Lowell Street/Stanford Avenue Tenant Improvement Program | Focused along Lowell Street and Stanford Avenue | Provide incentives to attract retail, restaurants, arts and entertainment businesses to targeted locations in the Amendment Area. |
| Low Income Housing Rehabilitation | Amendment Area | Financial assistance for low income housing rehabilitation. |
| Lowell Street/Stanford Avenue Developer Funding Assistance | Focused along Lowell Street and Stanford Avenue | Provide funding assistance to developers to address foreclosure and other economy related issues. |
| Lowell Street/Stanford Avenue Economic Development Program | Focused along Lowell Street and Stanford Avenue | Provide support to increase investment in the Amendment Area. |

^a This SEIR conservatively assumes that the Proposed Amendments could facilitate the development of a maximum of 370 new housing units and 110,000 square feet of industrial incubator space within the Amendment Area. Redevelopment Law requires that at least 15 percent of all new housing units developed within a redevelopment project area be affordable to persons and families of low- or moderate-income (with at least 40 percent of these units affordable to persons and families of very low income). Thus 15 percent of 370 units is equal to 56 affordable units, which could be facilitated by the Proposed Amendments, and therefore could be included as a part of the maximum new housing in the Amendment Area (370 units). While some portion of the 56 required affordable units could be developed within the Existing Project Area, this potential housing development has been considered, assumed, and approved in the analysis of the Oakland General Plan Housing Element Update Environmental Impact Report, and the MacArthur Transit Village Environmental Impact Report.

- low cost loans, grants, and/or subsidies in support of rehabilitation or new construction of housing, commercial, live/work, and industrial incubator properties;
- site remediation assistance;
- improvements to blighted structures and/or properties;
- façade improvement and tenant improvement programs; and
- infrastructure/streetscape improvements, including such items as new bike lanes, right-of-way adjustments, storm drainage improvements and installation of utilities, lighting, sidewalks, curbs, and/or gutters.

3.2.3 Potential Redevelopment Activities in the Existing Redevelopment Plan and that May Occur Without the Proposed Amendments

Table 3-2 specifies redevelopment projects and programs supported or implemented pursuant to the Existing Redevelopment Plan that would occur without the Proposed Amendments. These include ongoing programs and major projects located in the Existing Project Area that are approved but not yet constructed, and which have been previously analyzed in certified and/or approved CEQA documents (including the 2000 Redevelopment Plan Environmental Impact Report, referred to throughout as “2000 EIR”) in which Standard Conditions of Approval (SCAs) and/or mitigation measures have been identified and adopted to reduce significant impacts; in addition to projects that are otherwise reasonably foreseeable. As such, these programs and projects could occur even without approval of the Proposed Amendments and, therefore, are analyzed within the cumulative analysis and reflected in the Cumulative Year 2015 and Cumulative Year 2035 conditions.

Housing development analyzed as part of the Proposed Amendments is defined as units considered to occur only if the Proposed Amendments are approved. Potential housing development within the existing Project Area is anticipated to be supported by the existing Redevelopment Plan. The effects of these units are analyzed within the cumulative analysis and thus reflected in the Cumulative Year 2015 and Cumulative Year 2035 conditions. Further, sites within the Amendment Area which are already entitled for housing development are considered reasonably foreseeable projects without approval of the Proposed Amendments and are also considered in the cumulative analysis.

3.3 Location and Site Characteristics

As discussed above, the Existing Project Area consists of two non-contiguous subareas that total approximately 676 acres (see **Figure 3-1**). The Existing Project Area incorporates roughly the area between Highway 24 and Broadway from 27th Street to 42nd Street, and a portion of the Golden Gate neighborhood between Vallejo Street and San Pablo Avenue from 53rd to 67th streets.

**TABLE 3-2
POTENTIAL REDEVELOPMENT ACTIVITIES FACILITATED BY
THE EXISTING REDEVELOPMENT PLAN AND
THAT MAY OCCUR WITHOUT THE PROPOSED AMENDMENTS**

| Name | Location | Description |
|---|---|--|
| Façade Improvement Program and Tenant Improvement Program | Existing Project Area | Grants and architectural design assistance to property owners and tenants. |
| Neighborhood Projects Initiative Program | Existing Project Area | Community grant program to fund one-time, small-scale, community-initiated physical improvement projects such as planting projects, lighting improvements, surveillance cameras, murals and other beautification projects. |
| Low Income Housing Rehabilitation | Existing Project Area | Financial assistance for low income housing rehabilitation. |
| MacArthur Transit Village | Area around the MacArthur BART Station | The Agency entered an Owner Participation Agreement with the developer to further development of the project through mechanisms such as parcel acquisition, and assistance with public infrastructure components. The project will include the development of a mixed-use transit village at MacArthur BART Station consisting of 624 residential units (including 108 below market-rate units), 42,500 square feet of retail, and 5,000 square feet of community space. |
| Enhanced Security Officer | Existing Project Area | Fund a patrol officer during peak hours. |
| Targeted Land Acquisition | Existing Project Area | Purchase of key parcels on opportunity sites. |
| Streetscape Improvements | Existing Project Area | Traffic calming, landscaping, lighting, and enhanced pedestrian and bicycle improvements on existing commercial right-of-ways. |
| Broadway Specific Plan | Portion of Broadway Auto Row within the Existing Project Area | Contribute funds to the preparation of a Specific Plan in the Broadway Auto Row portion of the Existing Project Area. |

The Amendment Area covers approximately 1,300 parcels on 210 acres in North Oakland, generally between 67th Street to the north, 53rd Street to the south, San Pablo Avenue to the west, and Adeline and Market streets to the east (see **Figure 3-2**). The north and south boundaries of the Amendment Area are generally defined by the city limit lines of Emeryville and Berkeley.

3.3.1 Existing Population, Households and Employment

In 2000, the Existing Project Area was estimated to include approximately 2,630 households (approximately 1.7 percent of the City's 2000 total of 150,790), approximately 5,680 persons (approximately 1.4 percent of the City's 2000 total of 399,480), and an estimated 11,510 jobs (approximately 5.8 percent of the City's 2000 total of 199,470).

Currently the Existing Project Area contains approximately 3,190 households (approximately 2.0 percent of the City's total of 159,180) with a population of approximately 7,050

(approximately 1.6 percent of the City's population of 430,670). The Amendment Area also includes business activity with estimated employment of approximately 12,480 jobs (approximately 0.7 percent of the City's total of 188,600).

Currently the Amendment Area contains approximately 2,150 households (approximately 1.3 percent of the City's total of 159,180) with a population of approximately 5,310 (approximately 1.2 percent of the City's population of 430,670). The Amendment Area also includes business activity with estimated employment of approximately 510 jobs (approximately 0.3 percent of the City's total of 188,600).

3.3.2 Existing Development

The Existing Project Area is largely urbanized and contains a mixture of older retail, residential and commercial areas, in addition to major public and institutional uses, such as Oakland Technical High School, Alta Bates Summit Medical Center, medical facilities associated with the Kaiser Permanente Oakland Medical Center, the MacArthur BART Station and Mosswood Park. Segments of Interstate 580 and Highway 24 traverse the Existing Project Area. Numerous zoning classifications for residential, commercial, industrial and medical uses exist throughout the Existing Project Area, as do General Plan land use designations of Urban Residential, Mixed Housing Type Residential, Neighborhood Center Mixed Use, Community Commercial, Institutional, and Park and Urban Open Space. None of these uses are expected to change substantially as a result of the Proposed Amendments.

The majority of the Amendment Area is built out with single-family homes in an established residential neighborhood within the Mixed Housing Type Residential Zone / Mixed Housing Type General Plan land use designation. Light industrial uses are focused along the arterial corridors such as Stanford Avenue and Lowell Street. Older industrial structures used for warehousing and manufacturing are concentrated along both sides of Lowell Street within the Housing and Business Mix Commercial Zone and Housing and Business Mix General Plan land use designation. Many of the existing industrial structures are in disrepair and possibly abandoned.

3.4 Proposed Amendments Goals and Objectives

The goals and objectives of the activities associated with the Proposed Amendments are consistent with the Project Objectives set forth in the Existing Redevelopment Plan (discussed below). They include assisting in the improvement of the Amendment Area by redevelopment and private reinvestment to improve public health and welfare and to address economic and physical blight conditions. Specifically, the goals and objectives are as follows:

- Stimulate in-fill development and land assembly opportunities on obsolete, underutilized and vacant properties in the Amendment Area.
- Stimulate opportunities for adaptive re-use and preservation of existing building stock in the Amendment Area.

- Attract new businesses and retain existing businesses in the Amendment Area, providing job training and employment opportunities for Amendment Area residents.
- Improve public facilities and infrastructure throughout the Amendment Area.
- Stimulate home ownership opportunities in the Amendment Area and preserve and expand the supply of rental housing through new construction, rehabilitation and conservation of living units in the Amendment Area.

The Project Objectives set forth in the Existing Redevelopment Plan remain as follows:

- To upgrade the overall physical and economic climate of the Existing Project Area.
- To retain existing businesses and attract new businesses to the area, based on the comparative strengths in each of the subareas, as well as long-term economic trends.
- To increase job opportunities in the commercial areas.
- To expand the City's tax base.
- To upgrade existing housing and increase the City's supply of low- and moderate-income housing.
- To strengthen the Broadway Auto Row as a regional retail center.
- To develop mixed-use commercial and residential development centered around the MacArthur BART Station.
- To revitalize the commercial corridors along Telegraph Avenue, MacArthur Boulevard, and San Pablo Avenue, as well as improve the physical appearance of the surrounding neighborhoods.
- To allow diverse land uses in the area to grow in a way that: (1) preserves the location of compatible uses next to each other, and (2) minimizes potential conflicts among different uses.
- To improve transportation access to retail and commercial areas.
- To improve the public image of the major retail and commercial corridors within the area.
- To reduce crime and improve automobile and pedestrian safety within the Existing Project Area.

3.5 Redevelopment Plan Implementation and Strategies

3.5.1 Redevelopment Plan, as Amended, as Implementation of the General Plan

The Redevelopment Plan, as Amended, would facilitate future redevelopment activity within the Project Area, as Amended, (including the Amendment Area), consistent with the City of Oakland General Plan. Any amendment to the General Plan requires a matching amendment to the Redevelopment Plan, as Amended. The General Plan policies regarding redevelopment within the Project Area, as Amended are primarily included in the following Elements:

- Land Use and Transportation Element (LUTE),
- Open Space, Conservation and Recreation Element (OSCAR),
- Housing Element,
- Noise Element,
- Safety Element, and
- Historic Preservation Element.

The Redevelopment Plan, as Amended, complies with all of the City's land use plans and programs.

3.5.2 Other City Controls

The Oakland Planning Code and the Oakland Municipal Code as well as other City ordinances apply throughout the Existing Project Area and Amendment Area and all redevelopment activities are subject to the City codes.

3.6 Agency Approvals

3.6.1 Required Public Agency Approvals

As discussed in Chapter 1, *Introduction*, the City of Oakland is the Lead Agency responsible for preparation and certification of this SEIR (pursuant to CEQA Guidelines Section 15051). The City and/or the Agency will make decisions on the required discretionary actions in accordance with City plans, policies and ordinances.

This SEIR is intended to update the 2000 EIR to be adequate to address the potential environmental effects that may result with the Redevelopment Plan, as Amended. This SEIR will be used to provide CEQA analysis for all required discretionary actions for the activities facilitated by the Redevelopment Plan, as Amended. However, activities facilitated by the Redevelopment Plan, as Amended, would be required to obtain all necessary project-specific City approvals necessary to proceed and may be required to conduct their own project-specific environmental review. When the 2000 EIR was prepared, as well as when this SEIR is being prepared, the discretionary actions and

other considerations and approvals anticipated to be required for activities facilitated by the Existing Redevelopment Plan (in the 2000 EIR), and the Redevelopment Plan, as Amended, (in this SEIR) include but are not limited to, those listed below:

- **Conditional Use Permits** (Planning Code Chapter 17.134) – Activities could require a Conditional Use Permit for demolition of any buildings that contain rooming units or the conversion of dwelling units to a non-residential use.
- **Tree Removal Permit** (Oakland Municipal Code Chapter 12.36) – Pursuant to the City’s Protected Trees Ordinance, activities could require an approved Tree Removal Permit prior to removing (or having construction activity near) a “Protected Tree,” as defined in Oakland Municipal Code Section 12.36.020. Tree permits would require approval by the Oakland Parks and Recreation Advisory Commission.
- **Encroachment and Obstruction Permits** (Oakland Municipal Code Chapter 12.08) – Activities could require approval of encroachment and obstruction permits to work within and close to various public rights-of-way in the Amendment Area.
- **Demolition Permits** (Oakland Municipal Code Chapter 15.36) – Activities could require approval of demolition permits to demolish existing buildings and structures in the Amendment Area.
- **Excavation Permits** (Oakland Municipal Code Chapter 12.12) – Activities could require approval of excavation permits to conduct excavation activities in the Amendment Area.
- **Other permits:** Activities could require Building permits, Design Review approval, Tentative Parcel Maps, Tentative Tract Maps, Parcel Map Waivers, and Variances, in addition to various other required permits and approvals pursuant to the Oakland Municipal Code, the Oakland Planning Code and applicable Building and Fire Codes.

3.6.2 Other Agencies

As was generally the case at the time the 2000 EIR was prepared, some activities facilitated by the Redevelopment Plan, as Amended, may require review and approval by other public and quasi-public agencies and jurisdictions that have purview over specific actions. These other agencies may also consider this SEIR in their review and decision-making processes. These other agencies and their jurisdictional permits and approvals may include, but are not limited to, the following:

- **San Francisco Bay Regional Water Quality Control Board (RWQCB)** – acceptance of a Notice of Intent (NOI) to obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit), and Notice of Termination after construction is complete. Granting of required clearances to confirm that all applicable standards, regulations and conditions for all previous contamination at the site have been met.
- **Bay Area Air Quality Management District (BAAQMD)** – compliance with BAAQMD Regulation 2, Rule 1 (General Requirements) for all portable construction equipment subject to that rule.
- **East Bay Municipal Utility District (EBMUD)** – approval of new service requests and new water meter installations.

- **Alameda County Flood Control and Water Conservation District (ACFCWD)** – enforcement of the Stormwater Quality Management Plan and Best Management Practices (BMP) included in Alameda Countywide Clean Water Program’s Stormwater Pollution Prevention Permit (SWPPP). This is done in conjunction with the City of Oakland, one of 18 co-permittees.
- **Alameda County Department of Environmental Health (ACDEH)** – review and acceptance of an updated Hazardous Materials Management Plan and Inventory (HMMP) and the Hazardous Materials Business Plan (HMBP).
- **California Department of Toxic Substances Control (DTSC)** – ensuring compliance with state regulations for the generation, transportation, treatment, storage, and disposal of hazardous waste.
- **California Department of Transportation (Caltrans)** – review and approval of plans, specifications, and estimates (including any equipment or facility upgrades) for modifications to intersections under the jurisdiction of Caltrans to accommodate signal timing changes.

CHAPTER 4

Environmental Setting, Impacts, Standard Conditions of Approval and Mitigation Measures

This Draft SEIR has been prepared in accordance with CEQA (Public Resources Code Section 21000, et seq.), and the CEQA Guidelines (California Code of Regulations Sections 15000, et seq.). This SEIR is also prepared in accordance with Public Resources Code Section 21166 and CEQA Guidelines Sections 15162 and 15163.

This chapter introduces basic assumptions, approaches, formats and protocols pertinent to the reader's review of the environmental analysis to follow. Described are the environmental topics addressed; the format of impacts statements and mitigation measures; the application of CEQA thresholds/significance criteria and the City's Standard Conditions of Approval (SCA); and the relationship of the thresholds/significance criteria and SCAs. The impact classifications are described, as are categories for how the impacts and conclusions in this SEIR compare to those in the 2000 EIR. This chapter also discusses the approaches to environmental baseline and cumulative analysis applied herein.

Following the introductory sections (4.01 through 4.09) of this chapter are sections (4.1 through 4.14) for each environmental topic considered under CEQA. Each section is the analysis of the potential effects that may result from development facilitated by the Redevelopment Plan, as Amended. Specifically, each environmental topic section describes for the topic the environmental setting (*Setting*) (existing physical conditions and regulatory framework) and the environmental impacts (*Impacts and Mitigation Measures*) as discussed in the 2000 EIR for the Existing Redevelopment Plan, as well as for the Proposed Amendments and the Redevelopment Plan, as Amended.

The analysis identifies environmental impacts (project and cumulative conditions before and after implementation of mitigation measures), applicable SCAs, and mitigation measures that after implementation would reduce or eliminate significant impacts of the activities facilitated by the Redevelopment Plan, as Amended. The sections summarize the information from the 2000 EIR, focus on the Proposed Amendments, and conclude with the impact of the Redevelopment Plan, as Amended. The applicable CEQA thresholds/criteria to assess CEQA significance for each environmental topic are identified, and any changes since the 2000 EIR that affect the analysis and environmental conclusions in this SEIR are discussed.

Lastly, each section discusses for each topic, how the analysis relates to the conditions described in Public Resources Code Section 21166 and CEQA Guidelines Section 15162 and 15163 with respect to any changed circumstances, new information or environmental conditions relative to findings in the Broadway/MacArthur/San Pablo Redevelopment Plan Environmental Impact Report that the City certified on July 25, 2000 (referred to throughout as the “2000 EIR”).

4.01 Environmental Topics

This chapter analyzes the environmental topics listed below:

- | | |
|---|--|
| 4.1 Aesthetics, Shadow and Wind | 4.8 Hydrology and Water Quality |
| 4.2 Air Quality | 4.9 Land Use, Plans and Policies |
| 4.3 Biological Resources | 4.10 Noise |
| 4.4 Cultural Resources | 4.11 Population, Housing and Employment |
| 4.5 Geology, Soils and Geohazards | 4.12 Public Services and Recreation Facilities |
| 4.6 Greenhouse Gases and Climate Change | 4.13 Transportation and Circulation |
| 4.7 Hazardous Materials | 4.14 Utilities and Service Systems |

Because of the Project’s location in an existing urbanized setting, Agricultural Resources and Mineral Resources were determined not to be directly relevant to the Redevelopment Plan, as Amended, and are briefly discussed in Chapter 6, *Impact Overview and Growth Inducement*, under Section 6.4, *Effects Found Not to Be Significant*.

The City elected to prepare an Initial Study Checklist to narrow the scope of the 2000 EIR but elected not to prepare an Initial Study Checklist to narrow the scope of this SEIR, as permitted by Section 15060(d) of the CEQA Guidelines, to provide a comprehensive analysis in this document. As a result, this SEIR addresses some topics in greater detail than previously analyzed in detail in the 2000 EIR in order to conform to the standard approach, format and organization of an EIR document; for example, a less than significant impact identified in the 1999 Initial Study that would not have required a specific impact statement may now be identified with a bold-print impact statement and detailed discussion, consistent with current City of Oakland approach.

4.02 Focus of SEIR Analysis

As discussed in Chapter 1, *Introduction*, and mentioned above, the analysis in this SEIR focuses on the Proposed Amendments and makes impact conclusions for the Redevelopment Plan, as Amended. This approach is taken (1) because CEQA review has already occurred in the 2000 EIR for the Existing Redevelopment Plan, including identification of environmental effects, feasible mitigation measures, and feasible alternatives; (2) the Proposed Amendments would not result in any changes to the physical environment in, or redevelopment activities facilitated by, the Existing Redevelopment Plan; (3) no changes to the existing circumstances surrounding the Existing Redevelopment Plan necessitate further analysis in this SEIR; (4) the Proposed

Amendments do not involve any new impacts or trigger the criteria of “changed circumstances” or “new information” in Section 15162 *with respect to the Existing Project Area*; and (5) only minor additions/changes are necessary to make the previous EIR adequately apply to the Redevelopment Plan, as Amended.

This SEIR is a supplement to the 2000 EIR and incorporates only the information necessary to make the 2000 EIR adequate for the Redevelopment Plan, as Amended, in accordance with CEQA Guidelines Section 15163. Each environmental analysis section in this chapter includes the minor additions/changes necessary to update the 2000 EIR accordingly.

4.03 Format of Environmental Topic Sections, Impact Statements and Mitigation Measures

Environmental Topic Sections

Each environmental topic section generally includes two main subsections:

- *Existing Setting*, which includes baseline conditions, regulatory setting, thresholds/significance criteria, and identification of applicable Standard Conditions of Approval (which are discussed below); and
- *Impacts and Mitigation Measures*, which identifies and discusses the potential impact and cites applicable Standard Conditions of Approval and mitigation measures that would, to the extent possible, reduce or eliminate adverse impacts identified in this chapter. A discussion of how each impact and mitigation relates to the analysis and findings in the 2000 EIR is included within the *Impacts and Mitigation Measures* sections of this chapter.

Impact Statements and Mitigation Measures

All impact statements are presented in bold text. This SEIR identifies new impacts associated with the Redevelopment Plan, as Amended, as well as certain impacts previously-identified in the 2000 EIR and that still apply to the project. All impacts are identified with an abbreviated designation that corresponds to the environmental topic addressed (e.g., “NOI” for noise). For clarity and conformity with the SEIR, abbreviated designators have been added to impacts identified in the 2000 EIR, but the original 2000 alpha-numeric impact designators are retained. So, for example, noise impacts include new impacts not previously specified with bold impact statements in the 2000 EIR (e.g., “Impact NOI-X”) as well as impacts from the 2000 EIR (updated, in most cases, as discussed below in Section 4.05) (e.g., “Updated Impact D.X (NOI)”). For each topic, “X” is a number that generally reflects the sequence in which the impact statement occurs within the SEIR section, however, the number designations from the 2000 EIR are also retained.

The Impact Classification (discussed below in Section 4.06) of the project’s effects prior to implementation of mitigation measures is stated in parentheses immediately following the bold-text impact statement. The Impact Classification stated in the parentheses already assumes incorporation the City’s Standard Conditions of Approval and Uniformly Applied Development Standards, discussed below in Section 4.05.

Each mitigation measure is numbered to correspond with the impact that it addresses.

4.04 Thresholds/Criteria of Significance

Under CEQA, a significant effect is determined as a substantial, or potentially substantial, adverse change in the environment (Public Resources Code Section 21068). Each *Impact and Mitigation Measures* discussion in this chapter is prefaced by Significance Criteria, which are the thresholds for determining whether an impact is significant.

The criteria of significance used in this SEIR are from the City of Oakland's *CEQA Thresholds/Criteria of Significance Guidelines*. The City has established the guidelines to help clarify and standardize analysis and decision-making in the environmental review process in the City of Oakland. The thresholds/significance criteria are offered as guidance in preparing environmental review documents. The City uses these thresholds/significance criteria unless the location of the project or other unique factors warrants the use of different thresholds. The thresholds/significance criteria are intended to implement and supplement provisions in the CEQA Guidelines for determining the significance of environmental effects, including CEQA Guidelines Sections 15064, 15064.5, 15065, 15382, and Appendix G, and form the basis of the City's Initial Study and Environmental Review Checklist.¹

The thresholds/significance criteria are intended to be used in conjunction with the City's Standard Conditions of Approval and Uniformly Applied Development Standards (see discussion below in Section 4.05), which are incorporated into projects regardless of the determination of a project's environmental impacts.

In some instances, thresholds/significance criteria that applied at the time the 2000 EIR was prepared are no longer applicable in this SEIR because of changes to CEQA Guidelines or the City's approach to the CEQA analysis. Similarly, as discussed below, there are a number of new thresholds/significance criteria that did not exist at the time the 2000 EIR was prepared or that have been updated or refined since that time and are newly applied in this SEIR. In neither case are new thresholds/significance criteria applied or removed because of changed circumstances that involve significant new or substantially more severe environmental impacts associated with changes to the Existing Redevelopment Plan or the Existing Project Area. None of these conditions exist that warrant a change to the thresholds/significance criteria that apply.

As warranted to reflect current City requirements and for overall conformance with current standards and practices and this SEIR, some impact statements from the 2000 EIR have been updated or refined to reflect current thresholds/significance criteria. These are referred to throughout as "Updated Impact X" ("X" being the 2000 EIR impact designator, as discussed above in Section 4.03). Impacts that address thresholds/significance criteria wholly not considered in the 2000 EIR for any reason are referred to throughout as "New Impact X."

¹ No Environmental Review Checklist was prepared for this Project; all factors listed for consideration in the Environmental Review Checklist are evaluated in this EIR.

4.05 Standard Conditions of Approval and Uniformly Applied Development Standards

The City's *Standard Conditions of Approval and Uniformly Applied Development Standards* (referred to in the SEIR as "Standard Conditions of Approval" or "SCAs") are incorporated into projects as conditions of approval regardless of a project's environmental determination. As applicable, the SCAs are adopted as requirements of an individual project when it is approved by the City and are designed to, and will, substantially mitigate environmental effects.

In reviewing individual project applications, the City determines which SCAs are applied, based upon the specific characteristics of the project type and/or project site and the zoning district, community plan, the type(s) of permit(s)/approval(s) required for the project. For example, SCAs related to creek protection permits will only be applied to projects on or near creekside properties.

All relevant SCAs have been incorporated as part of the analysis for development facilitated by the Redevelopment Plan, as Amended. Because SCAs are mandatory City requirements, the impact analysis assumes that these will be imposed and implemented by a project. If an SCA would reduce a potentially significant impact to less than significant, the impact is determined to be less than significant and no mitigation is imposed. SCAs are not listed as mitigation measures.

The SCAs incorporate development policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and other Municipal Codes, Oakland Creek Protection, Stormwater Management and Discharge Control Ordinance, Oakland Tree Protection Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System [NPDES] permit requirements, Oakland Housing Element, California Building Code, and Uniform Fire Code, et al.), which have been found to substantially mitigate environmental effects. Where there are peculiar circumstances associated with a project or project site that will result in significant environmental impacts despite implementation of the SCAs, the City will determine whether there are feasible mitigation measures to reduce the impact to less than significant levels.

Relationship of Standard Conditions of Approval to Previous Impacts and Mitigation Measures

As discussed above, if an SCA would reduce a potentially significant impact to less than significant, the impact is determined to be less than significant and no mitigation is imposed. This is the established approach that the City currently applies to its CEQA analyses, and this practice was not established at the time the 2000 EIR was prepared. Therefore, in certain cases, a mitigation measure identified in the 2000 EIR to reduce a potentially significant impact imposes requirements that are consistent with a current City of Oakland SCA that may also reduce the same potentially significant impact to less than significant. In most cases, the SCA is more detailed and comprehensive than the 2000 mitigation measure. As a result, this SEIR updates some mitigation measures from the 2000 EIR to replace them with SCAs to reflect current City requirements and ensure overall conformance in the SEIR. In most cases, the less-than-significant

impact determination from the 2000 EIR does not change as a result, and none of these changes are due to the involvement of changed circumstances or environmental impacts or changes to the Existing Redevelopment Plan or the Existing Project Area.

4.06 Impact Classifications

The following level of significance classifications are used throughout the impact analysis in this SEIR, and are consistent with those used in the 2000 EIR:

- **Less than Significant (LS)** – The impacts of the proposed project, either before or after implementation of Standard Conditions of Approval and/or feasible mitigation measures, do not reach or exceed the defined threshold/criteria of significance. Generally, no mitigation measure is required for a LS impact.
- **Potentially Significant (PS)** – The impact of the proposed project may reach or exceed the defined threshold/criteria of significance, however it is not evident that, even in the theoretical worst-case condition, a significant impact would occur. Where feasible, Standard Conditions of Approval and/or mitigation measures are identified to reduce the PS impact to LS.
- **Significant (S)** – The impact of the proposed project is expected to reach or exceed the defined threshold/criteria of significance. Feasible mitigation measures and/or Standard Conditions of Approval may or may not be identified to reduce the significant impact to a less than significant level.
- **Significant Unavoidable (SU)** – The impact of the proposed project reaches or exceeds the defined threshold/criteria of significance. No feasible mitigation measure is available to reduce the S impact to LS. In these cases, feasible mitigation measures are identified to reduce the S impact to the maximum feasible extent, and the significant impact is considered SU. Impacts are also classified as SU if a feasible mitigation measure is identified that would reduce the impact to LS, but the approval and/or implementation of the mitigation measure is not within the City of Oakland’s or the project applicant’s sole control, in which case the analysis cannot presume implementation of the mitigation measure and the resulting LS impact. It is important to clarify that SU is an impact classification that only applies *after* consideration of possible mitigation measures.
- **No Impact (N)** – No noticeable adverse effect on the environmental would occur.

4.07 Comparison of Impacts and Conclusions to the 2000 EIR

As previously stated above and in Chapter 1, *Introduction*, this SEIR addresses the physical and environmental effects of the Redevelopment Plan, as Amended, (i.e., the Existing Redevelopment Plan analyzed in the 2000 EIR, combined with the “Proposed Amendments”) and presents the minor additions/changes necessary to update the 2000 EIR to address the “substantial change” (i.e., the Proposed Amendments) to the Existing Redevelopment Plan. For each environmental

impact, the SEIR concludes one of the following to describe how the impact, mitigation measures (if applicable), and impact conclusion compares to those in the 2000 EIR.

Same Impacts and Conclusions

- **Same Impact and Conclusion** – The proposed project would result in substantially the same impact (significant or otherwise) as identified for the Existing Redevelopment Plan in the 2000 EIR.
- **Same Impact and Conclusion, but Previous Mitigation Measure Revised** – The proposed project would result in substantially the same impact (significant or otherwise) as identified for the Existing Redevelopment Plan in the 2000 EIR, but mitigation measures are updated to reflect current City requirements, updated or new thresholds/criteria of significance, and to ensure overall conformance with current standards and practices.
- **Same Impact and Conclusion, but Previous Mitigation Measure Replaced by New SCA** – The proposed project would result in substantially the same less-than-significant impact identified for the Existing Redevelopment Plan in the 2000 EIR, but new SCAs replace mitigation measures, as the SCA substantially mitigate environmental effects to less than significant.

New Impacts and/or Conclusions

- **New Less Than Significant Impact and Conclusion** – The proposed project would result in a new, less than significant impact not identified for the Existing Redevelopment Plan in the 2000 EIR, or would avoid a significant and unavoidable impact identified in the 2000 EIR. This category would apply in cases where new Standard Conditions of Approval and replace previously identified mitigation measures.
- **New Less than Significant Impact, but Same Conclusion** – The proposed project would result in a new, less than significant impact not identified for the Existing Redevelopment Plan in the 2000 EIR. However, the proposed project would result in substantially the same conclusions identified for the Existing Redevelopment Plan in the 2000 EIR. This category pertains to topics for which an impact discussion was discussed in the 2000 EIR, but not within the context of a specific impact statement.
- **New Significant and Unavoidable Impact and Conclusion** – The proposed project would result in a new or substantially more severe significant and unavoidable impact not identified for the Existing Redevelopment Plan in the 2000 EIR.

The “substantial changes” (i.e., the Proposed Amendments) to the Existing Redevelopment Plan do not result in any new impacts or trigger the criteria of “changed circumstances” or “new information” in Section 15162 *with respect to the Existing Project Area*. In most cases the new less-than-significant impacts are simply “newly stated” as EIR-formatted impact statements (i.e., alpha-numerically designated statements in bold text) for topics previously addressed only in the 1999 Initial Study Checklist and for which no impact statement was required, or “re-stated” to address new thresholds/significance criteria or current standards and practices established by the City.

The SEIR also identifies impacts included in the 2000 EIR that are no longer applicable to the Redevelopment Plan, as Amended, and this SEIR analysis. Appendix G to this SEIR includes a complete list of impacts and mitigation measures from the 2000 EIR, including those that are eliminated, or updated by this SEIR. Revisions are shown in underlined/strikeout format.

4.08 Environmental Baseline

Overall, pursuant to Section 15125(a) of the CEQA Guidelines, this SEIR measures the physical impacts of the proposed project (i.e., the development facilitated by the Redevelopment Plan, as Amended) against a “baseline” of physical environmental conditions at and in the vicinity of a project area (i.e., Existing Project Area or Amendment Area). Consistent with CEQA guidance, the SEIR is required to evaluate only the changes in the project, circumstances, or new information that led to the preparation of the SEIR as compared to that contained in the prior EIR (i.e., the 2000 EIR for the Existing Redevelopment Plan). As discussed in Section 4.02, above, this SEIR focuses on the potential impacts of the Proposed Amendments and warrants no further analysis of the Existing Project Area from the 2000 EIR for several reasons, including primarily that none of the criteria of “changed circumstances” or “new information” in Section 15162 of the CEQA Guidelines are triggered *with respect to the Existing Project Area*, and that only minor additions/changes are necessary to make the 2000 EIR adequate for use in connection with the Redevelopment Plan, as Amended. Where necessary and/or meaningful for context, the analysis considers the environmental baseline that is the combined circumstances existing around the time the initial NOP was published March 2011.²

In addition to physical conditions, the baseline includes the policy and planning context in which development facilitated by the Redevelopment Plan, as Amended, is proposed. This is discussed in detail in Section 4.9, Land Use, Plans and Policies, of this SEIR, which identifies any inconsistencies between the development facilitated by the Redevelopment Plan, as Amended, and applicable, currently adopted plans and policies.

In most cases in this SEIR, the baseline condition relevant to the environmental topic being analyzed is described within each environmental topic section in this chapter. In some cases, discussion of the baseline condition is detailed or restated in the *Impacts and Mitigation Measures* analysis subsection.

4.09 Cumulative Analysis

Approach to the Cumulative Analysis

CEQA defines cumulative as “two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impact.” Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts when the project’s incremental effect is cumulatively considerable. “Cumulatively considerable” means

² Except as specified otherwise, any reference to “existing” conditions throughout this EIR refers to the baseline condition as of around March 2011.

that the incremental effects of an individual project are significant when viewed in connection with the effects of past, present, existing, approved, pending and reasonably foreseeable future projects. These impacts can result from a combination of the proposed project together with other projects causing related impacts. “The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects.”

As previously discussed, the analysis in this SEIR considers changes that have occurred to the conditions considered in the 2000 EIR for the Existing Redevelopment Plan. As such, the cumulative analysis approach herein considers the existing conditions, impacts, and mitigation measures evaluated in the 2000 EIR. It then incorporates any changes to the 2000 EIR significance conclusions that are warranted based on a review of the impacts and mitigation measures identified in project-specific EIRs certified since the 2000 EIR for projects currently underway in the Existing Project Area, discussed below (see Appendix H to this SEIR), as well as the Oakland Housing Element EIR program-level analyses that encompassed the Project Area, as Amended (see Appendix I to this SEIR). Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

Cumulative Context

The context used for assessing cumulative impacts typically varies depending on the specific topic being analyzed to reflect the different geographic scope of different impact areas. For example, considerations for the cumulative air quality analysis are different from those used for the cumulative analysis of aesthetics. In assessing aesthetic impacts, only development within the vicinity of the project would contribute to a cumulative visual effect. In assessing air quality impacts, on the other hand, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions is the best tool for determining the cumulative effect. Accordingly, the geographic setting and other parameters of each cumulative analysis discussion can vary.

Cumulative development in this SEIR is generally established using the City of Oakland’s Major Projects list December 2010–January 2011 (provided as Appendix B to this Draft SEIR), together with past, present, existing, approved, pending and reasonably foreseeable future projects (summarized consistently in the cumulative analyses in this SEIR as “past, present, and reasonably foreseeable”) within and beyond the Project Area, as Amended. As a result, the Major Projects List is not intended as an inclusive list of cumulative projects considered in this SEIR.

As discussed in Chapter 1, *Introduction*, since 2000, the City has prepared and certified respective EIRs and issued subsequent approvals for four major projects within the Existing Project Area. These major projects are the MacArthur Transit Village, the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan, the 2935 Telegraph Avenue (Courthouse Condominiums) Project, and the Kaiser Permanente Oakland Medical Center Master Plan. Each of these projects was envisioned generally in the development scenario analyzed in the 2000 EIR. The project-specific environmental review conducted for each of these projects included cumulative analyses, and each of the four projects is now either built and in use or

currently under construction or site preparation. As such, they are considered “past, present or reasonably foreseeable” projects and their setting, environmental effects and mitigation measures are considered in the cumulative analysis in this SEIR.

As discussed above, cumulative projects considered in the cumulative context can vary by environmental topic; therefore, some of the Major Projects listed, or other cumulative development, may not be directly relevant to the cumulative context, depending on the environmental topic. In some cases, the cumulative context may include more development than listed in the Major Projects list. A primary example is the transportation analyses (and transportation-related traffic and air quality), which use the Alameda County Congestion Management Analysis travel demand model, which reflects traffic from projects citywide and the broader regional context. Alternatively, as mentioned above, the aesthetics analysis would primarily consider projects within the viewsheds of the Amendment Area (i.e. the “substantial changes” that trigger the need for an SEIR), which may not, for example, include projects on the list that are located in distant Oakland areas, particularly low-rise development not affecting the Oakland skyline or hillsides. Further, projects contributing to potential cumulative effects to cultural resources, for example, could consider development in and near the Amendment Area as well as development citywide (in the case of impacts to resource types, such as libraries, railroad-related resources, and specific building types sites found throughout the city, although not the case for the Project Area, as Amended).

The cumulative discussions in each topical section throughout this chapter describe the cumulative geographic context considered for each topic at a level appropriate to the program-level analysis presented in this SEIR.

4.1 Aesthetics, Shadow and Wind

This section analyzes how the development facilitated by the Redevelopment Plan, as Amended, may affect visual, shadow, and wind conditions. Specifically, the analysis includes how the development facilitated by the Proposed Amendments, and as appropriate, the development facilitated by the Existing Redevelopment Plan, may affect the visual quality and visual character of the area, as well as scenic vistas and resources viewed from surrounding public areas, and lighting and glare. Potential changes to shadow and wind conditions are also analyzed.

Appropriate City of Oakland Standard Conditions of Approval (SCAs) are listed. Pursuant to CEQA Guidelines Section 15162 regarding an SEIR, this section also discusses whether there are any new or more severe significant impacts than those identified in the 2000 EIR that result from changed circumstances or new information.

4.1.1 2000 EIR and Existing Project Area

Aesthetics, shadow and wind were evaluated in the 2000 EIR (Initial Study Checklist Items # 19, 20, 33, and 34). The Initial Study conducted for the 2000 EIR included a description of the Existing Project Area environmental setting as it relates to light and glare, building heights, solar access, and scenic vistas and views.

The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Changes that have occurred to the aesthetics setting since preparation of the 2000 EIR are included in the analysis in this SEIR. Because the only new impacts regarding the Redevelopment Plan, as Amended, are associated with the Proposed Amendments and would not involve any new significant impacts with respect to the Existing Project Area, the remainder of this Aesthetics, Shadow and Wind Environmental Setting, and Regulatory Setting, and Impacts and Mitigation Measures analysis herein focuses primarily on the Amendment Area and the additions/changes related to the Proposed Amendments.

4.1.2 Environmental Setting for the Amendment Area

Visual Character of the Amendment Area

The Amendment Area is a densely-built urban environment with a variety of building types. The area contains a squared street grid is, with the exception of Stanford Avenue and Adeline Street that cross the Amendment Area diagonally from east to west. The majority of the Amendment Area, including the Gaskill neighborhood, is characterized as medium density single-family residential neighborhoods. Residential properties feature primarily late nineteenth and early twentieth century housing stock. There are also other residential uses within the Amendment Area, such as duplexes, townhouses, and small multi-unit apartment buildings.

Existing land uses along the Lowell Street corridor include a mixture of industrial/commercial uses and residential uses. Vacant lots and vacant/abandoned structures are distributed throughout this corridor. Occupied structures vary widely in terms of building types and states of disrepair.

Many of the existing industrial structures are in disrepair and possibly abandoned. The occupied industrial structures support a variety of land uses including warehouses, offices, artists' studios, and light industrial manufacturing.

Other uses in the Amendment Area include several churches on corner lots as well as educational institutions such as the Oakland Unified School District's Santa Fe Elementary School at 915 54th Street and the Civicorps Elementary Charter School at 1086 Alcatraz Avenue. There are no public parks within the Amendment Area. However, Emeryville's 0.7 acre Temescal Creek Park is located along a portion of the Amendment Area's southern border.

Views of the Amendment Area and Scenic Resources

Due to the densely built urban environment and relatively flat topography of the Amendment Area, available views are primarily short-range (those less than 0.25 mile from the area) from surrounding streets. Limited long-range views are also available to riders traveling along highways near the Amendment Area, such as along Interstate 580 (I-580) and Highway 24.

Scenic resources in the Amendment Area primarily are limited to historic architectural resources, discussed in Section 4.4, *Cultural Resources* of this document. Other scenic resources include protected trees, discussed in Section 4.3, *Biological Resources*.

Light and Glare

The Amendment Area is located in a built-out urban environment that has existing sources of light and glare associated with land uses typical for an urban setting. Light and glare are also associated with street lights and luminaries on major interstate highways near the Amendment Area, such as I-580 and Highway 24.

Shadow

Shadow conditions within the Amendment Area are typical of shadow conditions in built-out urban environments. Very few buildings are taller than 2-3 stories; therefore, shadows cast by buildings in the Amendment Area are minimal.

Wind

The Amendment Area lies within a climatological subregion of the San Francisco Bay Area Air Basin where the marine air that travels through the Golden Gate, as well as across San Francisco and the San Bruno Gap, is a dominant weather factor. The Oakland-Berkeley Hills cause the westerly flow of marine air to split off to the north and south of Oakland; this phenomenon tends to diminish wind speeds in Oakland.

Wind flow is generally from the west, and average wind speeds vary from season to season with the strongest average winds occurring during summer and the lightest average winds during

winter. Together, the west, north-northwest and south-southeast winds are the most frequent winds that exceed 25 miles per hour (mph).

Wind conditions within the City result from the interaction of the approaching wind with the physical features of the environment—buildings, topography and landscape. Buildings much taller than surrounding structures intercept winds that might otherwise flow overhead, and bring those winds down the vertical face of the building to ground level, where they create ground-level wind and turbulence. These redirected winds can be incompatible with the intended uses of nearby ground-level spaces.

4.1.3 Regulatory Setting

Local

City of Oakland General Plan

City of Oakland General Plan policies that pertain to aesthetics, shadow, and wind relevant to the Proposed Amendments include the following:

- ***Policy OS-2.1:*** Protection of Park Open Space: Manage Oakland’s urban parks to protect and enhance their open space character while accommodating a wide range of outdoor activities.
- ***Policy OS-2.2:*** Schoolyard Enhancement: Enhance the availability and usefulness of Oakland’s schoolyards and athletic fields as open space resources by (a) working with the Oakland Unified School District to make schoolyards and school athletic fields available to the public during non-school hours; (b) softening the harsh appearance of schoolyards by varying paving materials, landscaping, and restoring elements of the natural landscape, and (c) encouraging private schools, including church schools, to improve the visual appearance of asphalt yard areas.
- ***Policy OS-4.4:*** Elimination of Blighted Vacant Lots: Discourage property owners from allowing vacant land to become a source of neighborhood blight, particularly in residential areas with large vacant lots.
- ***Policy OS-9.3:*** Gateway Improvements: Enhance neighborhood and city identity by maintaining or creating gateways. Maintain view corridors and enhance a sense of arrival at the major entrances to the city, including freeways, BART lines, and the airport entry. Use public art, landscaping, and signage to create stronger city and neighborhood gateways.
- ***Policy OS-10.1:*** View Protection: 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 Road, and other hillside locations.
- ***Policy OS-10.2:*** Minimize Adverse Visual Impacts: Encourage site planning for new development which minimizes adverse visual impacts and take advantage of opportunities for new vistas and scenic enhancement.
- ***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 signs, trees, benches, and other support facilities.

- *Policy N1.5: Designing Commercial Development:* Commercial development should be designed in a manner that is sensitive to surrounding residential uses.
- *Policy N3.2: Encouraging Infill Development:* In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City of Oakland.
- *Policy N3.4: Constructing Housing on Orphan Lots:* Construction of housing on “orphan lots” in residential areas should be allowed where the proposed unit meets other applicable standards.
- *Policy N3.8: Required High-Quality Design:* 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.

Scenic Highways Element

The City’s Scenic Highways Element of the General Plan (adopted 1974) includes a number of policies that pertain to visual resources identified as part of the Caltrans Scenic Highway Program. Policies within the City’s Scenic Highways Element aim to limit signage and visual intrusions and protect panoramic vistas along scenic corridors, and to ensure that new construction within scenic corridors demonstrate “architectural merit” and are “harmonious” with the surrounding landscape.

The MacArthur Freeway (I-580) has been identified as an Officially Designated State Scenic Highway by Caltrans. This highway is approximately one mile south of the Amendment Area (CalTrans, 2011).

Design Review

The designs of new projects in Oakland are subject to performance criteria that are utilized as part of the City’s design review process. These criteria address the projects related to the surrounding visual character, as well as public and private investments in the area. Projects are evaluated based on site, landscaping, height, bulk, arrangement, texture, materials, colors, appurtenances, potential shadowing effects on adjacent properties, and other characteristics. Conformance with the Oakland General Plan and any other design guidelines or criteria is also considered.

Oakland Planning Code

The Planning Code serves to implement General Plan policies through the City’s Zoning Code which is found in the Oakland Municipal Code, Title 17. The Zoning Code governs land uses and development standards, such as building height and density for specific zoning districts within Oakland. Permits to construct new buildings or to alter or demolish existing ones may not be issued unless the project proposed conforms to the Zoning Code or an exception is granted

pursuant to provisions of the Planning Code. The zoning districts existing in the Amendment Area are described in Section 4.9, *Land Use, Plans and Policies*.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The City of Oakland SCAs relevant to visual, light and glare, wind, and shade/shadow, are listed below. All applicable SCAs would be adopted as conditions of approval for projects facilitated by the Redevelopment Plan, as Amended, to reduce significant aesthetic resources impacts. The SCAs are incorporated and required as part of development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures.

The City's SCAs relevant to aesthetics impacts are shown below.

- **SCA 12: Required Landscape Plan for New Construction and Certain Additions to Residential Facilities**

Prior to issuance of a building permit. Submittal and approval of a landscape plan for the entire site is required for the establishment of a new residential unit (excluding secondary units of five hundred (500) square feet or less), and for additions to Residential Facilities of over five hundred (500) square feet. The landscape plan and the plant materials installed pursuant to the approved plan shall conform to all provisions of Chapter 17.124 of the Oakland Planning Code, including the following:

- a) Landscape plan shall include a detailed planting schedule showing the proposed location, sizes, quantities, and specific common botanical names of plant species.
- b) Landscape plans for projects involving grading, rear walls on downslope lots requiring conformity with the screening requirements in Section 17.124.040, or vegetation management prescriptions in the S-11 zone, shall show proposed landscape treatments for all graded areas, rear wall treatments, and vegetation management prescriptions.
- c) Landscape plan shall incorporate pest-resistant and drought-tolerant landscaping practices. Within the portions of Oakland northeast of the line formed by State Highway 13 and continued southerly by Interstate 580, south of its intersection with State Highway 13, all plant materials on submitted landscape plans shall be fire-resistant. The City Planning and Zoning Division shall maintain lists of plant materials and landscaping practices considered pest-resistant, fire-resistant, and drought-tolerant.
- d) All landscape plans shall show proposed methods of irrigation. The methods shall ensure adequate irrigation of all plant materials for at least one growing season.

- **SCA 13: Landscape Requirements for Street Frontages (Residential Construction)**

Prior to issuance of a final inspection of the building permit:

- a) All areas between a primary Residential Facility and abutting street lines shall be fully landscaped, plus any unpaved areas of abutting rights-of-way of improved streets or alleys, provided, however, on streets without sidewalks, an unplanted strip of land five (5) feet in width shall be provided within the right-of-way along the edge

of the pavement or face of curb, whichever is applicable. Existing plant materials may be incorporated into the proposed landscaping if approved by the Director of City Planning.

- b) In addition to the general landscaping requirements set forth in Chapter 17.124, a minimum of one (1) fifteen-gallon tree, or substantially equivalent landscaping consistent with city policy and as approved by the Director of City Planning, shall be provided for every twenty-five (25) feet of street frontage. On streets with sidewalks where the distance from the face of the curb to the outer edge of the sidewalk is at least six and one-half (6 ½) feet, the trees to be provided shall include street trees to the satisfaction of the Director of Parks and Recreation.

- **SCA 15: Landscape Maintenance (Residential Construction)**

Ongoing. All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. All required fences, walls and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.

- **SCA 17: Landscape Requirements for Street Frontages (Commercial and Manufacturing)**

Prior to issuance of a final inspection of the building permit, on streets with sidewalks where the distance from the face of the curb to the outer edge of the sidewalk is at least six and one-half (6 ½) feet and does not interfere with access requirements, a minimum of one (1) twenty-four (24) inch box tree shall be provided for every twenty-five (25) feet of street frontage, unless a smaller size is recommended by the City arborist. The trees to be provided shall include species acceptable to the Tree Services Division.

- **SCA 18: Landscape Maintenance (Commercial and Manufacturing)**

Ongoing. All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. All required irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.

- **SCA 19: Underground Utilities**

Prior to issuance of a building permit, the project applicant for projects facilitated by the Proposed Amendments shall submit plans for review and approval by the Building Services Division and the Public Works Agency, and other relevant agencies as appropriate, that show all new electric and telephone facilities; fire alarm conduits; street light wiring; and other wiring, conduits, and similar facilities placed underground. The new facilities shall be placed underground along the project applicant's street frontage and from the project applicant's structures to the point of service. The plans shall show all electric, telephone, water service, fire water service, cable, and fire alarm facilities installed in accordance with standard specifications of the serving utilities.

- **SCA 20: Improvements in the Public Right-of-Way (General)**

Approved prior to the issuance of a P-job or building permit

- a) The project applicant for projects facilitated by the Proposed Amendments shall submit Public Improvement Plans to Building Services Division for adjacent public

rights-of-way (ROW) showing all proposed improvements and compliance with the conditions and City requirements including but not limited to curbs, gutters, sewer laterals, storm drains, street trees, paving details, locations of transformers and other above ground utility structures, the design specifications and locations of facilities required by the East Bay Municipal Utility District (EBMUD), street lighting, on-street parking and accessibility improvements compliant with applicable standards and any other improvements or requirements for the project as provided for in this Approval. Encroachment permits shall be obtained as necessary for any applicable improvements- located within the public ROW.

- b) Review and confirmation of the street trees by the City's Tree Services Division is required as part of this condition.
 - c) The Planning and Zoning Division and the Public Works Agency will review and approve designs and specifications for the improvements. Improvements shall be completed prior to the issuance of the final building permit.
 - d) The Fire Services Division will review and approve fire crew and apparatus access, water supply availability and distribution to current codes and standards.
- **SCA 21: Improvements in the Public Right-of Way (Specific)**

Approved prior to the issuance of a grading or building permit. Final building and public improvement plans submitted to the Building Services Division shall include the following components:

 - a) Install additional standard City of Oakland streetlights.
 - b) Remove and replace any existing driveway that will not be used for access to the property with new concrete sidewalk, curb and gutter.
 - c) Reconstruct drainage facility to current City standard.
 - d) Provide separation between sanitary sewer and water lines to comply with current City of Oakland and Alameda Health Department standards.
 - e) Construct wheelchair ramps that comply with Americans with Disabilities Act requirements and current City Standards.
 - f) Remove and replace deficient concrete sidewalk, curb and gutter within property frontage.
 - g) Provide adequate fire department access and water supply, including, but not limited to currently adopted fire codes and standards.
 - **SCA 40: Lighting Plan**

Prior to the issuance of an electrical or building permit. The proposed lighting fixtures shall be adequately shielded to a point below the light bulb and reflector and that prevent unnecessary glare onto adjacent properties. Plans shall be submitted to the Planning and Zoning Division and the Electrical Services Division of the Public Works Agency for review and approval. All lighting shall be architecturally integrated into the site.

- **SCA 46: Tree Replacement Plantings**

Prior to issuance of a final inspection of the building permit. Replacement plantings shall be required for erosion control, groundwater replenishment, visual screening and wildlife habitat, and in order to prevent excessive loss of shade, in accordance with the following criteria:

- a) No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered.
- b) Replacement tree species shall consist of *Sequoia sempervirens* (Coast Redwood), *Quercus agrifolia* (Coast Live Oak), *Arbutus menziesii* (Madrone), *Aesculus californica* (California Buckeye) or *Umbellularia californica* (California Bay Laurel) or other tree species acceptable to the Tree Services Division.
- c) Replacement trees shall be at least of twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate.
- d) Minimum planting areas must be available on site as follows:
 - i. For *Sequoia sempervirens*, three hundred fifteen square feet per tree;
 - ii. For all other species listed in #2 above, seven hundred (700) square feet per tree.
- e) In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee as determined by the master fee schedule of the city may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians.
- f) Plantings shall be installed prior to the issuance of a final inspection of the building permit, subject to seasonal constraints, and shall be maintained by the project applicant until established. The Tree Reviewer of the Tree Division of the Public Works Agency may require a landscape plan showing the replacement planting and the method of irrigation. Any replacement planting which fails to become established within one year of planting shall be replanted at the project applicant's expense.

4.1.4 Impacts and Mitigation Measures

Significance Criteria

The Redevelopment Plan, as Amended, would have a significant impact on the environment if it would:

1. Have a substantial adverse effect on a public scenic vista;
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway;
3. Substantially degrade the existing visual character or quality of the site and its surroundings;

4. Create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area;
5. Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code Section 25980-25986);
6. Cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;
7. Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space;
8. Cast shadow on an historic resource, as defined by CEQA Section 15064.5(a), such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion on or eligibility for listing in the National Register of Historic Places, California Register of Historical Resources, Local register of historical resources, or a historical resource survey form (DPR Form 523) with a rating of 1-5;
9. Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light related to appropriate uses; or
10. Create winds exceeding 36 mph for more than one hour during daylight hours during the year. The wind analysis only needs to be done if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: (a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown.

Approach to Analysis

Prior to approval of any project that is facilitated by the Redevelopment Plan, as Amended, the project would be subject to project-level environmental review as well as the SCAs and the goals and policies of the City's General Plan as outlined above.

The 2000 EIR analyzed the potential environmental effects on aesthetics and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As previously indicated in Section 4.1.1, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes that have occurred to the aesthetics setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

The approach to the analysis herein compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.¹ Based on the information in each of the

¹ Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic

aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding aesthetics relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for this topic. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of aesthetics in the Existing Project Area in this SEIR. Therefore, the impact discussions and analyses below focus on the activities facilitated by the Proposed Amendments and the potential for aesthetics impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes that have occurred to the environmental setting since the 2000 EIR are also evaluated as “past, present or reasonably foreseeable” projects and accordingly, are considered in the cumulative analysis in this SEIR (see Updated Impact AES-5).

As noted above, the City of Oakland’s *CEQA Thresholds/Criteria of Significance Guidelines* apply the wind exceedence criterion to projects with a height of 100 feet or greater (measured to the roof) and one of the following conditions exist: (a) the project is located adjacent to a substantial body of water (i.e. Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown. For the reasons described below, the development facilitated by the Proposed Amendments would not result in impacts related to the following criteria:

- Create winds exceeding 36 miles per hour for more than one hour during daylight hours during the year. The maximum permitted height for buildings in the Amendment Area is within the HBX-1 District generally along the Lowell Street corridor. Within this district, the Planning Code permits buildings up to 30 feet tall by right and up to 35 feet tall with a Conditional Use Permit. Because development facilitated by the Proposed Amendments would conform to all applicable zoning regulations, no structures of 100 feet in height or taller are anticipated (see Section 4.9, *Land Use, Plans and Policies*). Further, the Amendment Area is neither adjacent to a substantial water body nor within Oakland’s Downtown. As a result there would be to impact associated with wind exceedences.

This criterion was not addressed in the 2000 EIR. However, application of these thresholds/significance criteria and guidelines that were not established when the 2000 EIR was prepared, does not represent a change to the environment, the Existing Redevelopment Plan or the Existing Project Area. Similarly, the application of the new thresholds/significance criteria, guidelines and thresholds does not result in a new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

While portions of the Existing Project Area fall within land use designations for which no general maximum height is prescribed (e.g. the S-1 Medical Center Zone), the Existing Project Area does

Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

not meet the second set of criteria. Therefore, a wind analysis is not required and the conclusion of no impact applies to the Redevelopment Plan, as Amended.

To ensure overall conformance within the SEIR, and to reflect City of Oakland's *CEQA Thresholds/Criteria of Significance Guidelines* (initially established in 2008) and new City requirements and analysis methods, such as the incorporation of the City's *Standard Conditions of Approval and Uniformly Applied Development Standards* established since the 2000 EIR, this SEIR updates or replaces some of the impact conclusions and mitigation measures in the 2000 EIR. In accordance with CEQA Guidelines Section 15163, the SEIR contains only the information necessary to make the 2000 EIR adequate for the Redevelopment Plan, as Amended.

Impacts

Scenic Vistas and Scenic Resources

Updated Impact AES-1: Development facilitated by the Redevelopment Plan, as Amended would not adversely affect scenic public vistas or scenic resources. (Less than Significant)

Scenic resources within the Existing Project Area were discussed in the 2000 EIR (Initial Study Item #34), and the impact was determined to be less than significant. As discussed in *Approach to Analysis*, above, no substantial change to aesthetic resources has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing scenic vista and public view effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Development facilitated by the Proposed Amendments would not be expected to block or otherwise adversely affect scenic views or scenic resources. As stated above, the area is characterized by a generally flat topography, which limits the extent of views to short-range. Private projects would be built within existing property lines and would not be expected to visually obstruct view corridors along city streets.

Regarding scenic resources, the Amendment Area is partially visible in dynamic views from I-580, which is a designed scenic route located about one mile from the Amendment Area. Changes in the Amendment Area may be noticeable in views along this route. However, due to the distance between I-580 and the Amendment Area, changes would be primarily associated with larger projects that could be seen in the skyline above the existing built form. Such buildings would not be expected to obstruct views from I-580 or otherwise result in an adverse effect.

Renovation or construction of new projects pursuant to the Proposed Amendments may very likely require project-specific environmental review because sufficient details about potential projects that may be facilitated by the Proposed Amendments are not available for this program-level analysis. Adherence to the General Plan policies, Zoning, and SCAs described in the Regulatory Setting, above, would effectively mitigate potential impacts to scenic views and vistas to less-than-significant levels.

This analysis of the Redevelopment Plan as Amended considers the effects described above for the Amendment Area, in combination with the less-than-significant scenic vista and public view effect identified in the 2000 EIR. Adherence to the General Plan policies, Zoning, and SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact to scenic resources is the same as identified in the 2000 EIR (Initial Study Checklist Item # 34). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Visual Character

Updated Impact AES-2: Development facilitated by the Redevelopment Plan, as Amended, would not substantially degrade the existing visual character or quality of the site and its surroundings. (Less than Significant)

Visual character and quality within the Existing Project Area were discussed in the 2000 EIR (Initial Study Item #33), and the impact was determined to be less than significant. As discussed in *Approach to Analysis*, above, no substantial change to aesthetic resources has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing visual character and visual quality effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Development facilitated by the Proposed Amendments would improve the visual character of the Amendment Area by eliminating blighting conditions and improving the physical appearance of public spaces and existing structures. The majority of the redevelopment programs that would be facilitated by the Proposed Amendments would be implemented in the Lowell Street corridor and Stanford Avenue. Potential projects could include streetscape, public facilities, and infrastructure improvements; right-of-way adjustments; remediation assistance; façade and tenant improvements; development assistance; and site acquisitions. Redevelopment is intended to stimulate infill development and land assembly opportunities on obsolete, underutilized, and vacant properties. Adaptive re-use and preservation of existing building stock could also occur. Other projects in the Amendment Area could seek to preserve and expand the supply of rental housing units in the Amendment Area through new construction, rehabilitation, and preservation of existing housing.

All lots fronting Lowell Street fall within the Housing Business Mix Commercial Zone (HBX-1), which is intended to guide compatible coexistence of industrial/heavy commercial uses and medium density residential development. The Lowell Street corridor and areas to the east could become more densely developed with taller buildings that reach permitted height limits on parcels that are now vacant or occupied by single-story structures. The maximum permitted height for buildings in the HBX-1 district is 35 feet; however, on Lowell Street, the Planning Code requires a Conditional Use Permit for buildings over 30 feet tall.

Although the specific designs of development projects facilitated by the Proposed Amendments are not yet known, this analysis assumes that development would be compatible with the existing built form and architectural character of the Amendment Area as a whole, and compatible with the distinctive visual character of individual areas. Development projects facilitated by the Proposed Amendments would likely strengthen and revitalize the existing visual character of the Amendment Area. Renovation or construction of new development projects pursuant to the Proposed Amendments would require project-specific environmental review as necessary and appropriate. During that process, as well as during the design review process, those proposed projects would be analyzed to determine their individual effect on the visual character of the surrounding environment. In addition, future development would align with and incorporate the General Plan policies and SCAs described in the Regulatory Setting, above. Therefore, the impact of development facilitated by the Proposed Amendments on visual character and visual quality would be less-than-significant.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant effect to visual character and visual quality identified in the 2000 EIR. Project-specific environmental review and design review of specific projects facilitated by the Redevelopment Plan, as Amended, would occur, and development would be required to adhere to the General Plan policies and SCAs as discussed above. Therefore, the impact of development facilitated by the Redevelopment Plan, as Amended on visual character and visual quality would be less-than-significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding potential impact to visual character and visual quality is the same as identified in the 2000 EIR (Initial Study Checklist Item #33). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Light and Glare

Updated Impact AES-3: Development facilitated by the Redevelopment Plan, as Amended, would facilitate the creation of new sources of light or glare which would not substantially and adversely affect day or nighttime views in the area. (Less than Significant)

Issues related to light and glare within the Existing Project Area were discussed in the 2000 (Initial Study Item #19 and 20), and the impact was determined to be less than significant. As discussed in *Approach to Analysis*, above, no substantial change to aesthetic resources has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing light and glare effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Development facilitated by the Proposed Amendments could create new sources of light or glare, but these new sources would be consistent with the existing light and glare conditions in the area. The Amendment Area is already an urbanized environment with associated light and glare. Individual development projects would not be expected to change or affect day or nighttime views as a result of increased light or glare to any significant extent. Such projects would be subject to standard project review and approval processes as required by the City of Oakland, and may require additional design review. Individual projects would be required to implement SCA 40, *Lighting Plan*, which would minimize potential impacts resulting from lighting and ensure that lighting and glare effects remain less than significant.

This analysis of the Redevelopment Plan, as Amended considers the effects described above for the Amendment Area, in combination with the less-than-significant impact regarding light and glare identified in the 2000 EIR. Project-specific environmental review and design review of specific projects facilitated by the Redevelopment Plan, as Amended, would occur, and development would adhere to the SCAs as discussed above. Therefore, the impact of development facilitated by the Redevelopment Plan, as Amended, regarding light and glare would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential for an impact related to light and glare is substantially the same as identified in the 2000 EIR (Initial Study Checklist Item #19). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Shadow

Updated Impact AES-4: Development facilitated by the Redevelopment Plan, as Amended, would not result in substantial new shadow that would shade solar collectors, passive solar heaters, public open spaces, or historic resources or otherwise result in inadequate provision of adequate light. (Less than Significant)

Solar access and shading within the Existing Project Area were discussed in the 2000 EIR (Initial Study Item #19 and 20), and the impact was determined to be less than significant. As discussed in *Approach to Analysis*, above, no substantial change to aesthetic resources has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing shading effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Development facilitated by the Proposed Amendments could include taller buildings in the Lowell Street corridor that may cast shadow on public open spaces, solar collectors, and historic resources. At this time, however, there are not sufficient details available about potential developments, and this program level analysis assumes new development would be similar in height to buildings that currently exist in the Amendment Area. Through the City's review of individual development project proposals and the design review process, potential project-level effects related to shadow would be determined according to the City's significance criteria (described in Section 4.1.3 above), which specifically consider potential adverse effects of shadow to solar collectors and similar heating facilities, public or quasi-public parks and open spaces, and historic resources. Regarding solar features in particular, the City maintains a list of locations where solar collectors are located throughout the City, and issues permits for such facilities, particularly those sited on rooftops. Individual projects will also be assessed for their proximity to historic resources and open spaces. If a project has potential project-level shadow effects, the City will require, through the standard design review and environmental review processes, that the project incorporate design changes, to avoid or reduce these potential effects to less-than-significant at a project level. With the implementation of these procedures, development facilitated by the Proposed Amendments would result in a less-than-significant shadow impact.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant impact regarding shade, shadow and solar access identified in the 2000 EIR. Project-specific environmental review and design review of specific projects facilitated by the Redevelopment Plan, as Amended would occur, and the City will require project modifications to reduce or avoid significant impacts as discussed above. Therefore, the impact of development facilitated by the Redevelopment Plan, as Amended, regarding shadow would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential for an impact related to solar access and shading is the same as identified in the 2000 EIR (Initial

Study Checklist Item #20). No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Cumulative Impacts

Updated Impact AES-5: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects in and around the Project Area, as Amended, would not result in impacts to aesthetics, shadow and wind. (Less than Significant)

Geographic Context

The cumulative geographic context includes the physical environment and viewsheds visible within and across the Project Area, as Amended.

The development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended. Changes to the aesthetic setting that have occurred since preparation of the 2000 EIR are included as part of “past, present or reasonably foreseeable” projects that accordingly are considered in the cumulative analysis in this SEIR. As discussed in *Approach to Analysis*, above, no substantial change to the physical environmental setting has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing aesthetic resources effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Impacts

Development facilitated by the Proposed Amendments is intended to increase public and private investment within the Amendment Area, which would improve the overall visual quality of the area. When combined with other cumulative development in and around the Amendment Area (as described in the Major Projects List in Appendix B to this Draft SEIR, and discussed in Section 4.09, *Cumulative Context*, at the beginning of Chapter 4 of this Draft SEIR), the cumulative effects would not result in a significant adverse aesthetics impact, due to past, present and future developments’ adherence to the General Plan policies and SCAs described earlier in the Regulatory Setting section, as well as compliance with conditions identified through the City’s design review and environmental review processes, when applicable. Present and reasonably foreseeable development, in particular, generally would be consistent with adopted plans and the overall vision of the City.

Individual development projects facilitated by the Proposed Amendments, in addition to other cumulative projects, would be analyzed for their potential impacts to light and glare, views, visual character, and shadows – through design review and/or the environmental review process. If potential project-level, adverse aesthetics effects are identified through these processes, the

project's effects will be reduced to less-than-significant to the extent feasible through adherence to project-specific design measures, including design modifications, identified through those processes. It is reasonable to anticipate that present and reasonably foreseeable cumulative development, in addition to redevelopment activities that include new and rehabilitation projects and façade improvement programs, could improve past development that may pose existing adverse aesthetics effects. Therefore, although the effect of cumulative development may change the overall aesthetic character of the Amendment Area, it would not be adverse or result in significant cumulative impacts for the reasons discussed above and throughout this analysis.

This analysis of the Redevelopment Plan, as Amended, in addition to other cumulative development, considers the effects described above for the Amendment Area, in combination with the less-than-significant impact regarding cumulative aesthetics effects identified in the 2000 EIR. Project-specific environmental review and design review of specific projects facilitated by the Redevelopment Plan, as Amended, would occur, and development would adhere to applicable SCAs to reduce potential effects. Therefore, the impact of cumulative aesthetic effects from development facilitated by the Proposed Redevelopment Plan, as Amended, would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential for a cumulative impact related to aesthetics, shadow, or wind is the same as identified in the 2000 EIR (Initial Study Checklist Mandatory Finding “c”). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

4.1.5 References

California Department of Transportation (Caltrans), California Scenic Highway System, <http://www.dot.ca.gov/hq/LandArch/scenic/cahisys.htm>, accessed May 4, 2011.

City of Oakland, *2935 Telegraph Avenue Courthouse Condominiums Project Environmental Impact Report*, March 2007.

City of Oakland, *2935 Telegraph Avenue Courthouse Condominiums Project Final Environmental Impact Report*, June 2007.

City of Oakland, *Alta Bates Summit Medical Center, Summit Campus Seismic Upgrade and Master Plan Draft Environmental Impact Report*, December 2009.

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City of Oakland, *Broadway/MacArthur Redevelopment Plan Initial Study and Environmental Review Checklist*, March 1999.

City of Oakland, *Broadway/MacArthur/San Pablo Redevelopment Plan Draft Environmental Impact Report*, April 2000.

City of Oakland, *Broadway/MacArthur/San Pablo Redevelopment Plan Final Environmental Impact Report*, June 2000. City of Oakland, Community and Economic Development Agency, *Major Projects List*, December 2010-January 2011.

City of Oakland, *General Plan, Land Use and Transportation Element (LUTE)*, March 24, 1998, as amended.

City of Oakland, *General Plan, Open Space, Conservation and Recreation (OSCAR) Element*, June 1996.

City of Oakland, *General Plan, Scenic Highways Element*, adopted September 1974.

City of Oakland, *Kaiser Permanente Oakland Medical Center Master Plan Project Draft Environmental Impact Report*, March 2006.

City of Oakland. *2007-2014 Housing Element EIR*, Section 3.3, Air Quality. August 2010.

City of Oakland, *Kaiser Permanente Oakland Medical Center Master Plan Project Final Environmental Impact Report*, May 2006.

City of Oakland, *MacArthur Transit Village Draft Environmental Impact Report*, January 2008.

City of Oakland, *MacArthur Transit Village Final Environmental Impact Report*, May 2008.

City of Oakland, Municipal Code, Title 17, Planning Code, effective April 14, 2011.

4.2 Air Quality

This section analyzes how the development facilitated by the Redevelopment Plan, as Amended, may affect air quality and relate to odor. Specifically, it presents an overview of region-specific information related to air quality, including a description of current air quality conditions in the vicinity of the Amendment Area and the Existing Project Area, and sensitive land uses that could be affected by air pollution. The impact analysis evaluates the expected emissions associated with development facilitated by the Proposed Amendments, and as appropriate, the development facilitated by the Existing Redevelopment Plan. The analysis also evaluates potential effects on sensitive receptors in the vicinity, and includes appropriate City Standard Conditions of Approval (SCAs). Mitigation measures are identified for significant effects, followed by identification of the residual impact significance after mitigation measures are implemented. Pursuant to CEQA Guidelines Section 15162 regarding an SEIR, this section also discusses whether there are any new or more severe significant impacts than those identified in the 2000 EIR that result from changed circumstances or new information.

4.2.1 2000 EIR and Existing Project Area

Air Quality and odor were evaluated in the Air Quality Chapter of the 2000 EIR (Chapter 4.C), and in the FEIR (Chapter 4). The 2000 EIR (Chapter 4.C) described meteorological and air quality conditions, state and federal air quality standards, and sensitive receptors applicable to the Existing Project Area at the time. The 2000 EIR identified sensitive receptors in the Existing Project Area that included residences, schools, convalescent homes, and hospitals.

The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Changes that have occurred to the air quality setting since preparation of the 2000 EIR are included in the analysis in this SEIR. There have, however, been notable changes to the regulatory setting for air quality since the 2000 EIR. Noteworthy is the *2004 Revision to the California State Implementation Plan for Carbon Monoxide Updated Maintenance Plan for Ten Federal Planning Areas* and the *Bay Area 2010 Clean Air Plan (2010 CAP) (BAAQMD, 2010b)*. There have also been changes to state and federal ambient air quality standards for ozone (O₃), nitrogen dioxide (NO₂), and particulate matter (PM), as well as to federal ambient air quality standards for sulfur dioxide (SO₂) (comparing Table 4.C-1 in the 2000 EIR to Table 4.2.2 in this section of the SEIR). Moreover, there have been no changes in Bay Area attainment status for criteria pollutants since 2000 (comparing Table 4.C-3 in the 2000 EIR to Table 4.2.2 in this section of the SEIR). None of these changes affect the conclusions from the 2000 EIR.

Regulatory changes that would result in new significant impacts or a substantial increase in the severity of a previously identified significant impact include the Bay Area Air Quality Management District's (BAAQMD) June 2010 adoption (and May 2011 revision) of updated *California Environmental Quality Act (CEQA) Air Quality Guidelines*, which included new thresholds of significance (BAAQMD, 2011). There have also been changes since 2000 to BAAQMD's regional monitoring network pertinent to sites near Oakland. Specifically relevant to

the program-level analyses in the 2000 EIR and this SEIR, new thresholds are provided for toxic air contaminants (TACs) and odor, which are not addressed in the 2000 EIR. Additionally since 2000, the City has pictorially depicted TAC and odor sources (within the Oakland Housing Element Draft EIR), which provides substantive data toward the assessment of TAC and odor impacts throughout the City. These regulatory changes update the 2000 EIR and are not changed circumstances or new information with respect to the Existing Redevelopment Plan or Existing Project Area pursuant to CEQA Guidelines Section 15162.

Consistent with the 2000 EIR setting and given the regional and subregional nature of most plan-level air quality considerations, the Air Quality Environmental Setting, Regulatory Setting, and Impacts and Mitigation Measures analysis addresses the Project Area, as Amended, as well as discusses relevant aspects of the Amendment Area, as appropriate.

4.2.2 Environmental Setting

Climate and Meteorology

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. The Project Area, as Amended, is located in the City of Oakland and is within the boundaries of the San Francisco Bay Area Air Basin (Bay Area). The Bay Area Air Basin encompasses the nine-county region including all of Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, Marin and Napa counties, and the southern portions of Solano and Sonoma counties. The climate of the Bay Area is determined largely by a high-pressure system that is almost always present over the eastern Pacific Ocean off the West Coast of North America. During winter, the Pacific high-pressure system shifts southward, allowing more storms to pass through the region. During summer and early fall, when few storms pass through the region, emissions generated within the Bay Area can combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are conducive to the formation of photochemical pollutants, such as ozone and secondary particulates, such as nitrates and sulfates.

More specifically, the Project Area, as Amended, lies between approximately one and two miles (at the closest and farthest boundaries, respectively) east of San Francisco Bay in the Northern Alameda and Western Contra Costa Counties climatological subregion. This subregion extends from Richmond to San Leandro with San Francisco Bay as its western boundary, and its eastern boundary defined by the Oakland-Berkeley Hills. In this area, marine air traveling through the Golden Gate, as well as across San Francisco and the San Bruno Gap, is a dominant weather factor. The Oakland-Berkeley Hills cause the westerly flow of air to split off to the north and south of Oakland, which causes diminished wind speeds. The air pollution potential in this subregion is relatively low for portions close to the Bay, due to the largely good ventilation and less influx of pollutants from upwind sources (BAAQMD, 2010).

Wind measurements taken at Oakland International Airport indicate that the predominant wind flow is out of the west-northwest. Northwest winds occur approximately 46 percent of the time.

Average wind speeds vary from season to season with the strongest average winds occurring during summer and the lightest average winds during winter. Average wind speeds are 9.7 miles per hour (mph) during summer and 7.4 mph during winter. Temperatures in Oakland average 58 °F annually, ranging from an average of 40°F on winter mornings to an average of mid-70s in the late summer afternoons. Daily and seasonal oscillations of temperature are small 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.

Existing Air Quality

The BAAQMD operates a regional monitoring network that measures the ambient concentrations of criteria air pollutants. Existing and probable future levels of air quality in Oakland can generally be inferred from ambient air quality measurements conducted by the BAAQMD at its nearby monitoring stations. The monitoring stations closest to the Project Area, as Amended, are the 6th Street station in Berkeley, approximately 2 miles northwest of the Project Area, as Amended, and the International Boulevard station in Oakland, approximately 7.5 miles southeast of the Project Area, as Amended. The 6th Street station monitors ozone (one-hour and eight-hour) and particulate matter (PM10 and PM2.5), which are the major pollutants of concern in the San Francisco Bay Area. However, since the PM2.5 data from the 6th Street station is very limited, the data from the International Boulevard station has been included. **Table 4.2-1** shows a three-year summary of monitoring data (2007 through 2009). Due to the proximity of the Amendment Area to these monitoring stations, the air quality measurements shown are generally representative of conditions in the Project Area, as Amended. Table 4.2-1 also compares measured pollutant concentrations with state and national ambient air quality standards.

Criteria Air Pollutants

Ozone (O₃)

Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NOx). ROG and NOx are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NOx under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone.

**TABLE 4.2-1
 AIR QUALITY DATA SUMMARY (2007-2009) FOR THE PROJECT AREA, AS AMENDED**

| Pollutant | Monitoring Data by Year | | |
|--|-------------------------|-------------|-------------|
| | 2007 | 2008 | 2009 |
| Ozone – (6th Street, Berkeley Station) | | | |
| Highest 1 Hour Average (ppm) ^b | 0.038 | 0.053 | 0.063 |
| Days over State Standard (0.09 ppm) ^a | 0 | 0 | 0 |
| Highest 8 Hour Average (ppm) ^b | 0.032 | 0.049 | 0.054 |
| Days over National Standard (0.075 ppm) ^a | 0 | 0 | 0 |
| Days over State Standard (0.07 ppm) ^a | 0 | 0 | 0 |
| Particulate Matter (PM10) – (6th Street, Berkeley Station) | | | |
| Highest 24 Hour Average – State/National (µg/m ³) ^b | 35.8/33.0 | 43.5/42.3 | 33.5/31.4 |
| Estimated Days over National Standard (150 µg/m ³) ^{a,c} | NA | 0 | 0 |
| Estimated Days over State Standard (50 µg/m ³) ^{a,c} | NA | 0 | 0 |
| State Annual Average (State Standard 20 µg/m ³) ^{a,b} | NA | 22.4 | 18.3 |
| Particulate Matter (PM2.5) – (International Blvd, Oakland Station) | | | |
| Highest 24 Hour Average (µg/m ³) ^b – National Measurement | 22.8 | 30.1 | 36.3 |
| Estimated Days over National Standard (35 µg/m ³) ^{a,c} | NA | 0 | 3 |
| State Annual Average (12 µg/m ³) ^b | NA | 9.4 | NA |

^a Generally, state standards and national standards are not to be exceeded more than once per year.

^b ppm = parts per million; µg/m³ = micrograms per cubic meter.

^c PM10 and PM2.5 is not measured every day of the year. Number of estimated days over the standard is based on 365 days per year.

NA = Not Available. Values in **Bold** exceed the respective air quality standard.

SOURCE: California Air Resources Board (ARB), 2011. *Summaries of Air Quality Data, 2007-2009*;
<http://www.arb.ca.gov/adam/topfour/topfour1.php>

Carbon Monoxide (CO)

Ambient carbon monoxide concentrations normally are considered a local effect and typically correspond closely to the spatial and temporal distributions of vehicular traffic. Wind speed and atmospheric mixing also influence carbon monoxide concentrations. Under inversion conditions, carbon monoxide concentrations may be distributed more uniformly over an area that may extend some distance from vehicular sources. When inhaled at high concentrations, carbon monoxide combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses.

Carbon monoxide concentrations have declined dramatically in California due to existing controls and programs, and most areas of the state, including the region encompassing the Project Area, as Amended, have no problem meeting the carbon monoxide state and federal standards. CO measurements and modeling were important in the early 1980s when CO levels were regularly exceeded throughout California. In more recent years, CO measurements and modeling have not been a priority in most California air districts due to the retirement of older polluting vehicles,

fewer emissions from new vehicles, and improvements in fuels. The clear success in reducing CO levels is evident in the first paragraph of the executive summary of the ARB 2004 *Revision to the California State Implementation Plan for Carbon Monoxide Updated Maintenance Plan for Ten Federal Planning Areas* (ARB, 2004), shown below:

“The dramatic reduction in carbon monoxide (CO) levels across California is one of the biggest success stories in air pollution control. Air Resources Board (ARB or Board) requirements for cleaner vehicles, equipment and fuels have cut peak CO levels in half since 1980, despite growth. All areas of the state designated as non-attainment for the federal 8-hour CO standard in 1991 now attain the standard, including the Los Angeles urbanized area. Even the Calexico area of Imperial County on the congested Mexican border had no violations of the federal CO standard in 2003. Only the South Coast and Calexico continue to violate the more protective state 8-hour CO standard, with declining levels beginning to approach that standard.”

Nitrogen Dioxide (NO₂)

NO₂ is a reddish brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO₂. NO₂ may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

Nitrogen dioxide is an air quality concern because it acts as a respiratory irritant and is a precursor of ozone. Nitrogen dioxide is a major component of the group of gaseous nitrogen compounds commonly referred to as nitrogen oxides (NO_x). Nitrogen oxides are produced by fuel combustion in motor vehicles, industrial stationary sources (such as industrial activities), ships, aircraft, and rail transit. Typically, nitrogen oxides emitted from fuel combustion are in the form of nitric oxide (NO) and nitrogen dioxide (NO₂). NO is often converted to NO₂ when it reacts with ozone or undergoes photochemical reactions in the atmosphere. Therefore, emissions of NO₂ from combustion sources are typically evaluated based on the amount of NO_x emitted from the source.

Sulfur Dioxide (SO₂)

SO₂ is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel. SO₂ is also a precursor to the formation of atmospheric sulfate, particulate matter and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Particulate Matter (PM)

PM₁₀ and PM_{2.5} consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. (A micron is one-millionth of a meter). PM₁₀ and PM_{2.5} represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Some sources of particulate matter, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility. Large dust particles (diameter greater than 10 microns) settle out rapidly and are easily

filtered by human breathing passages. This large dust is of more concern as a soiling nuisance rather than a health hazard. The remaining fraction, PM10 and PM2.5, are a health concern particularly at levels above the federal and state ambient air quality standards. PM2.5 (including diesel exhaust particles) is thought to have greater effects on health, because these particles are so small and thus, are able to penetrate to the deepest parts of the lungs. Scientific studies have suggested links between fine particulate matter and numerous health problems including asthma, bronchitis, acute and chronic respiratory symptoms such as shortness of breath and painful breathing. Recent studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air. Children are more susceptible to the health risks of PM10 and PM2.5 because their immune and respiratory systems are still developing.

Mortality studies since the 1990s have shown a statistically significant direct association between mortality (premature deaths) and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health (Dockery and Pope, 2006).

Lead

Ambient lead concentrations meet both the federal and state standards in the Project Area, as Amended. Lead has a range of adverse neurotoxin health effects, and was formerly released into the atmosphere primarily via leaded gasoline products. The phase-out of leaded gasoline in California resulted in decreasing levels of atmospheric lead. Development facilitated by the Redevelopment Plan, as Amended, would not introduce any new sources of lead emissions; consequently, lead emissions are not required to be quantified and are not further evaluated in this analysis.

Toxic Air Contaminants (TACs)

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 health 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 of exposure to toxic substances and human health risks from exposure to toxic substances is estimated, based on the potency of the toxic substances.¹

¹ A health risk assessment is required for permitting approval if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk. In these instances, a health risk assessment for the source in question must be prepared. Such an assessment generally evaluates chronic, long-term effects, calculating the increased risk of cancer as a result of exposure to one or more TACs.

BAAQMD provides two public source inventories of TAC emissions sources within its jurisdiction. The first is its TAC Annual Inventory, the most recent of which was published in 2008 and identifies several TAC sources in the vicinity of the Project Area, as Amended. The second source is its recently released (May 2011) Google Earth-based inventory of stationary source risks and hazards. This latter source indicates 25 permitted TAC sources within or immediately adjacent to the Project Area, as Amended, and approximately 19 additional permitted TAC sources within 1,000 feet of the Project Area, as Amended. These sources are predominantly associated with commercial and industrial uses in the area, such as gasoline dispensing facilities, automotive repair, furniture and flooring manufacturing, and dry cleaning operations. Of the total permitted TAC sources in the Project Area, as Amended, the Google Earth-based inventory identifies five permitted TAC sources within or immediately adjacent to the Amendment Area, and approximately eight additional permitted TAC sources within 1,000 feet of the Amendment Area.

Odorous Emissions

Though offensive odors from stationary sources rarely cause any physical harm, they still remain unpleasant and can lead to public distress generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency and intensity of the source; wind speed and direction; and the sensitivity of receptors. Odor impacts should be considered for any proposed new odor sources located near existing receptors, as well as any new sensitive receptors located near existing odor sources. Generally, increasing the distance between the receptor and the source will mitigate odor impacts.

BAAQMD provides examples of odor sources which include wastewater treatments plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries and chemical plants. As described and pictorially depicted in the City of Oakland Housing Element Draft EIR (City of Oakland, 2010), few odor sources currently exist in the Project Area, as Amended, however, most of the Amendment Area is within maximum buffer areas delineated in accordance with BAAQMD screening distances.

Sensitive Land Uses

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions source, or duration of exposure to air pollutants. 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 and other air quality-related health problems. 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. Located within the Project

Area, as Amended, are residences, schools, convalescent homes, and hospitals. Located within the Amendment Area are residential areas and several schools.

4.2.3 Regulatory Setting

Federal

The Federal Clean Air Act requires the U.S. Environmental Protection Agency (USEPA) to identify National Ambient Air Quality Standards (NAAQS or “national standards”) to protect public health and welfare. National standards have been established for ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide, respirable particulate matter (PM₁₀ and PM_{2.5}), and lead. **Table 4.2-2** shows current national and state ambient air quality standards, as well as the Bay Area attainment status and common sources for each pollutant.

Pursuant to the 1990 Federal Clean Air Act amendments, the USEPA classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria air pollutants, based on whether or not the national standards had been achieved. Table 4.2-2 shows the current attainment status of the vicinity of the Project Area, as Amended.

The Federal Clean Air Act requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The Federal Clean Air Act amendments added requirements for states containing areas that violate the national standards to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA has responsibility to review all SIPs to determine if they conform to the mandates of the Federal Clean Air Act amendments and will achieve air quality goals when implemented. If the USEPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and may impose additional control measures. Failure to submit an approvable SIP or to implement the plan within mandated timeframes can result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

Regulation of TACs, termed Hazardous Air Pollutants (HAPs) under federal regulations, is achieved through federal, state and local controls on individual sources. The 1977 Federal Clean Air Act amendments required the USEPA to identify National Emission Standards for Hazardous Air Pollutants to protect public health and welfare. These substances include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. There is uncertainty in the precise degree of hazard.

**TABLE 4.2-2
AMBIENT AIR QUALITY STANDARDS AND BAY AREA ATTAINMENT STATUS**

| Pollutant | Averaging Time | State Standard | Bay Area Attainment Status for California Standard | Federal Primary Standard | Bay Area Attainment Status for Federal Standard | Major Pollutant Sources |
|-------------------------------|------------------------|---|--|--------------------------|---|--|
| Ozone | 8 hour | 0.070 ppm | Non-Attainment | 0.075 ppm | Non-Attainment | Formed when ROG and NOx react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial/ industrial mobile equipment. |
| | 1 hour | 0.090 ppm | Non-Attainment | --- | --- | |
| Carbon Monoxide | 8 hour | 9.0 ppm | Attainment | 9.0 ppm | Attainment | Internal combustion engines, primarily gasoline-powered motor vehicles |
| | 1 Hour | 20 ppm | Attainment | 35 ppm | Attainment | |
| Nitrogen Dioxide | Annual Average | 0.030 ppm | --- | 0.053 ppm | Attainment | Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads |
| | 1 Hour | 0.180 ppm | Attainment | 0.100 ppm | Unclassified | |
| Sulfur Dioxide | Annual Average | --- | --- | 0.03 ppm | Attainment | Fuel combustion, chemical plants, sulfur recovery plants and metal processing |
| | 24 Hour | 0.04 ppm | Attainment | 0.14 ppm | Attainment | |
| | 1 Hour | 0.25 ppm | Attainment | 0.075 ppm | Attainment | |
| Particulate Matter (PM10) | Annual Arithmetic Mean | 20 µg/m3 | Non-Attainment | --- | --- | Dust- and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays) |
| | 24 hour | 50 µg/m3 | Non-Attainment | 150 µg/m3 | Unclassified | |
| Particulate Matter (PM2.5) | Annual Arithmetic Mean | 12 µg/m3 | Non-Attainment | 15 µg/m3 | Attainment | Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics. |
| | 24 hour | --- | --- | 35 µg/m3 | Non-Attainment | |
| Lead | Calendar Quarter | --- | --- | 1.5 µg/m3 | Attainment | Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline. |
| | 30 Day Average | 1.5 µg/m3 | Attainment | --- | --- | |
| Hydrogen Sulfide | 1 hour | 0.03 ppm | Unclassified | No Federal Standard | --- | Geothermal Power Plants, Petroleum Production and refining |
| Visibility Reducing Particles | 8 hour | Extinction of 0.23/km; visibility of 10 miles or more | Unclassified | No Federal Standard | --- | See PM2.5. |

NOTE: ppm=parts per million; and µg/m3=micrograms per cubic meter

SOURCE: Bay Area Air Quality Management District, 2010a, available at http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm as of August 23, 2010; California Air Resources Board, 2009a. ARB Fact Sheet: Air Pollution Sources, Effects and Control, <http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm>, page last reviewed December 2009

State

The ARB manages air quality, regulates mobile emissions sources, and oversees the activities of county Air Pollution Control Districts and regional Air Quality Management Districts. ARB establishes state ambient air quality standards and vehicle emissions standards. California has adopted ambient standards that are more stringent than the federal standards for the criteria air pollutants and include air quality standards for some pollutants for which there is no corresponding national standard. These are shown in Table 4.2-2. Under the California Clean Air Act patterned after the Federal Clean Air Act, areas have been designated as attainment or nonattainment with respect to the state standards. Table 4.2-2 summarizes the attainment status with California standards in the Bay Area.

Toxic Air Contaminants

The Health and Safety Code defines TACs as air pollutants which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). A total of 243 substances have been designated TACs under California law; they include the 189 (federal) Hazardous Air Pollutants adopted in accordance with AB 2728. The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. Toxic air contaminant emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform a health risk assessment and, if specific thresholds are violated, are required to communicate the results to the public in the form of notices and public meetings.

In August of 1998, ARB identified particulate emissions from diesel-fueled engines (diesel particulate matter, or DPM) as TACs. ARB subsequently developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (ARB, 2000). The document represents proposals to reduce diesel particulate emissions, with the goal of reducing emissions and associated health risks by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra low sulfur diesel fuel on diesel-fueled engines.

In April 2005, ARB published *Air Quality and Land Use Handbook: A Community Health Perspective* (ARB, 2005). This handbook is intended to give guidance to local governments in the siting of sensitive land uses, such as residences, schools, daycare centers, playgrounds, or medical facilities, near sources of air pollution. There are TAC sources predominantly associated with commercial and industrial uses located in the Project Area, as Amended, as well as the Amendment Area vicinity, including, for example, emergency diesel generators, gasoline dispensing facilities, automotive repair shops, and dry cleaning operations. Consistent with ARB guidance, the City of Oakland has adopted Standard Conditions of Approval (SCA B, *Exposure to Air Pollution [Toxic Air Contaminants: Particulate Matter]*, and SCA C, *Exposure to Air Pollution [Toxic Air Contaminants: Gaseous Emissions]*) that reduce the impact of TAC sources and sensitive receptors.

Regional

The regional agency primarily responsible for developing air quality plans for the Bay Area is the BAAQMD, the agency with permit authority over most types of stationary emission sources of air pollutants in the Bay Area.

Air Quality Plans

The 1977 Federal Clean Air Act amendments require 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 specified in the Clean Air Act. The 1988 California Clean Air Act also requires development of air quality plans and strategies to meet state air quality standards in areas designated as non-attainment (with the exception of areas designated as non-attainment for the state PM standards). Maintenance plans are required for attainment areas that had previously been designated non-attainment in order to ensure continued attainment of the standards. Air quality plans developed to meet federal requirements are referred to as SIPs, discussed above.

Bay Area plans are prepared by the BAAQMD with the cooperation of the Metropolitan Transportation Commission (“MTC”) and the Association of Bay Area Governments (“ABAG”). Currently, there are two plans for the Bay Area. These are:

- The *Bay Area 2010 Clean Air Plan* (2010 CAP) developed to meet planning requirements related to the state ozone standard using a multi-pollutant approach; and
- The *2004 Revision to the California State Implementation Plan for Carbon Monoxide Updated Maintenance Plan for Ten Federal Planning Areas*, developed by the air districts with jurisdiction over the ten planning areas including the BAAQMD to ensure continued attainment of the federal carbon monoxide standard. In June 1998, the USEPA approved this plan and designated the ten areas as attainment. The maintenance plan was revised most recently in 2004 (ARB, 2004).

The Bay Area 2001 *Ozone Attainment Plan* was prepared as a proposed revision to the Bay Area part of California’s plan to achieve the national ozone standard. The Bay Area addresses all requirements of the national eight-hour standard in the 2010 CAP.

For state air quality planning purposes, the Bay Area is classified as a serious non-attainment area for the 1-hour ozone standard. The “serious” classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that the Bay Area update the CAP every three years to reflect progress in meeting the air quality standards and to incorporate updated 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. Bay Area plans are prepared with the cooperation of the Metropolitan Transportation Commission (MTC), and the Association of Bay Area Governments (ABAG). On September 15, 2010, the BAAQMD adopted the most recent revision to the CAP - the 2010 CAP – which serves to:

- Update the *Bay Area 2005 Ozone Strategy* in accordance with the requirements of the California Clean Air Act to implement “all feasible measures” to reduce ozone;
- Consider the impacts of ozone control measures on particulate matter, air toxics, and greenhouse gases in a single, integrated plan;
- Review progress in improving air quality in recent years; and
- Establish emission control measures to be adopted or implemented in the 2010 – 2012 timeframe.

BAAQMD CEQA Guidelines

In December 1999, BAAQMD adopted its *CEQA Guidelines – Assessing the Air Quality Impacts of Projects and Plans*, as a guidance document to provide lead government agencies, consultants, and project proponents with uniform procedures for assessing air quality impacts and preparing the air quality sections of environmental documents for projects subject to CEQA. The *BAAQMD CEQA Guidelines* is an advisory document and local jurisdictions are not required to utilize the methodology outlined therein. The document describes the criteria that BAAQMD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for use in determining whether projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts.

BAAQMD adopted updated *California Environmental Quality Act (CEQA) Air Quality Guidelines*, including new thresholds of significance in June 2010 and revised in May 2011 (BAAQMD, 2011), which advise lead agencies on how to evaluate potential air quality impacts with the adopted new thresholds of significance. The analysis herein uses the updated thresholds and methodologies from the *BAAQMD CEQA Air Quality Guidelines* to determine the potential impacts of the Redevelopment Plan, as Amended.

Local

City of Oakland General Plan

The OSCAR Element of the Oakland General Plan contains the following Air Quality objective and policies that would apply to the development facilitated by the Proposed Amendments (City of Oakland, 1996).

- *Objective CO-12: Air Resources*: To improve air quality in Oakland and the surrounding Bay Region.
- *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 live-work development, mixed use development, and office development with ground floor retail space; (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-12.4:* 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 and pedestrian travel.
- *Policy CO-12.6:* Require construction, demolition and grading practices which minimize dust emissions

City of Oakland Municipal Code

Per the City of Oakland Municipal Code, Title 15 Buildings and Construction, Chapter 15.36 Demolition Permits, 15.36.100 Dust Control Measures,

“Best Management Practices” shall be used throughout all phases of work, including suspension of work, to alleviate or prevent fugitive dust nuisance and the discharge of smoke or any other air contaminants into the atmosphere in such quantity as will violate any city or regional air pollution control rules, regulations, ordinances, or statutes. Water or dust palliatives or combinations of both shall be applied continuously and in sufficient quantity during the performance of work and at other times as required. Dust nuisance shall also be abated by cleaning and sweeping or other means as necessary. A dust control plan may be required as condition of permit issuance or at other times as may be deemed necessary to assure compliance with this section. Failure to control effectively or abate fugitive dust nuisance or the discharge of smoke or any other air contaminants into the atmosphere may result in suspension or revocation of the permit, in addition to any other applicable enforcement actions or remedies. (Ord. 12152 § 1, 1999).

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The City of Oakland SCAs relevant to air quality, are listed below. All applicable SCAs for air quality would be adopted as conditions of approval for projects facilitated by the Redevelopment Plan, as Amended, reduce -significant air quality impacts. The SCA’s are incorporated and required as part of development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures.

Where there are impacts associated with development facilitated by the Redevelopment Plan, as Amended, that would result in significant environmental impacts despite implementation of the SCA, additional mitigation measures are recommended.

The City’s SCAs relevant to air quality impacts are shown below.

A. Construction-Related Air Pollution Controls (Dust and Equipment Emissions)

Ongoing throughout demolition, grading, and/or construction. During construction, the project applicant shall require the construction contractor to implement all of the following applicable measures recommended by the Bay Area Air Quality Management District (BAAQMD):

Basic (applies to all construction sites)

- a) Water all exposed surfaces of active construction areas at least twice daily (using reclaimed water if possible). Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
- b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- d) Pave all roadways, driveways, sidewalks, etc. as soon as feasible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- e) Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
- f) Limit vehicle speeds on unpaved roads to 15 miles per hour.
- g) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations. Clear signage to this effect shall be provided for construction workers at all access points.
- h) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- i) Post a publicly visible sign that includes the contractor's name and telephone number to contact regarding dust complaints. When contacted, the contractor shall respond and take corrective action within 48 hours. The telephone numbers of contacts at the City and the BAAQMD shall also be visible. This information may be posted on other required on-site signage.

Enhanced (All "Basic" Controls listed above, plus the following if the project would include 114 or more single-family dwelling units, 240 or more multi-family units, nonresidential uses that exceed the applicable screening size listed in the BAAQMD CEQA Guidelines. Demolition permit, simultaneous occurrence of more than two construction phases. Extensive site preparation or extensive soil transport.)

- j) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
- k) All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph.

- l) Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- m) Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).
- n) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.
- o) Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind blown dust. Wind breaks must have a maximum 50 percent air porosity.
- p) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- q) The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- r) All trucks and equipment, including tires, shall be washed off prior to leaving the site.
- s) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.
- t) Minimize the idling time of diesel-powered construction equipment to two minutes.
- u) The project applicant shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate matter (PM) reduction compared to the most recent California Air Resources Board (CARB) fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as they become available.
- v) Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings).
- w) All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.
- x) Off-road heavy diesel engines shall meet the CARB's most recent certification standard.

B. Exposure to Air Pollution (Toxic Air Contaminants: Particulate Matter)

Prior to issuance of a demolition, grading, or building permit

- A. Indoor Air Quality: In accordance with the recommendations of the California Air Resources Board (CARB) and the Bay Area Air Quality Management District,

appropriate measures shall be incorporated into the project design in order to reduce the potential health risk due to exposure to diesel particulate matter to achieve an acceptable interior air quality level for sensitive receptors. The appropriate measures shall include one of the following methods:

- 1) The project applicant shall retain a qualified air quality consultant to prepare a health risk assessment (HRA) in accordance with the CARB and the Office of Environmental Health and Hazard Assessment requirements to determine the exposure of project residents/occupants/users to air pollutants prior to issuance of a demolition, grading, or building permit. The HRA shall be submitted to the Planning and Zoning Division for review and approval. The applicant shall implement the approved HRA recommendations, if any. If the HRA concludes that the air quality risks from nearby sources are at or below acceptable levels, then additional measures are not required.
- 2) The applicant shall implement all of the following features that have been found to reduce the air quality risk to sensitive receptors and shall be included in the project construction plans. These features shall be submitted to the Planning and Zoning Division and the Building Services Division for review and approval prior to the issuance of a demolition, grading, or building permit and shall be maintained on an ongoing basis during operation of the project.
 - a) Redesign the site layout to locate sensitive receptors as far as possible from any freeways, major roadways, or other sources of air pollution (e.g., loading docks, parking lots).
 - b) Do not locate sensitive receptors near distribution center's entry and exit points.
 - c) Incorporate tiered plantings of trees (redwood, deodar cedar, live oak, and/or oleander) to the maximum extent feasible between the sources of pollution and the sensitive receptors.
 - d) Install, operate and maintain in good working order a central heating and ventilation (HV) system or other air take system in the building, or in each individual residential unit, that meets or exceeds an efficiency standard of MERV 13. The HV system shall include the following features: Installation of a high efficiency filter and/or carbon filter to filter particulates and other chemical matter from entering the building. Either HEPA filters or ASHRAE 85% supply filters shall be used.
 - e) Retain a qualified HV consultant or HERS rater during the design phase of the project to locate the HV system based on exposure modeling from the pollutant sources.
 - f) Install indoor air quality monitoring units in buildings.
 - g) Project applicant shall maintain, repair and/or replace HV system on an ongoing and as needed basis or shall prepare an operation and maintenance manual for the HV system and the filter. The manual shall include the operating instructions and the maintenance and replacement schedule. This manual shall be included in the CC&Rs for residential projects and distributed to the building maintenance staff. In addition, the

applicant shall prepare a separate homeowners manual. The manual shall contain the operating instructions and the maintenance and replacement schedule for the HV system and the filters.

- B. Outdoor Air Quality: To the maximum extent practicable, individual and common exterior open space, including playgrounds, patios, and decks, shall either be shielded from the source of air pollution by buildings or otherwise buffered to further reduce air pollution for project occupants.

C. Exposure to Air Pollution (Toxic Air Contaminants: Gaseous Emissions)

Prior to issuance of a demolition, grading, or building permit

- A. Indoor Air Quality: In accordance with the recommendations of the California Air Resources Board (CARB) and the Bay Area Air Quality Management District, appropriate measures shall be incorporated into the project design in order to reduce the potential risk due to exposure to toxic air contaminants to achieve an acceptable interior air quality level for sensitive receptors. The project applicant shall retain a qualified air quality consultant to prepare a health risk assessment (HRA) in accordance with the CARB and the Office of Environmental Health and Hazard Assessment requirements to determine the exposure of project residents/occupants/users to air pollutants prior to issuance of a demolition, grading, or building permit. The HRA shall be submitted to the Planning and Zoning Division for review and approval. The applicant shall implement the approved HRA recommendations, if any. If the HRA concludes that the air quality risks from nearby sources are at or below acceptable levels, then additional measures are not required.
- B. Exterior Air Quality: To the maximum extent practicable, individual and common exterior open space, including playgrounds, patios, and decks, shall either be shielded from the source of air pollution by buildings or otherwise buffered to further reduce air pollution for project occupants.

- **SCA 41: Asbestos Removal in Structures**

Prior to issuance of a demolition permit. If asbestos-containing materials (ACM) are found to be present in building materials to be removed, demolished and disposed, the Project Applicant shall submit specifications signed by a certified asbestos consultant for the removal, encapsulation, or enclosure of the identified ACM in accordance with all applicable laws and regulations, including but not necessarily limited to: California Code of Regulations, Title 8; Business and Professions Code; Division 3; California Health & Safety Code 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended.

- **Radon or Vapor Intrusion from Soil or Groundwater Sources**

Ongoing The project applicant shall submit documentation to determine whether radon or vapor intrusion from the groundwater and soil is located on-site as part of the Phase I documents. The Phase I analysis shall be submitted to the Fire Prevention Bureau, Hazardous Materials Unit, for review and approval, along with a Phase II report if warranted by the Phase I report for the project site. The reports shall make recommendations for remedial action, if appropriate, and should be signed by a Registered Environmental Assessor, Professional Geologist, or Professional Engineer. Applicant shall implement the approved recommendations.

In addition, the following SCAs located in other sections of this SEIR would also serve to reduce vehicle miles traveled (VMT), thus reducing pollutant emissions:

- **SCA 25: Parking and Transportation Demand Management** (Chapter 4.13, *Transportation and Circulation*)

4.2.4 Impacts and Mitigation Measures

Significance Criteria

The Redevelopment Plan, as Amended, would have a significant plan-level air quality impact if it would²:

1. Fundamentally conflict with the *Bay Area 2010 CAP* because the projected rate of increase in vehicle miles traveled (VMT) or vehicle trips is greater than the projected rate of increase in population;
2. Fundamentally conflict with the *Bay Area 2010 CAP* because the plan does not demonstrate reasonable efforts to implement control measures contained in the *Bay Area 2010 CAP*;
3. Not include special overlay zones containing goals, policies, and objectives to minimize potential TAC impacts in areas located (a) near existing and planned sources of TACs and (b) within 500 feet of freeways and high-volume roadways containing 100,000 or more average daily vehicle trips;³ or
4. Not identify existing and planned sources of odors with policies to reduce potential odor impacts.

Approach to Analysis

The analysis of potential air quality impacts uses the Plan-level methodology identified by the BAAQMD for air quality effects outlined in the BAAQMD document *CEQA Air Quality Guidelines*. Individual projects developed pursuant to adoption of the Redevelopment Plan, as Amended, may most likely undergo separate Project-level environmental review under CEQA. This Plan-level analysis does not analyze individual construction or operational emissions from these development projects, consistent with BAAQMD's *CEQA Air Quality Guidelines*. The City has adopted the BAAQMD's Guidelines for its thresholds for significance.

The 2000 EIR analyzed the potential environmental effects on air quality and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As previously indicated in Section 4.2.1 and *Approach to Analysis*, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes

² BAAQMD thresholds state that plan-level thresholds for air quality should be applied to long-range planning documents, such as general plans, redevelopment plans, specific plans, area plans, and community plans.

³ Pursuant to BAAQMD CEQA Guidelines (June 2010), the size of the overlay zones should be based upon the recommended buffer distances contained within the California Air Resources Board's (ARB's) 2005 Land Use Handbook.

that have occurred to the air quality setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

The approach to the analysis herein compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.⁴ Based on the information in each of the aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding air quality relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for this topic. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of air quality in the Existing Project Area in this SEIR. Therefore, the impact discussions and analyses below focus on the activities facilitated by the Proposed Amendments and the potential for aesthetics impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes that have occurred to the environmental setting since the 2000 EIR are also evaluated as “past, present or reasonably foreseeable” projects and accordingly, are considered in the cumulative analysis in this SEIR.

Because this analysis utilizes the BAAQMD’s Plan-level methodology for air quality, it is in essence a cumulative analysis as it takes into account population growth and VMT increases within the region as well as a planning-level analysis of existing and potential future TAC and odor impacts. Therefore, there is no separate cumulative analysis section with regard to air quality impacts.

Impacts

Consistency with the Clean Air Plan

Updated Impact C.1 (AIR): Development facilitated by the Redevelopment Plan, as Amended, would not fundamentally conflict with the *Bay Area 2010 Clean Air Plan* because the projected rate of increase in vehicle miles traveled (VMT) or vehicle trips is not greater than the projected rate of increase in population. (Less than Significant)

The most recently adopted air quality plan in the San Francisco Bay Area Air Basin is the 2010 CAP. The 2010 CAP is a roadmap showing how the San Francisco Bay Area will achieve

⁴ Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

compliance with the state's one-hour ozone standard as expeditiously as practicable, and how the region will reduce transport of ozone and ozone precursors to neighboring air basins. The control strategy includes stationary-source control measures to be implemented through BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the MTC, local governments, transit agencies, and others. The 2010 CAP also represents the Bay Area's most recent triennial assessment of the region's strategy to attain the state one-hour ozone standard. In this, the 2010 CAP replaces the 2005 Ozone Strategy.

Under BAAQMD's methodology, a determination of consistency with the most recently adopted CAP, currently the 2010 CAP, must demonstrate that a plan or project would not exceed the population or VMT assumptions contained in the CAP and that the project or plan implements transportation control measures ("TCMs") as applicable.

For a project to be consistent with the CAP, BAAQMD requires that the projected increase in VMT associated with a proposed project be less than the projected population increase. Because project vehicle trips would be distributed not just to Oakland, percentage increases of VMT and population are compared on a countywide basis because available VMT estimates are inventories on a countywide basis, not a citywide basis.

Proposed Amendments

The MTC maintains an inventory of population VMT for the region and by county (MTC, 2008), the latest version of which was published in 2008. The population estimates of the MTC cite a 2035 Alameda county-wide population of 1,938,600. The Proposed Amendments will result in a population increase of 826 persons accounting for removal of existing residences as well as proposed residences. This represents a county-wide population increase of 0.043 percent.

Development facilitated by the Proposed Amendments would increase daily VMT in Alameda County by approximately 14,600 miles per day as calculated by the ACCMA Travel Demand Model used in the Transportation analysis (see Section 4.13, *Transportation and Circulation*). The MTC maintains an inventory of VMT for the region and by county (MTC, 2008). For 2035, MTC data shows VMT for Alameda County of 40,595,908 miles. The addition of project-related VMT to the 2035 forecast results for Alameda County in a total increase of 0.036 percent in the VMT for the development facilitated by the Proposed Amendments.

Consequently, the rate of increase in VMT (0.036 percent) would be less than the rate of increase in population (0.043 percent) for the development facilitated by the Proposed Amendments and would be considered consistent with the population and VMT assumptions of the CAP.

Although not included in the City's significance thresholds, BAAQMD recommends that growth that would occur from development facilitated by the Proposed Amendments be evaluated to determine if growth under the Proposed Amendments would exceed growth anticipated in the CAP. As discussed for Impact POP-3 in Section 4.11, *Population, Housing, and Employment*, of this Draft SEIR, the growth of households and population due to the Proposed Amendments would

account for about 0.7 percent of total population growth projected for Oakland between 2010 and 2035, as projected by ABAG *Projections 2007*, which also drive the growth projections factored into the CAP (see Table 4.11-12 in Section 4.11). When compared to *total* population anticipated in Oakland in 2035, the Proposed Amendments would have contributed about 0.2 percent.

Thus, the Proposed Amendments would not result in “substantial” population growth in comparison to the amount of population growth and the total population anticipated for Oakland in the future. Further, the Proposed Amendments would not conflict with the 2010 CAP because the projected rate of increase in VMT is not greater than the projected rate of increase in population.

Redevelopment Plan, as Amended

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the conditions supporting the significant impact (Impact C.1) identified in the 2000 EIR (page 4.C-9). The 2000 EIR impact was determined significant because, at the time that analysis was prepared, the growth projections underlying the Oakland General Plan was determined to be inconsistent with the population growth and VMT assumptions used in the effective regional air quality plan (now referred to as “CAP”) in place at that time. Since the population growth and VMT assumptions underlying the Existing Redevelopment Plan were considered to be consistent with the General Plan, those assumptions could therefore not be consistent with the air quality plan in effect at that time.

The 2000 EIR did not report projected rates of increase for population or VMT for the Existing Redevelopment Plan, which is considered fundamental to the current significance criterion. However, the rates have been estimated for the analysis in this SEIR: For the Existing Redevelopment Plan, the rate of increase in VMT (0.136 percent) would have been less than the rate of increase in population (0.164 percent), despite the inconsistency of the growth assumptions with the air quality plan in effect at that time.⁵

To estimate the rates of population growth and VMT projected for the Redevelopment Plan, as Amended, the conditions under the Existing Redevelopment Plan are combined with the conditions of the Proposed Amendments (discussed above). For the Redevelopment Plan, as Amended, the rate of increase in VMT (0.170 percent) would be less than the rate of increase in population (0.213 percent), assuming countywide estimates for 2020⁶; and the rate of increase in

⁵ Rate of VMT change for the Existing Redevelopment Plan assumes an estimated 58,000 VMT (Fehr & Peers, 2011) and an estimated 2020 countywide VMT of 42,631,300 (the 2000 EIR baseline) (MTC, 2005; 2020 interpolated from 2015 and 2025 projections). Rate of population change for the Existing Redevelopment Plan is based on an estimated 2,796 population increase and an estimated 2020 countywide population of 1,700,700 (ABAG, *Projections 2007*).

⁶ Combining the projected population and VMT for the Proposed Amendments and for the Existing Redevelopment Plan, the rate of VMT change for the Redevelopment Plan, as Amended, assumes an estimated 72,600 total VMT and an estimated 2020 countywide VMT of 42,631,300 (assuming the 2000 EIR baseline) (MTC, 2005; 2020 interpolated from 2015 and 2025 projections); the rate of population change for the Redevelopment Plan, as Amended, is based on an estimated 3,622 total population increase and an estimated 2020 countywide population of 1,700,700 (ABAG, *Projections 2007*).

VMT (0.179 percent) would be less than the rate of increase in population (0.187 percent), assuming countywide estimates for 2035.⁷

As a result, the impact according to the current significance criterion would be less than significant, and the mitigation measures identified in the 2000 EIR (Mitigation Measure C.1, see Appendix G to this SEIR) is no longer required. Mitigation Measure C.1 generally stated that adherence to policies in the Oakland General Plan would help reduce potential regional air quality emissions, and that continues to be the case, including given compliance with TCMs specified in the 2010 CAP (see Updated Impact C.2, below).

Mitigation: None Required.

Comparison to 2000 EIR: *New Less Than Significant Impact and Conclusion.* Due to adherence to the City's current significance criterion (consistent with BAAQMD CEQA Guidelines) and current approach to assess consistency with the CAP, this impact is the changed from significant and unavoidable, as identified in the 2000 EIR (Impact C.1), to less than significant. The corresponding Mitigation Measure C.1 is no longer required, but it will still effectively be implemented because all future development facilitated by the Redevelopment Plan, as Amended, will adhere to General Plan policies and TCMs of the CAP (see Updated Impact C.2, below). No "changed circumstances" result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects. The new threshold/significance criterion adopted since the 2000 EIR is information that updates the 2000 EIR, but this change in conclusion compared to the 2000 EIR is not due to changed circumstances or new information with respect to the Existing Redevelopment Plan or Existing Project Area pursuant to CEQA Guidelines Section 15162. Thus, no new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Consistency with Implementation Measures of the CAP

Updated Impact C.2 (AIR): Development facilitated by the Redevelopment Plan, as Amended, would not fundamentally conflict with the Bay Area 2010 Clean Air Plan because that future development under the Redevelopment Plan, as Amended, would incorporate reasonable efforts to implement control measures contained in the CAP. (Less than Significant)

The 1988 California Clean Air Act, Section 40919(d) requires regions to implement "transportation control measures to substantially reduce the rate of increase in passenger vehicle trips and miles traveled." Consistent with this requirement, one of the goals of the 2010 CAP is to reduce the

⁷ Combining the projected population and VMT for the Proposed Amendments and for the Existing Redevelopment Plan, the rate of VMT change for the Redevelopment Plan, as Amended, assumes an estimated 72,600 total VMT and an estimated 2035 countywide VMT of 40,595,908; the rate of population change for the Redevelopment Plan, as Amended, is based on an estimated 3,622 total population increase and an estimated 2035 countywide population of 1,938,600 (MTC, 2008).

number of trips and vehicle miles Bay Area residents travel in single-occupant vehicles through the implementation of five categories of TCMs. **Table 4.2-3** identifies those five categories of TCMs that local governments should implement through local plans to be considered in conformance with the 2010 CAP. A review of the TCM's in Table 4.2-3 indicates that these measures lend themselves to incorporation into large scale land use development projects and would be addressed by City of Oakland SCA 25, *Parking and Transportation Demand Management*, which would apply to all development projects under the Redevelopment Plan, as Amended, which would consist of 50 or more new residential units or 50,000 square feet or more of new non-residential space.

**TABLE 4.2-3
TRANSPORTATION CONTROL MEASURES IN THE 2010 CLEAN AIR PLAN**

| | |
|----|---|
| 1. | Improve Transit Services (TCM A) |
| 2. | Improve System Efficiency (TCM B) |
| 3. | Encourage Sustainable Travel Behavior (i.e., voluntary employer-based trip reduction program) (TCM C) |
| 4. | Support Focused Growth (Bicycle and Pedestrian friendliness) (TCM D) |
| 5. | Implement Pricing Strategies (TCM E) |

Specifically, SCA 25 would require an applicant for future development projects to submit for review and approval by the Planning and Zoning Division a Transportation Demand Management (TDM) plan containing strategies to reduce onsite parking demand and single occupancy vehicle travel. The applicant shall implement the approved TDM plan. The TDM plan shall include strategies to increase bicycle, pedestrian, transit, and carpools/vanpool use. All four primary modes of travel shall be considered. Strategies to consider include the following:

- a. Inclusion of additional bicycle parking, shower, and locker facilities that exceed the requirement
- b. Construction of bike lanes per the Bicycle Master Plan; Priority Bikeway projects
- c. Signage and striping onsite to encourage bike safety
- d. Installation of safety elements per the Pedestrian Master Plan (such as cross walk striping, curb ramps, count-down signals, bulb outs, etc.) to encourage convenient crossing at arterials
- e. Installation of amenities such as lighting, street trees, trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.
- f. Direct transit sales or subsidized transit passes
- g. Guaranteed ride home program
- h. Pre-tax commuter benefits (checks)
- i. Onsite car-sharing program (such as City CarShare, Zip Car, etc.)
- j. Onsite carpooling program
- k. Distribution of information concerning alternative transportation options
- l. Parking spaces sold/leased separately
- m. Parking management strategies; including attendant/valet parking and shared parking spaces

Because the requirements of SCA 25 would implement transportation control measures consistent with the 2010 CAP, development facilitated by the Redevelopment Plan, as Amended, would not fundamentally conflict with the 2010 CAP and would have a less-than-significant air quality impact with regard to TCM implementation.

Mitigation: None Required.

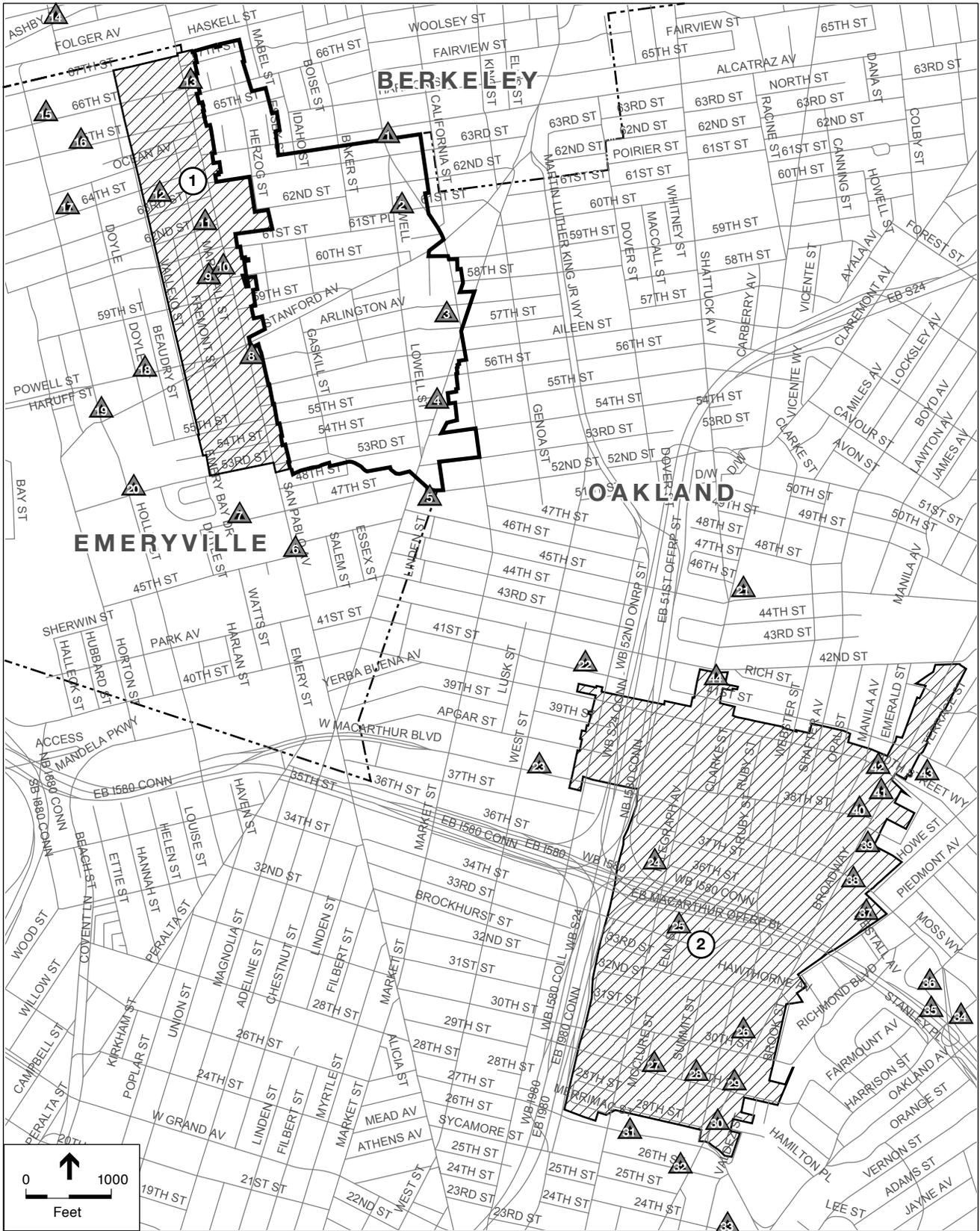
Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact to consistency with the Clean Air Plan is the same as identified in the 2000 EIR (Impact C.2), and the impact statement is updated to reflect the City's current significance criterion. New SCAs apply and are consistent with and update the 2000 EIR analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Toxic Air Contaminants

New Impact AIR-3: Development facilitated by the Redevelopment Plan, as Amended, could include residential developments that expose occupants to substantial health risk from diesel particulate matter (DPM) from mobile and stationary sources. Although compliance with City's Standard Conditions of Approval would provide that a site specific health risk assessment (HRA) be prepared, and that would reduce exposures to DPM sources to less than significant, there is no assurance that exposure to gaseous TACs could be reduced to a less-than-significant level at every site. (Potentially Significant)

As reported in Section 4.2.2, *Environmental Setting*, there are 25 permitted TAC sources within or immediately adjacent to the Project Area, as Amended, and approximately 19 additional permitted TAC sources are within 1,000 feet of the Project Area, as Amended. Within or adjacent to the Amendment Area alone there are five permitted TAC sources, and approximately eight additional permitted TAC sources within 1,000 feet. These sources are predominantly associated with commercial and industrial uses in the vicinity, such as gasoline dispensing facilities, automotive repair, furniture and flooring manufacturing, and dry cleaning operations. **Figure 4.2-1** shows the locations of these 44 TAC sources in or near to the Existing Project Area and the Amendment Area. The numbers depicted on the figure correlate to the appropriate numbered source listed below:

- | | |
|-----------------------------|-----------------------------|
| 1. New Economy Laundry | 9. Manjit Valero |
| 2. Amber Flooring, Inc. | 10. AJ's Auto Clinic |
| 3. ST Johnson Company | 11. Alaska Gas |
| 4. East Bay Fixture Company | 12. Sullivan Counter Tops |
| 5. Rockridge Antiques | 13. La Loma 7 Auto Body |
| 6. AC Transit | 14. Orchard Supply Hardware |
| 7. AC Transit | 15. Bacchus Press |
| 8. Style Cleaners | 16. George M. Martin Co. |



-  Existing Redevelopment Project Area
-  Amendment Area
-  1 San Pablo subarea
-  2 Broadway/MacArthur subarea
-  Toxic Air Contaminants Locations

SOURCE: City of Oakland, 2009; BAAQMD, 2011

Proposed Amendments to B/M/SP Redevelopment Plan . 210505.02

Figure 4.2-1
Sources of Toxic Air Contaminants

- | | |
|---|---|
| 17. Coffee House Supply | 31. Oakland Fleet Fueling Facility |
| 18. Boyds Body Shop | 32. Oakland Acura |
| 19. Amycis | 33. Auto Trends |
| 20. Level 3 Communications | 34. City of Oakland Environmental Services Division |
| 21. Pacific Bell | 35. 76 Gas Station |
| 22. Lithograph reproductions | 36. Quick Stop Market |
| 23. Westco Gas | 37. Kaiser Permanente Medical Center |
| 24. California CHP Oakland | 38. West MacArthur Shell |
| 25. W H Strehle | 39. Professional Industrial Services |
| 26. Alta Bates Summit Medical Center | 40. Honda of Oakland |
| 27. Alta Bates Summit Medical Center | 41. Broadway Express Gas |
| 28. Alta Bates Summit Medical Center | 42. Soma Environmental Engineering |
| 29. Collision Service Center of Oakland | 43. Unocal |
| 30. Auto Trends | |

Magic Touch Cleaners In some cases, ARB makes recommendations for specific buffer zones around certain types of TAC emitters of particular concern, as is the case for dry cleaners (500 feet) and chrome platers (1,000 feet). The BAAQMD Guidelines recommend special overlay zones containing goals, policies, and objectives to minimize potential TAC impacts in areas located within 1,000 feet of existing and planned TAC sources. Some potential residential development areas within the Amendment Area are within areas of concern from the TAC emissions from one or more of the stationary TAC sources. The City also mapped sources of TAC emissions citywide in the City of Oakland Housing Element Draft EIR (City of Oakland, 2010), consistent with the data shown above.

Development projects that could be facilitated by the Redevelopment Plan, as Amended, could locate new residences within the Existing Project Area and the Amendment Area and potentially near existing TAC sources, as depicted in Figure 4.2-1, above. The Project Area, as Amended, is not located near rail yards, trucking distribution facilities or major port activities – major TAC emission sources that exist primarily in other areas of the City. Although the Project Area, as Amended, may not contain major roadways that could have volumes approaching 100,000 vehicles per day, the Project Area, as Amended, is traversed by segments of Interstate 580 and Highway 24 in the eastern portion (Broadway/MacArthur subarea). The City's SCA B, *Exposure to Air Pollution (Toxic Air Contaminants: Particulate Matter)* and SCA C, *Exposure to Air Pollution (Toxic Air Contaminants: Gaseous Emissions)*, will apply to residential development located near sources of PM_{2.5} and DPM and within 1,000 feet of stationary sources of TACs. In accordance with the BAAQMD Guidelines, when a residential development project is proposed within 1,000 feet of a stationary TAC source, the potential health risk to the project residents would be evaluated using BAAQMD's recommended screening criteria. If the project were to exceed the screening criteria, a project-specific health risk assessment (HRA) would be prepared to quantify the project-specific health risk; this requirement is incorporated in SCA B. Developments facilitated by the Redevelopment Plan, as Amended, would be required to implement any project-specific recommendations to reduce the potential health risk. Compliance

with SCA B and SCA C specifically would reduce the potential impact of DPM from mobile and stationary sources to less than significant.

Because of the variety of exposure conditions local to each source, and because exposure to gaseous TACs cannot be reduced through the use of filters (unlike exposure to particulate TACs addressed in SCA B may), compliance with SCA C, which also requires preparation and implementation of an HRA, would not necessarily assure that exposure to gaseous TACs could be reduced to a less-than-significant level at every site. Consequently, even with adherence to SCA C, certain developments facilitated by the Redevelopment Plan, as Amended, could have significant impacts with respect to exposure to gaseous TACs in the Project Area, as Amended. The impact would be significant and unavoidable because no measures or techniques are available to reduce the impact of gaseous TACs on sensitive receptors with respect to those developments, even with incorporation of the SCAs B and C.

Mitigation: None Available.

Significance after Mitigation: Significant and Unavoidable.

Comparison to 2000 EIR: *New Significant and Unavoidable Impact and Conclusion.* The conclusion regarding potential TACs impact is new. Due to adherence to the City's current established approach, consistent with current BAAQMD CEQA Guidelines regarding assessing TAC impacts, this impact and conclusion are newly identified in this SEIR. Although "Human Health and Risk of Upset" are addressed in the 2000 EIR (Initial Study Checklist Items #24-#25) the specific topic of TACs was not discussed there or in the 2000 EIR as it was not an established significance threshold at that time. New SCAs apply. The new criterion is a regulatory change that updates the 2000 EIR, but it is not changed circumstances or new information with respect to the Existing Redevelopment Plan or Existing Project Area pursuant to CEQA Guidelines Section 15162.

Odor

Updated Impact C.5 (AIR): Development facilitated by the Redevelopment Plan, as Amended, would encourage new residential uses that could expose occupants to sources of substantial and frequent odors affecting a substantial number of people and would be guided by City policies to reduce potential odor impacts. (Significant)

BAAQMD provides examples of the types of land uses that are potential odor sources, which include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries and chemical plants. Certain engines, including diesel-powered engines used for construction, can also generate objectionable odors. Development facilitated by the Redevelopment Plan, as Amended, would not include these types of land uses. In accordance with the recommendations in the BAAQMD Guidelines, the City mapped known odor sources in the City of Oakland Housing Element Draft EIR (City of Oakland, 2010). Further, most of the Project Area, as Amended, is located within the BAAQMD-recommended two-mile buffer zones of an EBMUD Waste Treatment Facility (only the easternmost area, east of

Telegraph Avenue is excluded); and all of the Project Area, as Amended, is located within the BAAQMD-recommended two-mile buffer zone of chemical manufacturing facilities. Most of the Project Area, as Amended, is also within a BAAQMD-recommended one-mile buffer zone for food processing facilities and greenwaste/recycling. Odor buffer areas are considered a maximum screening distance from a particular source, and, as indicated in the setting discussion, the actual severity and area of impact would depend on factors such as the nature, frequency and intensity of the source; wind speed and direction; and the sensitivity of receptors.

BAAQMD requires that a plan document include policies to reduce potential odor impacts in the Amendment Area. Overall, the Proposed Amendments would add a new geographic area to the Existing Project Area. Objectives for redevelopment projects and programs apply throughout the Project Area, as Amended. While the Redevelopment Plan, as Amended, does not address specific land use policies, such as those to reduce potential odor impacts, it specifies that predominant land uses be consistent with the Oakland General Plan and the Oakland Planning Code, and includes objectives and actions that emphasize land use compatibility for redevelopment in the Project Area, as Amended.

Considering the program-level environmental impacts regarding odors, the City has identified and mapped odor sources, and development facilitated by the Redevelopment Plan, as Amended, would be guided by City plans and policies that emphasize land use compatibility, including minimizing odor impacts. The majority of odor sources in the Existing Project Area are along the southern portion of Broadway although there are a variety of sources throughout, including located in proximity to residential development sites. However, there are no feasible mitigation measures to reduce the impact of siting receptors near odor sources except for increasing the distance between the receptor and the source, and housing development sites are within the BAAQMD-recommended odor buffer with no room to increase the buffer distance. As a result, this analysis conservatively assumes the impact of development facilitated by the Redevelopment Plan, as Amended, regarding odors would be significant, even with adherence to City plans and policies that emphasize land use compatibility.

Mitigation: None Available.

Significance after Mitigation: Significant and Unavoidable.

Comparison to 2000 EIR: *New Significant and Unavoidable Impact and Conclusion.* This conclusion is changed from less than significant in the 2000 EIR (Impact C.5) to significant and unavoidable due to adherence to the City's current established approach to assessing odor effects, combined with the City's 2010 mapped odor sources data, as well as BAAQMD guidance. No "changed circumstances" will result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects. The City's analysis approach regarding odors, and its recently mapped data and BAAQMD's guidance update the 2000 EIR, but are not changed circumstances or new information with respect to the Existing Redevelopment Plan or Existing Project Area pursuant to CEQA Guidelines Section 15162.

Cumulative Impacts

As previously stated in Section 4.2.4, *Impacts and Mitigation Measures*, under *Approach to Analysis*, because this analysis utilizes the BAAQMD's Plan-level methodology for air quality, it is in essence a cumulative analysis as it takes into account population growth and VMT increases within the region as well as a planning-level analysis of existing and potential future TAC and odor impacts. Therefore, there is no separate cumulative analysis section with regard to air quality impacts.

2000 EIR Impacts Replaced or that Require No Further Analysis in this SEIR

The 2000 EIR identified the following impacts that, while applicable to the CEQA analysis for the Existing Redevelopment Plan when that EIR was prepared, are no longer applicable to (1) the Redevelopment Plan, as Amended (which is subject to a plan-level air quality analysis; see Section 4.2.4, *Significance Criteria*, above) and/or (2) current CEQA analysis approaches conducted by the City of Oakland. These impacts are carried forward from the 2000 EIR (and are included in the summary table of impacts in Chapter 2, *Summary*), particularly to ensure consideration of previously identified mitigation measures approved for project under the Existing Redevelopment Plan and that may still be relevant (even if not warranted).

The impacts and mitigation measures are listed below and may reflect minor revisions made for clarity and consistency within the context of this SEIR, for example, topic designators, e.g., "(AIR)" or references to distinguish that the impact is pertinent to the "Existing Project Area" analyzed in the 2000 EIR. (Revisions are shown in Appendix G to this SEIR in underlined/strikeout format.)

- **Impact C.3 (AIR): Traffic generated by the proposed Redevelopment Plan, as Amended, would not significantly increase CO emissions along roadways and at intersections within the planning area. (Less than Significant).**

This is not a significance criterion applicable to plan-level air quality analyses.

- **Impact C.4 (AIR): Cumulative development of future development projects in the Existing Project Area would result in increased stationary source emissions associated with heating and electricity consumption. (Less than Significant)**

This addresses a significance criterion no longer applicable to plan-level air quality CEQA analysis and that is not included in the City of Oakland's *CEQA Thresholds/Criteria of Significance Guidelines*. The effect is addressed by New Impact GHG-1, in part, in this SEIR.

- **Impact C.6 (AIR): Construction activities associated with development projects within the Existing Project Area would generate dust (including the respirable fraction known as PM₁₀) and combustion emissions. (Potentially Significant)**

Mitigation Measure C.6: Implementation of Policy CO-12.6 of the OSCAR would help reduce short-term emissions associated with future development with the Project Area, as Amended. In addition, Basic Control measures shall be implemented at all construction sites, and enhanced control measures shall be implemented at all construction site when more than four acres are under construction at any one time. In addition, BAAQMD dust control measures would be implemented by contractors as outlined in BAAQMD *CEQA Guidelines* (1996) or any subsequent applicable BAAQMD updates.

Significance after Mitigation: Less than Significant

Impact C.6 (AIR) addresses a significance criterion that no longer applies to plan-level air quality CEQA analysis. However, the impact is addressed by Oakland SCAs and other regulatory requirements discussed in this SEIR. Although Mitigation Measure C.6 will remain in this SEIR, it is effectively the same as and expanded by SCA A, *Construction-Related Air Pollution Controls (Dust and Equipment Emission)s*, and Chapter 15.36 of the Oakland Municipal Code, which specifies Dust Control Measures and adherence to “best management practices.” All future development projects in Oakland will be required to comply with the most current and applicable City SCAs and City Codes.

4.2.5 References

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- BAAQMD, *Bay Area 2010 Clean Air Plan*, available at <http://www.baaqmd.gov>, adopted September 15, 2010b.
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- California Air Resources Board (ARB), *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.
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City of Oakland, *MacArthur Transit Village Final Environmental Impact Report*, May 2008.

Dockery, D. W., and Pope, C.A., III, *Health Effects of Fine Particulate Air Pollution: Lines that Connect*, Journal Air & Waste Management Association, pp. 709–742, June 2006.

Metropolitan Transportation Commission, *Travel Forecasts Data Summary: Transportation 2035 Plan for the San Francisco Bay Area*, available online
http://www.mtc.ca.gov/planning/2035_plan/Supplementary/T2035-Travel_Forecast_Data_Summary.pdf, December 2008.

4.3 Biological Resources

This section analyzes how the development facilitated by the Redevelopment Plan, as Amended, may affect biological resources. Specifically, it identifies the existing biological resources within the Amendment Area and identifies the federal, state, and local regulations pertaining to biological resources within the region. It also identifies any potentially significant biological resource impact of development facilitated by the Proposed Amendments, and as appropriate, the development facilitated by the Existing Redevelopment Plan. If necessary, appropriate mitigation measures or Standard Conditions of Approval to reduce project-related potentially significant impacts are identified. Information used in the preparation of this section was obtained from existing documents pertaining to plant and wildlife species found in the vicinity of the Amendment Area, the California Natural Diversity Database (CNDDDB) (CDFG, 2011), California Native Plant Society (CNPS) Electronic Inventory (CNPS, 2011), U.S. Fish and Wildlife Service (USFWS) *Official List of Federal Endangered and Threatened Species* (USFWS, 2011), and standard biological literature. Pursuant to CEQA Guidelines Section 15162 regarding an SEIR, this section also discusses whether there are any new or more severe significant impacts than those identified in the 2000 EIR that result from changed circumstances or new information.

4.3.1 2000 EIR and Existing Project Area

Biological resources within the Existing Project Area were evaluated in the 2000 EIR (Initial Study Checklist Items #13 - 16 and Mandatory Findings “a”). The Initial Study conducted for the 2000 EIR included a brief description of biological resources in the Existing Project Area at the time. Since 2000, an approximately 145 foot-long segment of western branch of the Glen Echo Creek was daylighted (restored to natural and open). The daylighted segment runs north-south between Broadway and 38th Street, Manila Avenue and West MacArthur Boulevard. Improvements to this creek segment, including bank stabilization and revegetation, were approved as a part of the Kaiser Permanente Oakland Medical Center Master Plan (2007).

The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Changes that have occurred to the biological resources setting since preparation of the 2000 EIR are included in the analysis in this SEIR

Because only new impacts regarding the Redevelopment Plan, as Amended, are associated with the Proposed Amendments and would not involve any new significant impacts with respect to the Existing Project Area, the remainder of this Biological Resources Environmental Setting, and Regulatory Setting, and Impacts and Mitigation Measures analysis herein focuses primarily on the Amendment Area and the additions/changes related to the Proposed Amendments, although part of the setting discussion pertains to the City of Oakland at-large.

4.3.2 Environmental Setting for the Amendment Area

Regional Setting

The Amendment Area is located in the Bay Area-Delta Bioregion, as defined by the State's Natural Communities Conservation Program. This bioregion extends from the Sacramento and San Joaquin Valley Bioregions to the Pacific Coast (California Environmental Resources Evaluation System [CERES], 2007). The climate is Mediterranean with relatively mild, wet winters and warm, dry summers. This bioregion is drained by rivers including the Russian, Gualala, Napa, Petaluma, and Alameda and Putah Creeks. These watersheds support a variety of habitats such as open water, salt and brackish marshes, chaparral, and oak woodlands, which are host to a variety of threatened or endangered wildlife and sensitive plants, including California red-legged frog (*Rana draytonii*), California clapper rail (*Rallus longirostris obsoletus*) and black rail (*Laterallus jamaicensis coturniculus*), salt-marsh harvest mouse (*Reithrodontomys raviventris*), and Alameda whipsnake (*Masticophis lateralis euryxanthus*).

The Amendment Area is located within the central portion of the San Francisco Estuary, which is designated as Western Hemisphere Shorebird Reserve Network of international importance. More than one million shorebirds use regional wetlands each winter, between 300,000 and 900,000 shorebirds pass through San Francisco Bay during spring and fall migration periods, more than 50 percent of the diving ducks in the Pacific Flyway winter in the shallow wetlands of the bay, and several species breed in regional wetlands during the summer (Goals Project, 1999). More than 90 percent of historic wetlands in San Francisco Bay have been lost or altered and 94 percent of tidal marshes have been destroyed in the central San Francisco Bay Region (Goals Project, 1999). The high diversity of vegetation and wildlife found in Alameda County, which reflects that of the region as a whole, is a result of soils, topographic, and micro-climate diversity that combine to promote relatively high levels of endemism.¹ This, in combination with the rapid pace of development in the region, has resulted in a relatively high degree of endangerment for local flora and fauna.

Project Setting

The Amendment Area is largely developed and consists of a residential area in North Oakland approximately one mile east of the San Francisco bayshore and salt marsh habitats of the Emeryville Crescent. A mix of roadways, parks, mixed-use development, and residential, industrial and commercial buildings occupy the Amendment Area. Historically, the Amendment Area included a mix of coast live oak woodland, coastal prairie, coastal scrub, and riparian habitats.

Habitat Types within the Amendment Area

The two habitat types found within the Amendment Area are urban and landscape; descriptions of these habitat types occurring within the Amendment Area are presented below.

¹ *Endemism* refers to the degree to which organisms or taxa are restricted to a geographical region or locality and are thus individually characterized as endemic to that area.

Urban

The Amendment Area is developed and occurs in a highly urbanized context. Urban areas, dominated by roads, structures, concrete, and asphalt, provide little wildlife habitat and essentially no habitat for plants other than opportunistic weedy species adapted to harsh conditions or the horticultural plants used in landscaped areas (see discussion below). Wildlife species utilizing urban areas must be able to tolerate the presence of humans and their activities; species present are typically generalists, capable of utilizing the limited food sources available such as garbage and fruits of horticultural plants. Urban wildlife species in the Oakland area include common raven (*Corvus corax*), crow (*Corvus corone*), northern mockingbird (*Mimus polyglottos*), raccoon (*Procyon lotor*), Norway rat (*Rattus norvegicus*), and Virginia opossum (*Didelphis virginiana*). Landscaped plants in particular attract white-tailed deer (*Odocoileus virginianus*). Other wildlife species that are often found in undisturbed habitats include red-tailed hawks (*Buteo jamaicensis*), which prey on rodents and birds often found in urban parks, Cooper's hawks (*Accipiter cooperi*), and peregrine falcons (*Falco peregrinus anatum*) which prey almost exclusively on small to medium sized birds.

Landscaped

Habitat provided by landscaped areas occurs within tree-lined streets and sidewalks as well as vegetation associated with private residences. Street trees within the Amendment Area also provide some marginal foraging, roosting and nesting habitat for common urban adapted birds.

Landscaped areas and planted trees can typically provide cover, foraging, and nesting habitat for a variety of bird species, especially those that are tolerant of disturbance and human presence. Birds commonly found in such areas include the non-native English sparrow (*Passer domesticus*), house finch (*Carpodacus mexicanus*), dark-eyed junco (*Junco hyemalis*), western scrub jay (*Aphelocoma californica*), and Anna's hummingbird (*Calypte anna*). Landscaped areas bordering forested areas and inner-city creeks attract white-tailed deer which attract predators like mountain lions (*Felis concolor*) and coyotes (*Canis latrans*).

Wetlands and Aquatic Habitat

No wetlands or aquatic habitats are present within the Amendment Area. A branch of Derby Creek used to be present in the northern portion of the site between Alcatraz Avenue and Stanford Avenue, but has been completely filled (Oakland Museum, 2010).

Sensitive Natural Communities

Sensitive natural communities are designated as such by various resource agencies, such as California Department of Fish and Game (CDFG), or in local policies and regulations and are generally considered to have important functions or values for wildlife or humans and/or are recognized as declining in extent or distribution and are considered threatened enough to warrant some sort of protection. For example, many local agencies in California consider protection of oak woodlands important and federal, state, and most local agencies also consider wetlands and riparian habitat as sensitive communities. The California Natural Diversity Database (CNDDDB)

tracks communities it believes to be of conservation concern and these communities are typically considered sensitive for the purposes of CEQA analysis.

No CNDDDB-listed sensitive natural communities occur within the of the Amendment Area, but northern coastal salt marsh is present in the Emeryville Crescent, approximately one mile west of the Amendment Area. The Amendment Area has been extensively developed and modified and northern coastal salt marsh, along with other sensitive natural communities is absent from the Amendment Area.

Jurisdictional Waters and Wetlands

No formal wetland delineation of the Amendment Area has been conducted, and no obvious wetland or open water habitats are present within the Amendment Area.

Special-status Species

A number of species known to occur in the vicinity of the Amendment Area are protected pursuant to federal and/or State of California endangered species laws, or have been designated Species of Special Concern by CDFG. In addition, Section 15380(b) of the California Environmental Quality Act (CEQA) Guidelines provides a definition of rare, endangered, or threatened species that are not included in any listing.² Species recognized under these terms are collectively referred to as “special-status species.” For the purposes of this SEIR, special-status species include:

- Plant and wildlife species listed as rare, threatened or endangered under the federal or state endangered species acts;
- Species that are candidates for listing under either federal or state law;
- Species formerly designated by the USFWS as Species of Concern or designated by CDFG as Species of Special Concern;
- Species protected by the federal Migratory Bird Treaty Act (16 U.S.C. 703-711); and/or
- Species such as candidate species that may be considered rare or endangered pursuant to Section 15380(b) of the CEQA Guidelines.

Appendix D provides comprehensive lists of the special-status species that have been documented from, or have potential to occur in suitable habitat within, the Amendment Area. These lists include occurrences documented by the CNDDDB (CDFG, 2011), the CNPS Electronic Inventory (CNPS, 2011), and the USFWS database (USFWS, 2011). Based on a review of the biological literature of the region, information presented in previous environmental documentation, and an evaluation of the habitat conditions of the Amendment Area, many of these species were eliminated from further evaluation because (1) the Amendment Area does not and/or never has provided suitable habitat for the species, or (2) the known range for a particular species is outside of the Amendment Area.

² For example, vascular plants listed as rare or endangered or as List 1 or 2 by the California Native Plant Society (CNPS) are considered subject to Section 15380(b).

The remaining special-status species presented in **Table 4.3-1** include those that are documented as occurring within the Amendment Area or for which potential habitat (i.e., general habitat types) occurs within the Amendment Area. Species for which generally suitable habitat occurs but that were nonetheless determined to have low potential to occur in the Amendment Area are also listed in Table 4.3-1. This table also provides the rationale for each potential-to-occur determination. Species observed or with a moderate-to-high potential to occur in the Amendment Area are discussed in further detail below.

Special-status Animals

Fifteen special-status wildlife species were identified in Table 4.3-1 as having potential for occurrence within the Amendment Area. Please refer to Table 4.3-1 for a summary of each species' habitat preferences and the rationale for the determinations with regard to potential for occurrence within the Amendment Area.

Of the special-status plants and animals presented in Table 4.3-1, only the following eight species either have been observed within the Amendment Area or were determined to have a moderate potential to occur within the Amendment Area. These species, therefore, are evaluated in the impact analysis and described in further detail below:

- Peregrine falcon
- Cooper's hawk
- Red-shouldered hawk
- Red-tailed hawk
- Pallid bat
- Silver-haired bat
- Hoary bat
- Big free-tailed bat

Peregrine falcon (*Falco peregrinus anatum*). The peregrine falcon is a federal- and State-Delisted Endangered Species³ and a California Fully Protected Species. It is known throughout California and is a year-around resident along the Pacific coast. The peregrine is a specialist, preying primarily on mid-sized birds, such as pigeons and doves, in flight. Occasionally these birds will take insects and bats. Although typical nesting sites for the species are tall cliffs, preferably over or near water, peregrines are also known to use urban sites (Peeters, 2005), including the Bay Bridge and tall buildings in San Francisco and San Jose. Nesting peregrines were also recently documented from the Fruitvale Avenue Bridge on the Oakland-Alameda border, approximately five miles southeast of the Amendment Area; one breeding pair was observed at this site in 2010 (G. Nevill, 2010). No peregrine nesting sites are documented in downtown Oakland but the species has been observed perching and roosting on several buildings in downtown Oakland including Kaiser Center, Oakland City Hall, and the California State building (G. Nevill, 2007; Lowe, 2010). No structures tall enough to support foraging peregrine falcons are present within the Amendment Area, but perching birds could still use taller buildings or communication towers. Peregrine falcons are not expected to breed within the Amendment Area.

³ The peregrine falcon was listed as federally endangered on June 2, 1970, and then federally delisted on August 25, 1999. This species was also listed as state endangered on June 27, 1971, and then state delisted on November 4, 2009.

**TABLE 4.3-1
SPECIAL-STATUS SPECIES CONSIDERED**

| Common Name Scientific Name | Listing Status USFWS/ CDFG/CNPS | General Habitat | Potential for Occurrence in Amendment Area |
|---|---|--|--|
| ANIMALS | | | |
| Birds | | | |
| Peregrine falcon <i>Falco peregrinus anatum</i> | Delisted FE/ Delisted CE/ Fully Protected | Nests on ledges on cliffs, bridges, and tall buildings. In SF Bay area the species is known to nest on the Bay Bridge and buildings in San Francisco and San Jose. | Moderate. While this species has been observed foraging and roosting at multiple sites within downtown Oakland (Lowe, 2010; Nevill, 2007), there are no known nesting sites for this species in Oakland (CDFG, 2011). Tall buildings for perching or nesting are not present within the Amendment Area, but larger towers could support perching falcons. |
| California brown pelican <i>Pelecanus occidentalis californicus</i> | Delisted FE/ Delisted CE/ | Nests on islands, seeks cover on islands, mudflats, beaches, wharves. | Low. Suitable nesting or foraging habitat is absent from the Amendment Area, but individuals could wander from the bay shore and fly over the Amendment Area. |
| Fish | | | |
| Central California coast coho salmon <i>Oncorhynchus kisutch</i> | FE/CE | Occurs between central California and Alaska. Spawns in small streams with silt-free gravel substrates and cool shaded water. | Low. San Francisco Bay is not included in this species evolutionarily significant unit (ESU). No suitable habitat is present in the Amendment Area. |
| Central California coast steelhead <i>Oncorhynchus mykiss</i> | FT/CSC | Spawns and rears in coastal streams between the Russian River and Aptos Creek, as well as drainages tributary to San Francisco Bay, where gravelly substrate and shaded riparian habitat occurs. | Low. Migrates through San Francisco Estuary. No suitable creeks for migration or breeding within the Amendment Area. |
| Sacramento winter-run Chinook salmon <i>Oncorhynchus tshawytscha</i> | FE/CE | Spawns and rears in Sacramento River and tributaries where gravelly substrate and shaded riparian habitat occurs. | Low. Migrates through San Francisco Estuary. No suitable creeks for migration or breeding within the Amendment Area. |
| Central Valley spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i> | FT/CT | Spawns and rears in Sacramento River and tributaries where gravelly substrate and shaded riparian habitat occurs. | Low. Migrates through San Francisco Estuary. No suitable creeks for migration or breeding within the Amendment Area. |
| Central Valley fall/late fall-run Chinook salmon <i>Oncorhynchus tshawytscha</i> | FSC/CSC | Spawns and rears in Sacramento River and tributaries where gravelly substrate and shaded riparian habitat occurs. | Low. Migrates through San Francisco Estuary. No suitable creeks for migration or breeding within the Amendment Area. |
| Birds | | | |
| Cooper's hawk <i>Accipiter cooperii</i> | --/CSC | Commonly nests in conifers and riparian woodland but also known to nest in large trees in urban areas throughout the East Bay, especially near riparian corridors. | Moderate. While no riparian corridors are present in the Amendment Area, this species may forage or nest in and around large landscape trees. |
| Red-shouldered hawk <i>Buteo lineatus</i> | --/3503.5 | Commonly nests in riparian corridors but becoming increasingly common in urban areas throughout the East Bay, nesting in large trees. | Moderate. Known to occur in most developed areas of Oakland. May nest within tall trees within the Amendment Area. |
| Red-tailed hawk <i>Buteo jamaicensis</i> | --/3503.5 | Nests in large oaks and conifers. The Bay Area's most common urban raptor. | Moderate. Known to occur in most developed areas of Oakland. May nest within tall trees within the Amendment Area. |

**TABLE 4.3-1 (Continued)
SPECIAL-STATUS SPECIES CONSIDERED**

| Common Name <i>Scientific Name</i> | Listing Status USFWS/ CDFG/CNPS | General Habitat | Potential for Occurrence in Amendment Area |
|---|---------------------------------------|---|--|
| Birds (cont.) | | | |
| Northern harrier <i>Circus cyaneus</i> | --/CSC | Nests on ground primarily in emergent vegetation, wet meadows, or near rivers and lakes, but may nest in grasslands away from water. | Low. May occasionally forage within the Amendment Area but no suitable nesting habitat is present within the Amendment Area. |
| Mammals | | | |
| Pallid bat <i>Antrozous pallidus</i> | FSC/CSC | Occurs in various habitats including grasslands, scrubs, woodlands, mixed conifer forests, but it is most common in open, dry habitats with rocky areas for roosting. Day roosts include hollow trees, buildings, caves, crevices, and mines. | Moderate. Suitable roosting habitat occurs in parks and buildings within the Amendment Area, and foraging habitat is present over park turfgrass associated with local schools. May forage and roost within Amendment Area but not expected to breed there. |
| Silver-haired bat <i>Lasionycteris noctivagans</i> | FSC/ WBWG_M | Roost almost exclusively in trees – in natural hollows and bird excavated cavities or under loose bark of large diameter snags. | Moderate. Suitable roosting habitat occurs in parks and large trees within the Amendment Area, and foraging habitat is present over park turfgrass associated with local schools. May forage and roost within Amendment Area but not expected to breed there. |
| Hoary bat <i>Lasiurus cinereus</i> | --/WBWG_M | Prefers open habitats or habitat mosaics, with trees for cover and open areas or habitat edges for feeding. Prefers to roost in dense foliage of medium to large trees. | Moderate. Suitable roosting habitat occurs in parks and large trees within the Amendment Area, and foraging habitat is present over park turfgrass associated with local schools. May forage and roost within Amendment Area but not expected to breed there. CNDDDB records for this species have been recorded within 3 miles of the Amendment Area (CDFG, 2011). |
| Big free-tailed bat <i>Nyctinomops macrotis</i> | --/CSC | Found in habitats such desert shrub, woodlands, and evergreen forests. Mostly roosts in cliff crevices, but documented in buildings, caves, and tree cavities. | Moderate. Suitable roosting habitat occurs in parks and buildings within the Amendment Area, and foraging habitat is present over park turfgrass associated with local schools. May forage and roost within Amendment Area but not expected to breed there. |

STATUS CODES:FEDERAL: (U.S. Fish and Wildlife Service)

FE = Listed as Endangered (in danger of extinction) by the Federal Government.

FT = Listed as Threatened (likely to become Endangered within the foreseeable future) by the Federal Government.

FP = Proposed for Listing as Endangered or Threatened.

FC = Candidate to become a *proposed* species.

FSC = former Federal Species of Concern. Species so designated as such were listed by the Sacramento FWS office until 2006 but Sacramento FWS no longer maintains this list. These species are still considered to be at-risk by other federal and state agencies, as well as various organizations with recognized expertise such as the Audubon Society.

STATE: (California Department of Fish and Game)

CE = Listed as Endangered by the State of California

CT = Listed as Threatened by the State of California

CSC = California Species of Special Concern

3503.5=Protection for nesting species of Falconiformes (hawks) and Strigiformes (owls) under section 3503.5 CDFG code.

Fully Protected = California Department of Fish and Game Fully Protected Species

CDFG WL = on CDFG watch list for "Taxa to Watch"

WBWG_M = on the Western Bat Working Group (WBWG) "Medium Priority" list. This designation, made by the WBWG, indicates a level of concern that should warrant closer evaluation, more research, and conservation actions of both the species and possible threats.

Delisted = Species that were formally federally or state listed as endangered or threatened species.

SOURCES: CDFG, 2010; USFWS, 2010

Cooper's hawk (*Accipiter cooperi*). Cooper's hawks are protected under section 3503.5 of CDFG code (nesting Falconiformes). Cooper's hawk ranges over most of North America and may be seen throughout California, most commonly as a winter migrant. Nesting pairs have declined throughout the lower-elevation, more populated parts of the state. Cooper's hawks forage in open woodlands and wooded margins and nests in tall trees, often in riparian areas (Ehrlich et al., 1988; Sibley, 2001). While no habitat suitable for Cooper's hawk is present in the Amendment Area, large landscape trees directly adjacent to the Amendment Area in Temescal Creek Park could support foraging or nesting Cooper's hawks.

Red-tailed hawk (*Buteo jamaicensis*). Red-tailed hawks are protected under section 3503.5 of CDFG code (nesting Falconiformes). They are commonly found in woodlands and open country with scattered trees. These large hawks feed primarily on small mammals, but will also prey on other small vertebrates, such as snakes and lizards, as well as on small birds and invertebrates. Red-tailed hawks nest in a variety of trees in urban, woodland, and agricultural habitats.

Red-shouldered hawk (*Buteo lineatus*). Red-shouldered hawks are protected under section 3503.5 of CDFG code (nesting Falconiformes). They are relatively common in both rural and urban situations and can be found in residential neighborhoods and along riparian corridors or other waterbodies. These hawks hunt primarily for mammals, reptiles, and amphibians (Sibley, 2000). Large trees within the Amendment Area, particularly those within parks, provide potential nesting habitat for red-shouldered hawks.

Mammals

Special-status Bat Species. The Amendment Area provides potential foraging and roosting habitat for four special-status bat species, all of which have been documented within the vicinity of the Amendment Area.

Pallid bat (*Antrozous pallidus*). The pallid bat ranges throughout western North America, from British Columbia to Mexico and east to Texas. This species is most abundant in arid lands, including deserts and canyonlands, shrub-steppe grasslands, and higher elevation coniferous forests and is therefore only likely to occur within the Amendment Area on a transient basis during spring and summer migrations. Pallid bats may roost alone or in groups in trees in cavities or under bark and structures such as bridges and buildings. Pallid bats forage over open areas and are opportunistic feeders on a wide variety of insects, foraging both on surfaces and in the air. Prey includes beetles, centipedes, crickets, moths, and rarely, lizards, and small rodents (WBWG, 2005a).

Silver-haired bat (*Lasiorycteris noctivagans*). The silver-haired bat occurs throughout most of North America and is primarily associated with conifer and mixed conifer/hardwood forests. This species would most likely be found in the Amendment Area during winter and seasonal migrations. Silver-haired bats roost almost exclusively in cavities and under the bark of trees, although they are sometimes found in structures as well. Moths are apparently the primary prey for this species, although they have been documented as feeding on a wide variety of insects.

Seasonal records suggest considerable north to south migration, with animals moving to warmer, more southern climates in the winter (WBWG, 2005b).

Hoary bat (*Lasiurus cinereus*). The hoary bat is the most widespread of all North American bats. This species ranges from Canada to South America and is primarily associated with forested habitats. Hoary bats are solitary and roost primarily in foliage of both coniferous and deciduous trees, often at the edge of a clearing. The species is highly migratory but neither wintering sites nor migratory routes are well documented. Hoary bats reportedly have a strong preference for moths, but are also known to eat beetles, flies, grasshoppers, termites, dragonflies, and wasps (WBWG, 2005c).

Big free-tailed bat (*Nyctinomops macrotis*). The big free-tailed bat ranges from South America to the southwestern United States. This species is found in a variety of habitats including desert shrub, woodlands, and evergreen forests. It mostly roosts in cliff crevices, but has been documented in buildings, caves, and tree cavities (WBWG, 2005d). This species may occur within the Amendment Area as a seasonal migrant. These four bat species may utilize trees or abandoned buildings for roosting and turfgrass for foraging in any of the parks within the Amendment Area during migratory periods but are not expected to breed and reproduce there.

Special-status Plants

No special-status plant species are expected to occur within the Amendment Area. Although a number of special-status plant species are identified in Appendix D as occurring within the vicinity of the Amendment Area, there are no intact native communities remaining within the Amendment Area. In addition, distribution of a number of these species is restricted to specific habitat types or soils that are not, and/or never were, present within the Amendment Area, such as vernal pools or serpentine soils. Many plant species presented in Appendix D are considered by CNPS (2011) to be extirpated from the Amendment Area due to a long-standing history of disturbance within the Amendment Area.

4.3.3 Regulatory Setting

This section briefly describes federal, state, and local regulations, permits, and policies pertaining to biological resources and wetlands as they apply to development facilitated by the Proposed Amendments.

Federal

Endangered Species Act

The USFWS, which has jurisdiction over plants, wildlife, and most freshwater fish, and the National Marine Fisheries Service (NMFS), which has jurisdiction over anadromous fish, marine fish, and mammals, oversee implementation of the Federal Endangered Species Act (FESA). Section 7 of the FESA mandates that all federal agencies consult with the USFWS and NMFS to ensure that federal agency actions do not jeopardize the continued existence of a listed species or

destroy or adversely modify critical habitat for listed species. A federal agency is required to consult with USFWS and NMFS if it determines a “may affect” situation will occur in association with a proposed project. The FESA prohibits the “take”⁴ of any fish or wildlife species listed as threatened or endangered, including the destruction of habitat that could hinder species recovery.

Under Section 9 of the FESA, the take prohibition applies only to wildlife and fish species. However, Section 9 does prohibit the removal, possession, damage, or destruction of any endangered plant from federal land. Section 9 also prohibits acts to remove, cut, dig up, damage, or destroy an endangered plant species in non-federal areas in knowing violation of any state law or in the course of criminal trespass. Candidate species and species that are proposed, or under petition for listing, receive no protection under Section 9 of the FESA.

Section 10 of the FESA requires the issuance of an “incidental take” permit before any public or private action may be taken that would potentially harm, harass, injure, kill, capture, collect, or otherwise hurt (i.e., take) any individual of an endangered or threatened species. To offset the take of individuals that may occur incidental to implementation of a proposed project, the permit requires preparation and implementation of a habitat conservation plan that provides for the overall preservation of the affected species through specific mitigation measures.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (16 USC, Section 703, Supplement I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

Essential Fish Habitat

The Sustainable Fisheries Act of 1996 (Public Law 104-297), amended the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) to establish new requirements for Essential Fish Habitat (EFH) descriptions in federal Fisheries Management Plans (FMPs) and to require federal agencies to consult with the NMFS on activities that may adversely affect EFH. The Magnuson-Stevens Act requires all fishery management councils to amend their FMPs to describe and identify EFH for each managed fishery. The act also requires consultation for all federal agency actions that may adversely affect EFH (i.e., direct versus indirect effects); it does not distinguish between actions in EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside of EFH, such as upstream and upslope activities that may have an adverse effect on EFH. Therefore, EFH consultation with NMFS is required by federal agencies undertaking,

⁴ “Take,” as defined in Section 9 of the FESA, is broadly defined to include intentional or accidental “harassment” or “harm” to wildlife. “Harass” is further defined by the U.S. Fish and Wildlife Service as an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns that include, but are not limited to, breeding, feeding, and sheltering. “Harm” is defined as an act that actually kills or injures wildlife. This may include significant habitat modification or degradation that actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

permitting, or funding activities that may adversely affect EFH, regardless of the activity's location. Under section 305(b)(4) of the Magnuson-Stevens Act, NMFS is required to provide EFH conservation and enhancement recommendations to federal and state agencies for actions that adversely affect EFH. However, state agencies and private parties are not required to consult with NMFS unless state or private actions require a federal permit or receive federal funding. Although the concept of EFH is similar to that of critical habitat under the FESA, measures recommended to protect EFH by NMFS are advisory, not proscriptive.

State

California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFG has the responsibility for maintaining a list of threatened and endangered species (California Fish and Game Code Section 2070). CDFG also maintains a list of "candidate species," which are species formally noticed as being under review for addition to either the list of endangered species or the list of threatened species. In addition, CDFG maintains lists of "species of special concern," which serve as "watch lists." Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species could be present on the project site and determine whether the proposed project could have a potentially significant impact on such species. In addition, CDFG encourages informal consultation on any proposed project that may affect a candidate species.

California Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act, which directed CDFG to carry out the legislature's intent to "preserve, protect, and enhance endangered plants in this state." The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. The California Endangered Species Act (CESA) expanded upon the original California Native Plant Protection Act and enhanced legal protection for plants. The CESA established threatened and endangered species categories, and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, there are three listing categories for plants in California: rare, threatened, and endangered.

California Fish and Game Code

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.3 of the California Fish and Game Code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs.

The California Fish and Game Code (Sections 3511-birds, 4700-mammals, 5050-reptiles and amphibians, and 5515-fish) also allows the designation of a species as Fully Protected. This

designation provides a greater level of protection than is afforded by the CESA, since it means the designated species cannot be taken at any time.

Sensitive Natural Communities

Sensitive natural communities are identified as such by CDFG's Natural Heritage Division and include those that are naturally rare and those whose extent has been greatly diminished through changes in land use. The CNDDDB tracks 135 such natural communities in the same way that it tracks occurrences of special-status species: information is maintained on each site's location, extent, habitat quality, level of disturbance, and current protection measures. CDFG is mandated to seek the long-term perpetuation of the areas in which these communities occur. While there is no statewide law that requires protection of all special-status natural communities, CEQA requires consideration of a project's potential impacts on biological resources of statewide or regional significance.

Local

City of Oakland General Plan

The OSCAR Element of the City of Oakland General Plan was adopted in 1996. OSCAR policies pertaining to natural resources with potential relevance to implementation of the development facilitated by the Proposed Amendments include the following:

- *Policy CO-7.1*: Protect native plant communities, especially oak woodlands, redwood forests, native perennial grasslands, and riparian woodlands, from the potential adverse impacts of development. Manage development in a way which prevents or mitigates adverse impacts to these communities.
- *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.
- *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 unmitigatable adverse impacts.
- *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.
- *Policy CO-11.1*: Protect wildlife from the hazards of urbanization, including loss of habitat and predation by domestic animals.
- *Policy CO-11.2*: Protect and enhance migratory corridors for wildlife. Where such corridors are privately owned, require new development to retain native habitat or take other measures which help sustain local wildlife population and migratory patterns.

The following policy is from the LUTE:

- *Policy W3.3*: Native plant communities, wildlife habitats, and sensitive habitats should be protected and enhanced.

City of Oakland Tree Ordinance

City of Oakland Tree Preservation and Removal Ordinance (Oakland Municipal Code, Chapter 12.36) prohibits removal of protected trees under certain circumstances. Factors to be considered in determining significance include:

The number, type, size, location and condition of (a) the protected trees to be removed and/or impacted by construction and (b) the protected trees to remain, with special consideration given to native trees.⁵

Protected trees include the following:

Quercus agrifolia (California or coast live oak) measuring four inches diameter at breast height (dbh) or larger, and any other tree measuring nine inches dbh or larger except *Eucalyptus* and *Pinus radiata* (Monterey pine); provided, however, that Monterey pine trees on City property and in development-related situations where more than five Monterey pine trees per acre are proposed to be removed are considered to be Protected trees.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The SCAs relevant to the biological resources are listed below. All applicable SCAs would be adopted as conditions of approval and required of development facilitated by the Redevelopment Plan, as Amended, reduce significant impacts to biological resources. The SCAs are incorporated and required as part of development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures.

The City's SCAs relevant to biological resources impacts are shown below:

- **SCA 44: Tree Removal During Breeding Season**

Prior to issuance of a tree removal permit. To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of raptors and/or any federally protected migratory bird species shall not occur during the breeding season of March 15 and August 15. If tree removal must occur during the breeding season, all sites shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to start of work from March 15 through May 31, and within 30 days prior to the start of work from June 1 through August 15. The pre-removal surveys shall be submitted to the Planning and Zoning Division and the Tree Services Division of the Public Works Agency. If the survey indicates the potential presences of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed

⁵ Oakland Planning Code section 17.158.280E2 states that "Development related" tree removal permits are exempt from CEQA if no single tree to be removed has a dbh of 36 inches or greater **and** the cumulative trunk area of all trees to be removed does not exceed 0.1 percent of the total lot area.

until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the CDFG, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.

- **SCA 45: Tree Removal Permit**

Prior to issuance of a demolition, grading, or building permit. Prior to removal of any protected trees, per the Protected Tree Ordinance, located on the Project Site or in the public right-of-way adjacent to the project, the project applicant must secure a tree removal permit from the Tree Division of the Public Works Agency, and abide by the conditions of that permit.

- **SCA 46: Tree Replacement Plantings**

Prior to issuance of a final inspection of the building permit. Replacement plantings shall be required for erosion control, groundwater replenishment, visual screening and wildlife habitat, and in order to prevent excessive loss of shade, in accordance with the following criteria:

- a) No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered.
- b) Replacement tree species shall consist of *Sequoia sempervirens* (Coast Redwood), *Quercus agrifolia* (Coast Live Oak), *Arbutus menziesii* (Madrone), *Aesculus californica* (California Buckeye) or *Umbellularia californica* (California Bay Laurel) or other tree species acceptable to the Tree Services Division.
- c) Replacement trees shall be at least of twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate.
- d) Minimum planting areas must be available on site as follows:
 - i. For *Sequoia sempervirens*, three hundred fifteen square feet per tree;
 - ii. For all other species listed in #2 above, seven hundred (700) square feet per tree.
- e) In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee as determined by the master fee schedule of the city may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians.
- f) Plantings shall be installed prior to the issuance of a final inspection of the building permit, subject to seasonal constraints, and shall be maintained by the project applicant until established. The Tree Reviewer of the Tree Division of the Public Works Agency may require a landscape plan showing the replacement planting and the method of irrigation. Any replacement planting which fails to become established within one year of planting shall be replanted at the project applicant's expense.

- **SCA 47: Tree Protection during Construction.**

Prior to issuance of a demolition, grading, or building permit. Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist:

- 1) Before the start of any clearing, excavation, construction or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the City Tree Reviewer. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree.
- 2) Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filing, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the City Tree Reviewer from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree.
- 3) No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the Tree Reviewer from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the tree reviewer. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree.
- 4) Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration.
- 5) If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Agency of such damage. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed.
- 6) All debris created as a result of any tree removal work shall be removed by the Project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the Project applicant in accordance with all applicable laws, ordinances, and regulations.

- **SCA A: Bird Collision Reduction**

Applies to ALL new construction, including telecommunication towers, which include large uninterrupted expanses of glass that account for more than 40 percent of any one side of the a building's exterior AND at least one of the following:

- The project is located immediately adjacent to a substantial water body (i.e., Oakland Estuary, San Francisco Bay, Lake Merritt or other substantial lake, reservoir, or wetland); OR
- The project is located immediately adjacent to a substantial recreation area or park (i.e., Region-Serving Park, Resource Conservation Areas, Community Parks, Neighborhood parks, and linear parks and Special Use Parks over 1 acre in size), which contain substantial vegetation; OR
- The project includes a substantial vegetated or greenroof (roofs with growing medium and plants taking the place of asphalt, tile, gravel, or shingles, but excluding container gardens):

Concurrent with submittal of planning applications or a building permit, whichever occurs first, and ongoing. The project applicant, or his or her successor, including the building manager or Home Owner's Association, shall submit plans to the Planning and Zoning Division, for review and approval, indicating how they intend to reduce potential bird collisions to the maximum feasible extent. The applicant shall implement the approved plan, including all mandatory measures, as well as applicable and specific project Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent.

- a) Mandatory measures include all of the following:
 - i. Comply with federal aviation safety regulations for large buildings by installing minimum intensity white strobe lighting with three second flash instead of blinking red or rotating lights.
 - ii. Minimize the number of and co-locate rooftop-antennas and other rooftop structures.
 - iii. Monopole structures or antennas shall not include guy wires.
 - iv. Avoid the use of mirrors in landscape design.
 - v. Avoid placement of bird-friendly attractants (i.e. landscaped areas, vegetated roofs, water features) near glass.
- b) Additional BMP strategies to consider include the following:
 - i. Make clear or reflective glass visible to birds using visual noise techniques. Examples include:
 - 1. Use of opaque or transparent glass in window panes instead of reflective glass.
 - 2. Uniformly cover the outside clear glass surface with patterns (e.g., dots, decals, images, abstract patterns). Patterns must be separated by a minimum 10 centimeters (cm).
 - 3. Apply striping on glass surface. If the striping is less than 2 cm wide it must be applied vertically at a maximum of 10 cm apart (or 1 cm wide strips at 5 cm distance)
 - 4. Install paned glass with fenestration patterns with vertical and horizontal mullions of 10 cm or less.

5. Place decorative grilles or louvers with spacing of 10 cm or less.
 6. Apply one-way transparent film laminates to outside glass surface to make the window appear opaque on the outside.
 7. Install internal screens through non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects.
 8. Install windows which have the screen on the outside of the glass.
 9. Use UV-reflective glass. Most birds can see ultraviolet light, which is invisible to humans.
 10. If it is not possible to apply glass treatments to the entire building, the treatment should be applied to windows at the top of the surrounding tree canopy or the anticipated height of the surrounding vegetation at maturity.
- ii. Mute reflections in glass. Examples include:
1. Angle glass panes toward ground or sky so that the reflection is not in a direct line-of-sight (minimum angle of 20 degrees with optimum angle of 40 degrees)
 2. Awnings, overhangs, and sunshades provide birds a visual indication of a barrier and may reduce image reflections on glass, but do not entirely eliminate reflections.
- iii. Reduce Light Pollution. Examples include:
1. Turn off all unnecessary interior lights from 11 p.m. to sunrise.
 2. Install motion-sensitive lighting in lobbies, work stations, walkways, and corridors, or any area visible from the exterior and retrofitting operation systems that automatically turn lights off during after-work hours.
 3. Reduce perimeter lighting whenever possible.
- iv. Institute a building operation and management manual that promotes bird safety. Example text in the manual includes:
1. Donation of discovered dead bird specimens to authorized bird conservation organization or museums to aid in species identification and to benefit scientific study, as per all federal, state and local laws.
 2. Production of educational materials on bird-safe practices for the building occupants
 3. Asking employees to turn off task lighting at their work stations and draw office blinds or curtains at end of work day.
 4. Schedule nightly maintenance during the day or to conclude before 11 p.m., if possible.

4.3.4 Impacts and Mitigation Measures

Significance Criteria

The Redevelopment Plan, as Amended, would have a significant impact on the environment if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS;
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS;
3. Have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means;
4. Substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
5. Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan;
6. Fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code Chapter 12.36) by removal of protected trees under certain circumstances [NOTE: Factors to be considered in determining significance include the number, type, size, location and condition of (a) the protected trees to be removed and/or impacted by construction and (b) protected trees to remain, with special consideration given to native trees.⁶ Protected trees include *Quercus agrifolia* (California or coast live oak) measuring four inches diameter at breast height (dbh) or larger, and any other tree measuring nine inches dbh or larger except eucalyptus and *pinus radiata* (Monterey pine); provided, however, that Monterey pine trees on City property and in development-related situations where more than five Monterey pine trees per acre are proposed to be removed are considered to be protected trees].

Approach to Analysis

Prior to approval of any project that is facilitated by the Redevelopment Plan, as Amended, the project would be subject to project-level environmental review as well as the SCAs and the goals and policies of the City's General Plan as outlined above.

The 2000 EIR analyzed the potential environmental effects on biological resources and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As previously indicated in Section 4.3.1, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes that have

⁶ Oakland Planning Code section 17.158.280E2 states that "Development related" tree removal permits are exempt from CEQA if no single tree to be removed has a dbh of 36 inches or greater **and** the cumulative trunk area of all trees to be removed does not exceed 0.1 percent of the total lot area.

occurred to the biological resources setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

The approach to the analysis herein compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.⁷ Based on the information in each of the aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding biological resources relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for this topic. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of biological resources in the Existing Project Area in this SEIR. Therefore, the impact discussions and analyses below focus on the activities facilitated by the Proposed Amendments and the potential for biological resources impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes that have occurred to the environmental setting since the 2000 EIR are also evaluated as “past, present or reasonably foreseeable” projects and accordingly, are considered in the cumulative analysis in this SEIR (see Updated Impact BIO-5).

Potential impacts resulting from implementation of development facilitated by the Proposed Amendments were evaluated based on a review of the following sources:

- Existing resource information and aerial photographs of the Amendment Area and vicinity;
- Data presented in the CNDDDB (CDFG, 2011), CNPS *Electronic Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2011), for the Oakland West, Oakland East, San Leandro, and Richmond U.S. Geological Survey 7.5-minute topographic quadrangles and USFWS *Official List of Federal Endangered and Threatened Species* for Alameda County (USFWS, 2011), which include the Amendment Area and vicinity;
- Standard biological references (e.g., field guides);
- Surveys and environmental documents including specific information on species or habitats found in the Amendment Area;
- Other available literature regarding the natural resources of the area.

⁷ Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

The Amendment Area is located within and immediately adjacent to fully developed and busy city streets, and has a long history of urban development. Typically, analyses for projects located in such highly urbanized areas have focused primarily on ensuring landscape trees are removed without disturbing nesting birds (which would potentially violate the Migratory Bird Treaty Act or California Fish and Game Code), as well as focusing on adherence to local tree preservation ordinances such as those found in the Oakland Municipal Code.

Based on the characteristics of the Proposed Amendments and the existing conditions, development facilitated by the Proposed Amendments would not result in impacts related to the following criteria. No impact discussion is provided for these topics for the following reasons:

1. Substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Services. No direct or indirect impacts on riparian or other sensitive habitats are expected because these habitats are absent from the Amendment Area or reasonably expected to be affected by the development facilitated by the Proposed Amendments. This is consistent with the determination in the 2000 EIR (Initial Study Checklist Item #13-16).
2. Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan. There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans that apply to the Amendment Area. Therefore, development facilitated by the Proposed Amendments would not conflict with such plans. This is consistent with the determination in the 2000 EIR (p.4.A-29)

To ensure overall conformance within the SEIR, and to reflect City of Oakland's *Thresholds/Criteria of Significance Guidelines* (initially established in 2008) and new City requirements and analysis methods, such as the incorporation of the City's *Standard Conditions of Approval and Uniformly Applied Development Standards* established since the 2000 EIR, this SEIR updates or replaces some of the impact conclusions and mitigation measures in the 2000 EIR. In accordance with CEQA Guidelines Section 15163, the SEIR contains only the information necessary to make the 2000 EIR adequate for the Redevelopment Plan, as Amended.

Impacts

Updated Impact BIO-1: Development facilitated by the Redevelopment Plan, as Amended, could adversely affect, either directly or through habitat modifications, species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (Less than Significant)

Biological resources within the Existing Project Area were discussed in the 2000 EIR (Initial Study Checklist Items #13-14, 16 and Mandatory Finding "a"), and the impact was determined to be less than significant. As discussed in Section 4.3.1, above, since 2000, an approximately 145 foot-long segment of western branch of the Glen Echo Creek was daylighted (restored to natural and open) within the Existing Project Area. A review of the Kaiser Permanente Oakland Medical

Center Master Plan EIR (2007) shows the riparian vegetation within this segment of the creek is non-native and invasive though the newly introduced aquatic habitat was found to be suitable for the western pond turtle—a special status species under USFWS and CDFG. The project-level analysis in the EIR concluded the potential impact to aquatic habitat of the Glen Echo Creek to be fully mitigated by existing City SCA. This SEIR updates the impact statement in the 2000 EIR by incorporating the City’s SCAs and, thus, no further analysis is required. No other change to biological resources has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to wetland effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

As discussed in the Setting, there are several special-status animals that may potentially use habitat in the Amendment Area, including the peregrine falcon, Cooper’s hawk, red-shouldered hawk, red-tailed hawk, pallid bat, silver-haired bat, hoary bat, and big free-tailed bat. Other migratory birds, protected under the federal Migratory Bird Treaty Act and/or the California Fish and Game Code, Sections 3500-3516, may also use the Amendment Area. The Proposed Amendments may facilitate new building construction, site remediation, and infrastructure improvements including such items storm drainage improvements and installation of utilities, among others. Any of these activities could adversely impact special status species.

Tree removal, building demolition, and other construction activities can cause disturbance, noise, or loss of habitat for resident or migratory birds and mammals, including bats. The protective measures contained within SCA 44, *Tree Removal During Breeding Season*, would be applied to all vegetation (including trees and shrubs) capable of supporting breeding birds or bats in the Amendment Area. Additionally, SCA A, *Bird Collision Reduction*, reduces incidents of bird and bat collision as a result of new building development. Therefore, the protective measures contained within the SCAs that would be incorporated into all development under the Proposed Amendments would reduce potential impacts to less-than-significant levels.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant effects on candidate, sensitive or special status species identified in the 2000 EIR. Adherence to the SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential direct or indirect (through habitat modification) impact to candidate, sensitive, or special status species is substantially the same as identified in the 2000 EIR (Initial Study Checklist Item # 13, 14, 16 and Mandatory Finding “a”). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Updated Impact BIO-2: Development facilitated by the Redevelopment Plan, as Amended, would not have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means. (Less than Significant)

Wetland resources within the Existing Project Area were discussed in the 2000 EIR (Initial Study Items #16 and Mandatory Finding “a”), and the impact was determined to be less than significant. As discussed in Section 4.3.1, above, since 2000, an approximately 145 foot-long segment of western branch of the Glen Echo Creek was daylighted (restored to natural and open) within the Existing Project Area. A review of the Kaiser Permanente Oakland Medical Center Master Plan EIR (2007) shows the creek was considered a potentially jurisdictional wetland. The project-level analysis in the EIR concluded the potential impact to protected wetlands to be fully mitigated by existing City SCA. This SEIR serves to update the impact conclusions in the 2000 EIR by incorporating the City’s SCAs. No further analysis is required. No other change to biological resources has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to wetland effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Creeks that previously flowed through or in close proximity to the Amendment Area, including Derby Creek, and Temescal Creek have been either completely filled or culverted. No wetlands or other waters considered jurisdictional are present in the Amendment Area.

Development under the Proposed Amendments is not expected to increase stormwater runoff since work is only expected to take place on areas that are already fully developed. However, potential increases in transmittal of oil, diesel fuel, transmission fluids, and other toxic materials from construction activities via runoff from the impermeable surfaces of the site, could result in significant adverse impacts to wetlands and/or other waters within the Amendment Area.

Incorporation of the City’s SCAs relating to erosion control, stormwater management, and hazardous materials will address potential impacts to wetlands and jurisdictional waters within San Francisco Bay that could result from project construction and reduce these potential impacts to less-than-significant levels. SCA 55, *Erosion and Sedimentation Control Plan*, 35, *Hazards Best Management Practices*, 75, *Stormwater Pollution Prevention Plan*, and 80, *Post-construction Stormwater Management Plan*, are relevant and will minimize potential indirect impacts to water quality in Temescal Creek and any other stormwater drainages in the Amendment Area to less-than-significant levels. These SCAs are discussed in Section 4.5, *Geology, Soils and Geohazards*; Section 4.7, *Hazardous Materials*; and Section 4.8, *Hydrology and Water Quality*, of this SEIR.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant effects on protected wetlands identified in the 2000 EIR. Adherence to the SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact to protected wetlands are substantially the same as identified in the 2000 EIR (Initial Study Checklist Item # 16 and Mandatory Finding “a”). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Updated Impact BIO-3: Development facilitated by the Redevelopment Plan, as Amended, would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (Less than Significant)

Biological resources within the Existing Project Area were discussed in the 2000 EIR (Initial Study Checklist Item # 15 and Mandatory Finding “a”), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no change to biological resources, including the daylighting of a segment of Glen Echo Creek, has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing biological resources effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

No aquatic habitats or jurisdictional waters potentially supporting migratory fish or birds are present within the Amendment Area. Very little natural vegetation exists, none of which is connected to other nearby natural habitats to constitute a wildlife corridor. Landscape trees in the Amendment Area could be considered nursery sites for native nesting birds, but any potential impacts on nesting birds from the Proposed Amendments would be reduced to less-than-significant levels by SCA 44, *Tree Removal During Breeding Season*. Construction activities associated with the Proposed Amendments would not have any impacts on native wildlife nursery sites or wildlife corridors.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant effects on natural habitats identified in the 2000 EIR. Adherence to the SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact to native resident or migratory fish or wildlife species is substantially the same as identified in the 2000 EIR (Initial Study Checklist Item # 15 and Mandatory Finding “a”). New

SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

New Impact BIO-4: Development facilitated by the Redevelopment Plan, as Amended, could fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code Chapter 12.36) by removal of protected trees under certain circumstances. (Less than Significant)

Consistency with the City of Oakland Tree Protection Ordinance topic was not discussed in the 2000 EIR as it was not an established significance threshold at that time. As such, the discussion that follows focuses on the effects of the Redevelopment Plan, as Amended.

The Redevelopment Project Area, as Amended, contains numerous trees, some of which may qualify as protected under the City of Oakland Tree Protection Ordinance (Oakland Municipal Code, Title 12, Chapter 12.36). Redevelopment and other construction-related activities facilitated by the Redevelopment Plan, as Amended, may potentially impact protected trees through direct removal or through loss from adjacent construction.

SCA 46, *Tree Replacement Plantings*, requires replacement plantings for impacted protected trees. SCA 47, *Tree Protection during Construction*, provides for adequate protection, during construction, of any trees that are to remain standing. Both SCA 46 and SCA 47 would be incorporated into development facilitated by the Redevelopment Plan, as Amended, and would ensure the impact is less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* This impact was not identified, nor was this topic addressed, in the 2000 EIR; this significance criterion was not addressed in the previous document. The new criterion and new SCAs apply and update the 2000 EIR. No new significant environmental effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Cumulative Impacts

Updated Impact BIO-5: Construction activity and operations of development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects in and around the Amendment Area and the Project Area, as Amended, would not result in impacts on special-status species, wildlife movement corridors, wetlands, and other waters of the U.S. (Less than Significant)

Geographic Context

The cumulative geographic context for biological resources for the Redevelopment Plan, as Amended, consists of developed areas of North Oakland, Berkeley and Emeryville.

The development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended. As discussed in the *Approach to Analysis*, above, no change to biological resources, including the daylighting of a segment of Glen Echo Creek, has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing biological resources effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Impacts

The cumulative analysis considers the effect of Proposed Amendment development in combination with past, present, existing, approved, pending and reasonably foreseeable future projects in the Amendment Area (as described in Major Projects List in Appendix B to this Draft SEIR, and discussed in Section 4.09, *Cumulative Analysis*, at the beginning of Chapter 4 of this Draft SEIR). Past projects resulting in extensive urban development have already caused adverse cumulative effects on biological resources. The Amendment Area consists almost entirely of areas that have previously been developed, and no wetlands or other waters considered jurisdictional are present in the Amendment Area. Incorporation of the City's SCAs relating to erosion control, stormwater management, and hazardous materials (57, *Vibrations Adjacent to Historic Structures*; 35, *Hazards Best Management Practices*; 55, *Erosion and Sedimentation Control Plan*; 75, *Stormwater Pollution Prevention Plan*; and 80, *Post-construction Stormwater Management Plan*) would ensure indirect impacts to culverted sections of Temescal Creek or storm drainages are less than significant. Additionally, incorporation of the City of Oakland's SCA 44, *Tree Removal During Breeding Season*; 45, *Tree Removal Permit*; 46, *Tree Replacement Plantings*; 47, *Tree Protection during Construction*; A, *Bird Collision Reduction*; and 83, *Creek Protection Plan*, among other applicable requirements, would also ensure that potential impacts to special status resources are less than significant.

Environmental protection laws and regulations have been applied with increasing rigor since the early 1970s and include the CESA, FESA, and the CWA, as described in the *Regulatory Setting* earlier in this SEIR chapter. Developments facilitated by the Proposed Amendments, as well as other future projects within the cumulative geographic context of the Amendment Area, would be required to comply with local, state, and federal laws and policies and all applicable permitting

requirements of the regulatory and oversight agencies intended to address potential impacts on biological resources, including wetlands, other waters of the U.S., and special-status species. Additionally, new projects would be required to demonstrate that they would not have significant effects on these biological resources, although it is possible that some projects may be approved even though they would have significant, unavoidable impacts on biological resources.

Therefore, overall, considering development under the Proposed Amendments, with effects of past, present, pending and reasonably foreseeable future projects within the geographic context for this analysis, the cumulative effect on biological resources would be less than significant.

This analysis of the Redevelopment Plan, as Amended, in addition to other cumulative development, considers the effects described above for the Amendment Area, in combination with the less-than-significant impact regarding cumulative effects on biological resources identified in the 2000 EIR. Project-specific environmental review and design review of specific projects facilitated by the Redevelopment Plan, as Amended, would occur, and development would adhere to applicable SCAs to reduce potential effects. Therefore, the impact of cumulative effects on biological resources from development facilitated by the Redevelopment Plan, as Amended, would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential for a cumulative impact related to biological resources is substantially the same as identified in the 2000 EIR (Initial Study Checklist Mandatory Findings “a” and “c”). New criteria and SCAs apply and are consistent with and update the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

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4.4 Cultural Resources

This section analyzes how the development facilitated by the Redevelopment Plan, as Amended, may affect cultural resources. Specifically, the analysis identifies potential impacts that implementation of the development facilitated by the Proposed Amendments, and as appropriate, the development facilitated by the Existing Redevelopment Plan, may have on existing cultural resources and recommends, where necessary and feasible, mitigation measures to reduce and/or avoid potentially significant impacts to those resources. Appropriate City Standard Conditions of Approval (SCAs) are also listed. Pursuant to CEQA Guidelines regarding an SEIR, this section also discusses whether there are any changed circumstances, new information or environmental conditions relative to findings in the 2000 EIR that result in new significant impacts, and specifies any updates necessary to make the 2000 EIR adequately address the Redevelopment Plan, as Amended. Cultural resources discussed in this section of the SEIR include:

- Prehistoric or historic-era archaeological sites,
- Properties of cultural or historic significance, and
- Paleontological resources.

4.4.1 2000 EIR and Existing Project Area

Cultural resources were evaluated in the 2000 EIR (Initial Study Checklist Item # 31 and 32) and in the Land Use, Plans and Policies chapter of the 2000 EIR (Chapter 4.A). As stated in the 2000 EIR (page 4.A-17), consistent with the Oakland General Plan Historic Preservation Element (adopted March 1994, amended 1998, and discussed in greater detail in Section 4.4.3, Regulatory Setting, below), several buildings in or near the Broadway/MacArthur subarea are City-designated Oakland Landmarks, and/or are listed on the National Register of Historic Places, and/or currently have an “A” or “B” rating from OCHS, and/or are located within an Area of Primary Importance (API). The Broadway/MacArthur subarea also has several Areas of Secondary Importance that were not under consideration for CEQA purposes. Within the San Pablo subarea, the Oakland Free Library (Golden Gate Branch), located at 5606 San Pablo, was identified as an Oakland Landmark and on the National Register of Historic Places. Since 2000, within the Existing Project Area, the former Courthouse Athletic Club at 2935 Telegraph Avenue, a building that qualifies as a historic resource as defined by CEQA Section 15064.5, was demolished in association with development of the 2935 Telegraph Avenue Courthouse Condominiums Project.

The development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended. Changes that have occurred to the cultural resources setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

Because only new impacts regarding the Redevelopment Plan, as Amended, are associated with the Proposed Amendments and would not involve any new significant impacts with respect to the Existing Project Area, the remainder of this Cultural Resources Environmental Setting, Regulatory Setting and Impacts and Mitigation Measures analysis herein focuses primarily on the

Amendment Area and the additions/changes related to the Proposed Amendments, although part of the setting discussion pertains to the City of Oakland at-large.

4.4.2 Environmental Setting for the Amendment Area

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 1998; pp. 1-2 through 1-9), and is hereby incorporated by reference. The City Planning Department's Cultural Heritage Survey project has prepared extensive neighborhood histories, thematic context statements, and individual property and district documentation that can be consulted for further information. The following discussion includes a brief summary of the Amendment Area's history as adapted in part from the Historic Preservation Element.

Prehistoric Setting

The Amendment Area is located on the north side of Oakland, near the Emeryville and Berkeley borders. The area is now completely urbanized, although prehistorically, it was a biologically rich alluvial plain and estuarine environment between the East Bay Hills and San Francisco Bay. The natural marshland biotic communities along the edges of bays and channels were the principal source for subsistence and other activities during the prehistory of the San Francisco Bay region.

Many of the original surveys of archaeological sites in the Bay region were conducted between 1906 and 1908 by Stanford (and, later, UC Berkeley) archaeologist N.C. Nelson. Such surveys yielded the initial documentation of nearly 425 "earth mounds and shell heaps" along the littoral zone of the Bay (Nelson, 1909). From these beginnings, the most notable sites in the Bay region were excavated scientifically, like the Emeryville shellmound (CA-ALA-309), the Ellis Landing Site (CA-CCO-295) in Richmond, and the Fernandez Site (CA-CCO-259) in Rodeo Valley (Moratto, 1984). These dense midden¹ sites, such as CA-ALA-309, have been radiocarbon dated to be 2,310 ± 220 years old, but other evidence from around the Bay suggests that human occupation in the region began earlier, at least by around 5,000 B.C. (Davis & Treganza, 1959 as cited in Moratto, 1984). These very early sites, from the Paleoindian Period (c. 10,000 to 6,000 B.C.) and a subsequent unnamed period (c. 6,000 to 2,500 B.C.), are not well documented in the Bay Area, as they are believed to exist under alluvial deposits that have reshaped the bayshore since the end of the Pleistocene (Ragir 1972).

The Windmill Pattern (c. 2,500 B.C. to 1,500 B.C.) is characterized by relatively sparse, small sites situated on small knolls above seasonal floodplains on valley floors. The people inhabiting the Bay Area at this time may have migrated from outside California, taking advantage of the seasonal resources afforded by rivers and marshes (Moratto, 1984).

Beginning around 2,000 B.C., the bayshore and marsh-adapted peoples representing the so-called Berkeley Pattern appeared in the archaeological record. This pattern (c. 2,000 B.C. to A.D. 300)

¹ A midden is a mound of domestic refuse generally containing culturally darkened soils, shells and animal bones, as well as other indices of past human life and habitation. Middens mark the site of an indigenous settlement, and may contain human burials related to that settlement.

reflected a change in socioeconomic complexity and settlement patterns from earlier adaptations (Fredrickson, 1973). This artifact pattern was represented by minimally-shaped cobble mortars and pestles, dart and atlatl hunting technology, and a well-developed bone carving industry. Given the size of these settlements, it is probable that the populations were denser and more sedentary, yet continued to exploit a diverse resource base from woodland to grassland and marshland, to bayshore and riverine resources throughout the San Francisco Bay Area (Bickel, 1978; King, 1974 as cited in Moratto, 1984). Many of the Berkeley Pattern traits diffused throughout the region and spread to the interior areas of central California during this time period.

The late prehistoric period, appearing in the archaeological record as the Augustine Pattern (c. A.D. 1000 until European contact), shows substantial population growth, increased trade and social exchange networks, increased ceremonial activity, and more intensive use of acorns as a staple food in addition to fish, shellfish, and a wide variety of hunted animals and gathered plant resources. Technological changes are shown in the adoption of the bow and arrow for hunting, and use of bone awls for basketry manufacture. The people of this period were the ancestors of the groups encountered by the first Spanish explorers.

Ethnographic Setting

Prior to Euroamerican contact, the Ohlone (also known by their linguistic group, Costanoan²) occupied the area that is currently Alameda County. Politically, the Ohlone were organized into sovereign groups that held a defined territory and exercised control over the resources within that territory. Each group was also a unit of linguistic and ethnic differentiation. In 1770, Costanoan-speaking people lived in approximately 50 small, but separate and politically autonomous nations. Oakland and a large surrounding area of the East Bay are located within the territory of a people that spoke Chochenyo, one of eight recognized Costanoan languages. The number of Chochenyo speakers at the beginning of the Mission period was approximately 2,000, making it one of the more populous linguistic groups (Milliken, 1995). At that time, at least four villages of Chochenyo speakers were probably settled within the boundaries of modern Oakland, although the exact locations are now unknown.

The Ohlone economy was based on fishing, gathering, and hunting, with the land and waters providing a diversity of resources including acorns, various seeds, salmonids and other fish, deer, rabbits, insects, and quail. The acorn was a very important dietary staple of the Ohlone. Acorns from several varieties of oaks were ground in mortars to produce a meal that was then leached to remove the bitter tannins. The Ohlone crafted tule reed balsas (a type of raft) for transportation along rivers and through marshlands; ground-stone tools such as mortars and metates (a mortarlike flat bowl used for grinding grain); flaked-stone arrow points, knives, scrapers, and other tools; and artfully woven and twined basketry. Houses were conical and likely thatched with tule reeds (Levy, 1978).

² “Costanoan” is derived from the Spanish word *Costaños* meaning “coast people.” No native name of the Costanoan-speaking people as a whole existed in prehistoric times as the Costanoan language was shared between multiple ethnic groups and political entities. Most modern descendants of Costanoan-speaking peoples prefer to be known as Ohlone, a name derived from one of the tribal groups that occupied the San Gregorio watershed in San Mateo County.

During the Mission Period, 1770-1835, the Ohlone people experienced cataclysmic changes in almost all areas of their life, particularly a massive decline in population due to introduced diseases and a declining birth rate, resulting in large part from colonization by the Spanish missionaries (Milliken, 1995). Many Chochenyo speakers moved, either by choice or by force, from the Oakland area to Mission San Jose. Following the secularization of the missions by the Mexican government in the 1830s, most Ohlone gradually left the missions to work as manual laborers on the ranchos that were established in the surrounding areas. It is estimated that by the late 1800s, perhaps ten percent of the pre-contact Ohlone population remained (Kroeber, 1932). Today, descendants of these survivors live throughout the Bay Area, and have formed modern tribal groupings to revive and promote their traditional arts, languages, and other cultural elements.

Historic Setting

The Amendment Area is within the Rancho San Antonio land grant that was granted to Luis Maria Peralta on August 3, 1820 for his service to the Spanish government. The nearly 44,000-acre rancho (eventually divided between Peralta's four sons) included the present-day cities of Oakland, Piedmont, Berkeley, Alameda, Emeryville, Albany, and parts of San Leandro. Peralta's land grant was confirmed after Mexico's independence from Spain in 1822, and the title was honored when California entered the Union by the Treaty of Guadalupe Hidalgo in 1848. Despite the confirmation of his ownership, by the middle of the 19th century, squatters had moved in to occupy portions of Peralta's undeveloped land. The Gold Rush and California statehood brought miners, businessmen, lumbermen and other speculators to the area in search of opportunities. Early settlers of that period include Edson Adams, Andrew Moon, and Horace Carpentier, who squatted on 480 acres of Vicente Peralta's (one of Luis Peralta's sons) land. Adams, Moon, and Carpentier subsequently hired Julius Kellersberger, an Austrian-educated Swiss military engineer, to plot a new city – Oakland – which was incorporated in 1852.

The City originally encompassed the area roughly bordered by the Oakland Estuary on the south, Market Street on the west, 14th Street on the north, and the Lake Merritt Channel on the east. Broadway served as the main street. The majority of the early city dwellers, numbering under one hundred, lived near the foot of Broadway in proximity to the estuary. From there, city development moved north along the street car lines of Broadway and Telegraph Avenue towards the Oakland Hills and ultimately connecting with the separate towns that came to form East Oakland.

Ferry service to San Francisco was established in 1854. A telegraph line to Sacramento was strung in the early 1860s along the route that would become Telegraph Avenue, further connecting the community to the larger region. With the selection of Oakland as the western land terminus of the first transcontinental railroad, the city population more than tripled in the decade between 1870 and 1880. Commercial development continued up Broadway, and construction of houses rapidly expanded to keep up with the growing and increasingly diverse population of railroad workers, dock workers, laborers, business owners, and San Francisco commuters. Oakland was named the county seat of Alameda County in 1873.

Further north and to the west, the opening of a commuter branch of the Southern Pacific Railroad in 1878 along newly built Stanford Avenue stimulated development around the railroad's Golden Gate station at the intersection of Stanford Avenue and San Pablo Road (now San Pablo Avenue). Among the developers attracted to the area was Charles A. Klinkner, who began development of a town he dubbed Klinknerville. Several of Klinkner's distinctive Victorian houses can still be found along 59th Street east of San Pablo Avenue, in the Amendment Area. In 1890, the residents successfully petitioned to change the name of the Klinknerville post office to Golden Gate, which became the popular name of the surrounding community. This neighborhood and other portions of the Amendment Area were included in an 1897 annexation to the City of Oakland. By 1900, the population of the growing incorporated City reached 66,960.

The 1906 earthquake and subsequent fires that ravaged San Francisco generated further growth in Oakland for several decades, as the City absorbed refugees displaced by the disasters across the Bay. The first several years of the post-earthquake boom resulted in almost total development of the remaining unbuilt areas of North Oakland, as well as many other outlying portions of the City. Colonial Revival and Arts and Crafts-style houses sprung up in new neighborhoods. Civic improvements during this time included several major parks, fire stations, and civic buildings influenced by the "City Beautiful" movement. This design philosophy in architecture and urban planning promoted beautification and architectural grandeur in cities in order to foster moral and civic virtue, ideally resulting in a more harmonious social order and increased quality of life.

After the Great Depression of the 1930s, Oakland became a major shipbuilding center during World War II, encouraging a new wave of growth. The City's African-American population increased about fivefold as immigrants from southern states joined the ranks of shipyard workers. The census of 1945 shows the City's population at 405,301 residents. After the war ended and the shipyards closed, many of the City's residents found themselves unemployed, and the downtown and West Oakland areas began to experience an economic slide. This was exacerbated during the 1950s and 1960s with the proliferation of the automobile, construction of major freeways through the urban fabric, and the flight of wealthier (primarily White) residents to the outlying suburbs. The Loma Prieta earthquake of 1989 caused severe structural damage to City Hall and many other buildings in the downtown area; however, most well-constructed smaller residential and commercial structures (such as those in the Amendment Area) escaped serious damage.

Paleontological Setting

Paleontological resources are the fossilized remains of plants and animals, including vertebrates (animals with backbones), invertebrates (e.g., starfish, clams, ammonites, and marine coral), and fossils of microscopic plants and animals (microfossils). The age and abundance of fossils depend on the location, topographic setting, and particular geologic formation in which they are found. Fossil discoveries not only provide a historic record of past plant and animal life, but may assist geologists in dating rock formations. Often, fossil discoveries constrain the known time period and geographic range of flora or fauna.

On a regional scale, fossilized plants, animals and microorganisms are prevalent throughout the East Bay Area. Many of the hills in the East Bay are made up of sedimentary bedrock that is

known to contain a wide range of fossils, including radiolaria, mollusks, diatoms, foraminifera, and non-marine vertebrates. In addition, even geologically young fluvial deposits have been known to contain freshwater mollusks and extinct late-Pleistocene vertebrate fossils (Graymer, 2000).

The Amendment Area overlies geologic units that have low to moderate paleontological sensitivity. The ground surface in the Amendment Area consists of geologically recent deposits of mud and silt associated with the present-day estuary (Bay Mud). This Bay Mud overlies Merritt Sand, which is composed of Pleistocene-age deposits of wind-blown sand as much as 50 feet thick (Graymer, 2000). Generally, these types of geologic deposits do not preserve significant vertebrate fossils. While the Bay Mud may preserve a variety of recent marine invertebrate fossils (mollusks, clams, foraminifera, microorganisms, etc...), such fossils are likely to exist in other Bay Mud deposits all around the Bay Area and would not be considered significant or unique. Deeper deposits of older Quaternary Alluvium may underlie the Merritt Sands in portions of the Amendment Area; these formations would have the highest likelihood of containing significant fossil resources. Of note, a portion of the Existing Project Area addressed in the project-specific *Alta Bates Summit Medical Center, Summit Campus Seismic Upgrade and Master Plan EIR* (May 2010) was identified to overlay geologic units that can be considered to have high paleontological potential.

4.4.3 Regulatory Setting

National Historic Preservation Act, National Register of Historic Places, and National Historic Landmarks

The National Historic Preservation Act of 1966 as amended (NHPA) addresses those concerns pertinent to the effect of federal actions on cultural resources (16 USC § 470 *et seq.*). The NHPA sets forth the federal government's policy on historic preservation, including establishing the National Register of Historic Places (NRHP, National Register). The National Register is the nation's official list of districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

To be listed on the National Register, a property must be shown to be "significant" at the local, state, or national level under one or more of the following criteria (36 CFR 60.4). Eligible resources are those:

1. That are associated with events that have made a significant contribution to the broad patterns of our history (Criterion A - Event);
2. That are associated with the lives of persons significant in our past (Criterion B - Person);
3. That 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 (Criterion C - Design/Construction); or

4. That have yielded, or may be likely to yield, information important in prehistory or history (Criterion D - Information Potential).

The property must also possess historic “integrity.” Integrity is defined as “the ability of a property to convey its significance.” The National Register criteria recognize seven qualities that define integrity: location, design, setting, materials, workmanship, feeling, and association.

- “Location” refers to the place where the historic property was originally constructed or situated.
- “Design” is the combination of architectural elements that create the form, structure and style of the property.
- “Setting” is the physical environment surrounding a historic resource.
- “Materials” are the original physical components that were combined during a particular period in time and in a particular pattern to form the historic resource.
- “Workmanship” is the physical evidence of the building crafts and skills of a particular culture during a given period.
- “Feeling” is a property’s expression of the aesthetic or historic sense of a particular period of time.
- “Association” is the direct link between an important historic event or person and a cultural resource.

Special considerations apply to moved or reconstructed properties, cemeteries, religious or commemorative properties, and properties achieving significance within the past 50 years. As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to an Indian Tribe are eligible for inclusion in the National Register. The National Register eligibility criteria and considerations are used as a standard in other programs such as the California Register of Historic Resources and many local evaluation and designation systems, including Oakland’s.

Section 106 of the NHPA requires review by the Advisory Council on Historic Preservation and/or State Historic Preservation Officer (SHPO) of any federal actions (including federally funded grants or loans) that may adversely affect properties listed on, eligible for, or potentially eligible for the National Register. Listing is normally initiated by an application to the State Historical Resources Commission. Determinations of eligibility usually take place as part of federally related project reviews. Properties officially determined eligible for the National Register have the same protections and the same standing in environmental review as those properties that have already been listed; however, only listed properties may qualify for a 20 percent federal investment tax credit. Several properties within the Amendment Area have been recorded as appearing eligible for the National Register; however, there are no National Register-listed properties within the Amendment Area at the time of this writing.

National Historic Landmarks are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. National Historic Landmarks are given special protection by Section 110(f) of the NHPA. There are currently no National Historic Landmarks within the Amendment Area.

California Environmental Quality Act, California Register of Historical Resources, and California State Historical Landmarks

CEQA requires lead agencies in California to consider the effects of proposed actions on historic resources, defined as those resources meeting the criteria for listing on the California Register of Historic Resources (CRHR, California Register). This definition of “historic resources” includes buildings, structures, objects, sites, and districts determined to be eligible for or listed on the California Register, the National Register, or a local register of historic resources. A lead agency may also determine a resource to be significant for purposes of CEQA. Section 15064.5 of CEQA assigns special importance to human remains and specifies procedures to be followed when Native American remains are discovered.

The California Register is an authoritative guide to the state’s cultural resources, and provides the standards by which properties are considered significant for CEQA purposes. The California Register program encourages public recognition and protection of resources of architectural, historical, archaeological and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under CEQA. The California Register includes resources listed in or formally determined eligible for listing in the National Register; California State Landmarks; and California Points of Historical Interest. The State Office of Historic Preservation (OHP) maintains a list of historical resources by county in their Directory of Properties in the Historic Property Data File. A building or structure identified in OHP’s Directory with a rating of 1 or 2 (on or determined eligible for the National Register) is considered to be “listed” on the California Register. Although no properties within the Amendment Area are currently listed on the California Register, several individual properties and two districts have been evaluated as appearing potentially eligible for listing.

Properties of local significance that have been designated under a local preservation ordinance (e.g., local landmarks), or that have been identified in a local historical resources inventory may also be eligible for listing in the California Register and are presumed to be significant resources for purposes of CEQA.

In order for a resource to meet the criteria for listing in the California Register, it must satisfy all of the following three provisions:

1. It meets one or more of the following four criteria of significance (PRC 5024.1[c] and CEQA Guidelines 15064.5):
 - a. the resource “is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;”

- b. the resource “is associated with the lives of persons important in our past;”
 - c. the resource “embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;” or
 - d. the resource “has yielded, or may be likely to yield information important in prehistory or history” (this criterion applies primarily to archaeological sites).
2. The resource retains historic integrity; and
 3. It is fifty years old or older (except where it can be demonstrated that sufficient time has passed to understand the historical importance of the resource).

California Historical Landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. The specific standards now in use were first applied in the designation of Landmark #770. California Historical Landmarks #770 and above are automatically listed in the California Register. No California Historical Landmarks have been designated within the Amendment Area.

Local Plans and Policies

In the City of Oakland, a historical resource under CEQA is defined by the City’s *CEQA Thresholds/Criteria of Significance Guidelines* as a resource that meets any of the following criteria:

1. A resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources;
2. A resource included in Oakland’s Local Register of Historical Resources (defined below), unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
3. A resource identified as significant (e.g., rated 1–5) in a historical resource survey recorded on Department of Parks and Recreation Form (DPR) 523, unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
4. Any object, building, structure, site, area, place, record, or manuscript which the Oakland City Council determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered “historically significant” if it meets the criteria for listing on the California Register of Historical Resources CEQA Guidelines section 15064.5; or
5. A resource that is determined by the City Council to be historically or culturally significant even though it does not meet the other four criteria listed here.

City of Oakland General Plan Historic Preservation Element

In March 1994, the Oakland City Council adopted a Historic Preservation Element (HPE) of the General Plan (amended July 21, 1998), which sets forth goals, objectives, policies, and actions for historic preservation in the City. The HPE creates a wide-reaching, multifaceted “Historic Preservation Strategy” that addresses a wide variety of properties and is intended to help revitalize Oakland’s districts and neighborhoods. Guiding the HPE are the two broad, ambitious goals at its core:

Goal 1: To use historic preservation to foster the economic vitality and quality of life in Oakland by:

- (1) Stressing the positive community attributes expressed by well-maintained older properties;
- (2) Maintaining and enhancing throughout the City the historic character, distinct charm, and special sense of place provided by older properties;
- (3) Establishing and retaining positive continuity with the past thereby promoting pride, a sense of stability and progress, and positive feelings for the future;
- (4) Stabilizing neighborhoods, enhancing property values, conserving housing stock, increasing public and private economic and financial benefits, and promoting tourist trade and interest through preservation and quality maintenance of significant older properties;
- (5) Preserving and encouraging a city of varied architectural styles and environmental character reflecting the distinct phases of Oakland’s cultural, social, ethnic, economic, political, and architectural history; and
- (6) Enriching the quality of human life in its educational, spiritual, social, and cultural dimensions through continued exposure to tangible reminders of the past.

Goal 2: To preserve, protect, enhance, perpetuate, use, and prevent the unnecessary destruction or impairment of properties or physical features of special character or special historic, cultural, educational, architectural or aesthetic interest or value.

The chapters of the HPE address identification, designation, preservation in ongoing city activities, and education and information. The HPE sets out a graduated system of ratings and designations based on the Oakland Cultural Heritage Survey (OCHS) information and implemented in the Oakland Planning Code. Incentives and regulations for historic properties are similarly graduated based on the relative importance of the property.

Oakland Cultural Heritage Survey

The Oakland Cultural Heritage Survey is the City Planning Department’s comprehensive city-wide inventory of historic buildings and districts. Since 1979, the OCHS has created and maintained an inventory of historic resources throughout the City, providing a basis for many of the policies in the HPE. Every property in Oakland has at least a preliminary rating and estimated construction date from Reconnaissance Surveys conducted in 1985-1986 and 1996-1997. These preliminary surveys are intended to be confirmed or modified over time by the OCHS Intensive Surveys. Inclusion of a property in the Survey has no direct regulatory effect; however, the

ratings provide guidance to city staff and property owners in design review, code compliance, and similar ongoing city activities. The intensive survey formal evaluation is based on the following criteria:

1. Visual Quality/Design: Evaluation of exterior design, interior design, materials and construction, style or type, supporting elements, feelings of association, and importance of designer.
2. History/Association: Association of person or organization, the importance of any event, association with patterns of history, and the age of the building.
3. Context: Continuity and familiarity of the building within the city, neighborhood, or district.
4. Integrity and Reversibility: Evaluation of the building's condition, its exterior and interior alterations, and any structural removals.

Survey ratings describe both the individual building and its neighborhood context. The OCHS rates individual properties using a five-tier rating system:

- A. Highest importance: Of exceptional historical or architectural value, outstanding example, clearly eligible for the National Register. Approximately 160 citywide. None recognized within the Amendment Area.
 - B. Major importance: Major historical or architectural value, fine example, probably eligible for the National Register. More than 600 citywide, including four in the Amendment Area.
 - C. Secondary importance: Superior or visually important example, very early, or otherwise noteworthy; these properties “warrant limited recognition” but generally do not appear individually eligible for the National Register (although they may contribute to a district). Approximately 10,050 citywide, with approximately 125 located in the Amendment Area.
 - D. Minor importance: Typical or representative example of a type, style, convention, or historical pattern. More than 25,000 citywide, approximately 190 of which are in the Amendment Area. Many “D” and lower-rated properties are Potential Designated Historic Properties (PDHPs), either because they have higher contingency ratings or because they contribute or potentially contribute to a district.
 - E. Of no particular interest: not representative of any important pattern and visually undistinguished.
- * or F. Not rated: Recent or totally modernized. Some of these also have higher contingency ratings.

This letter rating is termed the Individual Property Rating of a building. Properties with conditions or circumstances that could change substantially in the future are assigned both an “existing” and a “contingency” rating. The existing rating (UPPER CASE letter) describes the property under its present condition, while the contingency rating (lower case letter, if any), describes it under possible future circumstances, e.g., when older, with new information, or if restored.

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 (API: areas that appear eligible for the National Register) are rated “1,” those located in an Area of Secondary Importance (ASI: likely not eligible for the National Register) are rated “2,” and those outside an identified district are rated “3.” A plus (+), minus (-), or asterisk (*) symbol indicates respectively whether the property contributes to the API or ASI, does not contribute, or potentially contributes.

APIs are historically or visually cohesive areas or property groupings that usually contain a high proportion of individual properties with ratings of “C” or higher and appear eligible for the National Register, 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. APIs and their contributors are included on the Local Register.

ASIs are similar to APIs; however, remodeled 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, usually because they are less intact or less unique than APIs. The Amendment Area contains seven identified ASIs with approximately 187 buildings – two large residential districts and five small three- to seven-building groups.

Designated Historic Properties

The Oakland Planning Code currently provides for five types of historic property designations: landmarks, S-7 and S-20 preservation combining zones (historic districts), preservation study list, and heritage properties. It also establishes the Landmarks Preservation Advisory Board (Landmarks Board) to oversee these properties.

Oakland Landmarks (Section 17.07.030(p) of the Planning Code). Properties designated as Oakland Landmarks are those having “special character or special historical, cultural, educational, architectural, aesthetic or environmental interest or value.” This definition is more specifically interpreted in the Landmark Board’s “Guidelines for Determination of Landmark Eligibility” (City of Oakland, 1994). Designation is through a three-step application process requiring public hearings and approval by the Landmarks Board, Planning Commission, and City Council. Landmarks are protected by Landmarks Board review of exterior alterations, and demolition of landmarks can be delayed by up to 240 days.

There are currently more than 140 Oakland Landmarks, none of which is within the Amendment Area.

S-7 and S-20 Preservation Combining Zone (Sections 17.84 and 17.100B of the Planning Code). The S-7 and S-20 Preservation Combining Zones are the City’s historic preservation zoning districts. 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.” The S-20 zone is similar to the S-7 preservation combining zone, but is designed for larger areas, often with a large number of

residential properties that may not be individually eligible for landmark designation but which as a whole constitute a historic district. There are currently nine S-7 and S-20 preservation districts containing approximately 1,500 individual properties citywide. No properties in the Amendment Area are zoned with the S-7 or S-20 combining zone designations though there are two identified large residential districts, Golden Gate and 54th-Gaskill, that could be candidates for S-20 designation.

Preservation Study List and Heritage Properties (Section 17.102.060 of the Planning Code).

The Preservation Study List, used in the first three decades of the Landmarks Board's existence, was defined as "a list of facilities under serious study for possible landmark designation or for other appropriate preservation action." The Landmarks Board, the Planning Commission, or the Planning Director could add properties to the list while it was active. There are approximately 360 properties on the Study List, including four on 59th Street in the Amendment Area. A new Landmarks Board designation called Heritage Property is defined in the Historic Preservation Element of the General Plan as "properties which definitively warrant preservation but which are not Landmarks or Preservation Districts." Properties are eligible for nomination if they have at least an existing or contingency "C" (secondary) rating or could contribute to a preservation district. Heritage Property can be considered a less exclusive form of Landmark designation, and is often used when property owners are entering into Mills Act contracts. There is currently one Heritage Property at 1081 53rd Street in the Amendment Area.

Policy 2.5 of the HPE creates the Heritage Property designation described above. This designation is available to any properties with an OCHS Intensive Survey rating of "A," "B," or "C" (or an "A" or "B" rating from a Reconnaissance Survey), or which contribute to any area meeting the Preservation District eligibility guidelines. The Planning Director can postpone demolition of a Study List/Heritage Property for up to 120 days, during which time Landmark or other preservation district designations may occur or other means to preserve the property are investigated.

Potential Designated Historic Properties - PDHPs

Under Policy 1.2 of the HPE, Potential Designated Historic Properties (PDHPs) are any properties that have an OCHS rating of at least a contingency "C," or that contribute or potentially contribute to a primary or secondary district. These properties "warrant consideration for possible preservation." PDHPs are a large group - approximately one-fifth to one-quarter of all buildings in Oakland. They are intended to be numerous enough to "significantly influence the City's character." The inclusion of contingency-rated properties as PDHPs is intended to highlight their value as restoration opportunities. District contributors or potential contributors are classified as PDHPs to promote preservation of Oakland's distinctive neighborhoods. More than 350 PDHPs are located within the Amendment Area.

While most PDHPs do not appear obviously eligible for the National or California Registers and therefore (in the absence of Heritage Property designation or some other formal action) do not meet the CEQA definition of "historic resources," they are recognized and protected under the HPE for

their contribution to the Oakland environment. Chapter 5 of the HPE contains policies and actions for the protection and enhancement of PDHPs.

Local Register of Historical Resources

The HPE provides the following definition of the City of Oakland's Local Register of Historical Resources (Local Register), or properties considered significant for purposes of environmental review under CEQA:

1. All Designated Historic Properties (DHPs - Landmarks, Heritage Properties, Study List Properties, Preservation Districts, and S-7 and S-20 Preservation Combining Zone Properties); and
2. Those Potential Designated Historic Properties (PDHPs) that have an existing rating of "A" or "B," or are located within an Area of Primary Importance (API). An API is a district that appears eligible for the National Register.

This is the minimum set of historic properties that must be given consideration during CEQA environmental review. Policy 3.8 of the HPE defines a "significant adverse effect" to Local Register properties. There are approximately 3,000 Local Register properties citywide, including eight in the Amendment Area. These properties are listed in Section 4.4.4, *Study Results*, below. The Amendment Area also includes at least 10 properties with contingency B ratings.

General Plan Policies

Policies in the General Plan provide the basis for preservation, restoration, and protection of historic properties and other cultural resources. Development facilitated by the Proposed Amendments has potential for adverse or beneficial effects on historic properties. Policies and actions in the HPE provide guidance toward minimizing adverse effects. Redevelopment activities also have the potential to assist in implementation of beneficial HPE actions.

As an implementation tool of the General Plan and all its Elements, the Redevelopment Plan, as Amended, is intended to be fully consistent with General Plan policies. Objectives and policies found in the HPE that are particularly relevant to the Redevelopment Plan, as Amended, are summarized below. Some of the actions related to these policies have already been completed, while some are ongoing.

Objective 1: Identifying Properties Potentially Warranting Preservation. Policies and actions related to this Objective describe the OCHS rating system, inventory goals and guidelines, and define the various types of Designated Historic Properties as well as PDHPs.

Objective 2: Preservation Incentives and Regulations for Designated Historic Properties. This objective directs the City to develop a system of preservation incentives and regulations for specially designated significant older properties which (i) enhances economic feasibility for preservation; (ii) provides a predictable and appropriate level of protection, based on each property's importance; (iii) reasonably balances preservation with other concerns; and (iv) operates efficiently, avoiding unnecessary regulatory procedures and review periods.

- *Policy 2.1:* The City will use a combination of incentives and regulations to encourage 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 2.1 is a general policy which is expressed more specifically in this chapter's other policies and their related actions.
- *Policy 2.6:* This policy recommends Preservation Incentives for Landmarks and Preservation District properties, including several financial incentives (e.g., Mills Act contracts, conservation easements, development assistance from historic preservation grants or historical rehabilitation bonds, fee waivers or reductions for City permits), use of the State Historical Building Code to provide more flexible construction standards, a broader range of permitted or conditionally permitted uses, and transferable development rights. Heritage Properties and compatible new development on vacant noncontributing parcels of a Preservation District are eligible for some of the same incentives.

Objective 3: Historic Preservation and Ongoing City Activities. This objective seeks to establish administrative procedures and criteria to promote preservation of significant older properties as a routine part of City-sponsored or assisted projects, programs and regulatory activities.

- *Policy 3.1:* Avoid or minimize adverse historic preservation impacts related to discretionary City actions. Policy 3.1 states that the City will make all reasonable efforts to avoid or minimize adverse effects on the Character-Defining Elements of existing or Potential Designated Historic Properties which could result from private or public projects requiring discretionary City actions. Policy 3.1 is a general policy which is expressed more specifically in this Chapter's other policies and their related actions.
- *Policy 3.2:* To the extent consistent with other Oakland General Plan objectives, the City will ensure that all City-owned or controlled properties will, in fact, be preserved. All City-owned or controlled properties which may be eligible for Landmark or Heritage Property designation or as contributors to a Preservation District will be considered for such a designation. Related actions set out the steps for designation (3.2.1) and recommend a formal historic preservation management procedure for City-owned properties (3.2.2).
- *Policy 3.3:* To the extent consistent with other General Plan goals, policies and objectives, as a condition for providing financial assistance to projects involving existing or Potential Designated Historic Properties, the City will require that complete application be made for such properties to receive the highest local designation for which they are eligible prior to issuance of a building permit for the project, or a transfer of title (for City-owned or controlled properties), whichever comes first.
- *Policy 3.4:* City Acquisition for Historic Preservation Where Necessary. Policy 3.4 states that, 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, as conservation easements, or a combination thereof. This policy proposes limited acquisition powers for extremely important properties in dire situations. Related actions direct the City to develop procedures and criteria for City acquisition of historic properties, including acquisition by eminent domain.

- *Policy 3.5:* Historic Preservation and Discretionary Permit Approvals. This policy establishes design review findings for alterations and demolitions of Heritage Properties and PDHPs. This policy applies to both publicly and privately sponsored projects. Related actions include the development of appropriate design guidelines and standard conditions of approval for such projects.
- *Policy 3.6:* Historic Preservation and City-Sponsored or Assisted Projects. This policy recommends that City-sponsored or assisted projects involving an existing or Potential Designated Historic Property “be selected and designed to avoid adverse effects...and to promote preservation and enhancement.” The Secretary of the Interior’s Standards for the Treatment of Historic Properties are used as one criterion for avoiding adverse effects. This policy extends the protections applied to federally related projects under Section 106 of the NHPA to “non-Federally funded City projects and to City projects that involve existing or Potential Designated Historic Properties that are not on or eligible for the National Register.” Related actions direct the City to develop or modify evaluation and selection procedures that appropriately balance historic preservation with other priorities.
- *Policy 3.7:* As a condition of approval for all discretionary projects involving demolition of existing or Potential Designated Historic Properties, the City will normally require that reasonable efforts be made to relocate the properties to an acceptable site. Actions associated with this policy include preparation of relocation procedures and design guidelines, investigation of assistance programs, and review of permit regulations for both City-sponsored or assisted projects and discretionary permit approvals.
- *Policy 3.8:* Definition of “Local Register of Historic Resources” and historic preservation “Significant Effects” for environmental review purposes. This policy defines the minimum set of historical resources that require consideration in environmental review and declares that complete demolition of a historic resource cannot normally be mitigated to a level of insignificance.

Measures appropriate to mitigate significant effects to a Historical Resource may include one or more of the following measures depending on the extent of the proposed addition or alterations:

- 1) Modification of the project design to avoid adversely affecting the character defining elements of the property.
- 2) Relocation of the affected Historical Resource to a location consistent with its historical or architectural character.

If the above measures are not feasible, then other measures may be considered including, but not limited to the following:

- 3) Modification of the project design to include restoration of the remaining historic character of the property.
- 4) Modification of the project design to incorporate or replicate elements of the building's original architectural design.
- 5) Salvage and preservation of significant features and materials of the structure in a local museum or within the new project.

- 6) Measures to protect the Historical Resource from effects of on-site or other construction activities.
 - 7) Documentation in a Historic American Buildings Survey report or other appropriate format: photographs, oral history, video, etc.
 - 8) Placement of a plaque, commemorative, marker, or artistic or interpretive display on the site providing information on the historical significance of the resource.
 - 9) Contribution to a Facade Improvement Fund, the Historic Preservation Revolving Loan Fund, the Oakland Cultural Heritage Survey, or other program appropriate to the character of the resource.
- Policy 3.9: Consistency of zoning with existing or eligible preservation districts. This policy recommends including a historic preservation component in areawide and specific plans.
 - Policy 3.10: Historic preservation in response to earthquakes, fires or other emergencies.
 - Policy 3.11: Historic preservation and seismic retrofit and other building safety programs. Policies 3.10 and 3.11 direct that retrofit and repair be carried out in a manner that minimizes adverse effects on character-defining elements.
 - Policy 3.12: Historic preservation and substandard or public nuisance properties. This policy states that, before requiring vacation or demolition, the City will take all reasonable actions to repair or rehabilitate existing or Potential Designated Historic Properties which have been determined to be substandard or public nuisances under the Oakland Dangerous Buildings Code, the Oakland Housing Code, the Blight Ordinance, the Earthquake Repair Ordinance, or any other City code or ordinance. In cases where such properties are already vacant or an immediate hazard, such repair or rehabilitation will occur expeditiously to prevent future deterioration or to abate the immediate hazard.
 - Policy 3.13: Security of vacant properties. Policies 3.12 and 3.13 recommend an extensive program for dealing with substandard and nuisance properties, including repair rather than demolition, earlier intervention, repair with liens, property acquisition and transfer, financial assistance, and improved security of vacant properties.
 - Policy 3.14: Promotes commercial revitalization programs and California Main Street projects with a specific focus on preserving and enhancing designated and potential designated historic commercial properties and districts.

Objective 4: Archaeological Resources. This objective seeks to develop databases identifying existing and potential archaeological sites and adopt procedures for protecting significant archaeological resources. Related policies and actions describe the measures the City will take to protect significant archaeological resources during ground-disturbing activities associated with discretionary projects.

Objective 5: Information and Education. This objective seeks to provide and encourage informational and educational programs to enhance public and City staff appreciation of older properties and increase the level of technical knowledge. Associated policies and

actions promote research and information dissemination programs; public recognition of historic properties and preservation efforts through plaques, certificates, walking tours and guidebooks; City-sponsored design assistance, rehabilitation training and apprenticeship programs, rehabilitation publications, and a preservation-related design and construction bookstore; public school curricula emphasizing Oakland's history and architectural heritage; and improved City records management.

City of Oakland Planning Code

In addition to providing definitions of the four types of Designated Historic Properties, the Planning Code contains specific regulations for projects meeting certain criteria.

17.136.060 Review by Landmarks Board in Certain Cases. This regulation states that whenever an application is for regular design review in the S-7 zone, or on a designated Landmark site, the Director of City Planning shall refer the proposal to the Landmarks Board for its recommendations. Referral to the Landmarks Board may be appropriate, at the discretion of the Director of City Planning, for projects involving regular design review in the S-20 zone, or when a proposed addition or alteration will have a significant effect on the property's character-defining elements that are visible from a street or other public area.

17.136.070 Special Regulations for Designated Landmarks. This chapter includes regulations specific to the designation and preservation of Landmarks, including requirements that alterations and new construction may not adversely affect the exterior features of the Landmark, or the special character, interest, or value of the landmark or its setting. All projects involving Landmarks should conform, if possible, with the Design Guidelines for Landmarks and Preservation Districts as adopted by the City Planning Commission and/or the Secretary of the Interior's Standards for the Treatment of Historic Properties. The Director of the City Planning Commission is given the authority to decide whether or not project proposals conform to these regulations. The regulations also stipulate that the owner, lessee, or other person in actual charge of a designated Landmark has a duty to maintain the property and keep it in good condition.

17.136.075 Regulations for Demolition or Removal of Designated Historic Properties and Potentially Designated Historic Properties. This chapter codifies regulations for approval of demolition or removal permits. With the exception of structures declared to be a public nuisance by the Building Official or City Council, Regular Design Review of the demolition or removal of a Designated Historic Property or PDHP shall only be approved after the Regular Design Review of a replacement project at the subject site has been approved; however, demolition of nuisance structures must still undergo Regular Design Review for demolition. Regular Design Review approval for the demolition or removal of any Local Register property that is not in an S-7 or S-20 zone or API may be granted only if the proposal conforms to the general design review criteria, all other applicable design review criteria, and additional criteria set forth in the chapter. Approval of a demolition or removal permit for a contributing property in an S-7 or S-20 zone or an API is subject to similar criteria, while permit approval criteria for noncontributing Preservation District properties and PDHPs are less restrictive. The Director of City Planning may postpone issuance of a demolition permit for up to 120 days (from the date of permit application) following Design Review approval.

Different findings are required for the demolition of three categories of historic structures:

- *Category I* includes any Landmark; Heritage Property; property rated “A” or “B” by the Oakland Cultural Heritage Survey; or Preservation Study List Property. This category excludes any property that falls into Category II.
- *Category II* includes properties in an S-7 or S-20 zone or an Area of Primary Importance. Any buildings, including those that do not contribute to the historic quality of the district, fall into this category.
- *Category III* includes properties rated “C” by the OCHS or contributors to an Area of Secondary Importance. This category excludes any property that falls into Category II.

The findings in their entirety are included in Appendix E to this Draft SEIR document. As stated in the Planning Code, all demolition findings must be prepared by an independent third party consultant or be peer-reviewed.

Although not specifically stated as such in the Planning Code or other local regulations, historic signage on private property is subject to protection because any building improvements (including signage changes) are required to go through a Planning process that includes OCHS review where appropriate.

City of Oakland Municipal Code Article III – Green Building Compliance Standards (Section 18.02.100). This regulation requires all buildings or projects to comply with the requirements of the California Building Energy Efficiency Standards (Title 24, Part 6) of the California Building Code. This regulation requires any new construction projects resulting in removal of a historic resource, one- and two-family additions and alterations of historic resources that exceed 1,000 square feet of floor area, multi-family additions and alterations of historic resources, non-residential additions and alterations of historic resources between 5,000 and 25,000 square feet of floor area, non-residential additions and alterations of a historic resource over 25,000 square feet of floor area, or non-residential additions and alterations not meeting the Major Alteration definition and over 25,000 square feet of floor area, are required to consult with a Historic Preservation Planner, seek LEED and Green Building certification, in addition to other specific requirements.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The City’s SCAs relevant to the cultural resources are listed below. All applicable SCAs for cultural resources would be adopted as conditions of approval for projects facilitated by the Redevelopment Plan, as Amended, to reduce significant cultural resources impacts. The SCA’s are incorporated and required as part of development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures.

Where there are impacts associated with development facilitated by the Redevelopment Plan, as Amended, that would result in significant environmental impacts despite implementation of the SCA, additional mitigation measures are recommended.

The City's SCAs relevant to cultural resources impacts are shown below.

- **SCA 52: Archaeological Resources**

Ongoing throughout demolition, grading, and/or construction

- a. Pursuant to CEQA Guidelines section 15064.5 (f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted. Therefore, in the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant and/or lead agency shall consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified archaeologist would meet to determine the appropriate avoidance measures or other appropriate measure, with the ultimate determination to be made by the City of Oakland. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.
- b. In considering any suggested measure proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the project applicant shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while measure for historical resources or unique archaeological resources is carried out.
- c. Should an archaeological artifact or feature be discovered on-site during project construction, all activities within a 50-foot radius of the find would be halted until the findings can be fully investigated by a qualified archaeologist to evaluate the find and assess the significance of the find according to the CEQA definition of a historical or unique archaeological resource. If the deposit is determined to be significant, the project applicant and the qualified archaeologist shall meet to determine the appropriate avoidance measures or other appropriate measure, subject to approval by the City of Oakland, which shall assure implementation of appropriate measures recommended by the archaeologist. Should archaeologically-significant materials be recovered, the qualified archaeologist shall recommend appropriate analysis and treatment, and shall prepare a report on the findings for submittal to the Northwest Information Center.

- **Archaeological Resources – Sensitive Areas**

Prior to issuance of a demolition, grading or building permit, whichever comes first. The project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision D (Construction ALERT Sheet). However, if in either case a high potential presence of historic-period archaeological resources on the project site is indicated, or a potential resource is discovered, the project applicant shall also implement all of the following provisions:

- a) Provision B (Construction-Period Monitoring),
- b) Provision C (Avoidance and/or Find Recovery), and
- c) Provision D (to establish a Construction ALERT Sheet if the Intensive Pre-Construction Study was originally implemented per Provision A, or to update and

provide more specificity to the initial Construction ALERT Sheet if a Construction Alert Sheet was originally implemented per Provision D).

Provision A through Provision D are detailed as follows:

Provision A: *Intensive Pre-Construction Study* – The project applicant, upon approval from the City Planning and Zoning Division, may choose to complete a site-specific, intensive archaeological resources study prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. If that approach is selected, the study shall be conducted by a qualified archaeologist approved by the City Planning and Zoning Division. If prepared, at a minimum, the study shall include:

- An intensive cultural resources study of the project site, including subsurface presence/absence studies, of the project site. Field studies conducted by the approved archaeologist(s) may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources;
- A report disseminating the results of this research;
- Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources.

If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction (see Provision B, Construction-Period Monitoring, below), implement avoidance and/or find recovery measures (see Provision C, Avoidance and/or Find Recovery, below), and prepare an ALERT Sheet that details what could potentially be found at the project site (see Provision D, Construction ALERT Sheet, below).

Provision B: *Construction-Period Monitoring* – Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT Sheet, require per Provision D, Construction ALERT Sheet, below) and the procedures to follow if any are encountered, field recording and sampling in accordance with the Secretary of Interior’s *Standards and Guidelines for Archaeological Documentation*, notifying the appropriate officials if human remains or cultural resources are discovered, or preparing a report to document negative findings after construction is completed. If a significant archaeological resource is discovered during the monitoring activities, adherence to Provision C, Avoidance and/or Find Recovery, discussed below), would be required to reduce the impact to less than significant. The project applicant shall hire a qualified archaeologist to monitor all ground-disturbing activities on the project site throughout construction.

Provision C: *Avoidance and/or Find Recovery* – If a significant archaeological resource is present that could be adversely impacted by the proposed project, the project applicant of the specific project site shall either:

- Stop work and redesign the proposed project to avoid any adverse impacts on significant archaeological resource(s); or,

- If avoidance is determined infeasible by the City, design and implement an Archaeological Research Design and Treatment Plan (ARDTP). The project applicant shall hire a qualified archaeologist who shall prepare a draft ARDTP that shall be submitted to the City Planning and Zoning Division for review and approval. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical. The project applicant shall implement the ARDTP. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant.

Provision D: Construction ALERT Sheet – The project applicant, upon approval from the City Planning and Zoning Division, may choose to prepare a construction ALERT sheet prior to soil-disturbing activities occurring on the project site, instead of conducting site-specific, intensive archaeological resources pursuant to Provision A, above. The project applicant shall submit for review and approval by the City prior to subsurface construction activity an “ALERT” sheet prepared by a qualified archaeologist with visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project’s prime contractor; any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving); and/or utilities firm involved in soil-disturbing activities within the project site.

The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, that in the event of discovery of the following cultural materials, all work must be stopped in the area and the City’s Environmental Review Officer contacted to evaluate the find: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones.

Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel.

If the project applicant chooses to implement Provision D, Construction ALERT Sheet, and a potential resource is discovered on the project site during ground disturbing activities during construction, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction (see Provision B, Construction-Period Monitoring, above), implement avoidance and/or find recovery

measures (see Provision C, Avoidance and/or Find Recovery, above), and prepare an updated ALERT Sheet that addresses the potential resource(s) and other possible resources based on the discovered find found on the project site.

- **SCA 53: Human Remains**

Ongoing throughout demolition, grading, and/or construction. In the event that human skeletal remains are uncovered at the project site during construction or ground-breaking activities, all work shall immediately halt and the Alameda County Coroner shall be contacted to evaluate the remains, and following the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.

- **SCA 54: Paleontological Resources**

Ongoing throughout demolition, grading, and/or construction. In the event of an unanticipated discovery of a paleontological resource during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (per Society of Vertebrate Paleontology standards [SVP 1995,1996]). The qualified paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the City determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important, and such plan shall be implemented. The plan shall be submitted to the City for review and approval.

- **SCA 56: Compliance with Policy 3.7 of the Historic Preservation Element (Property Relocation Rather than Demolition)**

Prior to issuance of a demolition permit. The project applicant shall make a good faith effort to relocate the affected building(s) to a site acceptable to the Planning and Zoning Division and the OCHS. Good faith efforts include, at a minimum, the following:

- a. Advertising the availability of the building by: (1) posting of large visible signs (such as banners, at a minimum of 3' x 6' size or larger) at the site; (2) placement of advertisements in Bay Area news media acceptable to the City; and (3) contacting neighborhood associations and for-profit and not-for-profit housing and preservation organizations;
- b. Maintaining a log of all the good faith efforts and submitting that along with photos of the subject building showing the large signs (banners) to the Planning and Zoning Division;
- c. Maintaining the signs and advertising in place for a minimum of 90 days; and

- d. Making the building available at no or nominal cost (the amount to be reviewed by the Landmarks Preservation Advisory Board) until removal is necessary for construction of a replacement project, but in no case for less than a period of 90 days after such advertisement.
- **SCA 57: Vibrations Adjacent to Historic Structures**

Prior to issuance of a demolition, grading or building permit. The project applicant shall retain a structural engineer or other appropriate professional to determine threshold levels of vibration and cracking that could damage the affected historic building(s) and design means and methods of construction that shall be utilized to not exceed the thresholds.

4.4.4 Study Results

Archaeological Resources

A records search was conducted by ESA cultural resources staff at the Northwest Information Center (NWIC) at Sonoma State University in Rohnert Park, California on April 25, 2011 (File No. 10-1056). The records were accessed by utilizing the Oakland West, California, U.S. Geological Survey 7.5-minute quadrangle base maps. The records search, which encompassed the Amendment Area and a radius of 0.5 miles, was conducted to: (1) determine whether known cultural resources had been recorded within or adjacent to the Amendment Area; (2) assess the likelihood of unrecorded cultural resources based on historical references and the distribution of nearby sites; and (3) develop a context for the identification and preliminary evaluation of cultural resources.

During the records search, the following sources were reviewed: the *Historic Properties Directory Listing* (OHP, 2010), *California Inventory of Historical Resources* (OHP, 1976), *California Historical Landmarks* (OHP, 1990), *California Points of Historical Interest* (OHP, 1992). The Historic Properties Directory includes listings of the National Register and the California Register, California Historical Landmarks and California Points of Historical Interest, and properties recorded in project reviews and historic resources surveys.

The records search at the NWIC revealed that five recorded prehistoric archaeological resources are located within 0.5 miles of the Amendment Area. None of the identified resources is within the Amendment Area (**Table 4.4-1**). Four of the five resources (CA-ALA-309, -311, -312, and -313) were originally recorded by N.C. Nelson during his 1906 survey of San Francisco Bay Area shellmounds, and represent separate use areas of what is actually a large prehistoric complex popularly known as the Emeryville Shell Mound. The fifth resource identified through the records search (P-01-10795) is an undated, poorly known prehistoric burial along the route of what was once Derby Creek. While development may have partially disturbed and obscured these resources, intact portions of these sites and others may still exist below the ground surface. Archaeological survey coverage of the Amendment Area has been limited, with only two reported investigations covering less than five percent of the ground surface within the Amendment Area.

**TABLE 4.4-1
 ARCHAEOLOGICAL RESOURCES IN THE VICINITY OF THE AMENDMENT AREA**

| Primary Site # | Trinomial (if applicable) | Site Description | Approximate Distance from Amendment Area |
|----------------|---------------------------|--|--|
| P-01-000086 | CA-ALA-309 | Prehistoric shell midden (Emeryville Shell Mound) | 2,600 feet |
| P-01-000088 | CA-ALA-311 | Prehistoric shell midden (Emeryville Shell Mound) | 2,850 feet |
| P-01-000089 | CA-ALA-312 | Prehistoric shell midden (Emeryville Shell Mound) | 2,200 feet |
| P-01-000090 | CA-ALA-313 | Prehistoric shell midden (Emeryville Shell Mound) | 2,400 feet |
| P-01-010795 | | Prehistoric burial; uncovered during construction in 1960s | 1,000 feet |

SOURCE: NWIC, 2011.

Archaeological Sensitivity of the Amendment Area

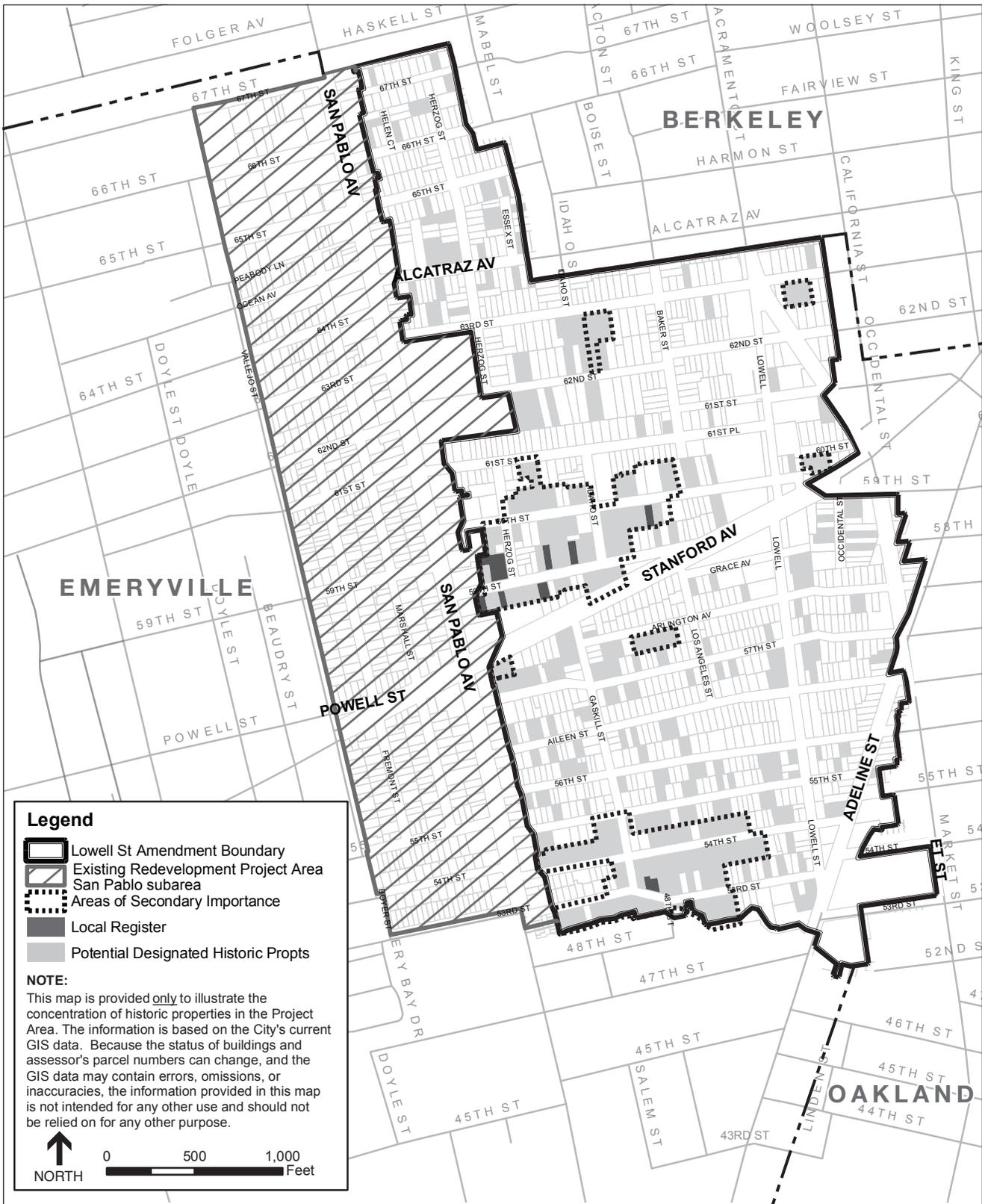
Unknown prehistoric resources may exist anywhere in the Amendment Area, including deeply-buried archaeological sites that have no surface manifestation. Areas along watercourses such as Temescal Creek (the southern boundary of the Amendment Area) have a particularly high sensitivity. Prehistoric archaeological materials could include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, shell, bone, and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones.

Although none were identified in the records search, historic-period archaeological deposits may also be located anywhere in the Amendment Area, and may include resources such as stone, concrete, or adobe footings and walls; filled wells or privies; sheet deposits of metal, glass, and/or ceramic debris; and remains of early infrastructure such as railroads, telegraph/telephone lines, water and sewer systems, or roads.

Historical Properties

The Amendment Area has a moderately high density of late nineteenth and early twentieth century residential properties, with a corridor of (mostly modern) commercial/industrial properties located along the Lowell Street corridor. Beginning in 1884, this corridor was oriented along a railroad route originally built by the short-lived California and Mount Diablo Railroad, then bought by the Atchison, Topeka, and Santa Fe (ATSF) Railroad, which continued to operate trains along it until the early 1980s. Several residential buildings in the Amendment Area are on the Local Register.

Figure 4.4-1 provides a map of City of Oakland historical resources, including historic districts, in the Amendment Area. This map is provided to show the concentration of historical resources in the Amendment Area and should not be relied on wholly for the most current information because data is constantly changing. Information regarding historical properties was gathered from the records search at the NWIC and at the Oakland City Planning Department.



SOURCE: City of Oakland, 2011

Proposed Amendments to B/M/SP Redevelopment Plan . 210505.02

Figure 4.4-1
 Local Register and Potential Designated
 Historic Properties within the Amendment Area

As described in the Regulatory Setting section, there are no National Register-listed properties, California Historic Landmarks, or City Landmarks in the Amendment Area, although there are four Study List properties and one Heritage Property formally designated by the Landmarks Board, as well as a few individual properties and at least two large districts that appear eligible for local designation and/or the National or California Register. There are currently eight Local Register properties in the Amendment Area, with close to 350 additional PDHPs, 10 of which have contingency B ratings (e.g., could be Bs if restored). Together, the Local Register properties and the PDHPs account for more than one-quarter of all buildings within the Amendment Area. These historic resources are listed below.

The historical resources within the Amendment Area are primarily single-family residences, representing expanding development of Oakland between the 1880s and 1930s. The Lowell Street/Stanford Avenue industrial corridor of the Amendment Area generally contains mid- to late-twentieth century properties, many constructed to take advantage of the former ATSF Railroad freight line along the Lowell Street alignment. Some of these buildings are approaching the age when they could be considered for PDHP or Designated Historic Property status. There are also several identified Areas of Secondary Importance (see map, Figure 4.4-1) within the Amendment Area. The Landmarks Board has emphasized the City's commitment to preservation and rehabilitation of not only individual historic buildings, but districts and neighborhoods such as these, as well as cultural sites and landscapes.

Individual Local Register Properties in the Amendment Area

The following individual Local Register Properties are located in the Amendment Area:

Designated Historic Properties (DHPs):

- 1038 59th St., Preservation Study List
- 1053 59th St., Preservation Study List
- 1076 59th St., Preservation Study List
- 1095 59th St., Preservation Study List
- 1081 53rd St., Heritage Property

Potential Designated Historic Properties (PDHPs) rated A or B:

- 1044 53rd St., B2+
- 1050 59th St., B2+
- 999 60th St., B2+

Districts / Area of Secondary Importance (ASIs):

- Golden Gate Residential, 76 properties, ASI
- 54th-Gaskill, 89 properties, ASI
- 925-37 63rd St. colonial cottage group, 4 properties, mini-ASI
- 1018 62nd - 1007-15 63rd St. Queen Anne group, 4 properties, mini-ASI
- 919-31 60th St. 1900s group, 4 properties, mini-ASI
- 1011-29 Arlington group, 7 properties, mini-ASI
- 1085-89 Stanford Av. flats, 3 properties, mini-ASI

Although the Amendment Area has been surveyed by OCHS or others in the recent past, there are likely other properties that have not yet been identified or evaluated for their potential historical significance, either at federal, state, or local levels. New information or new contexts may be discovered, or properties may not have been 50 years old at the time of the original surveys, or altered properties may have been restored. Assuming the Proposed Amendments are adopted in 2012, the 30-year time limit of the Proposed Amendments would be reached in 2042; by this time buildings constructed before 1992 will have reached 50 years of age. As such, there may exist numerous other properties in the Amendment Area that are potentially eligible for listing at federal, state, and local levels and therefore could be considered historical resources for purposes of CEQA Section 15064.5.

Paleontological Resources

The University of California, Museum of Paleontology (UCMP) maintains the world's largest database of fossil discoveries and collections, with thousands of records for the East Bay. A search of the database by location and age (Quaternary) revealed 72 Pleistocene-age localities and 47 Recent (Holocene) localities within Alameda County. While many of these localities contain no recorded specimens, localities within Berkeley and Oakland in the vicinity of the Amendment Area report at least 30 vertebrate fossils from a variety of now-extinct Pleistocene mammals. These were identified during deep excavations for the roadway tunnels connecting the island of Alameda to the mainland, and for deepening the Berkeley Municipal Marina. Fourteen invertebrate fossils of Quaternary age were reported from various locations in Oakland, three of which were found in or around Lake Merritt. One plant fossil was also reported in Oakland, although a more specific location could not be determined (UCMP, 2008, 2010, and 2011). Whether or not these fossils were found within the specific geologic units underlying the Amendment Area was not able to be determined from the information in the UCMP database.

4.4.5 Impacts and Mitigation Measures

Significance Criteria

A project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. For purposes of this section, a historical resource is one that meets the City's definitions listed above. The fact that a resource is not listed in or formally determined to be eligible for listing in the National Register California Register, or a local register of historical resources, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1 of the Public Resources Code (PRC), shall not preclude the City from determining that the resource may be a historical resource for purposes of this SEIR.

The Redevelopment Plan, as Amended, would have a significant impact on the environment if it would:

1. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5. Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings

such that the significance of the historical resource would be “materially impaired.” The significance of an historical resource is “materially impaired” when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance and that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historical Places, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5);

2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5;
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
4. Disturb any human remains, including those interred outside of formal cemeteries.

Approach to Analysis

Prior to approval of any project that is facilitated by the Redevelopment Plan, as Amended, the project would be subject to project-level environmental review as well as the SCAs and the goals and policies of the City’s General Plan as outlined above. Through the City’s project-level review of individual development project proposals, the City will consider additional mitigations, as appropriate, to reduce potential impacts to less than significant and/or to reduce the severity of significant and unavoidable impacts. Demolition or destruction of historical resources (as defined by CEQA) is a significant and unavoidable impact under CEQA, thus any such activity would be subject to all City regulations protecting historical resources. Further, relocation or alteration of historical resources could also result in a significant and unavoidable impacts under CEQA, thus any such activity would be subject to all City regulations protecting historical resources.

The approach used to analyze potentially significant impacts of the development facilitated by the Redevelopment Plan, as Amended, on cultural resources included an evaluation of the applicability of the SCAs for the protection of cultural resources and identification of additional mitigation measures if such SCAs were deemed insufficient to fully mitigate potentially significant impacts. As direct and indirect impacts to cultural resources typically arise from ground-disturbing activities (excavation for building foundations and utilities), as well as new construction, and demolition and alteration of existing buildings, the potential for such activities to occur as a result of the Redevelopment Plan, as Amended, is the focus of the analysis.

The 2000 EIR analyzed the potential environmental effects on cultural resources and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As previously indicated in Section 4.4.1, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes that have occurred to the cultural resources setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

The approach to the analysis herein compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other

project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.³ Based on the information in each of the aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding cultural resources relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for this topic. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of cultural resources in the Existing Project Area in this SEIR. Therefore, the impact discussions and analyses below focus on the activities facilitated by the Proposed Amendments and the potential for cultural resources impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes to the environmental setting that have occurred since the 2000 EIR (e.g., demolition of the Courthouse Athletic Club at 2935 Telegraph Avenue) are also evaluated as “past, present or reasonably foreseeable” projects and accordingly, are considered in the cumulative analysis in this SEIR (see New Impact CUL-5).

To ensure overall conformance within the SEIR, and to reflect City’s *CEQA Thresholds/Criteria of Significance Guidelines* (initially established in 2008) and new City requirements and analysis methods, such as the incorporation of the City’s *Standard Conditions of Approval and Uniformly Applied Development Standards* established since the 2000 EIR, this SEIR updates or replaces some of the impact conclusions and mitigation measures in the 2000 EIR. In accordance with CEQA Guidelines Section 15163, the SEIR contains only the information necessary to make the 2000 EIR adequate for the Redevelopment Plan, as Amended.

Impacts

Historical Resources

New Impact CUL-1: Development facilitated by the Redevelopment Plan, as Amended, would result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources. (Significant)

Historical resources within the Existing Project Area were discussed in the 2000 EIR (Initial Study Checklist Item # 31 and 32) as well as in the Land Use, Plans and Policies chapter of the 2000 EIR (Chapter 4.A), and the impact was determined to be less than significant. As discussed in Section 4.4.1, above, the change to historical resources that has occurred in the Existing Project Area (i.e., the demolition of Courthouse Athletic Club at 2935 Telegraph Avenue) has been

³ Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

analyzed with appropriate mitigation measures and alternatives in a previous EIR, and this change to the existing setting does not warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing historical resources effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

As described above, the Amendment Area contains a moderately high density of historical and potential historical properties, as defined in the City of Oakland's HPE. Implementation of the Proposed Amendments would facilitate additional redevelopment activities in the Amendment Area, which could result in the future demolition, destruction, relocation, or alteration of historical resources (i.e., those which are listed in or have been determined eligible for listing in the federal, state, or local registers of historical resources). Such impacts to historical resources would be considered a potentially significant impact under CEQA.

In addition, while much of the Amendment Area has been surveyed for the existence of historical resources in the recent past, there may be many other properties in the Amendment Area that have not yet been identified or evaluated for their *potential* historical significance, either at federal, state, or local levels (i.e., those properties which may be eligible for listing). Such properties may not have been 50 years old at the time of the original surveys, but may have reached this age threshold by the end of the time limit for the Proposed Amendments in 2042 (assuming adoption of the Proposed Amendments in 2012), alterations may have been reversed, or new information may have come to light. As such, there may exist numerous other properties in the Amendment Area that are potentially eligible for listing and could similarly be adversely affected by redevelopment activities, including physical demolition, destruction, relocation, or alteration. Such potential impacts to previously unidentified historical resources would be considered a potentially significant impact under CEQA.

While implementation of the City's SCA 56, *Property Relocation Rather than Demolition*, and SCA 57, *Vibrations Adjacent to Historic Structures*, would provide some level of protection for historical properties that may be affected by implementation of the Proposed Amendments, and future projects would undergo separate environmental review as they are proposed, additional mitigation may be necessary to reduce all potential impacts to some historical resources to a less-than-significant level.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant impact regarding historical resources identified in the 2000 EIR. Given adherence to the City's current established approach regarding implementation of SCAs and approach to assessing historical resources effects, the impact of development facilitated by the Redevelopment Plan, as Amended, regarding historical resources at a program level would be potentially significant, even with incorporation of the SCAs specified above.

New Mitigation Measure CUL-1 includes multiple measures and approaches, some that could reduce impacts to designated and currently unevaluated historic properties to a less-than-

significant level, and others that would reduce impacts to some historic properties, but not to a less-than-significant level.

New Mitigation Measure CUL-1:

a) Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Buildings.

- *Avoidance.* The City shall ensure that all future redevelopment activities allowable under the Redevelopment Plan, as Amended, including demolition, alteration, and new construction, would avoid historical resources (i.e., those listed on federal, state, and local registers).
- *Adaptive Reuse.* If avoidance is not feasible, adaptive reuse and rehabilitation of historical resources shall occur in accordance with the *Secretary of Interior's Standards for the Treatment of Historic Properties*.
- *Appropriate Relocation.* If avoidance or adaptive reuse *in situ* is not feasible, pursuant to SCA 56, Compliance with Policy 3.7 of the Historic Preservation Element (Property Relocation Rather than Demolition), redevelopment projects able to relocate the affected historical property to a location consistent with its historic or architectural character could reduce the impact to less than significant (Historic Preservation Element Action 3.8.1), unless the property's location is an integral part of its significance, e.g., a contributor to a historic district.

b) Future Site-specific Surveys and Evaluations.

Although most of the Project Area, as Amended, has been surveyed by the City's OCHS, evaluations and ratings may change with time and other conditions. As such, there may be numerous other previously unidentified historical resources which would be affected by future redevelopment activities, including demolition, alteration, and new construction. For any future redevelopment project that would occur on or immediately adjacent to buildings 50 years old or older, and would occur by 2042 (i.e., buildings constructed prior to 1992), the City shall require specific surveys and evaluations of such properties to determine their potential historical significance at the federal, state, and local levels. As part of the project-specific environmental review process, intensive-level surveys and evaluations shall be completed by a qualified architectural historian who meets the *Secretary of the Interior's Standards* for architectural history. For all historical resources identified as a result of site-specific surveys and evaluations, the City shall ensure that future redevelopment activities, including demolition, alteration, and new construction, would avoid, adaptively reuse and/or appropriately relocate such historical resources in accordance with measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures), above.

c) Recordation and Public Interpretation.

If measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically-significant Structures) is determined infeasible as part of any future redevelopment scenarios, the City shall evaluate the feasibility of recordation and public interpretation of such resources prior to any construction activities which would

directly affect them. Should city staff decide recordation and or public interpretation is required, the following activities would be performed:

- *Recordation.* Recordation shall follow the standards provided in the National Park Service’s Historic American Building Survey (HABS) program, which typically requires large-format photo-documentation of historic buildings, a written report, and measured drawings (or photo reproduction of original plans if available), as determined by the City. The photographs and report would be archived at local repositories, such as public libraries, historical societies, and the Northwest Information Center at Sonoma State University. The recordation efforts shall occur prior to demolition, alteration, or relocation of any historic resources identified in the Project Area, as Amended, including those that are relocated pursuant to measure “a” (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically-significant Structures). Additional recordation could include (as appropriate) oral history interviews or other documentation (e.g., video) of the resource.
- *Public Interpretation.* A public interpretation program would be developed by a qualified historic consultant in consultation with the Landmarks Preservation Advisory Board and City staff, based on a City-approved scope of work and submitted to the City for review and approval. The program could take the form of plaques, commemorative markers, or artistic or interpretive displays which explain the historical significance of the properties to the general public. Such displays would be incorporated into project plans as they are being developed, and would typically be located in a publicly accessible location on or near the site of the former historical resource(s). Public interpretation displays shall be installed prior to completion of any construction projects in the Project Area, as Amended.

Photographic recordation and public interpretation of historically significant properties prior to their demolition or alteration does not typically mitigate the loss of potentially historic resources to a less-than-significant level [CEQA Section 15126.4(b)(2)].

d) Financial Contributions.

If measure “a” (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically-significant Structures) and measure “b” (Future Site-specific Surveys and Evaluations) are not satisfied, the project applicants of specific projects facilitated by the Redevelopment Plan, as Amended, shall make a financial contribution to the City, which can be used to fund other historic preservation projects within the Project Area, as Amended, or in the immediate vicinity. Such programs include, without limitation, a Façade Improvement Program, or the Property Relocation Assistance Program.

This mitigation would conform to Action 3.8.1(9) of the Historic Preservation Element of the City of Oakland General Plan. Contributions to the fund(s) shall be determined by staff at the time of approval of site-specific project plans based on a formula to be determined by the Landmarks Preservation Advisory Board. However, such financial contribution, even in conjunction with measure “c” (Recordation and Public Interpretation), would not reduce the impacts to less-than-significant levels.

Only avoidance of direct effects to these buildings, appropriate relocation and/or adaptive reuse in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, as would be achieved through measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically-significant Structures) and measure "b" (Future Site-specific Surveys and Evaluations), would reduce the impacts of development in the Amendment Area to historic resources to a less-than-significant level. Therefore, if demolition or substantial alteration of historically-significant resources is identified by the City as the only feasible option to redevelopment in the Redevelopment Area, as Amended, even with implementation of measure "c" (Recordation and Public Interpretation) and measure "d" (Financial Contributions), the impact of development facilitated by the Redevelopment Area, as Amended would be considered significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

Comparison to 2000 EIR: *New Significant and Unavoidable Impact; Changed Conclusion.* Due to adherence to the City's current established approach regarding implementation of SCAs and approach to assessing historical resources effects, the conclusions regarding the potential impact to historic resources is changed from less than significant, as identified in the 2000 EIR (Initial Study Checklist Item #31 and 32 and 2000 EIR Impact A.4), to significant and unavoidable. New SCAs apply. In addition, New Mitigation Measure CUL-1 is added. No "changed circumstances" will result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects. New City approaches and SCAs update the 2000 EIR; they do not change circumstances or provide new information with respect to the Existing Redevelopment Plan or Existing Project Area pursuant to CEQA Guidelines Section 15162.

Archaeological Resources

Updated Impact CUL-2: Development facilitated by the Redevelopment Plan, as Amended, could result in significant impacts to unknown archaeological resources. (Less than Significant)

Issues related to archaeological resources within the Existing Project Area were discussed in the 2000 EIR (Initial Study Checklist Item # 31), and the impact was determined to be less than significant. As discussed in subsection 4.4.1, above, a thorough review of environmental documents prepared since the 2000 EIR for projects within the Existing Project Area support that no substantial changes have occurred regarding archaeological resources in the Existing Project Area that would warrant further analysis of the Existing Project Area. Therefore, the discussion that follows focuses on the effects of the Proposed Amendments and considers the City's current SCAs, and concludes with the impact of the Redevelopment Plan, as Amended.

As shown in Table 4.4-1, the records search at the NWIC indicated that significant prehistoric archaeological sites are located in the vicinity of the Amendment Area. The presence of the Emeryville Shell Mound and P-01-010795 less than 0.5 miles from the Amendment Area confirms the high sensitivity of the region for buried prehistoric resources, including human remains. There is a high probability that other, currently unknown prehistoric sites may also

contain human remains. (See Updated Impact CUL-4, below). Historic archaeological sites may also exist, reflecting early settlement and development of infrastructure in the region.

Potential impacts to archaeological resources have been addressed in the Oakland General Plan, the Land Use and Transportation Element (LUTE) EIR, as well as the City's SCA. The LUTE EIR mitigation measure specifically directs the City to establish procedures for determining when discretionary City approval of ground-disturbing activities warrant special conditions to safeguard archaeological resources. This mitigation measure has, in part, been incorporated into the City's SCAs addressing archaeological resources. Compliance with (1) General Plan objectives and policies addressing archaeological resources, (2) the LUTE EIR mitigation measure regarding procedures for determining when discretionary City approval of ground-disturbing activities warrant special conditions to safeguard archaeological resources, and (3) the City's SCAs addressing archaeological resources, would ensure impacts on archaeological resources would be less than significant in most cases, particularly at a program level of analysis.

The Amendment Area is potentially sensitive for the existence of significant buried archaeological sites not visible due to urban development. However, implementation of the City's SCA 52, *Archaeological Resources*, is considered adequate to ensure that inadvertent discoveries of any subsurface prehistoric or historic archaeological materials are dealt with according to regulatory guidance and would minimize the potential risk of impact to archaeological resources to a less-than-significant level.

Through the City's project-level review of individual development project proposals, the City will also consider, *as warranted based on specific characteristics obtained through the project-specific review*, additional approaches to avoiding the potential for damage to accidental discovery of resources. Approaches may include, but not be limited to, an "ALERT Sheet" or similar resource for all contractors and all on-site workers and that has visuals that depict each type of subsurface artifact that could be encountered during soil-disturbing activities; pre-construction briefings of all construction personnel about the type of artifacts that could be encountered on the project site; site-specific, intensive archaeological resources surveys; a qualified archaeologist to monitor all ground-disturbing activities on the project site throughout construction; and/or preparation of an Archaeological Research Design and Treatment Plan (ARDTP) by a qualified archaeologist to design and implement a data recovery and treatment program, which aligns with SCA 52. The City has determined that the potential approaches described above are not warranted in addition to SCA 52 to ensure less-than-significant effects to archaeological resources in the Amendment Area for this program-level analysis. The impact of development facilitated by the Proposed Amendments to archaeological resources would be less than significant for this program-level analysis. No additional mitigation is required for the program-level analysis.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above, in combination with the less-than-significant impact regarding archaeological resources identified in the 2000 EIR. As discussed above, future development's compliance with related General Plan objectives and policies, special safeguard conditions that the City may identify for future projects, and the City's SCAs addressing archaeological resources, would ensure impacts on archaeological resources to a less-than-significant level in most cases. Therefore, the impact of

development facilitated by the Redevelopment Plan, as Amended, regarding archaeological resources at a program level would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact to archaeological resources is substantially the same as identified in the 2000 EIR (Initial Study Checklist Item #31). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Paleontological Resources

Updated Impact CUL-3: Development facilitated by the Redevelopment Plan, as Amended, could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (Less than Significant)

Issues related to paleontological resources within the Existing Project Area were discussed in the 2000 EIR (Initial Study Checklist Item # 31), and the impact was determined to be less than significant. As discussed in Section 4.4.1, above, a thorough review of environmental documents prepared since the 2000 EIR for projects within the Existing Project Area support that no substantial changes have occurred regarding paleontological resources in the Existing Project Area that would warrant further analysis of the Existing Project Area.

The analysis in the project-specific Alta Bates Summit Medical Center, Summit Campus Seismic Upgrade and Master Plan EIR (May 2010) identified the potential for areas of high paleontological potential in the area, and identified adequate and feasible mitigation measures that reduced the impact to less than significant (which are currently being implemented as that project is under construction at the time this analysis is being prepared) and alternatives. No further analysis is warranted. Therefore, the discussion that follows focuses on the effects of the Proposed Amendments and considers the City’s current SCAs, and concludes with the impact of the Redevelopment Plan, as Amended.

As discussed above in the Paleontological Setting, the paleontological sensitivity of the geologic units underlying the Amendment Area is low to moderate. Deep excavations for building foundations associated with redevelopment plan activities may disturb these geologic units of low to moderate paleontological sensitivity.

It is possible that fossils would be discovered during excavation within the Amendment Area. Because the significance of such fossils would be unknown, such an event represents a potentially significant impact to paleontological resources. However, SCA 54, Paleontological Resources, would be incorporated with all development that may be facilitated by the Proposed Amendments,

and would ensure that the potential impact to fossils discovered within the rock units would be less than significant. No additional mitigation is required.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above, in combination with the less-than-significant impact regarding paleontological resources identified in the 2000 EIR. As discussed above, adherence to the City's SCA addressing paleontological resources would ensure related impacts would be less than significant. Therefore, the impact of development facilitated by the Redevelopment Plan, as Amended, regarding paleontological resources at a program level would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact to paleontological resources is substantially the same as identified in the 2000 (Initial Study Checklist Item #31). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Human Remains

Updated Impact CUL-4: Development facilitated by the Redevelopment Plan, as Amended, could disturb human remains, including those interred outside of formal cemeteries. (Less than Significant)

Issues related to human remains within the Existing Project Area were discussed in the 2000 EIR (Initial Study Item # 31), and the impact was determined to be less than significant. As discussed in Section 4.4.1, above, a thorough review of environmental documents prepared since the 2000 EIR for projects within the Existing Project Area support that no substantial changes have occurred regarding human remains in the Existing Project Area that would warrant further analysis of the Existing Project Area. Therefore, the discussion that follows focuses on the effects of the Proposed Amendments and considers the City's current SCAs, and concludes with the impact of the Redevelopment Plan, as Amended.

As stated in Updated Impact CUL-2, previously excavated archaeological sites in the vicinity of the Amendment Area are known to contain human remains. There is a high probability that any additional archaeological sites discovered in the Amendment Area may contain human remains. Implementation of SCA 53, *Human Remains*, provides adequate measures for prevention of adverse impacts to human remains that may be discovered during construction of developments facilitated by the Proposed Amendments. Combining with SCA 52, implementation of SCA 53 would ensure the potential impact to human remains is reduced to a less-than-significant level.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above, in combination with the less-than-significant impact regarding archaeological resources (which may

contain human remains) identified in the 2000 EIR. As discussed above, adherence to City's SCAs addressing human remains and archaeological resources would ensure related impacts would be less than significant. Therefore, the impact of development facilitated by the Redevelopment Plan, as Amended, regarding human remains at a program level would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact to human remains is substantially the same as identified in the 2000 EIR (Initial Study Checklist Item #31). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Cumulative Impacts

New Impact CUL-5: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects in and around the Amendment Area and the Project Area, as Amended, would contribute considerably to a significant adverse cumulative impact to cultural resources. (Significant)

Geographic Context

The geographic context for the assessment of cumulative impacts to cultural resources consists of the Project Area, as Amended, and immediate surroundings, in addition to all parts of the City of Oakland.

As noted above, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended. Since 2000, within the Existing Project Area, the former Courthouse Athletic Club at 2935 Telegraph Avenue, a building that qualifies as a historic resource as defined by CEQA Section 15064.5, was demolished in association with development of the Courthouse Condominiums Project. As a "past" action related to an approved project, this change to the cultural resources setting in the 2000 EIR is considered in the cumulative analysis below.

Impacts

Cumulative impacts for the Redevelopment Plan were discussed in the 2000 EIR (Initial Study Checklist Mandatory Findings "a" and "c" and Chapter 6), and the impact was determined to be less than significant. As discussed throughout the preceding analyses, there have been no substantial changes in the cumulative setting of archaeological, prehistoric, or paleontological resources, or human remains relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area; nor does the change in the cumulative setting of historical resources

(primarily the demolition of Courthouse Athletic Club at 2935 Telegraph Avenue) warrant further analysis of the Existing Project Area. Therefore, the discussion that follows focuses on the cumulative effects of the Proposed Amendments combined with other cumulative development, and concludes with the impact of the Redevelopment Plan, as Amended.

The Proposed Amendments, when combined with the cumulative development citywide, could result in cumulative impacts to cultural resources. Cumulative effects could occur to resources beyond the Amendment Area because cultural resources can include a resource type or theme such as libraries, railroad-related resources, and ethnic sites that occur in multiple locations throughout the City. Past projects in this area are included in the existing environmental setting. Present projects would include any projects currently under construction within the geographic context area. Several “past, present and reasonably foreseeable” future projects are described in the Major Projects List in Appendix B to this Draft SEIR, and discussed in Section 4.08, *Cumulative Analysis*, at the beginning of Chapter 4 of this Draft SEIR.

As analyzed throughout this section, development facilitated by the Proposed Amendments could result in significant impacts to cultural resources. Such impacts could combine with the significant impacts of the projects referenced above to form a significant cumulative impact to cultural resources. However, given the applicability of SCAs 52, 53, 54, 56, and 57 to all projects, Mitigation Measure CUL-1 identified above to reduce potential program-level impacts, as well as the mitigation measures identified in the project-level environmental documents for all cumulative projects in the geographic vicinity of the Amendment Area, potentially significant cumulative impacts to cultural resources would under most circumstances be reduced to a less-than-significant level. In addition, past projects have been, and present and reasonably foreseeable future projects would be, subject to development guidance contained within the Historic Preservation Element of the General Plan and other applicable historic preservation zoning controls and landmark ordinances to ensure protection of cultural resources.

There is a possibility that if demolition or major alteration of a historical resource occurs with development facilitated by the Proposed Amendments, and avoidance, adaptive reuse, and appropriate relocation as identified in Mitigation Measure CUL-1 are not feasible, and the same circumstance occurs with other nearby projects that may likely affect potential historic resources (such as the Central District Redevelopment Plan Amendments recently approved), a significant and unavoidable cumulative impact could result, even with the application of site-specific surveys and financial contributions as identified in Mitigation Measure CUL-1 and all SCAs incorporated to all development projects. Based on the information in this section and for the reasons summarized above, development facilitated by the Proposed Amendments could contribute considerably to the cumulative cultural resources impact, which would be considered significant and unavoidable.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above, in combination with the less-than-significant cumulative impact regarding cultural resources identified in the 2000 EIR. Given adherence to the City’s current established approach regarding implementation of SCAs and approach to assessing historical resources effects, cumulative effects regarding archaeological, prehistoric, or paleontological resources, and human remains

would be less than significant at this program level. Although development facilitated by the Redevelopment Plan, as Amended, and other cumulative development also would adhere to applicable SCAs regarding historical resources, a potentially significant cumulative impact to historical resources could occur at this program level. Therefore, the impact of cumulative historic resources effects from development facilitated by the Redevelopment Plan, as Amended, and other cumulative development would be significant. New Mitigation Measure CUL-2 would apply.

New Mitigation Measure CUL-2: Implement Mitigation Measure CUL-1 (Historical Resources). None required (Archaeological, Paleontological, or Prehistoric Resources, and Human Remains).

Significance after Mitigation: Significant and Unavoidable (Historic Resources) for Cumulative Impact.

Comparison to 2000 EIR: *New Significant and Unavoidable Impact; Changed Conclusion.* Due to adherence to the City's current established approach regarding implementation of SCAs and approach to assessing historical resources effects, in particular, the conclusions regarding the potential cumulative impact to cultural resources is changed from less than significant, as identified in the 2000 EIR (Initial Study Mandatory Findings "a" and "c"), to significant and unavoidable. New SCAs apply and are consistent with and update the 2000 EIR. In addition, New Mitigation Measure CUL-2 is added to update the 2000 EIR. The new SCAs and mitigation measure do not change circumstances or provide new information with respect to the Existing Redevelopment Plan or Existing Project Area pursuant to CEQA Guidelines Section 15162.

4.4.6 References

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4.5 Geology, Soils and Geohazards

This section analyzes how the development facilitated by the Redevelopment Plan, as Amended, may result in effects related to geology, soils and geohazards. Specifically, this section describes geologic and seismic conditions in the Amendment Area to provide relevant background information with respect to soils and potential geologic and seismic hazards. Based on the evaluation of geologic and seismic conditions, this section also evaluates the potential impact of development facilitated by the Proposed Amendments, and as appropriate, the development facilitated by the Existing Redevelopment Plan, and appropriate standard conditions of approval are identified, as necessary. Pursuant to CEQA Guidelines Section 15162 regarding an SEIR, this section also discusses whether there are any new or more severe significant impacts than those identified in the 2000 EIR that result from changed circumstances or new information.

4.5.1 2000 EIR and Existing Project Area

Geology, soils and geohazards were evaluated in the 2000 EIR (Initial Study Item # 1-4). The 2000 EIR included a detailed description unstable earth conditions, topography, and nearby earthquake faults for the Existing Project Area at the time.

The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Changes that have occurred to the geology, soils and geohazards setting since preparation of the 2000 EIR are included in the analysis in this SEIR

Because the only new impacts regarding the Redevelopment Plan, as Amended, are associated with the Proposed Amendments and would not involve any new significant impacts with respect to the Existing Project Area, the remainder of this Geology, Soils and Geohazards Environmental Setting, and Regulatory Setting, and Impacts and Mitigation Measures analysis herein focuses primarily on the Amendment Area and the additions/changes related to the Proposed Amendments, although part of the setting discussion pertains to the City of Oakland at-large.

4.5.2 Environmental Setting for the Amendment Area

The Amendment Area is located within the Coast Ranges Geomorphic Province¹ (Coast Ranges), characterized by northwest-southeast-trending mountain ridges and intervening valleys that have formed over millions of years due to movements along major regional faults. The bedrock of the Coast Ranges is primarily composed of ancient seafloor sediments and volcanic rocks. In most areas, these rocks have been significantly hardened, mineralized, folded and fractured by heat and pressure deep within the earth. This bedrock – broadly divided into the Franciscan Complex and Great Valley Sequence – forms most of the hills and mountains of the Bay Area, but may underlie the San Francisco Bay and adjacent plains at depths ranging from 200 to 2,000 feet.

¹ A geomorphic province is an area that possesses similar bedrock, structure, history, and age. California has 11 geomorphic provinces.

The valleys, plains, estuaries, and bay floors of the region are filled by loose, geologically young deposits of mud, silt, sand and gravel. The character of these deposits varies significantly depending on their origin. For example, the Sacramento and San Joaquin Rivers deliver significant volumes of fine sediments (mud and silt), which slowly accumulate on the margins and floors of the San Pablo and San Francisco Bays where currents are gentle. In contrast, peak winter flows from local creeks and streams often convey pulses of coarse sediment (sand and gravel) to the region's valleys and plains, occasionally reaching estuarine sloughs. Over geologic time scales and with fluctuating sea levels, dominant geologic processes in any one place are always competing, overlapping or changing. Thus, the character of the flatland deposits such as those found beneath the Amendment Area is variable over short distances and depths, producing heterogeneous geologic conditions.

Geology, Soils and Geologic Hazards

The following discussion describes the general geology of the Amendment Area and identifies potential risks associated with such conditions. The primary sources of information for this section consist of publicly available maps and reports prepared by U.S. Geological Survey (USGS), the California Geological Survey (formerly the California Division of Mines and Geology), and the Natural Resource Conservation Service (NRCS). Maps of topography, bedrock, soil and mineral resources provide the basic setting of the Amendment Area, and this information is used to describe the geologic hazards most likely to affect development facilitated by the Proposed Amendment.

Site Topography

Elevations of the Amendment Area range from approximately 40 feet on its western boundary to 60 feet above mean sea level along its eastern boundary (USGS, 1959). Generally, the Amendment Area is flat to slightly sloped, with slope gradients that are generally under five percent.

Local Geology

The Amendment Area is predominantly underlain by alluvium deposits as well as areas of artificial fills such as within the Temescal Creek channel, along the southernmost boundary of the Amendment Area. There are two types of alluvium identified in the Amendment Area: Holocene Alluvial Fan Deposits and Holocene Alluvial Fan Levee Deposit (CGS, 2003).

Soils

The Amendment Area includes largely developed properties, and as a result the ground surface is generally devoid of natural soils. The U.S. Department of Agriculture NRCS has characterized soils beneath the Amendment Area as predominately "Urban Land" soils intermixed with several other types of soils (NRCS, 2011). These combinations are called complexes. The following soils underlie the Amendment Area:

- Urban land-Clear Lake complex
- Urban land-Danville complex
- Urban land-Tierra complex, 2 to 5 percent slopes

The NRCS designates soils as urban land when soils have been so altered or obstructed by urbanization—such as buildings, pavement, and cut and fill operations—that identification of the native soils is not feasible. The physical properties of the site’s underlying geology are important factors in assessing the site’s susceptibility to geologic and seismic hazards, discussed below.

Geologic Hazards

The artificial fills and natural geology underlying the Amendment Area present potential hazards related to soil erosion, settlement, and expansive soil materials. These hazards are discussed below and provide the initial context for further evaluation in the impact analysis. Because the Amendment Area is flat to nearly-flat, slope-related ground failure (i.e., landslides) is not expected to pose a hazard.

Expansive Soils

Expansive soils possess a “shrink-swell” behavior. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may occur over a long period of time, usually as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Normally, soils that are expansive contain a significant clay fraction. The Urban land complexes contained within the Amendment Area all contain some portion of native soils, which generally exhibit shrink-swell behavior (NRCS, 2011). The Urban Land-Clear Lake Complex possesses highly expansive characteristics while the Urban Land-Danville and Urban Land-Tierra Complexes possess moderately expansive characteristics. However, the actual presence and extent of expansive soils could only be determined as part of site specific geotechnical evaluations for development facilitated by the Proposed Amendments.

Soil Erosion

Erosion is the wearing away of soil and rock by processes, such as mechanical or chemical weathering, mass wasting, and the action of waves, wind and underground water. Excessive soil erosion can eventually lead to damage of building foundations and roadways. Areas that are susceptible to erosion are those that would be exposed during the construction phase of projects and activities facilitated by the Proposed Amendments. Typically, the soil erosion potential is reduced once the soil is graded and covered with concrete, structures, asphalt, or slope protection.

Settlement

Settlement can occur from immediate settlement, consolidation, or shrinkage of expansive soil. Immediate settlement occurs when a load from a structure or placement of new fill material is applied, causing distortion in the underlying materials. This settlement occurs quickly and is typically complete after placement of the final load. Consolidation settlement occurs in saturated clay from the volume change caused by squeezing out water from the pore spaces. Consolidation occurs over a period of time and is followed by secondary compression, which is a continued change in void ratio under the continued application of the load. Rapid settlement can occur if soil is liquefied during an earthquake, an effect which is addressed later in the discussion of Seismic Hazards.

Soils tend to settle at different rates and by varying amounts depending on the load weight or changes in soil properties over an area, which is referred to as differential settlement. The Amendment Area is predominately underlain by Urban land complexes. Likelihood of these soils settling or compressing would be identified during site specific geotechnical evaluations for development facilitated by the Proposed Amendments.

Regional Faulting and Seismic Hazards

This section characterizes the region's existing faults, describes historic earthquakes, estimates the likelihood of future earthquakes, and describes probable ground-shaking effects. The primary sources of information for this section are publications prepared by United States Geological Survey (USGS), the California Geological Survey (CGS), and hazard mapping tools provided by the Association of Bay Area Governments (ABAG).

Earthquake Terminology and Concepts

Earthquake Mechanisms and Fault Activity

Faults are planar features within the earth's crust that have formed to release stresses caused by the dynamic movements of the earth's major tectonic plates. An earthquake on a fault is produced when these stresses overcome the inherent strength of the earth's crust, and the rock ruptures. The rupture causes seismic waves to propagate through the earth's crust, producing the ground-shaking effect known as an earthquake. The rupture also causes variable amounts of slip along the fault, which may or may not be visible at the earth's surface. It is important to note that faults are pervasive features in rocks, and occur even in areas of little-to-no earthquake activity. This is because over geologic time scales, the areas where tectonic stresses build up are always changing; thus, faults are more often evidence of past tectonic activity than indicators of a current earthquake hazard.

Geologists commonly use the age of offset rocks as evidence of fault activity—the younger the displaced rocks, the more recently earthquakes have occurred. To evaluate the likelihood that a fault will produce an earthquake, geologists examine the magnitude and frequency of recorded earthquakes and evidence of past displacement along a fault. An *active* fault is defined by the State of California as a fault that has had surface displacement within Holocene time (last 11,000 years). For the purpose of delineating fault rupture zones, the California Geological Survey historically defined a *potentially active* fault as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years). However, usage of that term was discontinued because it became apparent that there are so many Quaternary-age faults in the state that it would be meaningless to zone all of them (Bryant and Hart, 2007). In late 1975, the State Geologist made a policy decision to zone only those faults that have a relatively high potential for ground rupture. It was decided that a fault should only be considered for zoning if it is “sufficiently active”² and “well-defined.”³ *Blind* faults do not show surface evidence of past

² A fault is deemed sufficiently active if there is evidence of Holocene surface displacement along one or more of its segments or branches. Holocene surface displacement may be directly observable or inferred; it need not be present everywhere along a fault to qualify that fault for zoning.

earthquakes, even if they occurred in the recent past; and faults that are confined to pre-Quaternary rocks (more than 1.6 million years old) are considered inactive and incapable of generating an earthquake.

Earthquake Magnitude

When an earthquake occurs along a fault, a characteristic way to measure its size is to measure the energy released during the event. When an earthquake occurs, a network of seismographs records the amplitude and frequency of the seismic waves it generates. The Richter Magnitude (M) for an earthquake represents the highest amplitude measured by the seismograph at a distance of 100 kilometers from the epicenter. Richter magnitudes vary logarithmically with each whole number step representing a ten-fold increase in the amplitude of the recorded seismic waves. While Richter Magnitude was historically the primary measure of earthquake magnitude, seismologists now use Moment Magnitude as the preferred way to measure earthquakes. The Moment Magnitude scale (M_w) is related to the physical characteristics of a fault, including the rigidity of the rock, the size of fault rupture, and the style of movement or displacement across the fault. Although the formulae of the scales are different, they both contain a similar continuum of magnitude values, except that M_w can reliably measure larger earthquakes and can do so from greater distances.

Peak Ground Acceleration

A common measure of ground motion during an earthquake is the peak ground acceleration (PGA). The PGA for a given component of motion is the largest value of horizontal acceleration obtained from a seismograph. PGA is expressed as the percentage of the acceleration due to gravity (g), which is approximately 980 centimeters per second squared. In terms of automobile accelerations, one “g” of acceleration is equivalent to the motion of a car traveling 328 feet from rest in 4.5 seconds. For comparison purposes, the maximum peak acceleration value recorded during the Loma Prieta earthquake was in the vicinity of the epicenter, near Santa Cruz, at 0.64g (ABAG, 2003a). Unlike measures of magnitude, which provide a single measure of earthquake energy, PGA varies from place to place, and is dependent on the distance from the epicenter and the character of the underlying geology (e.g., hard bedrock, soft sediments or artificial fills).

The Modified Mercalli Intensity Scale

The Modified Mercalli Intensity Scale (**Table 4.5-1**) assigns an intensity value based on the observed effects of ground-shaking produced by an earthquake. Unlike measures of earthquake magnitude and PGA, the Modified Mercalli (MM) intensity scale is qualitative in nature (i.e., it is based on actual observed effects rather than measured values). Similar to PGA, MM intensity values for an earthquake at any one place can vary depending on its magnitude, the distance from its epicenter, the focus its energy, and the type of geologic material.

³ A fault is considered well-defined if its trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The fault may be identified by direct observation or by indirect methods (e.g., geomorphic evidence). The critical consideration is that the fault, or some part of it, can be located in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

**TABLE 4.5-1
 MODIFIED MERCALLI INTENSITY SCALE**

| Intensity Value | Intensity Description | Average Peak Ground Acceleration^a |
|------------------------|---|---|
| I | Not felt except by a very few persons under especially favorable circumstances. | < 0.0017 g |
| II | Felt only by a few persons at rest, especially on upper floors on buildings. Delicately suspended objects may swing. | 0.0017-0.014 g |
| III | Felt noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly, vibration similar to a passing truck. Duration estimated. | 0.0017-0.014 g |
| IV | During the day felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably. | 0.014–0.039g |
| V | Felt by nearly everyone, many awakened. Some dishes and windows broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles may be noticed. Pendulum clocks may stop. | 0.035 – 0.092 g |
| VI | Felt by all, many frightened and run outdoors. Some heavy furniture moved; and fallen plaster or damaged chimneys. Damage slight. | 0.092 – 0.18 g |
| VII | Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars. | 0.18 – 0.34 g |
| VIII | Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed. | 0.34 – 0.65 g |
| IX | Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken. | 0.65 – 1.24 g |
| X | Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks. | > 1.24 g |
| XI | Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly. | > 1.24 g |
| XII | Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air. | > 1.24 g |

^a Value is expressed as a fraction of the acceleration due to gravity (g). Gravity (g) is 9.8 meters per second squared. 1.0 g of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.

SOURCE: ABAG, 2003b

The MM values for intensity range from I (earthquake not felt) to XII (damage nearly total), and intensities ranging from IV to X could cause moderate to significant structural damage. Because the MM is a measure of ground-shaking effects, intensity values can be related to a range of PGA values, also shown in Table 4.5-1.

Seismic Context

The Amendment Area lies within a region of California that contains many active and potentially active faults and is considered an area of high seismic activity. The USGS along with the California Geological Survey and the Southern California Earthquake Center formed the 2007 Working Group on California Earthquake Probabilities to summarize the probability of one or more earthquakes of magnitude 6.7 or higher occurring in the state of California over the next 30 years. Accounting for the wide range of possible earthquake sources, it is estimated that the Bay Area has a 63 percent chance of experiencing such an earthquake (Working Group on California Earthquake Probabilities, 2008). According to the working group, the individual faults posing the greatest threat to the Bay Area are the Hayward, the San Andreas, and the Calaveras faults. Other principal faults capable of producing large earthquakes in the Bay Area include the Concord–Green Valley, Marsh Creek–Greenville, San Gregorio and Rodgers Creek faults.

Table 4.5-2 lists the above mentioned faults, their distance and directions from the Amendment Area and their maximum credible earthquake magnitude. The Hayward, the San Andreas, and the Calaveras faults are briefly described below because they have the greatest likelihood of affecting the Amendment Area based on future probability.

Hayward Fault

The Hayward Fault Zone, located as close as 2.2 miles northeast from the Amendment Area, extends for 60 miles from San Pablo Bay in Richmond south to the San Jose area. The Hayward fault has historically generated one sizable earthquake, in 1868, when a Richter magnitude 7 earthquake on its southern segment ruptured the ground for a distance of about 30 miles (Bryant, 2005). Lateral ground surface displacement during this event was at least 3 feet.

A characteristic feature of the Hayward fault is its well-expressed and relatively consistent fault creep. Although large earthquakes on the Hayward fault have been rare since 1868, slow fault creep has continued to occur and has caused measurable offset. Fault creep on the East Bay segment of the Hayward fault is estimated at 9 millimeters per year (mm/yr) (Peterson, et al., 1996). However, a large earthquake could occur on the Hayward fault with an estimated moment magnitude (M_w) of about M_w 7.1 (Table 4.5-2). The USGS Working Group on California Earthquake Probabilities (2008) identifies the Hayward–Rodgers Creek Fault Systems as having a 31 percent chance of generating one or more earthquakes of magnitude 6.7 or greater in the next 30 years.

**TABLE 4.5-2
ACTIVE FAULTS IN THE REGION**

| Fault | Closest Distance and Direction | Recency of Movement^a | Future Earthquake Probability^b | Historical Seismicity | Maximum Moment Magnitude Earthquake (Mw)^c |
|-------------------------------------|---------------------------------------|--|--|---|---|
| Hayward (Northern Section) | 2.2 miles northeast | Historic | 31% (combined with Rodgers Creek Fault) | M 6.8 in 1868 Many <M 4.5 | 7.1 |
| Calaveras (Northern Section) | 12.5 miles east | Historic | 7% | M 5.6–M 6.4 in 1861 M 6.2, 1911 in 1984 | 6.8 |
| San Andreas (Peninsula Section) | 16.8 miles southwest | Historic | 21% | M 7.1 in 1989 M 8.25 in 1906 M 7.0 in 1838 Many <M 6 | 7.9 |
| San Gregorio | 25.3 miles southwest | Holocene | 6% | n/a | 7.3 |
| Concord–Green Valley (Avon Section) | 15 miles east | Historic | 3% | Historic active creep | 6.7 |
| Marsh Creek–Greenville | 29.4 miles East | Historic | 3% | M 5.6 in 1980 | 6.9 |
| Rodgers Creek | 21.1 miles north | Holocene | | M 6.7 in 1898 M 5.6 and 5.7 in 1969 | 7.0 |

^a From Jennings (2004), historic refers to the post-colonial era (after 1775), the Holocene is from 11,000 years ago to present.

^b Probability of one or more earthquakes of magnitude 6.7 or greater in the next 30 years from the Working Group on California Earthquake Probabilities (2008). The Working Group estimates the probability of a “background” earthquake not from one of the seven major faults studied to be 9%.

^c The Maximum Moment Magnitude Earthquake is derived from the joint CDMG/USGS Probabilistic Seismic Hazard Assessment for the State of California.

SOURCES: Jennings, 1994; Working Group on California Earthquake Probabilities, 2008; Peterson et al., 1996.

San Andreas Fault

The San Andreas Fault Zone, located as close as 16.8 miles southwest from the Amendment Area, is a major structural feature that forms at the boundary between the North American and Pacific tectonic plates. It is a strike-slip⁴ fault, extending from the Salton Sea in Southern California near the border with Mexico to north of Point Arena, where the fault trace continues out into the Pacific Ocean. The main trace of the San Andreas Fault through the Bay Area trends northwest from the Santa Cruz Mountains to the western side of the San Francisco Peninsula.

In the San Francisco Bay Area, the San Andreas Fault Zone was the source of the two major earthquakes in recent history that affected the San Francisco Bay region. The 1906 San Francisco earthquake was estimated at M 7.9 and resulted in approximately 290 miles of surface fault rupture, the longest of any known continental strike slip fault. Horizontal displacement along the fault approached 17 feet near the epicenter (Bryant, 2005). The 1989 Loma Prieta earthquake, with a magnitude of Mw 6.9, was centered in the Santa Cruz Mountains and resulted in widespread damage throughout the Bay Area. The USGS Working Group on California

⁴ Refers to relative motion on either side of a fault which is primarily horizontal (as opposed to vertical).

Earthquake Probabilities (2008) identifies the San Andreas Fault as having a 21 percent chance of generating one or more earthquakes of magnitude 6.7 or greater in the next 30 years.

Calaveras Fault

The Calaveras fault, located as close as 12.5 miles east from the Amendment Area, is a major right-lateral strike-slip fault that has been active during the last 11,000 years. The Calaveras fault is located in the eastern San Francisco Bay region and generally trends from north to south along the eastern side of the Oakland Hills into the western Diablo Range, eventually joining the San Andreas Fault Zone south of Hollister. The northern extent of the fault zone is somewhat speculative and could be linked with the Concord fault.

There is a distinct change in slip rate and fault behavior north and south of the vicinity of Calaveras Reservoir. North of Calaveras Reservoir, the fault is characterized by a relatively low slip rate of 5-6 mm/yr and sparse seismicity (Bryant, 2005). South of Calaveras Reservoir, the fault zone is characterized by a higher rate of surface fault creep that has been evidenced in historic times. The Calaveras fault has been the source of several moderate magnitude earthquakes, and the probability of a large earthquake (greater than M 6.7) is much lower than on the San Andreas or Hayward faults. The USGS Working Group on California Earthquake Probabilities (2008) identifies the Calaveras fault as having a 7 percent chance of generating one or more earthquakes of magnitude 6.7 or greater in the next 30 years.

Seismic Hazards

The following discussion identifies the seismic hazards for the Amendment Area and provides the initial context for further evaluation in the impact analysis.

Surface Fault Rupture

Seismically-induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude, sense, and nature of fault rupture can vary for different faults or even along different strands of the same fault. Ground rupture is considered more likely along active faults, which are referenced in Table 4.5-2. Because the Amendment Area is not crossed by an Alquist-Priolo Fault Rupture Hazard Zone, as designated by the Alquist-Priolo Earthquake Fault Zoning Act, and no active or potentially active faults are known to pass through the Amendment Area, the risk of ground rupture in the area is low.

Ground Shaking

As discussed above, a major earthquake is likely to affect the Amendment Area within the next 30 years, and would produce strong ground-shaking effects throughout the region. Earthquakes on active or potentially active faults, depending on magnitude and distance from the Amendment Area, could produce a range of ground-shaking intensities. Historically, earthquakes have caused strong ground-shaking and damage in the San Francisco Bay Area, the most recent being the M 6.9 Loma Prieta earthquake in October 1989. The epicenter was approximately 52 miles south of the Amendment Area, but this earthquake is estimated to have caused moderate (V) to strong (VII) shaking intensities in the Amendment Area (ABAG, 2003b). The largest earthquake in Bay

Area history was the San Francisco Earthquake of 1906, with an estimated moment magnitude of 7.9. This produced strong (VII) to very strong (VII) shaking intensities in the Amendment Area (ABAG, 2003c).

A primary tool that seismologists use to describe ground-shaking hazard is a probabilistic seismic hazard assessment (PSHA). The PSHA for the State of California takes into consideration the range of possible earthquake sources (including such worse-case scenarios as described above) and estimates their characteristic magnitudes to generate a probability map for ground-shaking. The PSHA maps depict values of peak ground acceleration (PGA) that have a 10 percent probability of being exceeded in 50 years (1 in 475 chance). This probability level allows engineers to design buildings for ground motions that have a 90 percent chance of *not* occurring in the next 50-years, making buildings safer than if they were simply designed for the most likely events. The PSHA indicates that at the Amendment Area, there is a 10 percent chance of exceeding PGA values of 0.659g over the next 50 years (Peterson et al., 1996). As indicated in Table 4.5-1, these PGAs could result in considerable damage even in specially designed structures, causing partial collapse of some buildings and damaging underground utilities. The potential hazards related to ground-shaking are discussed further in the Impacts and Mitigation Measures section of this chapter.

Liquefaction

Liquefaction is a transformation of soil from a solid to a liquefied state, during which saturated soil temporarily loses strength resulting from the buildup of excess pore water pressure, especially during earthquake-induced cyclic loading. Soil susceptible to liquefaction includes loose- to medium-density sand and gravel, low-plasticity silt, and some low-plasticity clay deposits. Four kinds of ground failure commonly result from liquefaction: lateral spread, flow failure, ground oscillation, and loss of bearing strength. *Lateral spreading* is the horizontal displacement of surficial blocks of sediments resulting from liquefaction in a subsurface layer that occurs on slopes ranging between 0.3 and 3 percent and commonly displaces the surface by several meters to tens of meters. *Flow failures* occur on slopes greater than 3 degrees and are primarily liquefied soil or blocks of intact material riding on a liquefied subsurface zone. *Ground oscillation* occurs on gentle slopes when liquefaction occurs at depth and no lateral displacement takes place. Soil units that are not liquefied may pull apart from each other and oscillate on the liquefied zone. The *loss of bearing pressure* can occur beneath a structure when the underlying soil loses strength and liquefies. When this occurs, the structure can settle, tip, or even become buoyant and “float” upwards. Liquefaction and associated failures could damage foundations, roads, underground cables and pipelines, and disrupt utility service.

Liquefaction can occur in unconsolidated or artificial fill sediments. The depth to groundwater influences the potential for liquefaction, in that sediments need to be saturated to have a potential for liquefaction. The southernmost boundary of Amendment Area just north of 47th street is mapped as having very high liquefaction susceptibility due to the presence of artificial fill along former path of Temescal Creek (ABAG, 2011). The creek is now culverted below the ground, but the artificially fill likely remains in the area. Additionally, the California Geological Survey (2003), in accordance with the requirements of the Seismic Hazards Mapping Act, has placed

portions of the Amendment Area within a liquefaction hazard zone. The implications of this designation are discussed under the regulatory setting and impact analysis below.

Earthquake-Induced Settlement

Settlement of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid compaction and settling of subsurface materials (particularly loose, uncompacted, and variable sandy sediments above the water table) due to the rearrangement of soil particles during prolonged ground-shaking. Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different amounts). Given the geologic setting of the Amendment Area, there could be earthquake-induced settlement in the location of the artificial fills. This is discussed further in the impact analysis to follow.

4.5.3 Regulatory Setting

State

The statewide minimum public safety standard for mitigation of earthquake hazards (as established through the California Building Code (CBC), Alquist-Priolo Earthquake Fault Zoning Act, and the Seismic Hazards Mapping Act) is that the minimum level of mitigation for a project should reduce the risk of ground failure during an earthquake to a level that does not cause the collapse of buildings for human occupancy, but in most cases, is not required to prevent or avoid the ground failure itself. It is not feasible to design all structures to completely avoid damage in worst-case earthquake scenarios. Accordingly, regulatory agencies have generally defined an “acceptable level” of risk as that which provides reasonable protection of the public safety, though it does not necessarily ensure continued structural integrity and functionality of a project [CCR Title 14, Section 3721(a)]. Nothing in these acts, however, precludes lead agencies from enacting more stringent requirements, requiring a higher level of performance, or applying these requirements to developments other than those that meet the acts’ definitions of “project.”

California Building Code

The CBC has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The CBC is based on the International Building Code. The 2007 CBC is based on the 2006 International Building Code (IBC) published by the International Code Conference. In addition, the CBC contains necessary California amendments which are based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion into

building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code, Chapter 7.8, Section 2690-2699.6) was developed to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating ground failure caused by strong earthquakes, namely liquefaction and slope failure. While this Act pertains to seismic hazards, they are not the same as the fault surface rupture hazard regulated by the Alquist-Priolo Special Studies Zone Act of 1972. The Seismic Hazards Mapping Act requires the State Geologist to delineate seismic hazard zones, also known as “zones of required investigation”, where regional (that is, not site-specific) information suggests that the probability of a hazard requiring mitigation is great enough to warrant a site-specific investigation. The fact that a site lies outside a zone of required investigation does not necessarily mean that the site is free from seismic or other geologic hazards. Where a project—defined by the act as any structures for human occupancy or any subdivision of land that contemplates the eventual construction of structures for human occupancy—is within a zone of required investigation, lead agencies must apply minimum criteria for project approval. The most basic criteria for project approval are that the owner/developer adequately demonstrates seismic hazards at the site have been evaluated in a geotechnical report, that appropriate mitigation measures have been proposed, and that the lead agency has independently reviewed the adequacy of the hazard evaluation and proposed mitigation measures. Both the geotechnical report and the independent review must be performed by a certified engineering geologist or registered civil engineer. These criteria, along with seismic hazard evaluation and mitigation standards, are outlined in California Geological Survey Special Publication 117A, revised and re-adopted in September of 2008 by the State Mining and Geology Board (CGS, 2008).

Local

Ordinances and Oakland Municipal Code

The City of Oakland implements the following regulations and ordinances aimed at reducing soil erosion and protecting water quality and water resources:

The City’s Grading Ordinance (Ordinance No. 10312) is intended to reduce erosion during grading and construction activities. Pursuant to this ordinance, Chapter 13.16 of the Oakland Municipal Code requires that a project applicant obtain grading permits for earth moving activities under specified conditions of 1) volume of earth to be moved, 2) slope

characteristics, 3) areas where “land disturbance” or 4) stability problems have been reported. To obtain a grading permit, a project applicant must prepare and submit to the Public Works Agency a soils report, a grading plan, and an erosion and sedimentation control plan for approval (Oakland Municipal Code, 2008).

The City also implements the Sedimentation and Erosion Control Ordinance (Ordinance No. 10446) also aimed at reducing erosion during construction and operations. As a condition of development or redevelopment, the Chief of Building Services or his or her designee may require implementation of continuous or post construction best management practices such as good housekeeping practices or storm water treatment systems (Oakland Municipal Code, 2008).

Building Services Division

In addition to compliance with building standards set forth by the 2006 IBC and 2007 CBC, a project applicant would be required to submit to the Oakland Building Services Division an engineering analysis accompanied by detailed engineering drawings for review and approval prior to excavation, grading, or construction activities on a project site. Specifically, an engineering analysis report and drawings of relevant grading or construction activities on a project site would be required to address constraints and incorporate recommendations identified in geotechnical investigations. These required submittals and City reviews ensure that the buildings are designed and constructed in conformance with the seismic and other requirements of all applicable building code regulations, pursuant to standard City of Oakland procedures.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

In addition to compliance with building standards set forth by the 2006 IBC and 2007 CBC, a project applicant will be required to submit to the Oakland Building Services Division an engineering analysis accompanied by detailed engineering drawings for review and approval prior to excavation, grading, or construction activities on a project site. Specifically, an engineering analysis report and drawings of relevant grading or construction activities on a project site would be required to address constraints and incorporate recommendations identified in geotechnical investigations. These required submittals and City reviews ensure that the buildings are designed and constructed in conformance with the seismic and other requirements of all applicable building code regulations, pursuant to standard City of Oakland procedures.

The City of Oakland SCAs relevant to geologic and seismic conditions, are listed below. All applicable SCAs would be adopted as conditions of approval for projects facilitated by the Redevelopment Plan, as Amended, to reduce significant impacts from geologic and seismic conditions. The SCA are incorporated and required as part of the development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures.

The City's SCAs relevant to geologic and seismic conditions are shown below.

- **SCA 55 (also included in Hydrology): Erosion and Sedimentation Control Plan**

Prior to any grading activities. The project applicant shall obtain a grading permit if required by the Oakland Grading Regulations pursuant to Section 15.04.780 of the Oakland Municipal Code. The grading permit application shall include an erosion and sedimentation control plan for review and approval by the Building Services Division. The erosion and sedimentation control plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading operations. The plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the Director of Development or designee. The plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.

Ongoing throughout grading and construction activities. The project applicant shall implement the approved erosion and sedimentation plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Building Services Division.

- **SCA 57 (also included in Cultural Resources and Noise): Vibrations Adjacent to Historic Structures**

Prior to issuance of a demolition, grading or building permit. The project applicant shall retain a structural engineer or other appropriate professional to determine threshold levels of vibration and cracking that could damage nearby historic structures (as described in Section 4.4, *Cultural Resources*), and design means and methods of construction that shall be utilized to not exceed the thresholds.

- **SCA 58: Soils Report**

Required as part of the submittal of a Tentative Tract or Tentative Parcel Map. A preliminary soils report for each construction site within the project area shall be required as part of this project and submitted for review and approval by the Building Services Division. The soils reports shall be based, at least in part, on information obtained from on-site testing. Specifically the minimum contents of the report should include:

A. Logs of borings and/or profiles of test pits and trenches:

- a. The minimum number of borings acceptable, when not used in combination with test pits or trenches, shall be two (2), when in the opinion of the Soils Engineer such borings shall be sufficient to establish a soils profile suitable for the design of all the footings, foundations, and retaining structures.
- b. The depth of each boring shall be sufficient to provide adequate design criteria for all proposed structures.

- c. All boring logs shall be included in the soils report.
- B. Test pits and trenches
 - a. Test pits and trenches shall be of sufficient length and depth to establish a suitable soils profile for the design of all proposed structures.
 - b. Soils profiles of all test pits and trenches shall be included in the soils report.
- C. A plat shall be included which shows the relationship of all the borings, test pits, and trenches to the exterior boundary of the site. The plat shall also show the location of all proposed site improvements. All proposed improvements shall be labeled.
- D. Copies of all data generated by the field and/or laboratory testing to determine allowable soil bearing pressures, sheer strength, active and passive pressures, maximum allowable slopes where applicable and any other information which may be required for the proper design of foundations, retaining walls, and other structures to be erected subsequent to or concurrent with work done under the grading permit.
- E. A written Soils Report shall be submitted which shall include but is not limited to the following:
 - a. Site description
 - b. Local and site geology
 - c. Review of previous field and laboratory investigations for the site
 - d. Review of information on or in the vicinity of the site on file at the Information Counter, City of Oakland, Office of Planning and Building.
 - e. Site stability shall be addressed with particular attention to existing conditions and proposed corrective attention to existing conditions and proposed corrective actions at locations where land stability problems exist.
 - f. Conclusions and recommendations for foundations and retaining structures, resistance to lateral loading, slopes, and specifications, for fills, and pavement design as required.
 - g. Conclusions and recommendations for temporary and permanent erosion control and drainage. If not provided in a separate report they shall be appended to the required soils report.
 - h. All other items which a Soils Engineer deems necessary.
 - i. The signature and registration number of the Civil Engineer preparing the report.
- F. The Director of Planning and Building may reject a report that she/he believes is not sufficient. The Director of Planning and Building may refuse to accept a soils report if the certification date of the responsible soils engineer on said document is more than three years old. In this instance, the Director may be require that the old soils report be recertified, that an addendum to the soils report be submitted, or that a new soils report be provided.

- **SCA 59: Geotechnical Report**

Prior to required as part of the submittal of a tentative Tract Map or tentative Parcel Map.

- a) A site-specific, design level geotechnical investigation for the construction site within the project area (which is typical for any large, phased development project) shall be required as part of this project. Specifically:
 - i. Each investigation shall include an analysis of expected ground motions at the site from identified faults. The analyses shall be accordance with applicable City ordinances and polices, and consistent with the most recent version of the California Building Code, which requires structural design that can accommodate ground accelerations expected from identified faults.
 - ii. The investigations shall determine final design parameters for the walls, foundations, foundation slabs, surrounding related improvements, and infrastructure (utilities, roadways, parking lots, and sidewalks).
 - iii. The investigations shall be reviewed and approved by a registered geotechnical engineer. All recommendations by the project engineer, geotechnical engineer, shall be included in the final design, as approved by the City of Oakland.
 - iv. The geotechnical report shall include a map prepared by a land surveyor or civil engineer that shows all field work and location of the “No Build” zone. The map shall include a statement that the locations and limitations of the geologic features are accurate representations of said features as they exist on the ground, were placed on this map by the surveyor, the civil engineer or under their supervision, and are accurate to the best of their knowledge.
 - v. Recommendations that are applicable to foundation design, earthwork, and site preparation that were prepared prior to or during the projects design phase, shall be incorporated in the project.
 - vi. Final seismic considerations for the site shall be submitted to and approved by the City of Oakland Building Services Division prior to commencement of the project.
 - vii. A peer review is required for the Geotechnical Report. Personnel reviewing the geologic report shall approve the report, reject it, or withhold approval pending the submission by the applicant or subdivider of further geologic and engineering studies to more adequately define active fault traces.

Tentative Tract or Parcel Map approvals shall require, but not be limited to, approval of the Geotechnical Report.

- **SCA 61: Site Review by the Fire Services Division**

Prior to issuance of any demolition, grading or building permit. The project applicant shall submit plans for site review and approval to the Fire Prevention Bureau Hazardous Materials Unit. Property owner may be required to obtain or perform a Phase II hazard assessment.

- **SCA 62: Phase I and/or Phase II Reports**

Prior to issuance of a demolition, grading, or building permit. Prior to issuance of demolition, grading, or building permits the project applicant shall submit to the Fire Prevention Bureau, Hazardous Materials Unit, a Phase I environmental site assessment report, and a Phase II report if warranted by the Phase I report for the project site. The

reports shall make recommendations for remedial action, if appropriate, and should be signed by a Registered Environmental Assessor, Professional Geologist, or Professional Engineer.

- **SCA 63: Lead-Based Paint/Coatings, Asbestos, or PCB Occurrence Assessment**

Prior to issuance of any demolition, grading or building permit. The project applicant shall submit a comprehensive assessment report to the Fire Prevention Bureau, Hazardous Materials Unit, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACM), lead-based paint, and any other building materials or stored materials classified as hazardous waste by State or federal law.

- **SCA 64: Environmental Site Assessment Reports Remediation**

Prior to issuance of a demolition, grading, or building permit. If the environmental site assessment reports recommend remedial action, the project applicant shall:

- a) Consult with the appropriate local, State, and federal environmental regulatory agencies to ensure sufficient minimization of risk to human health and environmental resources, both during and after construction, posed by soil contamination, groundwater contamination, or other surface hazards including, but not limited to, underground storage tanks, fuel distribution lines, waste pits and sumps.
- b) Obtain and submit written evidence of approval for any remedial action if required by a local, State, or federal environmental regulatory agency.
- c) Submit a copy of all applicable documentation required by local, State, and federal environmental regulatory agencies, including but not limited to: permit applications, Phase I and II environmental site assessments, human health and ecological risk assessments, remedial action plans, risk management plans, soil management plans, and groundwater management plans.

- **SCA 65: Lead-based Paint Remediation**

Prior to issuance of any demolition, grading or building permit. If lead-based paint is present, the project applicant shall submit specifications to the Fire Prevention Bureau, Hazardous Materials Unit signed by a certified Lead Supervisor, Project Monitor, or Project Designer for the stabilization and/or removal of the identified lead paint in accordance with all applicable laws and regulations, including but not necessarily limited to: Cal/OSHA's Construction Lead Standard, 8 CCR1532.1 and DHS regulation 17 CCR Sections 35001 through 36100, as may be amended.

- **SCA 66: Other Materials Classified as Hazardous Waste**

Prior to issuance of any demolition, grading or building permit. If other materials classified as hazardous waste by State or federal law are present, the project applicant shall submit written confirmation to Fire Prevention Bureau, Hazardous Materials Unit that all State and federal laws and regulations shall be followed when profiling, handling, treating, transporting and/or disposing of such materials.

- **SCA 67: Health and Safety Plan per Assessment**

Prior to issuance of any demolition, grading or building permit. If the required lead-based paint/coatings, asbestos, or PCB assessment finds presence of such materials, the project applicant shall create and implement a health and safety plan to protect workers from risks

associated with hazardous materials during demolition, renovation of affected structures, and transport and disposal.

- **SCA 68: Hazard Best Management Practices for Soil and Groundwater Hazards**

The project applicant shall implement all of the following Best Management Practices (BMPs) regarding potential soil and groundwater hazards:

- a) Soil generated by construction activities shall be stockpiled onsite in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state and federal agencies laws, in particular, the Regional Water Quality Control Board (RWQCB) and/or the Alameda County Department of Environmental Health (ACDEH) and policies of the City of Oakland.
- b) Groundwater pumped from the subsurface shall be contained onsite in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies of the City of Oakland, the RWQCB and/or the ACDEH. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building (pursuant to the Standard Condition of Approval regarding Radon or Vapor Intrusion from Soil and Groundwater Sources);
- c) Prior to issuance of any demolition, grading, or building permit, the applicant shall submit for review and approval by the City of Oakland, written verification that the appropriate federal, state or county oversight authorities, including but not limited to the RWQCB and/or the ACDEH, have granted all required clearances and confirmed that the all applicable standards, regulations and conditions for all previous contamination at the site. The applicant also shall provide evidence from the City's Fire Department, Office of Emergency Services, indicating compliance with the Standard Condition of Approval requiring a Site Review by the Fire Services Division pursuant to City Ordinance No. 12323, and compliance with the Standard Condition of Approval requiring a Phase I and/or Phase II Reports.

4.5.4 Impacts and Mitigation Measures

Significance Criteria

The Redevelopment Plan, as Amended, would have a significant impact on the environment if it would:

1. Expose people or structures to substantial risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
 - Strong seismic ground shaking;
 - Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse; or
 - Landslides.

2. Result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways;
3. Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code, creating substantial risks to life or property;
4. Be located above a well, pit, swamp, mound, tank vault, or unmarked sewer line, creating substantial risks to life or property;
5. Be located above landfills for which there is no approved closure and post-closure plan, or unknown fill soils, creating substantial risks to life or property ; or
6. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

Approach to Analysis

Prior to approval of any project that is facilitated by the Redevelopment Plan, as Amended, the project would be subject to project-level environmental review as well as the SCAs and the goals and policies of the City's General Plan as outlined above.

The 2000 EIR analyzed the potential environmental effects on geology, soils and geohazards and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As previously indicated in Section 4.5.1, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes that have occurred to the geology, soils and geohazards setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

The approach to the analysis herein compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.⁵ Based on the information in each of the aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding geology, soils and geohazards relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for these topics. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of geology, soils and geohazards in the Existing Project Area in this SEIR. Therefore, the impact discussions and

⁵ Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

analyses below focus on the activities facilitated by the Proposed Amendments and the potential for geology, soils and geohazards impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes that have occurred to the environmental setting since the 2000 EIR are also evaluated as “past, present or reasonably foreseeable” projects and accordingly, are considered in the cumulative analysis in this SEIR (see Updated Impact GEO-3).

Based on the Amendment Area and its geographical location, development facilitated by the Proposed Amendments would not result in impacts related to the following criteria. No impact discussion is provided for these topics for the following reasons:

- *Fault Rupture*. The faults most susceptible to earthquake rupture are active faults, which are faults that have experienced surface displacement within the last 11,000 years. There are no active faults that cross the Amendment Area, and the nearest active fault is more than two miles away. Therefore, the potential for fault rupture to affect the development facilitated by the Proposed Amendments are very low. This is consistent with the determination in the 2000 EIR (Initial Study Checklist Item #4).
- *Landslides*. The Amendment Area does not contain slopes that are susceptible to landslides or slope failure. The gentle sloping topography of the area puts the potential for landslides or slope failure to affect any of the proposed redevelopment activities in the Amendment Area as very low and is therefore not discussed further. However, discussion on earthquake-induced ground failure is provided in Updated Impact GEO-1. This is consistent with the determination in the 2000 EIR (Initial Study Item #1).
- *Wastewater Disposal*. The Amendment Area is located within an urban area where all development will be able to tie into existing wastewater infrastructure. Therefore, none of the development or redevelopment would require the use of septic or other alternative disposal wastewater systems, and therefore no impact is associated with this hazard. This is consistent with information presented in the 2000 EIR (Section 4.E).
- *Substantial soil erosion or loss of topsoil*. Chapter 4.7, *Hydrology and Water Quality*, discusses soil erosion and its effect on water quality. The criterion for this section focuses on the potential for excessive or accelerated erosion to undermine building foundations or otherwise threaten the stability of improvements. Measures to reduce soil erosion during construction for water quality purposes would effectively prevent excessive rilling or rutting of soil on construction sites (see Chapter 4.7). The Amendment Area is in a developed urban area that is largely paved or landscaped, and served by a storm drain system. Therefore there would be no impact from excessive erosion on foundations or utilities. This is consistent with the determination in the 2000 EIR (Initial Study Checklist Item #2).
- *Located above a well, pit, swamp, mound, tank vault, unmarked sewer line, or landfill*. The Amendment area is not located above a well, pit, swamp, mound, tank vault, unmarked sewer line, or landfill. Therefore, there would be no impact to these resources. This is consistent with information presented in the 2000 EIR (Initial Study Checklist Item #3).

To ensure overall conformance within the SEIR, and to reflect City’s *CEQA Thresholds/Criteria of Significance Guidelines* (initially established in 2008) and new City requirements and analysis methods, such as the incorporation of the City’s *Standard Conditions of Approval and Uniformly Applied Development Standards* established since the 2000 EIR, this SEIR updates or replaces

some of the impact conclusions and mitigation measures in the 2000 EIR. In accordance with CEQA Guidelines Section 15163, the SEIR contains only the information necessary to make the 2000 EIR adequate for the Redevelopment Plan, as Amended.

Impacts

Updated Impact GEO-1: Development facilitated by the Redevelopment Plan, as Amended, could expose people or structures to seismic hazards such as ground shaking and seismic-related ground failure such as liquefaction, differential settlement, or lateral spread. (Less than Significant)

Unstable conditions, landslides or potential changes in geologic substructure within the Existing Project Area were discussed in the 2000 EIR (Initial Study Checklist Item #1), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to geologic conditions has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing seismic hazards effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

The development facilitated by the Proposed Amendments could add as many as 370 housing units (residential and live/work units), develop of up to 110,000 square feet of industrial, and require remediation activities in the Amendment Area. If projects and activities facilitated by the Proposed Amendments are not properly designed or constructed, they would have the potential to increase the exposure of people to injury or harm during a large regional earthquake. As discussed in the setting, the Amendment Area could be subject to very strong ground shaking, capable of causing considerable damage to well-built structures, causing partial collapse of older buildings (e.g., soft-story buildings, and those built of unreinforced masonry) and damaging underground utilities. In addition, the entire Amendment Area is located over soils susceptible to liquefaction, which substantially increases the potential damage incurred by structures and utility lines in the event of an earthquake. These hazards must be properly evaluated and mitigated as specific projects are implemented within the Amendment Area.

As described in the regulatory setting, proposed developments would be required to comply with the Seismic Hazards Mapping Act and with the California Building Code. These laws require development projects to demonstrate that (1) soil conditions are known and that foundations have been designed according to the proper seismic design category and (2) that the risk of liquefaction and other ground failures has been evaluated and that appropriate mitigation measures, if necessary, have been incorporated into project design. All proposed developments within the Amendment Area that coincide with the Seismic Hazard Zone for liquefaction would also be required to comply with CGS guidelines for evaluating and mitigating seismic hazards (Special Publication 117A) (CGS, 2008).

To ensure compliance with these laws, as well as the seismic requirements of the City of Oakland Building Code, the City requires owners/developers to prepare a soils report and geotechnical

report for proposed developments that include generally accepted and appropriate engineering techniques for determining the susceptibility of the project site to various geologic and seismic hazards. These requirements are implemented through uniformly-applied Standard Conditions of Approval (SCA) (City of Oakland, 2008), consistent with General Plan Policies. The geotechnical report (SCA 59, *Geotechnical Report*) would include an analysis of ground shaking effects, liquefaction potential, and provide recommendations to reduce these hazards. Owners/developers of development facilitated by the Proposed Amendments would be required to submit an engineering analysis accompanied by detailed engineering drawings to the City of Oakland Building Services Division prior to excavation, grading, or construction activities on a project site. Geotechnical and seismic design criteria would conform to engineering recommendations consistent with the seismic requirements set forth in the California Code of Regulations, Title 24, California Building Standards Code in effect at the time of permit application.

Further, development facilitated by the Proposed Amendments would be required to complete project-level environmental review pursuant to the California Environmental Quality Act (CEQA), as needed and appropriate. The potential impacts related to geology, soils and geohazards resulting from construction and operation of specific projects would be analyzed at a greater level of detail, taking into account the project's unique geologic conditions and structural components. The requirements of the CBC, Seismic Hazards Mapping Act, and Oakland's standard conditions of approval would ensure that new developments facilitated by the Proposed Amendments would do not expose people or structures to an unacceptable level of risk⁶ during a large regional earthquake.

It is important to ensure that projects facilitated by the Proposed Amendments involving addition of housing or office spaces to *existing* structures occur in structures that are seismically sound. The Amendment Area could contain buildings constructed prior to the development of modern building codes. Buildings constructed of unreinforced masonry have been widely recognized for experiencing life safety hazardous damage including partial or total collapse during moderate to strong earthquakes. Further, buildings subject to the Oakland Building Code prior to November 26, 1948 (the effective date of the building code requiring earthquake resistant design of buildings) may present an unacceptable level of risk to the residents during an earthquake. Implementation of SCA 58, *Soils Report*, and SCA 59, *Geotechnical Report*, and application of the City's building and grading codes occur as part of submittal of development plans; or projects involving excavation, grading, or construction. Any modification of a structure would require a building permit, and if the structure is out of seismic code, then it would require upgrades before a permit is issued. Under the Section 3406.1 of the CBC, however, any project that would place a building in a different occupancy category or use-type would be required to comply with the current CBC code applicable to the new use or occupancy category. This ensures that buildings that may be seismically unsound would be required to retrofit prior to approval of use changes or changes in occupancy levels. Therefore, impacts related to seismic hazards would be less than significant.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant seismic hazards effect

⁶ An "acceptable level" of risk means that which provides reasonable protection of the public safety, though it does not necessarily ensure continued structural integrity and functionality of the project [CCR Title 14, Section 3721(a)].

identified in the 2000 EIR. Adherence to the SCAs and applicable codes and regulations discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusions regarding the potential impacts related to seismic hazards are substantially the same as identified in the 2000 EIR (Initial Study Item # 1). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Updated Impact GEO-2: Development facilitated by the Redevelopment Plan, as Amended, could be subjected to geologic hazards, including expansive soils, subsidence, seismically induced settlement and differential settlement. (Less than Significant)

Presence of unstable land, loose fill and issues related to exposure to geologic hazards within the Existing Project Area were discussed in the 2000 EIR (Initial Study Item #2-4), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to geologic conditions has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing geologic hazards effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Soils containing a high percentage of clays are generally most susceptible to expansion. Expansive soils can damage foundations of above-ground structures, paved roads and streets, and concrete slabs. As discussed in the setting, soils that are expansive contain a significant clay fraction. The Urban Land complexes underlying the Amendment Area could potentially be subject to shrink-swell behavior. The artificial fill along the former path of Temescal Creek could also be subject to shrink-swell behavior. Further settlement and differential settlement could affect portions of the Amendment Area.

As development facilitated by the Proposed Amendments are further developed, they will undergo project-level CEQA review as needed and appropriate, which will further determine the potential for soil constraints to affect proposed developments. In addition, as discussed in Updated Impact GEO-1, the City of Oakland imposes standard conditions of approval requiring proposed developments to conduct a soil reports (SCA 58) and geotechnical studies (SCA 59). These conditions of approval would ensure that construction methods and building designs are in place to overcome problematic soils (such methods typically involve soil removal and replacement, or special foundation design). Standard conditions of approval would ensure that

structures are protected from expansive soil and settlement concerns. The impact would be less than significant.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant geologic hazards effect identified in the 2000 EIR. Adherence to the SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impacts related to unstable land and geologic hazards are substantially the same as identified in the 2000 EIR (Initial Study Checklist Item # 2, 3, and 4). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Cumulative Impacts

Updated Impact GEO-3: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects in and around the Amendment Area and the Project Area, as Amended, would not result in significant cumulative impacts with respect to geology, soils or seismicity. (Less than Significant)

Geographic Context

Although the entire Bay Area is situated within a seismically active region with a wide range of geologic and soil conditions, these conditions can vary widely within a short distance, making the cumulative context for potential impacts resulting from exposing people and structures to related risks one that is more localized or even site-specific. Potential cumulative geology and seismic impacts do not extend far beyond a project’s boundaries, since such geological impacts are typically confined to discrete spatial locations and do not combine to create an extensive cumulative impact. The exception to this generalization would occur where a large geologic feature (e.g., fault zone, massive landslide) might affect an extensive area, or where a project could affect the geology of an off-site location. These circumstances are not likely to occur in the Project Area, as Amended, as there are no large landslide features or fault zones. The development facilitated by the Redevelopment Plan, as Amended, would be located near, or encompass other development and would have the opportunity to combine with structural damage from other past, present, and reasonably foreseeable future projects. These include but are not limited to projects listed in the Major Projects List in Appendix B to this Draft SEIR, as well as other cumulative development

considered, as discussed in Section 4.09, *Cumulative Context*, at the beginning of Chapter 4 of this Draft SEIR.

The development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended. Changes to the geology, soils and geohazards setting that have occurred since preparation of the 2000 EIR are included in the analysis of “past, present or reasonably foreseeable” projects that accordingly are considered in the cumulative analysis in this SEIR. As discussed in the *Approach to Analysis*, above, no substantial change to geologic conditions has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing public services effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Impacts

During the early part of the 1900s, nonprofit organizations developed model building codes used throughout the United States. Although these regional code developments were effective and responsive to regulatory needs, the time came for a single set of codes. The International Code Council was established as a nonprofit organization dedicated to developing a single set of comprehensive and coordinated national model construction codes, now known as the Uniform Building Code. Within California, additional state requirements were added to the UBC to form the California Model Building Codes. Localities, such as the City of Oakland, may adopt additional amendments to the CBC through local ordinance. The trend in building codes has been increased rigor in the design and implementation requirements for geotechnical and seismic safety. These requirements, as specified by state and local regulation with the adoption of the CBC and amendments, have progressively become more rigorous in requirements mandating a greater reduction of risk to life, health, and safety, and minimized seismic risk.

The cumulative analysis considers the development facilitated by the Proposed Amendments combined with other past, present, existing, pending and reasonably foreseeable projects. Present, pending and future projects within and adjacent to the Amendment Area are subject to enhanced building code requirements for geotechnical and seismic safety and result in reduced geologic and seismic hazards. As present and future projects replace aging infrastructure and older structures with new, more rigorously regulated projects, the potential for cumulative seismic risks is incrementally reduced over time.

The SCAs discussed above, including appropriate grading requirements, and compliance with the UBC as locally amended would reduce the potential for cumulative geologic and seismic effects from the Amendment Area and surrounding area. Therefore, implementation of the development facilitated by the Proposed Amendments together with the impact of past, present, existing, pending and reasonably foreseeable future development would not result in any significant cumulative geologic and seismic impacts. Moreover, given that the development facilitated by the Proposed Amendments would remove older structures and replace them with new structures that must comply with current and future building code requirements for geologic and seismic safety, the development facilitated by the Proposed Amendments would not make any considerable

contribution to any potential cumulative impact, because it would improve geologic and seismic safety in the Amendment Area. The impact would be less than significant.

This analysis of the Redevelopment Plan, as Amended, in addition to other cumulative development, considers the effects described above for the Amendment Area, in combination with the less-than-significant impact regarding cumulative effects related to geology, soils and geohazards identified in the 2000 EIR . Project-specific environmental review and design review of specific projects facilitated by the Redevelopment Plan, as Amended, would occur and development would adhere to applicable SCAs and comply with the UBC as locally amended to reduce potential effects. Therefore, the impact of cumulative effects related to geology, soils and geohazards from development facilitated by the Redevelopment Plan, as Amended, would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential for a cumulative impact related to geology, soils and geohazards is substantially the same as identified in the 2000 EIR (Initial Study Checklist Mandatory Finding “c”). New SCAs apply and are consistent with and update the previous analysis. No new significant environmental effects or substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

4.5.5 References

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4.6 Greenhouse Gases and Climate Change

This section presents an overview of region-specific information related to greenhouse gases (GHGs), including a description of current air quality conditions in the vicinity of the Project Area, as Amended, and sensitive land uses that could be affected by GHG emissions. The impact analysis evaluates the expected emissions associated with development facilitated by the Redevelopment Plan, as Amended, in addition to development specific to the Proposed Amendments and the Existing Redevelopment Plan. The analysis evaluates potential effects on sensitive receptors in the vicinity, and includes appropriate City Standard Conditions of Approval (SCAs). An analysis of the emissions contribution of each of the scenarios to global climate change and GHG emissions is also included at the end of this section. Pursuant to CEQA Guidelines Section 15162 regarding an SEIR, this section also discusses whether there are any new or more severe significant impacts than those identified in the 2000 EIR that result from changed circumstances or new information.

4.6.1 2000 EIR and Existing Project Area

GHG issues were not discussed in the 2000 EIR, therefore the GHG Physical Setting, Regulatory Setting, and Impacts and Mitigation Measures analysis that follows addresses the potential effects of the Redevelopment Plan, as Amended. The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Emissions specific to the Amendment Area and the Existing Project Area are also included. The analysis for GHG utilizes the current established City of Oakland's *CEQA Thresholds/Criteria of Significance Guidelines*, which align with the BAAQMD CEQA Guidelines.

4.6.2 Physical Setting

There is a general scientific consensus that global climate change is occurring, caused in whole or in part, by increased emissions of GHGs that keep the Earth's surface warm by trapping heat in the Earth's atmosphere (USEPA, 2000), in much the same way as glass in a greenhouse. While many studies show evidence of warming over the last century and predict future global warming, the precise causes of such warming and its potential effects are far less certain.¹ While the greenhouse effect is responsible for maintaining a habitable climate on Earth, human activity has caused increased concentrations of these gases in the atmosphere, contributing to an increase in global temperatures and alterations of climactic conditions.

The USEPA has recently concluded that scientists have a good understanding of the following relationship and data supporting the following:

¹ "Global climate change" is a broad term used to describe any worldwide, long-term change in the earth's climate. "Global warming" is more specific and refers to a general increase in temperatures across the earth, although it can cause other climatic changes, such as a shift in the frequency and intensity of weather events and even cooler temperatures in certain areas, even though the world, on average, is warmer.

- “Human activities are changing the composition of Earth’s atmosphere. Increasing levels of greenhouse gases like carbon dioxide (CO₂) in the atmosphere since pre-industrial times are well-documented.”
- The atmospheric buildup of CO₂ and other greenhouse gases is largely the result of human activities such as the burning of fossil fuels.
- A warming trend of approximately 0.7 to 1.5°F occurred during the 20th century. Warming occurred in both the northern and southern hemispheres, and over the oceans.
- “The key greenhouse gases emitted by human activities remain in the atmosphere for periods ranging from decades to centuries.” It is therefore virtually certain that atmospheric concentrations of greenhouse gases will continue to rise over the next few decades. Increasing greenhouse gas concentrations tend to warm the planet. (USEPA, 2000)

At the same time, there is much uncertainty concerning the magnitude and rate of the warming. Specifically, the USEPA notes that “important scientific questions remain about how much warming will occur; how fast it will occur; and how the warming will affect the rest of the climate system, including precipitation patterns and storms. Answering these questions will require advances in scientific knowledge in a number of areas:

- Improving understanding of natural climatic variations, changes in the sun’s energy, land-use changes, the warming or cooling effects of pollutant aerosols, and the impacts of changing humidity and cloud cover.
- Determining the relative contribution to climate change of human activities and natural causes.
- Projecting future greenhouse emissions and how the climate system will respond within a narrow range.
- Improving understanding of the potential for rapid or abrupt climate change.” (USEPA, 2000)

Greenhouse Gases (GHGs)

Carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) are the principal GHGs, and when concentrations of these gases exceed natural concentrations in the atmosphere, the greenhouse effect may be enhanced. CO₂, CH₄ and N₂O occur naturally, but are also generated through human activity. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills. Other human generated GHGs, which have much higher heat-absorption potential than CO₂, include fluorinated gases such as hydrofluorocarbons (HFCs), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆) which are byproducts of certain industrial processes.

Potential Effects of Human Activity on GHG Emissions

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO₂ emissions (and thus substantial increases in

atmospheric concentrations). In 1994, atmospheric CO₂ concentrations were found to have increased by nearly 30 percent above pre-industrial (c.1860) concentrations.

The effect each GHG has on climate change is measured as a combination of the volume of its emissions, and its global warming potential (GWP),² and is expressed as a function of how much warming would be caused by the same mass of CO₂. Thus, GHG emissions are typically measured in terms of pounds or tons of CO₂e.

Global Emissions

Worldwide emissions of GHGs in 2004 were 30 billion tons of CO₂e per year (UNFCCC, 2007) (including both ongoing emissions from industrial and agricultural sources, but excluding emissions from land-use changes).

U.S. Emissions

In 2004, the United States emitted about 8 billion tons of CO₂e or about 25 tons/year/person. Of the four major sectors nationwide — residential, commercial, industrial and transportation — transportation accounts for the highest fraction of GHG emissions (approximately 35 to 40 percent); these emissions are entirely generated from direct fossil fuel combustion (USEPA, 2000).

State of California Emissions

In 2004, California emitted approximately 550 million tons of CO₂e, or about six percent of the U.S. emissions. This large number is due primarily to the sheer size of California compared to other states. By contrast, California has one of the fourth lowest per capita GHG emission rates in the country, due to the success of its energy-efficiency and renewable energy programs and commitments that have lowered the state's GHG emissions rate of growth by more than half of what it would have been otherwise (California Energy Commission [CEC], 2007). Another factor that has reduced California's fuel use and GHG emissions is its mild climate compared to that of many other states.

The California Environmental Protection Agency (Cal EPA) Climate Action Team stated in its March 2006 report that the composition of gross climate change pollutant emissions in California in 2002 (expressed in terms of CO₂ equivalence) were as follows:

- Carbon dioxide (CO₂) accounted for 83.3 percent;
- Methane (CH₄) accounted for 6.4 percent;
- Nitrous oxide (N₂O) accounted for 6.8 percent; and
- Fluorinated gases (HFCs, PFC, and SF₆) accounted for 3.5 percent (CalEPA, 2006).

The CEC found that transportation is the source of approximately 41 percent of the state's GHG emissions, followed by electricity generation (both in-state and out-of-state) at 23 percent, and industrial sources at 20 percent. Agriculture and forestry is the source of approximately

² The potential of a gas or aerosol to trap heat in the atmosphere.

8.3 percent, as is the source categorized as “other,” which includes residential and commercial activities (CEC, 2007).

Bay Area Emissions

In the Bay Area, fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of the Bay Area’s GHG emissions, accounting for just over half of the Bay Area’s 85 million tons of GHG emissions in 2002. Industrial and commercial sources were the second largest contributors of GHG emissions with about 25 percent of total emissions. Domestic sources (e.g., home water heaters, furnaces, etc.) account for about 11 percent of the Bay Area’s GHG emissions, followed by power plants at seven percent. Oil refining currently accounts for approximately six percent of the total Bay Area GHG emissions (BAAQMD, 2008b).

Oakland Emissions

The City of Oakland, in partnership with ICLEI – Local Governments for Sustainability (formerly International Council for Local Environmental Initiatives), has developed a GHG emissions inventory estimating citywide GHG emissions for the year 2005 at approximately three million metric tons of CO₂e (City of Oakland, 2009). This citywide GHG emissions inventory reflects all the energy used and waste produced within the Oakland city limits. When emissions from highway transportation are considered in this total, approximately 58 percent of Oakland’s annual GHG emissions are associated with the transportation sector. Natural gas consumption represents approximately 22 percent of Oakland’s GHG emissions, while electricity use and waste decomposition represent 16 percent and four percent of Oakland’s total GHG emissions, respectively. As shown in **Table 4.6-1**, Oakland emitted approximately three million metric tons of CO₂e in 2005 from all major sources, more than half of which were from transportation.

**TABLE 4.6-1
 OAKLAND COMMUNITY-WIDE GHG EMISSIONS SUMMARY – 2005 (TONS/YEAR)**

| GHG Emissions Source | Metric Tons of Carbon Dioxide Equivalent (CO₂e) | Percent of Total |
|-----------------------------------|---|-------------------------|
| Non-Highway Transportation | 759,884 | 25% |
| Highway Transportation | 1,006,911 | 33% |
| Commercial/Industrial Electricity | 320,151 | 11% |
| Commercial/Industrial Natural Gas | 288,514 | 10% |
| Residential Electricity | 150,077 | 5% |
| Residential Natural Gas | 350,162 | 12% |
| Landfilled Solid Waste | 126,361 | 4% |
| Total | 3,002,060 | 100% |

SOURCE: City of Oakland, 2009.

Construction and Development Emissions

The construction and operation of developments, such as those facilitated by the Redevelopment Plan, as Amended, cause GHG emissions. Operational phase GHG emissions result from energy use associated with heating, lighting and powering buildings (typically through natural gas and electricity consumption in Oakland), pumping and processing water, as well as fuel used for transportation and decomposition of waste associated with building occupants.

New development can also create GHG emissions in its construction and demolition phases including the use of fuels in construction equipment, creation and decomposition of building materials, vegetation clearing, natural gas usage, electrical usage (since electricity generation by conventional means is a major contributor of GHG emissions, discussed below), and transportation.

However, it is important to acknowledge that new development does not necessarily create entirely new GHG emissions, since most of the persons who will visit or occupy new development will come from other locations where they were already causing such GHG emissions. Further, as discussed above, it has not been demonstrated that new GHG emissions caused by a local development project can affect global climate change, or that a project's net increase in GHG emissions, if any, when coupled with other activities in the region, would be cumulatively considerable.

Potential Effects of Human Activity on Global Climate Change

Globally, climate change has the potential to impact numerous environmental resources through anticipated, though uncertain, impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. A warming of about 0.2°C (0.36°F) per decade is projected, and there are identifiable signs that global warming is taking place, including substantial loss of ice in the Arctic (International Panel on Climate Change [IPCC], 2000).

However, the understanding of GHG emissions, particulate matter, and aerosols on global climate trends remains uncertain. In addition to uncertainties about the extent to which human activity rather than solar or volcanic activity is responsible for increasing warming, there is also evidence that some human activity has cooling, rather than warming, effects, as discussed in detail in numerous publications by the IPCC, namely "Climate Change 2001, The Scientific Basis"(2001).³

Acknowledging uncertainties regarding the rate at which anthropogenic GHG emissions would continue to increase (based upon various factors under human control, such as future population growth and the locations of that growth; the amount, type, and locations of economic development; the amount, type, and locations of technological advancement; adoption of alternative energy

³ The IPCC was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to assess scientific, technical and socio-economic information relevant for the understanding of climate change, its potential impacts and options for adaptation and mitigation.

sources; legislative and public initiatives to curb emissions; and public awareness and acceptance of methods for reducing emissions), and the impact of such emissions on climate change, the IPCC devised a set of six “emission scenarios” which utilize various assumptions about the rates of economic development, population growth, and technological advancement over the course of the next century (IPCC, 2000). These emission scenarios are paired with various climate sensitivity models to attempt to account for the range of uncertainties which affect climate change projections. The wide range of temperature, precipitation, and similar projections yielded by these scenarios and models reveal the magnitude of uncertainty presently limiting climate scientists’ ability to project long-range climate change (as previously discussed).

The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects, according to the IPCC (IPCC, 2000):

- Snow cover is projected to contract, with permafrost areas sustaining thawing;
- Sea ice is projected to shrink in both the Arctic and Antarctic;
- Hot extremes, heat waves, and heavy precipitation events are likely to increase in frequency;
- Future tropical cyclones (typhoons and hurricanes) will likely become more intense;
- Non-tropical storm tracks are projected to move poleward, with consequent changes in wind, precipitation, and temperature patterns. Increases in the amount of precipitation are very likely in high-latitudes, while decreases are likely in most subtropical regions; and
- Warming is expected to be greatest over land and at most high northern latitudes, and least over the Southern Ocean and parts of the North Atlantic Ocean.

Potential secondary effects from global warming include global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

Potential Effects of Climate Change on State of California

According to the ARB, some of the potential impacts in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years.⁴ Several recent studies have attempted to explore the possible negative consequences that climate change, left unchecked, could have in California. These reports acknowledge that climate scientists’ understanding of the complex global climate system, and the interplay of the various internal and external factors that affect climate change, remains too limited to yield scientifically valid conclusions on such a localized scale. Substantial work has been done at the international and national level to evaluate climatic impacts, but far less information is available on regional and local impacts. In addition, projecting regional impacts of climate change and variability relies on large-scale scenarios of changing climate

⁴ California Air Resources Board (ARB), 2006c. *Public Workshop to Discuss Establishing the 1990 Emissions Level and the California 2020 Limit and Developing Regulations to Require Reporting of Greenhouse Gas Emissions*, Sacramento, CA. December 1, 2006.

parameters, using information that is typically at too general a scale to make accurate regional assessments.⁵

Below is a summary of some of the potential effects reported in an array of studies that could be experienced in California as a result of global warming and climate change:

- *Air Quality*. Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. For other pollutants, the effects of climate change and/or weather are less well studied, and even less well understood.⁶ If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State (California Climate Change Center [CCCC], 2006).
- *Water Supply*. Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. For example, models that predict drier conditions (i.e., parallel climate model [PCM]) suggest decreased reservoir inflows and storage and decreased river flows, relative to current conditions. By comparison, models that predict wetter conditions (i.e., HadCM2) project increased reservoir inflows and storage, and increased river flows (Brekke, et al., 2004).

A July 2006 technical report prepared by the California Department of Water Resources (DWR) addresses the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta. Although the report projects that “[c]limate change will likely have a significant effect on California’s future water resources . . . [and] future water demand,” it also reports that “much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain. This uncertainty serves to complicate the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood (DWR, 2006).” DWR adds that “[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future (DWR, 2006).” Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows (Kiparsky, 2003; DWR, 2005; Cayan et al., 2006). Water purveyors, such as the East Bay Municipal Utility District (EBMUD), are required by state law to prepare Urban Water Management Plans (UWMPs) (discussed below, under Regulatory Setting) that consider climatic variations and corresponding impacts on long-term water supplies (California Water Code, Section 10631[c]). DWR has published a 2005 SWP Delivery Reliability Report, which

⁵ Kiparsky, M. and P.H. Gleick, 2003. *Climate Change and California Water Resources: A Survey and Summary of the Literature*. Oakland, CA: Pacific Institute for Studies in Development. July, 2003.

⁶ US EPA, 2007, op. cit.

presents information from computer simulations of the SWP operations based on historical data over a 73-year period (1922–1994). The DWR notes that the results of those model studies “represent the best available assessment of the delivery capability of the SWP.” In addition, the DWR is continuing to update its studies and analysis of water supplies. EBMUD would incorporate this information from DWR in its update of its current UWMP 2005 (required every five years per the California Water Code), and information from the UWMP can be incorporated into Water Supply Assessments (WSAs) and Water Verifications prepared for certain development projects in accordance with California Water Code Section 10910, et seq. and California Government Code Section 66473.7, et seq. (See Section 4.14, *Utilities and Service Systems*, in this SEIR for a discussion of the WSA.)

- ***Hydrology.*** As discussed above, climate change could potentially affect the following: the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes—expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could also jeopardize California’s water supply. In particular, saltwater intrusion would threaten the quality and reliability of the state’s major fresh water supply that is pumped from the southern portion of the Sacramento/San Joaquin River Delta. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.
- ***Agriculture.*** California has a \$30 billion agricultural industry that produces half the country’s fruits and vegetables. The CCCC notes that higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase, crop-yield could be threatened by a less reliable water supply, and greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year that certain crops, such as wine grapes, bloom or ripen, and thus affect their quality (CCCC, 2006).
- ***Ecosystems and Wildlife.*** Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. In 2004, the Pew Center on Global Climate Change released a report examining the possible impacts of climate change on ecosystems and wildlife (Parmesan and Galbraith, 2004). The report outlines four major ways in which it is thought that climate change could affect plants and animals: (1) timing of ecological events; (2) geographic range; (3) species’ composition within communities; and (4) ecosystem processes such as carbon cycling and storage.

4.6.3 Regulatory Setting

Global climate change is addressed through the efforts of various federal, state, regional, and local government agencies as well as national and international scientific and governmental conventions and programs. These agencies work jointly, as well as individually, to understand and regulate the effects of greenhouse gas emissions and resulting climate change through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies, conventions and programs focused on global climate change are discussed below.

International and Federal

Kyoto Protocol. The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated five percent from 1990 levels during the first commitment period of 2008–2012. It should be noted that although the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol’s commitments.

Copenhagen Summit. The 2009 United Nations Climate Change Conference, i.e., Copenhagen Summit, was held in Denmark in December 2009. The conference included the 15th Conference of the Parties (COP 15) to the United Nations Framework Convention on Climate Change and the 5th Meeting of the Parties (COP/MOP 5) to the Kyoto Protocol. A framework for climate change mitigation beyond 2012 was to be agreed there. The Copenhagen Accord was drafted by the US, China, India, Brazil and South Africa on December 18, and judged a “meaningful agreement” by the United States government. It was “taken note of”, but not “adopted”, in a debate of all the participating countries the next day, and it was not passed unanimously. The document recognized that climate change is one of the greatest challenges of the present day and that actions should be taken to keep any temperature increases to below 2°C. The document is not legally binding and does not contain any legally binding commitments for reducing CO₂ emissions.

Climate Change Technology Program. The United States has opted for a voluntary and incentive-based approach toward emissions reductions in lieu of the Kyoto Protocol’s mandatory framework. The Climate Change Technology Program (CCTP) is a multi-agency research and development coordination effort (which is led by the Secretaries of Energy and Commerce) that is charged with carrying out the President’s National Climate Change Technology Initiative (CCTP, 2006).

U.S. Environmental Protection Agency (USEPA). To date, the USEPA has not regulated GHGs under the Clean Air Act (see Section 4.2, Air Quality, for a description of the Clean Air Act) based on its assertion in *Massachusetts et al. v. Environmental Protection Agency (EPA) et al.* (U.S. Supreme Court, 2007) that the “Clean Air Act does not authorize it to issue mandatory regulations to address global climate change and that it would be unwise to regulate GHG emissions because a causal link between GHGs and the increase in global surface air temperatures has not been unequivocally established.” However, in the same case, (*Massachusetts v. EPA*) the U.S. Supreme Court held that the USEPA can, and should, consider regulating motor-vehicle GHG emissions.

State of California

AB 1493 and Amended “Pavley” Regulations. On July 1, 2002, the California Assembly passed Bill 1493 (AB 1493) (signed into law on July 22, 2002), requiring the ARB to “adopt regulations that achieve the maximum feasible and cost-effective reduction of GHG emissions

from motor vehicles.” The regulations were to be adopted by January 1, 2005, and apply to 2009 and later model-year vehicles. In September 2004, ARB responded by adopting “CO₂-equivalent fleet average emission” standards. The standards will be phased in from 2009 to 2016, reducing emissions by 22 percent in the “near term” (2009–2012) and 30 percent in the “mid term” (2013–2016), as compared to 2002 fleets.

Executive Order (E.O.) S-3-05. On June 1, 2005, Governor Arnold Schwarzenegger signed E.O. S-3-05, establishing statewide GHG emission reduction targets. This E.O. provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels. The Secretary of the Cal EPA is charged with coordinating oversight of efforts to meet these targets and formed the Climate Action Team (CAT) to carry out the E.O. Several of the programs developed by the CAT to meet the emission targets are relevant to residential construction and are outlined in a March 2006 report (Cal EPA, 2006). These include prohibition of idling of certain classes of construction vehicles, provision of recycling facilities within residential buildings and communities, compliance with the CEC’s building and appliance energy efficiency standards, compliance with California’s Green Buildings and Solar initiatives, and implementation of water-saving technologies and features.

AB 32. On August 31, 2006, the California Assembly passed Bill 32 (AB 32) (signed into law on September 27, 2006), the California Global Warming Solutions Act of 2006. AB 32 commits California to reduce GHG emissions to 1990 levels by 2020 and establishes a multi-year regulatory process under the jurisdiction of the ARB to establish regulations to achieve these goals. The regulations shall require monitoring and annual reporting of GHG emissions from selected sectors or categories of emitters of GHGs. By January 1, 2008, ARB was required to adopt a statewide GHG emissions limit equivalent to the statewide GHG emissions levels in 1990, which must be achieved by 2020. By January 1, 2011, ARB is required to adopt rules and regulations, which shall become operative January 1, 2012, to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

On April 20, 2007, ARB published *Proposed Early Actions to Mitigate Climate Change in California* (Cal EPA, 2007). There are no early action measures specific to residential development included in the list of 36 measures identified for ARB to pursue during calendar years 2007, 2008, and 2009. Also, this publication indicated that the issue of GHG emissions in CEQA and General Plans was being deferred for later action, so the publication did not discuss any early action measures generally related to CEQA or to land use decisions. As noted in that report, “AB 32 requires that all GHG reduction measures adopted and implemented by the Air Resources Board be technologically feasible and cost effective (Cal EPA, 2007).” The law permits the use of market-based compliance mechanisms to achieve those reductions and also requires that GHG measures have neither negative impacts on conventional pollutant controls nor any disproportionate socioeconomic effects (among other criteria).

On December 11, 2008, ARB adopted its *Climate Change Scoping Plan* (Scoping Plan), which functions as a roadmap of ARB’s plans to achieve GHG reductions in California required by

AB 32 through subsequently enacted regulations. The Scoping Plan contains the main strategies California will implement to reduce CO₂e emissions by 174 million metric tons (MMT), or approximately 30 percent, from the state's projected 2020 emissions level of 596 MMT of CO₂e under a business-as-usual scenario. The Scoping Plan also breaks down the amount of GHG emissions reductions ARB recommends for each emissions sector of the state's GHG inventory. While ARB has identified a GHG reduction target of 15 percent for local governments themselves, it has not yet determined what amount of GHG emissions reductions it recommends from local government land use decisions. However, the Scoping Plan does state that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. ARB further acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The measures approved by ARB will be developed and in place by 2012.

The Scoping Plan also includes recommended measures that were developed to reduce GHG emissions from key sources and activities while improving public health, promoting a cleaner environment, preserving our natural resources, and ensuring that the impacts of the reductions are equitable and do not disproportionately impact low-income and minority communities. These measures, shown below in **Table 4.6-2** by sector, also put the state on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80 percent below 1990 levels.

California Senate Bill 1368 (SB 1368). On August 31, 2006, the California Senate passed SB 1368 (signed into law on September 29, 2006), which required the California Public Utilities Commission (CPUC) to develop and adopt a "greenhouse gases emission performance standard" by February 1, 2007, for the private electric utilities under its regulation. The CPUC adopted an interim standard on January 25, 2007, but formally requested a delay until September 30, 2007, for the local publicly-owned electric utilities under its regulation. These standards apply to all long-term financial commitments entered into by electric utilities. The CEC adopted a consistent standard in August, 2007. (Natural Resources Defense Council [NRDC], 2007)

California Senate Bill 97 (SB 97). Governor Schwarzenegger signed SB 97 (Chapter 185, Statutes 2007) into law on August 24, 2007. The legislation provides partial guidance on how greenhouse gases should be addressed in certain CEQA documents.

SB 97 required the Governor's Office of Planning and Research (OPR) to prepare CEQA Guidelines for the mitigation of GHG emissions, including, but not limited to, effects associated with transportation or energy consumption. The Resources Agency was required to certify and adopt the guidelines by January 1, 2010, and the relevant amendments became effective April, 2010, as discussed below. OPR and the Resources Agency are required to periodically review the guidelines to incorporate new information or criteria adopted by ARB facilitated by the Global Warming Solutions Act, scheduled for 2012.

**TABLE 4.6-2
 LIST OF RECOMMENDED ACTIONS BY SECTOR**

| Measure No. | Measure Description | GHG Reductions (Annual Million Metric Tons CO ₂ e) |
|------------------------------------|---|---|
| Transportation | | |
| T-1 | Pavley I and II – Light Duty Vehicle Greenhouse Gas Standards | 31.7 |
| T-2 | Low Carbon Fuel Standard (Discrete Early Action) | 15 |
| T-3 ¹ | Regional Transportation-Related Greenhouse Gas Targets | 5 |
| T-4 | Vehicle Efficiency Measures | 4.5 |
| T-5 | Ship Electrification at Ports (Discrete Early Action) | 0.2 |
| T-6 | Goods Movement Efficiency Measures. <ul style="list-style-type: none"> • Ship Electrification at Ports • System-Wide Efficiency Improvements | 3.5 |
| T-7 | Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action) | 0.93 |
| T-8 | Medium- and Heavy-Duty Vehicle Hybridization | 0.5 |
| T-9 | High Speed Rail | 1 |
| Electricity and Natural Gas | | |
| E-1 | Energy Efficiency (32,000 GWh of Reduced Demand) <ul style="list-style-type: none"> • Increased Utility Energy Efficiency Programs • More Stringent Building & Appliance Standards • Additional Efficiency and Conservation Programs | 15.2 |
| E-2 | Increase Combined Heat and Power Use by 30,000 GWh (Net reductions include avoided transmission line loss) | 6.7 |
| E-3 | Renewables Portfolio Standard (33% by 2020) | 21.3 |
| E-4 | Million Solar Roofs (including California Solar Initiative, New Solar Homes Partnership and solar programs of publicly owned utilities) <ul style="list-style-type: none"> • Target of 3000 MW Total Installation by 2020 | 2.1 |
| CR-1 | Energy Efficiency (800 Million Therms Reduced Consumptions) <ul style="list-style-type: none"> • Utility Energy Efficiency Programs • Building and Appliance Standards • Additional Efficiency and Conservation Programs | 4.3 |
| CR-2 | Solar Water Heating (AB 1470 goal) | 0.1 |
| Green Buildings | | |
| GB-1 | Green Buildings | 26 |
| Water | | |
| W-1 | Water Use Efficiency | 1.4† |
| W-2 | Water Recycling | 0.3† |
| W-3 | Water System Energy Efficiency | 2.0† |
| W-4 | Reuse Urban Runoff | 0.2† |
| W-5 | Increase Renewable Energy Production | 0.9† |
| W-6 | Public Goods Charge (Water) | TBD† |
| Industry | | |
| I-1 | Energy Efficiency and Co-Benefits Audits for Large Industrial Sources | TBD |
| I-2 | Oil and Gas Extraction GHG Emission Reduction | 0.2 |
| I-3 | GHG Leak Reduction from Oil and Gas Transmission | 0.9 |
| I-4 | Refinery Flare Recovery Process Improvements | 0.3 |
| I-5 | Removal of Methane Exemption from Existing Refinery Regulations | 0.01 |

**TABLE 4.6-2 (Continued)
LIST OF RECOMMENDED ACTIONS BY SECTOR**

| Measure No. | Measure Description | GHG Reductions (Annual Million Metric Tons CO ₂ e) |
|--|--|---|
| Recycling and Water Management | | |
| RW-1 | Landfill Methane Control (Discrete Early Action) | 1 |
| RW-2 | Additional Reductions in Landfill Methane <ul style="list-style-type: none"> Increase the Efficiency of Landfill Methane Capture | TBD† |
| RW-3 | High Recycling/Zero Waste <ul style="list-style-type: none"> Commercial Recycling Increase Production and Markets for Compost Anaerobic Digestion Extended Producer Responsibility Environmentally Preferable Purchasing | 9† |
| Forests | | |
| F-1 | Sustainable Forest Target | 5 |
| High Global Warming Potential (GWP) Gases | | |
| H-1 | Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Services (Discrete Early Action) | 0.26 |
| H-2 | SF ₆ Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action) | 0.3 |
| H-3 | Reduction of Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action) | 0.15 |
| H-4 | Limit High GWP Use in Consumer Products Discrete Early Action (Adopted June 2008) | 0.25 |
| H-5 | High GWP Reductions from Mobile Sources <ul style="list-style-type: none"> Low GWP Refrigerants for New Motor Vehicle Air Conditioning Systems Air Conditioner Refrigerant Leak Test During Vehicle Smog Check Refrigerant Recovery from Decommissioned Refrigerated Shipping Containers Enforcement of Federal Ban on Refrigerant Release during Servicing or Dismantling of Motor Vehicle Air Conditioning Systems | 3.3 |
| H-6 | High GWP Reductions from Stationary Sources <ul style="list-style-type: none"> High GWP Stationary Equipment Refrigerant Management Program: <ul style="list-style-type: none"> Refrigerant Tracking/Reporting/Repair Deposit Program Specifications for Commercial and Industrial Refrigeration Systems Foam Recovery and Destruction Program SF Leak Reduction and Recycling in Electrical Applications Alternative Suppressants in Fire Protection Systems Residential Refrigeration Early Retirement Program | 10.9 |
| H-7 | Mitigation Fee on High GWP Gases | 5 |
| Agriculture | | |
| A-1 | Methane Capture at Large Dairies | 1.0† |

¹ This is not the SB 375 regional target. ARB will establish regional targets for each Metropolitan Planning Organization (MPO) region following the input of the regional targets advisory committee and a consultation process with MPO's and other stakeholders per SB 375.
† GHG emission reduction estimates are not included in calculating the total reductions needed to meet the 2020 target.

In January 2009, OPR released preliminary proposed amendments to the CEQA Guidelines regarding GHG emissions. No significance threshold is included in the draft and the guidelines afford the customary deference provided to lead agencies in their analysis and methodologies. The introductory preface to the amendments recommends that ARB set state-wide thresholds of significance. OPR emphasized the necessity of having a consistent threshold available to analyze

projects, and the analyses should be performed based on the best available information. Like the advisory, the proposed Guidelines section calls for quantification of GHG emissions. The proposed section states that the significance of GHG impacts should include consideration of the extent to which the project would result in the following: help or hinder compliance with AB 32 goals; increase energy use, especially energy use generated by fossil fuel combustion; improve energy efficiency; and result in emissions that would exceed any applicable significance threshold. In April 2009, OPR forwarded the draft revisions to the California Natural Resources Agency for review and proposed adoption. On July 3, 2009, the California Natural Resources Agency began the formal rulemaking process for adopting the CEQA Guidelines. The Secretary for Natural Resources adopted Amendments to the CEQA Guidelines addressing GHG emissions on December 30, 2009. The Amendments became effective on March 18, 2010, with a 120-day grace period.

The second part of SB 97 codifies safe harbor for highways and flood control projects. It provides that the failure of a CEQA document for a project funded by Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or the Disaster Preparedness and Flood Prevention Bond Act of 2006 to adequately analyze the effects of GHG emission otherwise required to be reduced pursuant to the regulations adopted under the Global Warming Solutions Act (which are not slated for adoption until January 1, 2012), does not create a cause of action for a violation of CEQA. This portion of SB 97 had a sunset date of January 1, 2010.

The bill does not address the obligation to analyze GHGs in projects not protected by the safe harbor provision. One possible interpretation is that there is no duty until the guidelines are adopted, because CEQA Guidelines Section 15007, Subdivision (b), provides that guideline amendments apply prospectively only.

California Senate Bill 375 (SB 375). Governor Schwarzenegger signed SB 375 into law in September 2008 (Chapter 728, Statutes of 2008). The legislation aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS) that will prescribe land use allocation in the MPO's regional transportation plan. ARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects will not be eligible for funding programmed after January 1, 2012.

California Urban Water Management Act. The California Urban Water Management Planning Act requires various water purveyors throughout the State of California (such as EBMUD) to prepare UWMPs, which assess the purveyor's water supplies and demands over a 20-year horizon (California Water Code, Section 10631 *et seq.*). As required by that statute, UWMPs are updated by the purveyors every five years. As discussed above, this is relevant to global climate change

which may affect future water supplies in California, as conditions may become drier or wetter, affecting reservoir inflows and storage and increased river flows.⁷

Bay Area Air Quality Management District (BAAQMD). BAAQMD is responsible for improving air quality within the San Francisco Bay Area Basin. BAAQMD adopted updated *California Environmental Quality Act (CEQA) Air Quality Guidelines*, including new thresholds of significance in June 2010 (BAAQMD, 2011), which advise lead agencies on how to evaluate potential air quality impacts with the adopted new thresholds of significance. The analysis herein uses the updated thresholds and methodologies from the BAAQMD *CEQA Air Quality Guidelines*.

City of Oakland

City of Oakland General Plan

Oakland Energy and Climate Action Plan. An Oakland Energy and Climate Action Plan (ECAP) is being developed to identify, evaluate and recommend prioritized actions to reduce energy consumption and GHG emissions in Oakland. The ECAP will identify energy and climate goals, clarify policy direction, and identify priority actions for reducing energy use and GHG emissions. On July 7, 2009, the Oakland City Council directed staff to develop the draft Oakland ECAP using a GHG reduction target equivalent to 36 percent below 2005 GHG emissions by 2020 (City of Oakland, Resolution No. 82129 C.M.S., 2009). The City considered a draft ECAP for public review on March 1, 2011, and although the document is not yet adopted, it does not appear that development facilitated by the Redevelopment Plan, as Amended, would conflict with policies and actions in the draft ECAP. Development facilitated by the Redevelopment Plan, as Amended, does not conflict with the current City Sustainability Programs or General Plan policies regarding GHG reductions.

Land Use and Transportation Element (LUTE). The LUTE (which includes the Pedestrian Master Plan and Bicycle Master Plan) of the Oakland General Plan contains the following policies that address issues related to GHG emissions and climate change:

- *Policy T.2.1:* Transit-oriented development should be encouraged at existing or 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 T.2.2:* Transit-oriented developments should be pedestrian-oriented, encourage night and day time use, provide the neighborhood with needed goods and services, contain a mix of land uses, and be designed to be compatible with the character of surrounding neighborhoods.
- *Policy T3.5:* The City should include bikeways and pedestrian ways in the planning of new, reconstructed, or realigned streets, wherever possible.
- *Policy T3.6:* 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.

⁷ Brekke, 2004, op. cit.

- *Policy T4.2:* Through cooperation with other agencies, the City should create incentives to encourage travelers to use alternative transportation options.
- *Policy N3.2:* In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City of Oakland.
- *Policy T4.5:* The City should prepare, adopt, and implement a Bicycle and Pedestrian Master Plan as a part of the Transportation Element of [the] General Plan.

Open Space, Conservation and Recreation Element (OSCAR). The OSCAR Element includes policies that address GHG reduction and global climate change. Listed below are the following types of OSCAR policies: policies that encourage the provision of open space, which increases vegetation area (trees, grass, landscaping, etc.) to effect cooler climate, reduce excessive solar gain, and absorb CO₂; policies that encourage stormwater management, which relates to the maintenance of floodplains and infrastructure to accommodate potential increased storms and flooding; and policies that encourage energy efficiency and use of alternative energy sources, which directly address reducing GHG emissions.

- *Policy OS-1.1:* Conserve existing City and Regional Parks characterized by steep slopes, large groundwater recharge areas, native plant and animal communities, extreme fire hazards, or similar conditions.
- *Policy OS-2.1:* Manage Oakland's urban parks to protect and enhance their open space character while accommodating a wide range of outdoor recreational activities.
- *Policy CO-5.3:* Employ a broad range of strategies, compatible with the Alameda Countywide Clean Water Program.
- *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 live-work development, mixed use development, and office development with ground floor retail space; (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-12.3:* 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 and pedestrian travel.
- *Policy CO-12.5:* Require new industry to use best available control technology to remove pollutants, including filtering, washing, or electrostatic treatment of emissions.

- *Policy CO-13.2:* Support public information campaigns, energy audits, the use of energy-saving appliances and vehicles, and other efforts which help Oakland residents, businesses, and City operations become more energy efficient.
- *Policy CO-13.3:* Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.
- *Policy CO-13.4:* Accommodate the development and use of alternative energy resources, including solar energy and technologies which convert waste or industrial byproducts to energy, provided that such activities are compatible with surrounding land uses and regional air and water quality requirements.

Historic Preservation Element (HPE). A key HPE policy relevant to climate change encourages the reuse of existing building (and building materials) resources, which could reduce landfill material (a source of methane, a GHG), avoid the incineration of materials (which produces CO₂ as a by-product), avoid the need to transport materials to disposal sites (which produces GHG emissions), and eliminate the need for materials to be replaced by new product (which often requires the use of fossil fuels to obtain raw and manufacture new material) (USEPA 2006a).

Safety Element. Safety Element policies that address wildfire hazards related to climate change in that increased temperatures could increase fire risk in areas that become drier due to climate change (USEPA, 2010b). Also, wildfire results in the loss of vegetation; carbon is stored in vegetation, and when the vegetation burns, the carbon returns to the atmosphere (NASA, 2004). The occurrence of wildfire also emits particulate matters into the atmosphere. Safety Element policies also address storm-induced flooding hazards related to the potential to accommodate increase in storms and flooding as a result of climate change. Pertinent Safety Element policies including the following:

- *Policy FI-3:* Prioritize the reduction of the wildfire hazard, with an emphasis on prevention.
- *Policy FL-1:* Enforce and update local ordinances and comply with regional orders that would reduce the risk of storm-induced flooding.
- *Policy FL-2:* Continue or strengthen city programs that seek to minimize the storm-induced flooding hazard.

Other City of Oakland Programs and Policies. The City of Oakland has supported and adopted a number of programs and policies designed to reduce GHG emissions and continue Oakland's progress toward becoming a model sustainable city. Other programs and policies of relevance to development that would be facilitated by the Redevelopment Plan, as Amended, include:

- *Sustainable Oakland Program.* Oakland's sustainability efforts are coordinated through the Sustainable Oakland program, a product of the Oakland Sustainability Community Development Initiative (SDI) created in 1998 (Ordinance 74678 C.M.S.).
- *Green Building.* The City of Oakland has implemented Green Building principles in City buildings through the following programs: Civic Green Building Ordinance (Ordinance No. 12658 C.M.S., 2005), requiring, for certain large civic projects, techniques that minimize the environmental and health impacts of the built environment through energy,

water and material efficiencies and improved indoor air quality, while also reducing the waste associated with construction, maintenance and remodeling over the life of the building; Green Building Guidelines (Resolution No. 79871, 2006) which provides guidelines to Alameda County residents and developers regarding construction and remodeling; and Green Building Education Incentives for private developers.

- *Downtown Housing*. The 10K Downtown Housing Initiative has a goal of attracting 10,000 new residents to downtown Oakland by encouraging the development of 6,000 market-rate housing units. This effort is consistent with Smart Growth principles.
- *Waste Reduction and Recycling*. The City of Oakland has implemented a residential recycling program increasing collection of yard trimmings and food waste. This program has increased total yard trimming collections by 46 percent compared to 2004, and recycling tonnage by 37 percent. The City also adopted Construction and Demolition Recycling, for which the City passed a resolution in July 2000 (Ordinance 12253. OMC Chapter 15.34), requiring certain nonresidential or apartment house projects to recycle 100 percent of all Asphalt & Concrete (A/C) materials and 65 percent of all other materials.
- *Polystyrene Foam Ban Ordinance*. In June 2006 the Oakland City Council passed the Green Food Service Ware Ordinance (Ordinance 14727, effective as of January 1, 2007), which prohibits the use of polystyrene foam disposable food service ware and requires, when cost neutral, the use of biodegradable or compostable disposable food service ware by food vendors and City facilities.
- *Zero Waste Resolution*. In March 2006 the Oakland City Council adopted a Zero Waste Goal by 2020 Resolution (Resolution 79774 C.M.S.), and commissioned the creation of a Zero Waste Strategic Plan to achieve the goal.
- *Stormwater Management*. On October 14, 2009, the Regional Water Quality Control Board, San Francisco Bay Region, issued a municipal regional stormwater permit under the National Pollutant Discharge Elimination System (NPDES) permit program to the Alameda Countywide Clean Water Program (ACCWP). The purpose of the permit is to reduce the discharge of pollutants in stormwater to the maximum extent practicable and to effectively prohibit non-stormwater discharges into municipal storm drain systems and watercourses. The City of Oakland, as a member of the ACCWP, is a co-permittee under the ACCWP's permit and is, therefore, subject to the permit requirements.
- *Provision C.3 of the NPDES permit* is the section of the permit containing stormwater pollution management requirements for new development and redevelopment projects. Among other things, Provision C.3 requires that certain new development and redevelopment projects incorporate post-construction stormwater pollution management measures, including stormwater treatment measures, stormwater site design measures, and source control measures, to reduce stormwater pollution after the construction of the project. These requirements are in addition to standard stormwater-related best management practices (BMPs) required during construction.
- *Community Gardens and Farmer's Markets*. Community Garden locations include Arroyo Viejo, Bella Vista, Bushrod, Golden Gate, Lakeside Horticultural Center, Marston Campbell, Temescal, and Verdese Carter. Weekly Farmer's Markets locations include the Jack London Square, Old Oakland, Grand Lake, Mandela, and Temescal districts. Both efforts promote and facilitate the principal of growing and purchasing locally, which effects reductions in truck and vehicle use and GHG emissions.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The City's SCAs relevant to reducing GHG emissions and climate change impacts are discussed within the context of the GHG Emissions Inventory in the impacts analysis below in Section 4.6.4.

4.6.4 Impacts and Mitigation Measures

Significance Criteria

The Redevelopment Plan, as Amended, would have a significant impact on the environment if it were to:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, specifically:
 - Plan-level Impacts (which applies Project-level GHG numeric threshold for redevelopment plans, per BAAQMD)⁸
 - a) Produce total emissions of more than 1,100 metric tons of CO₂e annually **AND** more than 4.6 metric tons of CO₂e per service population annually⁹; or
2. Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing GHG emissions.

Approach to Analysis

As previously indicated in Section 4.6.1, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended. The approach to the analysis herein is described in detail below, and additionally, it compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.¹⁰ Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

⁸ The BAAQMD CEQA Guidelines (May 2011) state that the plan-level service threshold of 6.6 metric tons of CO₂e per service population annually should only be applied to general plans. For other types of plans, such as redevelopment plans and specific Plans, the Guidelines state that the project-level service threshold of 4.6 metric tons of CO₂e of service population annually should be used.

⁹ The project's expected greenhouse gas emissions during construction should be annualized over a period of 40 years and added to the expected emissions during operation for comparison to the threshold. A 40-year period is used because 40 years is considered the average life expectancy of a building before it is remodeled with considerations for increased energy efficiency. The thresholds are based on the BAAQMD thresholds. The BAAQMD thresholds were originally developed for project operation impacts only. Therefore, combining both the construction emissions and operation emissions for comparison to the threshold represents a conservative analysis of potential greenhouse gas impacts.

¹⁰ Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

Consideration of Certain Other Project-level GHG Analyses Since the 2000 EIR

This SEIR discusses estimated GHG emissions from development that would occur pursuant to the Redevelopment Plan, as Amended. Because details of future development projects that could occur under the Redevelopment Plan, as Amended, are not known, project design features that would avoid or minimize those emissions are not estimated. However, two major projects that the City has prepared and certified project-level EIRs and approved since preparation of the 2000 EIR, and located within the Existing Project Area, did identify and quantify project-specific GHG reduction measures that would reduce project-specific GHGs. These projects are analyzed in the Alta Bates Summit Medical Center, Summit Campus Seismic Upgrade and Master Plan EIR (May 2010) and the MacArthur Transit Village EIR (May 2008). These measures were developed pursuant to the required SCA F, *Greenhouse Gas (GHG) Reduction Plan*, and SCA 25, *Parking and Transportation Demand Management*, required for both projects. The project-specific GHG reduction measures are, and will continue to be, implemented during the ongoing construction and operation of those projects. Although these measures will reduce the potential emissions reported for development facilitated by the Redevelopment Plan, as Amended, those reductions to reduce the estimated emissions are not quantified in this program-level document; therefore the emissions reported in this SEIR analysis is conservative in that it likely overestimates the potential emissions associated with development in the Project Area, as Amended. Additionally, the GHG emissions estimated for the Existing Project Area do not account for the removal of existing uses that would likely occur to accommodate new development under the Existing Redevelopment Plan. This approach also makes the emissions reported in this SEIR analysis conservative in that it likely overestimates the potential emissions associated with development in the Existing Project Area (and thus the Project Area, as Amended).

GHG Emissions Estimates

As previously stated, this analysis addresses the potential GHG impacts associated with development facilitated by the Redevelopment Plan, as Amended. For context, the analysis first estimates emissions for the Amendment Area, combines those with the estimated emissions for the Existing Project Area, and then reports the combined emissions, which are those associated with development under the Redevelopment Plan, as Amended,

Quantitative and Qualitative Approach

This SEIR uses both a quantitative and a qualitative approach. The quantitative approach is used to answer the first threshold: will development facilitated by the Redevelopment Plan, as Amended, generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. The quantitative threshold discussed above is used to determine if this threshold is met.

The qualitative approach addresses the second threshold: will development facilitated by the Redevelopment Plan, as Amended, conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Theoretically, if a project implements reduction strategies identified in AB 32, the Governor's E.O. S-3-05, or other strategies

to help toward reducing GHGs to the level proposed by the Governor and targeted by the City of Oakland, it could reasonably follow that the project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Alternatively, a project could reduce a potential cumulative contribution to GHG emissions through energy efficiency features, density and locale (e.g., compact development near transit and activity nodes of work or shopping) and by contributing to available mitigation programs, such as reforestation, tree planting, or carbon trading.

However, the analysis in this SEIR considers that, because the quantifiable thresholds established in the BAAQMD Guidelines were formulated based on AB 32 reduction strategies, a project cannot exceed the numeric threshold without also conflicting with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, if a project does not meet the threshold #1 (numeric) and therefore results in a significant cumulative impact because it would also result in a significant cumulative impact under the threshold #2 (plan, policy or regulation consistency), even though the project may incorporate measures and have features that would reduce its contribution to cumulative GHG emissions.

GHG emissions resulting from the Redevelopment Plan, as Amended, were estimated using a combination of URBEMIS2007 model and the Bay Area Greenhouse Gas Model (BGM) of the BAAQMD. GHG emissions from motor vehicle sources were calculated using the URBEMIS2007 model in conjunction with the BGM greenhouse gas model. Vehicle trips assumed default trip lengths for urban land uses, which are embedded in URBEMIS2007. BGM makes adjustments for implementation of Pavley vehicle standards and Low Carbon Fuel Standards. Model data and additional assumptions are included in Appendix C.

Development under the Redevelopment Plan, as Amended, would generate GHG emissions from an increase in both stationary sources and mobile sources. Although specific characteristics of individual developments facilitated by the Redevelopment Plan, as Amended, are not known for this program-level analysis in this SEIR (except for those addressed in environmental review conducted since the 2000 EIR and that conducted a GHG emissions inventory and assessment), area and indirect sources associated with development under the Redevelopment Plan, as Amended, would primarily result from electrical usage, water and wastewater transport (the energy used to pump water and wastewater to and from a project site of development facilitated by the Redevelopment Plan, as Amended,) and solid waste generation. GHG emissions from electrical usage are generated when energy consumed on the site is generated by fuel combustion. GHG emissions from water and wastewater transport are also indirect emissions resulting from the energy required to transport water from its source, and the energy required to treat wastewater and transport it to its treated discharge point. Solid waste emissions are generated when the increased waste generated by the project are taken to a landfill to decompose. GHG emissions from electrical usage, water and wastewater conveyance, and solid waste were estimated using the BGM GHG model.

Net Change in Emissions and Local/Global Context

The methodology applied here assumes that all emission sources associated with development facilitated by the Redevelopment Plan, as Amended, would be new sources that would combine with existing conditions. For this assessment, it is not possible to predict whether emission sources associated with the Redevelopment Plan, as Amended, would move from outside the air basin (and thus generate “new” emissions within the air basin), or whether they are sources that already exist and are merely relocated within the air basin. Because the effects of GHGs are global, if the project merely shifts the location of the GHG-emitting activities (locations of residences and businesses and where people drive), there would not be a net new increase of emissions. It also cannot be determined until buildout of the project whether occupants of the proposed developments would have shorter commute distances, require fewer vehicle trips, walk, bike, or use public transit more often, instead of driving, or use overall less energy by virtue of the development’s characteristics or proximity to workers’ housing. If these types of changes occur, overall vehicle miles traveled could be reduced and it could be argued that the Redevelopment Plan, as Amended, would result in a potential net reduction in GHG emissions, locally and globally.

The GHG analysis presented herein takes into account growth and increased vehicle travel within the region context, which is the regional air basin and cumulative development, as described in Section 4.09, *Cumulative Context*, in the beginning of Chapter 4 in this Draft SEIR. Therefore, there is no separate cumulative analysis section with regard to GHG emissions and consistency with related plans.

GHG Effects on Flooding and Sea-level Rise

Based on available mapping, the Amendment Area would not be susceptible to inundation due to sea level rise (the nearest coastal shoreline is along the Bay in Emeryville) (ABAG, 2011). Therefore the potential effects of climate change (e.g., effects of flooding on the Amendment Area due to sea level rise) on the Redevelopment Plan, as Amended, is not discussed further in this SEIR.

GHG Emission Inventory Categories

Emissions included in the BAAQMD Guidelines, and therefore included in the adjusted GHG emissions inventory for the development facilitated by the Redevelopment Plan, as Amended, if applicable, are described below (and quantified in Tables 4.6-3 and 4.6-4, further below):

- ***Area Source Emissions.*** These are direct emissions from sources that include natural gas combustion for heating, cooking, fireplaces, or boilers, as well as emissions from landscape maintenance equipment.
- ***Transportation Emissions.*** These are direct emissions from mobile sources including automobiles, trucks, motorcycles, and buses.
- ***Operational Electricity Consumption.*** These are indirect emissions emitted off-site via non-renewable, non-nuclear electricity generators as a result of increased electrical demand.

- *Solid Waste Disposal Emissions.* These are indirect emissions associated with waste generation. A large percentage of Project waste would be diverted from landfills by waste reduction, recycling, and composting. Oakland currently diverts a large portion of its waste and has goals to even further reduce the amount of waste sent to a landfill. The remainder of the waste not diverted would be disposed of at a landfill. Landfills emit anthropogenic methane from the anaerobic breakdown of material.
- *Operational Fugitive (Direct) Emissions.* These direct emissions are most commonly associated with inadvertent emissions into the atmosphere due to leakage or inherent imperfections in a gas transport or collection system. Direct fugitive GHG emissions that may reasonably be expected to be generated by commercial buildings would consist of GHG refrigerants emitted from leaks or other imperfections in refrigeration or air cooling equipment.
- *Operational Water Emissions (embedded energy).* These indirect emissions are associated with the electricity used to convey water, due to increased water demand from development facilitated by the Redevelopment Plan, as Amended.
- *Operational Wastewater (non-biogenic).* These are indirect emissions from wastewater treatment associated with the electricity use in wastewater treatment (and not the biogenic CO₂ process emissions) (BAAQMD, 2011).

Emission sources that are not included in the BAAQMD Guidelines or relevant to development facilitated by the Redevelopment Plan, as Amended, are not included in the adjusted GHG emissions inventory. These sources include emissions generated from permitted stationary source equipment, vegetation sequestration change, fugitive refrigeration emissions, life cycle emissions, agricultural emissions; and off road equipment emissions.

City Standard Conditions of Approval, Regulatory Requirements, General Plan Policies and Local Programs, and Design Features that Reduce GHG Emissions of Development facilitated by the Redevelopment Plan, as Amended

There are many ways for developments facilitated by the Redevelopment Plan, as Amended, to reduce its GHG emissions through its design, construction and operations. Local conditions of approval, policies, programs and regulatory requirements that apply to a project also combine to reduce project GHG emissions. Each of these components would be considered part of the development facilitated by the Redevelopment Plan, as Amended, and, as applicable, would be included in the estimate of the adjusted GHG emissions inventory for each development facilitated by the Proposed Amendments, as described above. However, the adjusted emissions estimated for the program-level analysis of the Redevelopment Plan, as Amended, is conservative in that they do not incorporate potential reductions that may occur from implementing local conditions of approval, policies, programs and regulatory requirements (e.g., GHG Emissions Reduction Plan, Transportation Demand Management [TDM] Plan, Green Building Compliance, etc.) that would be considered at the project-level analysis based on specific project characteristics that cannot currently be known. The adjusted emissions do reflect regulatory efforts to control GHGs, such as the statewide Pavley fuel efficiency standard, the low carbon fuel standard, and energy efficiency measures for electricity and natural gas specified in the

AB 32 Scoping Plan, as specified in the BAAQMD guidelines (June 2010, Table D-4). These reductions also support a conservative analysis since the AB 32 reductions are based on a benchmark year of 2020, and the analysis in this SEIR has a benchmark year 2035 (and the horizon year for the Redevelopment Plan, as Amended, is 2032), and further reductions would likely accrue in the additional 12 to 15 years beyond 2020.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The individual projects approved under the Redevelopment Plan, as Amended, would have their own project-specific EIRs and environmental review. The City of Oakland SCAs relevant to GHG emissions are listed below. All applicable SCAs would be adopted as conditions of approval for projects facilitated by the Redevelopment Plan, as Amended, to reduce significant impacts due to GHG emission. The SCAs are incorporated and required as part of development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures.

The City's SCAs relevant to GHG emissions are shown below.

- **SCA F: Greenhouse Gas (GHG) Reduction Plan**

SCA F applies to certain projects that produce total GHG emissions that exceed none or one of the BAAQMD CEQA Thresholds (1,100 metric tons of CO₂e annually or 4.6 metric tons of CO₂e per service population annually), and therefore do not result in a significant impact requiring mitigation. SCA F requires a project applicant to prepare a GHG Reduction Plan to increase energy efficiency and reduce GHG emissions to the greatest extent feasible below the BAAQMD CEQA Thresholds. The GHG Reduction Plan will include a comprehensive set of quantified GHG emissions reduction measures in addition to energy efficiencies included as part of the project (including the City's SCAs, proposed mitigation measures, project design features, and other City requirements). The complete text of SCA F is presented in the discussion of *Long-Term Operational Emissions*, below.

- **SCA 25: Parking and Transportation Demand Management**

SCA 25 requires a project applicant to submit for review and approval by the City of Oakland Planning and Zoning Division a Transportation Demand Management (TDM) Plan containing strategies to reduce on-site parking demand and single occupancy vehicle (SOV) travel. Generally the TDM Plan could reduce SOV trips for projects located near transit by about 10 to 20 percent, depending on the specific land use. Certain projects facilitated by the Redevelopment Plan, as Amended, would be required to prepare a TDM Plan and incorporate the resulting reduced emissions (from reduced vehicle trips) into the project's GHG emissions calculations. Strategies to consider include the following:

- a) Inclusion of additional bicycle parking, shower, and locker facilities that exceed the requirement
- b) Construction of bike lanes per the Bicycle Master Plan; Priority Bikeway Projects
- c) Signage and striping onsite to encourage bike safety
- d) Installation of safety elements per the Pedestrian Master Plan (such as cross walk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient crossing at arterials

- e) Installation of amenities such as lighting, street trees, trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.
- f) Direct transit sales or subsidized transit passes
- g) Guaranteed ride home program
- h) Pre-tax commuter benefits (checks)
- i) On-site car-sharing program (such as City Car Share, Zip Car, etc.)
- j) On-site carpooling program
- k) Distribution of information concerning alternative transportation options
- l) Parking spaces sold/leased separately
- m) Parking management strategies; including attendant/valet parking and shared parking spaces

- **SCA 36: Waste Reduction and Recycling**

Prior to issuance of demolition, grading, or building permit. SCA 36 requires a project applicant to submit a Construction & Demolition Waste Reduction and Recycling Plan (WRRP) and an Operational Diversion Plan (ODP) for review and approval by the Oakland Public Works Agency. Chapter 15.34 of the Oakland Municipal Code outlines requirements for reducing waste and optimizing construction and demolition (C&D) recycling. Affected projects include all new construction and all demolition. This SCA essentially addresses reduction in construction-related emissions, which the City combines with a project's operational emissions to assess against the significance thresholds for operational emissions, even though construction emissions are not a component of BAAQMD's Guidelines. Therefore, this SCA will contribute to reducing total emissions of development facilitated by the Redevelopment Plan, as Amended.

Ongoing. The ODP will identify how the project complies with the Recycling Space Allocation Ordinance, (Chapter 17.118 of the Oakland Municipal Code), including capacity calculations, and specify the methods by which the development will meet the current diversion of solid waste generated by operation of the proposed project from landfill disposal in accordance with current City requirements. The proposed program shall be implemented and maintained for the duration of the proposed activity or facility. Changes to the plan may be re-submitted to the Environmental Services Division of the Public Works Agency for review and approval. Any incentive programs shall remain fully operational as long as residents and businesses exist at the project site.

- **Several SCAs Regarding Landscape Requirements and Tree Replacement**

Several SCAs address landscape requirements for frontages of commercial buildings and replacement of trees removed as part of a project. Projects are required to install one tree for every 25 feet of street frontage in cases where sidewalks have adequate width. Additionally SCAs generally require the replacement of native trees removed as part of a project. Together, these SCAs that maintain and increase landscaping and trees create a cooler climate, reduce excessive solar gain, and absorb CO₂e emissions for a contribution to emission reductions, but have no impact on the emissions inventory of development facilitated by the Redevelopment Plan, as Amended. SCA 12, SCA 13, SCA 15, SCA 17, and SCA 18 are initially presented in Section 4.1, *Aesthetics, Shadow and Wind*, of this Draft SEIR; and SCA 46 and SCA 47 is initially presented in Section 4.3, *Biological Resources*, in this Draft SEIR.

- **Several SCAs Regarding Stormwater Management**

Consistent with regional stormwater management programs and requirements that projects must comply with, the City has several SCAs that aim to reduce post construction stormwater runoff that could affect the ability to accommodate potentially increased storms and flooding within existing floodplains and infrastructure systems. These SCAs are relevant as climate change can result in increased flooding due to warmer climate (e.g., earlier and greater melting of snowpack) and inadequate infrastructure. See SCA 55, SCA 75, and SCA 83, in Section 4.5, *Geology, Soils and Geohazards*, and Section 4.8, *Hydrology and Water Quality*, in this Draft SEIR.

General Plan Policies and City Programs

Each of the following policies and programs were previously discussed in general in the Regulatory Setting, in this section.

- *Oakland General Plan LUTE*. The LUTE is aimed at promoting use of public transit, bicycles and pedestrian travel. Any reduction of transportation-related GHG emissions are captured in the trip reduction associated with the TDM Plan.
- *Oakland General Plan Open Space, Conservation and Recreation (OSCAR) Element*. The OSCAR contains policies that (a) encourage the provision of open space, which increases vegetation area (trees, grass, landscaping, etc.) to effect cooler climate, reduce excessive solar gain, and absorb CO₂; (b) encourage stormwater management, which relates to the maintenance of floodplains and infrastructure to accommodate potential increased storms and flooding; and (c) encourage energy efficiency and use of alternative energy sources. Policies that address vegetation area have no impact on the emissions inventory as vegetative sequestration is not a component of BAAQMD's Guidelines. Other policies regarding energy efficiency encourage and support energy efficiency but are not requirements under any implementation mechanism via the General Plan. They have resulted, however, in the implementation of the City of Oakland sustainability program discussed below.
- *City of Oakland Sustainability Programs*. The City has proactively adopted a number of sustainability programs in an effort to reduce the City's impact on climate change. Oakland's sustainability efforts are managed by the Oakland Sustainability Community Development Initiative and there are two main categories that relate to reducing GHG emissions from a development project: renewable energy and green building.

Renewable Energy. With regard to renewable energy, the City's Sustainability Program has set a priority of promoting renewable energy with a particular emphasis on solar generation. The Program's aggressive renewable energy goals include the following: 50 percent of city facilities entire electricity use from renewable sources by 2017; and 100 percent of the city's entire electricity use from renewable sources by 2030. The City has some control over renewable energy percentages for buildings it operates by contracting its energy needs directly with the local utility. However, private building operators generally receive a standard energy mix from PG&E, and would not be required to contract for a higher percentage of renewables under this program as it only targets City facilities. PG&E has requested a 33 percent renewable energy mix goal for 2020 from the CPUC (compared to a 12 percent mix in 2007).

Green Building. With regard to green building strategies, the City of Oakland has implemented green building principles in City buildings through the following programs:

Civic Green Building Ordinance (Ordinance No. 12658 C.M.S., 2005), requiring, for certain large civic projects, techniques that minimize the environmental and health impacts of the built environment through energy, water and material efficiencies and improved indoor air quality, while also reducing the waste associated with construction, maintenance and remodeling over the life of the building; Green Building Guidelines (Resolution No. 79871, 2006) which provides guidelines to Alameda County residents and developers regarding construction and remodeling; and Green Building Education Incentives for private developers.

Regulatory Requirements

- **AB 1493 and Amended “Pavley” Regulations.** AB 1493 required the ARB to develop and adopt, by January 1, 2005, regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the state. The ARB has adopted amendments to the Pavley regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments, approved by ARB on September 24, 2009, are part of California’s commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. The model used to estimate the development facilitated by the Redevelopment Plan, as Amended, GHG emissions for this analysis accounts for reductions of GHG resulting from implementation of Pavley standards.
- **Low Carbon Fuel Standards (LCFS).** On April 23, 2009 ARB approved the regulation to implement the LCFS. The LCFS will reduce GHG emissions from the transportation sector in California by about 16 MMT in 2020. The modeling used to estimate the development facilitated by the Redevelopment Plan, as Amended’s, GHG emissions for this analysis accounts for reductions of GHG resulting from implementation of LCFS.

Other Potential Design Features Relevant to Development Facilitated by the Redevelopment Plan, as Amended

- **City of Oakland.** According the Pedestrian Master Plan, the City of Oakland has the highest walking rates for all cities in the nine-county San Francisco Bay Region. It is noted that these high pedestrian trips are likely because the neighborhoods are densely populated and well served by transit, including BART, AC Transit, Amtrak, and the Alameda Ferry. As such, development facilitated by the Redevelopment Plan, as Amended, would reduce transportation-related GHG emissions compared to emissions from the same level of development elsewhere in the outer Bay Area.
- **Building Rehabilitation.** Certain development facilitated by the Redevelopment Plan, as Amended, could incorporate and support sustainable development goals including the renovation and reuse of the existing on-site buildings. As such, these developments would reduce transportation-related GHG emissions by avoiding the demolition and disposal of existing resources or energy to obtain and prepare raw resources for replacement structure.
- **Projects with Development Agreements or Disposition and Development Agreements / Construction Operations and Building and Site Design.** The project sponsor of development facilitated by the Redevelopment Plan, as Amended, will work with the City to develop specific sustainable building and site design, construction, and operational methods and standards that could be incorporated into development. Sources include GreenPoint Rated (a program of Build It Green, sponsored by a number of Bay Area public agencies and jurisdictions); LEED (Leadership in Energy and Environmental Design)

Green Building Rating System™ (the nationally accepted benchmark for the design, construction, and operation of high performance green buildings), and California Green Builder program. Examples of approaches that the project sponsors would incorporate as feasible include use of the following:

1. exceptionally durable and/or reused materials;
2. materials that avoid toxic emissions;
3. equipment and fixtures that conserve energy;
4. maximizing efficient and natural lighting and ventilation; and
5. maximizing on-site landscaping.

Estimated GHG Emissions

New Impact GHG-1: Development facilitated by the Redevelopment Plan, as Amended, would produce greenhouse gas emissions that exceed 1,100 metric tons of CO_{2e} per year and exceed 4.6 metric tons of CO_{2e} per service population annually. (Potentially Significant)

This analysis first discusses the estimate of GHG emissions associated with the Proposed Amendments in detail, and then incorporates an estimate of emissions for the Existing Project Area and then the Redevelopment Plan, as Amended.

Construction and operation of development facilitated by the Redevelopment Plan, as Amended, would generate GHG emissions, with the majority of energy consumption (and associated generation of GHG emissions) occurring during operation. Typically more than 80 percent of the total energy consumption takes place during the use of buildings and less than 20 percent are consumed during construction (United Nations Environmental Programme [UNEP], 2007). Overall, the following activities associated with development that would occur pursuant to the Redevelopment Plan, as Amended, (as well as any similar land use development) could contribute to the generation of GHG emissions:

- Motor Vehicle Use. Transportation associated with development facilitated by the Redevelopment Plan, as Amended, would result in GHG emissions from the combustion of fossil fuels in daily automobile and truck trips.
- Gas, Electric and Water Use. Natural gas use results in the emissions of two GHGs: methane (the major component of natural gas) and carbon dioxide from the combustion of natural gas. Methane is released prior to initiation of combustion of the natural gas (as before a flame on a stove is sparked), and from the small amount of methane that is uncombusted in a natural gas flame. Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. California's water conveyance system is energy intensive: Preliminary estimates indicate that total energy used to pump and treat this water exceeds 15,000 gigawatt hours (GWh) per year, or at least 6.5 percent of the total electricity used in the state per year (CEC, 2010).
- Removal of Vegetation. The net removal of vegetation for construction results in a loss of the carbon sequestration in plants. However, planting of additional vegetation would result in additional carbon sequestration and lower the carbon footprint of the project. (See City's Standard Conditions of Approval regarding *Landscape Requirements and Tree Replacement*, below.)

- ***Construction Activities.*** Construction equipment typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as carbon dioxide, methane and nitrous oxide. Furthermore, methane is emitted during the fueling of heavy equipment.

While development facilitated by the Redevelopment Plan, as Amended, and all developments of similar land uses would generate GHG emissions from the activities described above, the City of Oakland's ongoing implementation of its Sustainability Community Development Initiative (which includes an array of programs and measures, discussed above, under Regulatory Setting) will collectively reduce the levels of GHG emissions and contributions to global climate change attributable to activities throughout Oakland.

Construction-Generated GHG Emissions – Proposed Amendments

The construction-generated GHG emissions of development facilitated by the Proposed Amendments were estimated based on potential land use development within the Amendment Area and default construction equipment and area estimates of the URBEMIS2007 model. Because the timing of each project is not known, as a conservative estimate all development was assumed to occur over a 5-year period beginning in 2012 (even though the Proposed Amendments will extend for 30 years). An estimated total of approximately **3,865 metric tons (MT) of CO₂e** would be emitted over the assumed construction period of 5 years through 2016.

Construction emissions are annualized because the proposed operational GHG emissions thresholds are analyzed in terms of metric tons “per year.” Assuming a 40-year development life of the Proposed Amendments until development is demolished or remodeled for energy efficiency (which is the common standard currently used in practice), total construction emissions represent approximately **97 MT CO₂e annually, over 40 years.**

As previously discussed, the BAAQMD Guidelines do not include a specific threshold or methodology for assessing construction-related GHG emissions for CEQA analysis. The City's methodology adds the 40-year annualized construction-related GHG emissions to the project's total operational-related emissions, to assess construction-related GHG emissions against the BAAQMD thresholds and the project's ability to meet AB 32 GHG reduction goals, as discussed below.

The analysis of construction emissions only considers improvements in construction equipment exhaust emissions through manufacturer requirements and turnover. In addition to considering the CO₂e emission from construction activities, development that would be facilitated by the Proposed Amendments would incorporate dust control measures recommended by BAAQMD (SCA 26, *Dust Control*), which includes measures related to construction exhaust emissions. Further, the SCAs that apply to the development facilitated by the Proposed Amendments align with BAAQMD regulations that relate to portable equipment (e.g., concrete batch plants, and gasoline- or diesel-powered engines used for power generation, pumps, compressors, pile drivers, and cranes), architectural coatings, and paving materials. Equipment used during project construction would be subject to the requirements of BAAQMD Regulation 2 (Permits), Rule 1 (General Requirements) with respect to portable equipment unless exempt under Rule 2-1-105 (Exemption, Registered Statewide Portable Equipment); BAAQMD Regulation 8 (Organic

Compounds), Rule 3 (Architectural Coatings); and BAAQMD Regulation 8 (Organic Compounds), Rule 15 (Emulsified and Liquid Asphalts).

Construction-related emissions associated with the Proposed Amendments are reflected in **Tables 4.6-3 and 4.6-4**.

Long-Term Operational GHG Emissions – Proposed Amendments

As introduced above, long-term operational GHG emissions associated with development facilitated by the Proposed Amendments include indirect emissions from mobile sources (motor vehicle trips), emissions from natural gas combustion used in non-residential buildings, emissions from electricity use in non-residential buildings (grid electricity), emissions from water conveyance and waste water treatment and conveyance, and emissions from area sources. Emissions from each of these sources, in addition to the construction-related emissions discussed above, are reported in Table 4.6-3.

“Business as Usual” emissions shown in Table 4.6-3 do not consider any GHG reduction measures or compliance with local or statewide policies, plans and programs and regulations aimed at reducing GHG emissions. These “business as usual” emissions are provided to demonstrate how emissions from the development facilitated by the Proposed Amendments could be reduced even with the implementation of the most basic measures and adherence to regulatory requirements.

As previously discussed under *City Standard Conditions of Approval, Regulatory Requirements, General Plan Policies and Local Programs, and Design Features that Reduce GHG Emissions of Development facilitated by the Proposed Amendments*, the adjusted operational GHG emissions generated by development facilitated by the Proposed Amendments do not fully factor in project design features or applicable City SCAs (including implementation of a GHG Reduction Plan and TDM Plan), since design detail of such development within the Amendment Area and facilitated by the Proposed Amendments is not available for this program-level analysis, and the efficacy of GHG Emission Reduction measures and TDM programs is dependant on project types, land use specific travel demand and the availability of transit in a given area. The adjusted emissions associated with the Proposed Amendments do include regulatory requirements such as implementation of Pavley GHG standards and the LCFS for motor vehicles and other reduction measures from the AB 32 Scoping Plan.

As shown in Table 4.6-3, the total net (Proposed Amendments minus Existing) adjusted annual GHG emissions generated by development facilitated by the Proposed Amendments, including emissions from construction associated with that development, is approximately **2,370 MT CO₂e per year**. Net emissions and service population (residents and employees) generated by development facilitated by the Proposed Amendments would result in approximately **2.7 MT CO₂e per service population annually**.

**TABLE 4.6-3
GHG EMISSIONS INVENTORY FROM EXISTING USES AND DEVELOPMENT FACILITATED BY THE
PROPOSED AMENDMENTS – “BUSINESS AS USUAL” AND ADJUSTED**

| | Proposed Amendments Total “Business as Usual” Annual CO₂e Emissions (metric tons per year) | Proposed Amendments Total Adjusted Annual CO₂e Emissions (metric tons per year) |
|---|--|---|
| Existing Land Use Emission Sources^a | | |
| Motor vehicle trips | 995 | 902 |
| Natural gas | 27 | 27 |
| Grid Electricity | 396 | 396 |
| Wastewater & Treatment & Conveyance | 5 | 5 |
| Solid Waste | 202 | 202 |
| Area Source (landscape maintenance) | 4 | 4 |
| Total Existing Operational Project GHG Emissions | 1,629 | 1,536 |
| Proposed Amendments Emission Sources^b | | |
| Motor vehicle trips | 2,625 | 2,381 |
| Natural gas ^c | 516 | 467 |
| Grid Electricity ^c | 664 | 560 |
| Wastewater & Treatment & Conveyance | 41 | 41 |
| Solid Waste | 357 | 357 |
| Area Source (landscape maintenance) | 3 | 3 |
| Total Operational Project GHG Emissions without Construction Emissions | 4,206 | 3,809 |
| Construction Emissions per Year (annualized over 40 years) | 97 | 97 |
| Total Operational Project GHG Emissions with Construction Emissions | 4,303 | 3,906 |
| Net Emissions (Total Operational Project GHG Emissions with Construction Emissions Minus Existing) | 2,674 | 2,370 |
| <i>Threshold of Significance</i> | <i>1,100</i> | <i>1,100</i> |
| <i>Exceeds Threshold?</i> | Yes | Yes |
| Net Project GHG Emissions by Service Population (including Construction Emissions)^d | 3.1 | 2.7 |
| <i>Threshold of Significance^e</i> | <i>4.6</i> | <i>4.6</i> |
| <i>Exceeds Threshold?</i> | No | No |

^a In regards to the Existing Scenario, “Business as Usual” emissions primarily represent emission levels without implementation of post-AB32 regulatory efforts to control GHGs, such as the Pavley fuel efficiency standards and the low carbon fuel standard. These vehicle emissions-related standards are reflected in the adjusted emissions. Since existing land uses were modeled, energy efficiency measures (affecting natural gas and electricity) from the AB 32 Scoping Plan were not included. In addition, a 50 percent reduction was applied to the BGM sources (besides transportation) to account for below average occupancy in the area, as adjusted in the traffic study.

^b In regards to the Proposed Amendments, “Business as Usual” emissions primarily represent emission levels without implementation of post-AB32 regulatory efforts to control GHGs, such as the Pavley fuel efficiency standards and the low carbon fuel standard. These vehicle emissions-related standards are reflected in the adjusted emissions, which also consider energy efficiency measures (affecting natural gas and electricity) from the AB 32 Scoping Plan, as specified in the BAAQMD Guidelines (June 2010, Table D-4). This analysis is conservative in that additional potential reductions from implementing applicable City SCAs, policies and local programs that may substantially reduce the adjusted emissions (e.g. GHG Reduction Plan, Transportation Demand Management Plan, Green Building compliance, etc) are not incorporated, as reductions would vary widely depending on the specific characteristics (which can not currently be known) of the developments facilitated by the Proposed Amendments.

^c Adjusted emissions reductions reflect AB 32 Scoping Plan Measures for energy efficiency that result in approximately 9.5 percent reduction in natural gas and approximately 15.7 percent reduction in electricity (June 2010, Table D-4).

^d Total operational and construction GHG emissions, divided by estimated net population of 866 (826 residents and 40 employees) associated with development facilitated by the Proposed Amendments.

^e Per BAAQMD Guidelines, which indicate that the project-level service threshold of 4.6 metric tons of CO₂e of service population annually should be used for redevelopment plans.

**TABLE 4.6-4
 GHG EMISSIONS INVENTORY FROM DEVELOPMENT FACILITATED BY THE
 REDEVELOPMENT PLAN, AS AMENDED – ADJUSTED**

| | Existing Redevelopment Plan Adjusted Annual CO ₂ e Emissions (metric tons per year) | Proposed Amendments Adjusted Annual CO ₂ e Emissions (metric tons per year) | Redevelopment Plan, as Amended Adjusted Annual CO ₂ e Emissions (metric tons per year) |
|---|--|--|---|
| Existing Land Use Emission Sources^a | | | |
| Motor vehicle trips | --- | 902 | --- |
| Natural gas | --- | 27 | --- |
| Grid Electricity | --- | 396 | --- |
| Wastewater & Treatment & Conveyance | --- | 5 | --- |
| Solid Waste | --- | 202 | --- |
| Area Source (landscape maintenance) | --- | 4 | --- |
| Total Existing Operational Project GHG Emissions | --- | 1,536 | --- |
| Proposed Emission Sources^b | | | |
| Motor vehicle trips | 9,735 | 2,381 | 12,116 |
| Natural gas ^c | 1,989 | 467 | 2,456 |
| Grid Electricity ^c | 2,104 | 560 | 2,664 |
| Wastewater & Treatment & Conveyance | 100 | 41 | 141 |
| Solid Waste | 2,242 | 357 | 2,599 |
| Area Source (landscape maintenance) | 369 | 3 | 372 |
| Total Operational Project GHG Emissions without Construction Emissions | 16,539 | 3,809 | 20,348 |
| Construction Emissions per Year (annualized over 40 years) | 141 | 97 | 238 |
| Total Operational Project GHG Emissions with Construction Emissions | 16,680 | 3,906 | 20,586 |
| Net Emissions (Total Operational Project GHG Emissions with Construction Emissions Minus Existing) | 16,680 | 2,370 | 19,050 |
| <i>Threshold of Significance</i> | <i>1,100</i> | <i>1,100</i> | <i>1,100</i> |
| <i>Exceeds Threshold?</i> | Yes | Yes | Yes |
| Net Project GHG Emissions by Service Population (including Construction Emissions)^d | 6.0 | 2.7 | 5.2 |
| <i>Threshold of Significance^e</i> | <i>4.6</i> | <i>4.6</i> | <i>4.6</i> |
| <i>Exceeds Threshold?</i> | Yes | No | Yes |

^a In regards to the Existing Scenario, "Business as Usual" emissions primarily represent emission levels without implementation of post-AB32 regulatory efforts to control GHGs, such as the Pavley fuel efficiency standards and the low carbon fuel standard. These vehicle emissions-related standards are reflected in the adjusted emissions. Since existing land uses were modeled, energy efficiency measures (affecting natural gas and electricity) from the AB 32 Scoping Plan were not included. In addition, a 50 percent reduction was applied to the BGM sources (besides transportation) to account for below average occupancy in the area, as adjusted in the traffic study. No Existing Land Use Emissions sources are estimated for the Existing Redevelopment Plan, thus the estimate of GHG are conservative (potentially overstated).

^b In regards to the Proposed Amendments, "Business as Usual" emissions primarily represent emission levels without implementation of post-AB32 regulatory efforts to control GHGs, such as the Pavley fuel efficiency standards and the low carbon fuel standard. These vehicle emissions-related standards are reflected in the adjusted emissions, which also consider energy efficiency measures (affecting natural gas and electricity) from the AB 32 Scoping Plan, as specified in the BAAQMD Guidelines (June 2010, Table D-4). This analysis is conservative in that additional potential reductions from implementing applicable City SCAs, policies and local programs that may substantially reduce the adjusted emissions (e.g. GHG Reduction Plan, Transportation Demand Management Plan, Green Building compliance, etc) are not incorporated, as reductions would vary widely depending on the specific characteristics (which can not currently be known) of the future developments facilitated by the Proposed Amendments for the Redevelopment Plan, as Amended.

^c Adjusted emissions reductions reflect AB 32 Scoping Plan Measures for energy efficiency that result in approximately 9.5 percent reduction in natural gas and approximately 15.7 percent reduction in electricity (June 2010, Table D-4).

^d For the Existing Redevelopment Plan, net operational and construction GHG emissions divided by estimated net population of 2,796 (1,704 residents and 1,092 employees) associated with development facilitated by the Existing Redevelopment Plan. For the Proposed Amendments, net operational and construction GHG emissions, divided by estimated net population of 866 (826 residents and 40 employees) associated with development facilitated by the Proposed Amendments. For the Redevelopment Plan, as Amended, net operational and construction GHG emissions divided by estimated net population of 3,662 (2,570 residents and 1,132 employees) associated with development facilitated by the Redevelopment Plan, As Amended.

^e Per BAAQMD Guidelines, which indicate that the project-level service threshold of 4.6 metric tons of CO₂e of service population annually should be used for redevelopment plans, even for program-level CEQA analysis as in this SEIR.

Based on the project-level significance thresholds applicable to redevelopment plans, development facilitated by the Proposed Amendments would produce net emissions that exceed 1,100 MT of CO₂e annually, but it would not exceed 4.6 MT of CO₂e per service population annually, which would be less than significant.

Total GHG Emissions –Redevelopment Plan, as Amended

This SEIR considers the emissions described above for GHG emissions for the Proposed Amendments, combined with the emissions estimated in this SEIR for the Existing Redevelopment Plan. Table 4.6-4 shows that the total adjusted annual GHG emissions generated by development facilitated by the Proposed Redevelopment Plan as Amended, including emissions from construction associated with that development, is approximately **19,050 MT CO₂e per year**. Net emissions and service population (residents and employees) generated by development facilitated by the Proposed Redevelopment Plan as Amended, would result in approximately **5.2 MT CO₂e per service population annually**.

Based on the project-level significance thresholds applicable to redevelopment plans, this would be a potentially significant impact since both the 1,100 MT of CO₂e annually threshold; as well as the 4.6 MT of CO₂e per service population annually threshold, would be exceeded. SCA F, *Greenhouse Gas (GHG) Reduction Plan*, applies and will identify specific reduction measures to reduce this impact to less than significant.

Greenhouse Gas (GHG) Reduction Plan (SCA F)

SCA F, *Greenhouse Gas (GHG) Reduction Plan*, applies to certain projects and has the goal of increasing energy efficiency and reducing GHG emissions to the greatest extent feasible below **both** applicable numeric BAAQMD CEQA Thresholds (i.e., total emissions and per service population) to help achieve the City’s goal of reducing GHG emissions. The GHG Reduction Plan shall be considered fully attained when project emissions are less than both applicable numeric BAAQMD CEQA Thresholds. The GHG emissions impact is the result of individual future developments facilitated by the Proposed Redevelopment Plan as Amended that will be subject to SCA F, to the extent that a specific development project meets the applicability criteria discussed below. The GHG emissions reported in Table 4.6-3 and Table 4.6-4 will be reduced through project-by-project implementation of project-specific reduction measures.

SCA F. Greenhouse Gas (GHG) Reduction Plan

Prior to issuance of a construction-related permit and ongoing as specified

The project applicant shall retain a qualified air quality consultant to develop a Greenhouse Gas (GHG) Reduction Plan for City review and approval. The applicant shall implement the approved GHG Reduction Plan.

The goal of the GHG Reduction Plan shall be to increase energy efficiency and reduce GHG emissions to below at least one of the Bay Area Quality Management District’s (BAAQMD’s) CEQA Thresholds of Significance (1,100 metric tons of CO₂e per year or 4.6 metric tons of CO₂e per year per service population) AND to reduce GHG emissions by 36 percent below the project’s “adjusted” baseline GHG emissions (as explained below) to

help achieve the City's goal of reducing GHG emissions. The GHG Reduction Plan shall include, at a minimum, (a) a detailed GHG emissions inventory for the project under a "business-as-usual" scenario with no consideration of project design features, or other energy efficiencies, (b) an "adjusted" baseline GHG emissions inventory for the project, taking into consideration energy efficiencies included as part of the project (including the City's Standard Conditions of Approval, proposed mitigation measures, project design features, and other City requirements), (c) a comprehensive set of quantified additional GHG reduction measures available to further reduce GHG emissions beyond the adjusted GHG emissions, and (d) requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. If the project is to be constructed in phases, the GHG Reduction Plan shall provide GHG emission scenarios by phase.

Specifically, the applicant/sponsor shall adhere to the following:

- a) ***GHG Reduction Measures Program.*** Prepare and submit to the City Planning Director or his/her designee for review and approval a GHG Reduction Plan that specifies and quantifies GHG reduction measures that the project will implement by phase.

Potential GHG reduction measures to be considered include, but are not be limited to, measures recommended in BAAQMD's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2008, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures Document (August 2010, as may be revised), the California Attorney General's website, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council.

The proposed GHG reduction measures must be reviewed and approved by the City Planning Director or his/her designee. The types of allowable GHG reduction measures include the following (listed in order of City preference): (1) physical design features; (2) operational features; and (3) the payment of fees to fund GHG-reducing programs (i.e., the purchase of "offset carbon credits," pursuant to item "b" below).

The allowable locations of the GHG reduction measures include the following (listed in order of City preference): (1) the project site; (2) off-site within the City of Oakland; (3) off-site within the San Francisco Bay Area Air Basin; (4) off-site within the State of California; then (5) elsewhere in the United States.

Offset Carbon Credits Guidelines. For GHG reduction measures involving the purchase of offset carbon credits, evidence of the payment/purchase shall be submitted to the City Planning Director or his/her designee for review and approval prior to completion of the project (or prior to completion of the project phase, if the project includes more one phase).

As with preferred locations for the implementation of all GHG reductions measures, the preference for offset carbon credit purchases include those that can be achieved as follows (listed in order of City preference): (1) within the City of Oakland; (2) within the San Francisco Bay Area Air Basin; (3) within the State of California; then (4) elsewhere in the United States. The cost of offset carbon credit purchases shall be based on current market value at the time purchased and shall be based on the Project's operational emissions estimated in the GHG Reduction Plan or subsequent approved

emissions inventory, which may result in emissions that are higher or lower than those estimated in the GHG Reduction Plan.

- b) ***Plan Implementation and Documentation.*** For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits. For operational GHG reduction measures to be incorporated into the project, the measures shall be implemented on an indefinite and ongoing basis beginning at the time of project completion (or at the completion of the project phase for phased projects).

For physical GHG reduction measures to be incorporated into off-site projects, the measures shall be included on drawings and submitted to the City Planning Director or his/her designee for review and approval and then installed prior to completion of the subject project (or prior to completion of the project phase for phased projects). For operational GHG reduction measures to be incorporated into off-site projects, the measures shall be implemented on an indefinite and ongoing basis beginning at the time of completion of the subject project (or at the completion of the project phase for phased projects).

Compliance, Monitoring and Reporting. Upon City review and approval of the GHG Reduction Plan program by phase, the applicant/sponsor shall satisfy the following requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. The GHG Reduction Plan requires regular periodic evaluation over the life of the Project (generally estimated to be at least 40 years) to determine how the Plan is achieving required GHG emissions reductions over time, as well as the efficacy of the specific additional GHG reduction measures identified in the Plan.

Implementation of the GHG reduction measures and related requirements shall be ensured through the project applicant/sponsor's compliance with Conditions of Approval adopted for the project. Generally, starting two years after the City issues the first Certificate of Occupancy for the project, the project applicant/sponsor shall prepare each year of the useful life of the project an Annual GHG Emissions Reduction Report (Annual Report), subject to the City Planning Director or his/her designee for review and approval. The Annual Report shall be submitted to an independent reviewer of the City Planning Director's or his/her designee's choosing, to be paid for by the project applicant/sponsor (see Funding, below), within two months of the anniversary of the Certificate of Occupancy.

The Annual Report shall summarize the project's implementation of GHG reduction measures over the preceding year, intended upcoming changes, compliance with the conditions of the Plan, and include a brief summary of the previous year's Annual Report results (starting the second year). The Annual Report shall include a comparison of annual project emissions to the baseline emissions reported in the GHG Plan.

The GHG Reduction Plan shall be considered fully attained when project emissions are less than either applicable numeric BAAQMD CEQA Thresholds AND GHG emissions are 36 percent below the project's "adjusted" baseline GHG emissions, as confirmed by the City Planning Director or his/her designee through an established monitoring program. Monitoring and reporting activities will continue at the City's discretion, as discussed below.

- c) **Funding.** Within two months after the Certificate of Occupancy, the project applicant/sponsor shall fund an escrow-type account or endowment fund to be used exclusively for preparation of Annual Reports and review and evaluation by the City Planning Director or his/her designee, or its selected peer reviewers. The escrow-type account shall be initially funded by the project applicant/sponsor in an amount determined by the City Planning Director or his/her designee and shall be replenished by the project applicant/sponsor so that the amount does not fall below an amount determined by the City Planning Director or his/her designee. The mechanism of this account shall be mutually agreed upon by the project applicant/sponsor and the City Planning Director or his/her designee, including the ability of the City to access the funds if the project applicant/sponsor is not complying with the GHG Reduction Plan requirements, and/or to reimburse the City for its monitoring and enforcement costs.

Corrective Procedure. If the third Annual Report, or any report thereafter, indicates that, in spite of the implementation of the GHG Reduction Plan, the project is not achieving the GHG reduction goal, the project applicant/sponsor shall prepare a report for City review and approval, which proposes additional or revised GHG measures to better achieve the GHG emissions reduction goals, including without limitation, a discussion on the feasibility and effectiveness of the menu of other additional measures (Corrective GHG Action Plan). The project applicant/sponsor shall then implement the approved Corrective GHG Action Plan.

If, one year after the Corrective GHG Action Plan is implemented, the required GHG emissions reduction target is still not being achieved, or if the project applicant/owner fails to submit a report at the times described above, or if the reports do not meet City requirements outlined above, the City Planning Director or his/her designee may, in addition to its other remedies, (a) assess the project applicant/sponsor a financial penalty based upon actual percentage reduction in GHG emissions as compared to the percent reduction in GHG emissions established in the GHG Reduction Plan; or (b) refer the matter to the City Planning Commission for scheduling of a compliance hearing to determine whether the project's approvals should be revoked, altered or additional conditions of approval imposed.

The penalty as described in (a) above shall be determined by the City Planning Director or his/her designee and be commensurate with the percentage GHG emissions reduction not achieved (compared to the applicable numeric significance thresholds) or required percentage reduction from the "adjusted" baseline.

In determining whether a financial penalty or other remedy is appropriate, the City shall not impose a penalty if the project applicant/sponsor has made a good faith effort to comply with the GHG Reduction Plan.

The City would only have the ability to impose a monetary penalty after a reasonable cure period and in accordance with the enforcement process outlined in Planning Code Chapter 17.152. If a financial penalty is imposed, such penalty sums shall be used by the City solely toward the implementation of the GHG Reduction Plan.

- d) **Timeline Discretion and Summary.** The City Planning Director or his/her designee shall have the discretion to reasonably modify the timing of reporting, with reasonable notice and opportunity to comment by the applicant, to coincide with other related monitoring and reporting required for the project.

- *Fund Escrow-type Account for City Review*: Certificate of Occupancy plus 2 months
- *Submit Baseline Inventory of “Actual Adjusted Emissions”*: Certificate of Occupancy plus 1 year
- *Submit Annual Report #1*: Certificate of Occupancy plus 2 years
- *Submit Corrective GHG Action Plan* (if needed): Certificate of Occupancy plus 4 years (based on findings of Annual Report #3)
- *Post Attainment Annual Reports*: Minimum every 3 years and at the City Planning Director’s or his/her designee’s reasonable discretion

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact.* This new impact and conclusion not previously identified in the 2000 EIR is the result of adherence to the current established City of Oakland’s *CEQA Thresholds/Criteria of Significance Guidelines*, CEQA Guidelines and BAAQMD CEQA Guidelines, this impact is newly identified in this SEIR. The impact was not addressed in the 2000 EIR. Numerous new SCAs apply. The new impact is not due to changes to the environment. No “changed circumstances” will result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects. Application of the current thresholds/significance criteria and BAAQMD CEQA Guidelines regarding GHG emissions update the 2000 EIR, but are not change circumstances or new information with respect to the Existing Redevelopment Plan or Existing Project Area pursuant to CEQA Guidelines Section 15162.

New Impact GHG-2: Development facilitated by the Redevelopment Plan, as Amended, would not conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing greenhouse gas emissions, but would exceed the numeric threshold for GHG emissions. (Potentially Significant)

As discussed in New Impact GHG-1, development facilitated by the Redevelopment Plan, as Amended, would not conflict with any applicable plan, policy or regulation adopted with the intent to reduce GHG emissions because it would not result in a significant impact by exceeding both numeric thresholds (see Table 4.6-3). However, as also discussed therein, when considered with the Existing Project Area, the Redevelopment Plan, as Amended, would result in a potentially significant impact because it would exceed both numeric thresholds (see Table 4.6-4).

Development facilitated by the Redevelopment Plan, as Amended, would be subject to all the regulatory requirements, including the City’s approach to reducing GHG emissions (and significant GHG emissions impacts, if applicable) by requiring the preparation and implementation of project-specific GHG Reduction Plans (SCA F), which would reduce GHG emissions of the development facilitated by the Redevelopment Plan, as Amended, to the greatest extent feasible. As discussed above, implementation and adherence to SCA F will reduce potentially significant impact to less than significant. SCAs also include conditions to address adherence to best management construction practices and equipment use (SCA 26, SCA 27

and SCA 41) and minimize post construction stormwater runoff that could affect the ability to accommodate potentially increased storms and flooding within existing floodplains and infrastructure systems (SCA 55, SCA 75, and SCA 83), to reduce demand for single occupancy vehicle travel (SCA 25), to increase landscaping to absorb CO₂e emissions (SCA 12, SCA 13, SCA 15, SCA 17, SCA 18, and SCA 46), and facilitate waste reduction and recycling (SCA 36).

Future development facilitated under the Redevelopment Plan, as Amended, will align with existing current plans, policies and regulations adopted to reduce GHG emissions. Specifically, development would not conflict with the current City Sustainability Programs or General Plan policies or regulations regarding GHG reductions and other local, regional and statewide plans, policies and regulations (previously discussed in Section 4.6.2, Regulatory Setting) that are related to the reduction of GHG emissions and relevant to the Redevelopment Plan, as Amended, and the Project Area, as Amended.

Development facilitated by the Redevelopment Plan, as Amended, would also entail implementing reduction strategies identified in AB 32, the Governor's E.O. S-3-05, and other strategies to help reduce GHGs to the level proposed by the Governor and targeted by the City of Oakland. An Oakland Energy and Climate Action Plan (ECAP) is being developed to identify, evaluate and recommend prioritized actions to reduce energy consumption and GHG emissions in Oakland. On July 7, 2009, the Oakland City Council directed staff to develop the draft Oakland ECAP using a GHG reduction target equivalent to 36 percent below 2005 GHG emissions by 2020 (City of Oakland, Resolution No. 82129 C.M.S., 2009). Consistent with that direction, the City Council considered a draft ECAP on March 1, 2011 that identifies energy and climate goals, clarifies policy direction, and identifies priority actions for reducing energy use and GHG emissions. Development facilitated by the Redevelopment Plan, as Amended, would be required to comply with the application requirements of the ECAP, when both are adopted.

Overall, development facilitated by the Redevelopment Plan, as Amended, would not conflict with any applicable plans, policies or regulations adopted with the intent to reduce GHG emissions. The net GHG emissions from that development would exceed the annual 1,100 MT of CO₂e threshold and the 4.6 MT of CO₂e per service population annually threshold, and SCA F would apply and be implemented with future development facilitated by the Redevelopment Plan, as Amended, with the goal of reducing each project's GHG emissions to below both numeric thresholds (i.e., total emissions and per service population) to the greatest extent feasible, which directly supports local, regional and statewide GHG reduction goals.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact.* As discussed for New Impact GHG-1, New Impact GHG-2 is identified as a result of complying with current established City of Oakland's *CEQA Thresholds/Criteria of Significance Guidelines*, CEQA Guidelines and BAAQMD CEQA Guidelines. The impact was not addressed in the 2000 EIR. Numerous new SCAs apply. The new impact is not due to changes to the environment, the Redevelopment Plan or the Existing Project Area. No "changed circumstances" will result in new significant environmental effects or a substantial increase in the severity of previously identified significant

effects. Further, application of the aforementioned current thresholds/significance criteria, guidelines and thresholds update the 2000 EIR, but are not changed circumstances or new information with respect to the Existing Redevelopment Plan or Existing Project Area, pursuant to CEQA Guidelines Section 15162.

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4.7 Hazardous Materials

This section analyzes how the development facilitated by the Redevelopment Plan, as Amended, may affect issues related to hazardous materials. Specifically, this section discusses the hazardous materials issues related to the existence of hazardous materials associated with Amendment Area and provides an overview of the regulatory setting that is applicable to health and safety regarding hazardous materials in the Amendment Area.

Materials and waste may be considered hazardous if they are poisonous (toxicity), can be ignited by open flame (ignitability), corrode other materials (corrosivity), or react violently, explode or generate vapors when mixed with water (reactivity). The term “hazardous material” is defined in the State Health and Safety Code (Chapter 6.95, Section 25501[o]) as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment. A hazardous waste, for the purpose of this SEIR, is any hazardous material that is abandoned, discarded, or recycled, as defined in the State Health and Safety Code (Chapter 6.95, Section 25125). The transportation, use, and disposal of hazardous materials, as well as the potential releases of hazardous materials to the environment, are closely regulated through many state and federal laws.

This section identifies any potentially significant hazards or hazardous materials impacts of the development facilitated by the Proposed Amendments, and as appropriate, the development facilitated by the Existing Redevelopment Plan. If necessary, appropriate mitigation measures or standard conditions of approval are identified. Pursuant to the City’s amendment to the Oakland General Plan (City of Oakland, 2004), as well as Section 15358(b) of the CEQA Guidelines, mitigation measures are proposed only to address physical impacts.

Pursuant to CEQA Guidelines Section 15162 regarding an SEIR, this section also discusses whether there are any new or more severe significant impacts than those identified in the 2000 EIR that result from changed circumstances or new information.

4.7.1 2000 EIR and Existing Project Area

Hazards and hazardous materials within the Existing Project Area were evaluated in the 2000 EIR (Initial Study Checklist Items #8, 24, 25 and Mandatory Findings “c” and “d”). The 2000 EIR included a brief description of the potential risks associated with hazardous materials in the Existing Project Area at the time.

The development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes that have occurred to the hazardous materials setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

Because only new impacts regarding the Redevelopment Plan, as Amended, are associated with the Proposed Amendments and would not involve any new significant impacts with respect to the Existing Project Area, the remainder of this Hazardous Materials Environmental Setting, and Regulatory Setting, and Impacts and Mitigation Measures analysis herein focuses primarily on

the Amendment Area and the additions/changes related to the Proposed Amendments, although part of the setting discussion pertains to the City of Oakland at-large.

4.7.2 Environmental Setting for the Amendment Area

Regulatory databases, provided by numerous federal, state, and local agencies, including the State Water Resources Control Board Geotracker database for leaking underground fuel tanks (LUFTs) and underground storage tanks (USTs); the San Francisco Bay RWQCB Spills, Leaks, Investigations, and Cleanup Database (SLIC); and the California Department of Toxic Substances Control (DTSC) database (Envirostor); contain relatively current information showing where past hazardous materials releases have been identified within the Amendment Area. These databases list sites with suspected and confirmed releases of hazardous materials to the subsurface soil and/or groundwater resulting in plumes. The databases also identify school sites that have been associated with hazardous materials releases and reports on the status of their clean-up or remediation. The reporting and statuses of these sites change frequently as identification, monitoring and clean-up of hazardous sites occur. Typically, sites are closed once it has been demonstrated that existing site uses combined with the levels of identified contamination present no significant risk to human health or the environment. These databases are updated frequently and would need to be revisited prior to construction for development facilitated by the Proposed Amendments. The databases would likely be revisited as part of subsequent environmental review required by CEQA, as needed and appropriate. At the time of preparation of this document, there are 20 LUFT and 10 SLIC sites currently identified within the Amendment Area (SWRCB, 2011 and DTSC, 2011).

Fuel Contamination from Leaking Underground and Aboveground Storage Tanks

An underground storage tank system is defined as a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground. Until the mid-1980s, most USTs were made of single-walled bare steel which were found to corrode over time resulting in leakage. Faulty installation or maintenance procedures also lead to UST leakage, in addition to potential releases associated with spills. Recently revised UST regulations have significantly reduced the incidents of UST leakage from new UST systems and the consequential soil and groundwater contamination. However, there are some older UST systems that remain in service and many sites contaminated by leaking USTs that are still under investigation and clean-up. USTs installed prior to the mid-1980's that have leaked as well as improperly installed USTs have resulted in fuel spills can present contamination issues in the Amendment Area. In addition, it is not uncommon for older USTs to have been abandoned in place with no documentation of location or abandonment technique. LUFT sites are associated with unauthorized releases of petroleum products associated with underground and aboveground USTs. There are 20 LUFT sites located within the Amendment Area. Approximately one-third of these sites have addressed their hazards and the environmental cases are closed (SWRCB, 2011).

Contamination from Spills and Leaks

Spills and leaks of chemicals can contaminate soil and groundwater when proper precautions are not in place. Various businesses and industries transport, use, and dispose of chemicals improperly or accidentally release them into the environment. Chemicals can include but are not limited to heavy metals, solvents and flammable materials. Non-permitted discharges of these chemicals are documented by the San Francisco Bay RWQCB in the Spills SLIC. Within the Amendment Area, there are 10 SLIC sites identified. These sites are in various stages of assessment, cleanup and monitoring under the oversight of the DTSC.

Hazardous Building Materials Associated with Demolition

Implementation of development facilitated by the Proposed Amendments could include demolition of some portions of the existing structures in the Amendment Area. The Amendment Area is currently highly developed consisting of many older buildings which may have been constructed with hazardous building materials. These materials include lead-based paint, asbestos, and polychlorinated biphenyls (PCBs) and if disturbed could present a potential hazard to workers or the public.

Prior to the U.S. Environmental Protection Agency (USEPA) ban in 1978, lead-based paint was commonly used on interior and exterior surfaces of buildings. Through such disturbances as sanding and scraping activities, or renovation work, or gradual wear and tear, old peeling paint, or paint dust particulates have been found to contaminate surface soils or cause lead dust to migrate and affect indoor air quality. Exposure to residual lead can cause severe adverse health effects especially in children.

Asbestos is a naturally occurring fibrous material that was extensively used as a fireproofing and insulating agent in building construction materials before such uses were banned by the USEPA in the 1970s. Asbestos was commonly used for insulation of heating ducts as well as ceiling and floor tiles to name a few typical types of materials. Similar to lead-based paint, contained within the building materials asbestos fibers present no significant health risk, but once these tiny fibers are disturbed they become airborne and create potential exposure pathways. The fibers are very small and cannot be seen with the naked eye. Once they are inhaled they can become lodged into the lung potentially causing lung disease or other pulmonary complications.

PCBs are organic oils that were formerly used primarily as insulators in many types of electrical equipment including transformers and capacitors. After PCBs were determined to be a carcinogen in the mid to late 1970s, the USEPA banned PCB use in most new equipment and began a program to phase out certain existing PCB-containing equipment. Fluorescent lighting ballasts manufactured after January 1, 1978, do not contain PCBs and are required to have a label clearly stating that PCBs are not present in the unit. Additional information about these materials is provided in the Regulatory Setting Section below.

4.7.3 Regulatory Setting

Development facilitated by the Proposed Amendments would be subject to government health and safety regulations applicable to the transportation, use, and disposal of hazardous materials. This section provides an overview of the regulatory setting that is applicable to the health and safety in the Amendment Area.

Federal

Hazardous Materials Management

The primary federal agencies with responsibility for hazardous materials management include the USEPA, U.S. Department of Labor Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation (DOT). Federal laws, regulations, and responsible agencies are summarized in **Table 4.7-1** and are discussed in detail in this section.

State and local agencies often have either parallel or more stringent regulations than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the state or local agency section.

State

In January 1996, the California Environmental Protection Agency (Cal EPA) adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The program has six elements: hazardous waste generators and hazardous waste on-site treatment; underground storage tanks; aboveground storage tanks; hazardous materials release response plans and inventories; risk management and prevention programs; and Unified Fire Code hazardous materials management plans and inventories. The plan is implemented at the local level. The Certified Unified Program Agency (CUPA) is the local agency that is responsible for the implementation of the Unified Program. In Oakland, the Alameda County Department of Environmental Health (ACDEH) and the Oakland Fire Department are the designated CUPA for all businesses.

Hazardous Materials Management

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires that any business that handles hazardous materials prepare a business plan, which must include the following:

- Details, including floor plans, of the facility and business conducted at the site;
- An inventory of hazardous materials that are handled or stored on site;
- An emergency response plan; and
- A safety and emergency response training program for new employees with annual refresher courses.

**TABLE 4.7-1
 FEDERAL LAWS AND REGULATIONS RELATED TO
 HAZARDOUS MATERIALS MANAGEMENT**

| Classification | Law or Responsible Federal Agency | Description |
|---|--|---|
| Hazardous Materials Incidents | National Priorities List (NPL) | Compilation of over 1,200 sites for priority cleanup under the Federal Superfund Program. |
| | Proposed National Priorities List (PNPL) | Sites considered for NPL listing. |
| | Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) | Contains data on potentially hazardous waste sites that have been reported to the USEPA by California. CERCLIS contains sites which are either proposed to or on the NPL and sites which are in the screening and assessment phase for possible inclusion on the NPL. |
| | CERCLIS No Further Remedial Action Planned (CERC-NFRAP) | CERC-NFRAP are archived sites which indicate an assessment of the site has been completed and that the EPA has determined no further steps will be taken to list the site on NPL. |
| | California Hazardous Materials Incident Report System (CHMIRS) | Spills and other incidents gathered from the California Office of Emergency Services. |
| | Formerly Used Defense Sites Properties (FUDS) | Includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions. |
| | Proposition 65 Records (Notify 65) | This database, maintained by the State Water Resources Control Board (SWRCB), contains facility notifications about any release that could impact drinking water and thereby expose the public to a potential health risk. |
| Hazardous Materials Management | Community Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA)) | Imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that such materials are accidentally released. |
| Hazardous Waste Handling | Resource Conservation and Recovery Act of 1976 (RCRA) | Under RCRA, the EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste from "cradle to grave." |
| | Hazardous and Solid Waste Act | Amended RCRA in 1984, affirming and extending the "cradle to grave" system of regulating hazardous wastes. The amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes. |
| | Hazardous Wastes & Substances Sites List (Cortese) | Historical compilation of sites listed in the LUST, SWF/LF and Cal SITES databases. No longer maintained as an active database. |
| Hazardous Materials Transportation | U.S. Department of Transportation (DOT) | Has the regulatory responsibility for the safe transportation of hazardous materials. The DOT regulations govern all means of transportation except packages shipped by mail (49 CFR). |
| | U.S. Postal Service (USPS) | USPS regulations govern the transportation of hazardous materials shipped by mail. |
| Occupational Safety | Occupational Safety and Health Act of 1970 | Fed/OSHA sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR). |
| Structural and Building Components (Lead-based paint, PCBs, and asbestos) | Toxic Substances Control Act (TSCA) | Regulates the use and management of PCBs in electrical equipment, and sets forth detailed safeguards to be followed during the disposal of such items. |
| | U.S. EPA | The EPA monitors and regulates hazardous materials used structural and building components and affects on human health. |

Hazardous Waste Handling

The Cal EPA DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to health or the environment. Laws and regulations require hazardous materials users to store these materials appropriately and to train employees to manage them safely.

Under the federal Resource Conservation and Recovery Act of 1976 (RCRA) described in Table 4.7-1, above, individual states may implement their own hazardous waste programs in lieu of RCRA, as long as the state program is at least as stringent as federal RCRA requirements. In California, the DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; prescribe management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

Hazardous Materials Transportation

The State of California has adopted DOT regulations for the intrastate movement of hazardous materials. State regulations are contained in Title 26 of the CCR. In addition, the State of California regulates the transportation of hazardous waste originating in the state and passing through the state (26 CCR). Both regulatory programs apply in California. The two state agencies that have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans).

Occupational Safety

The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the CFR. Cal/OSHA standards are generally more stringent than federal regulations.

Cal/OSHA regulations (8 CCR) concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances, and communicating hazard information relating to hazardous substances and their handling. The hazard communication program also requires that Materials Safety Data Sheets (MSDS) be available to employees, and that employee information and training programs be documented. These regulations also require preparation of emergency action plans (escape and evacuation procedures, rescue and medical duties, alarm systems, and training in emergency evacuation).

State laws, like federal laws, include special provisions for hazard communication to employees in research laboratories, including training in chemical work practices. Specific, more detailed training and monitoring is required for the use of carcinogens, ethylene oxide, lead, asbestos, and certain other chemicals listed in 29 CFR. Emergency equipment and supplies, such as fire extinguishers, safety showers, and eye washes, must also be provided and maintained in accessible places.

Cal/OSHA (8 CCR), like Fed/OSHA (29 CFR) includes extensive, detailed requirements for worker protection applicable to any activity that could disturb asbestos-containing materials, including maintenance, renovation, and demolition. These regulations are also designed to ensure that persons working near the maintenance, renovation, or demolition activity are not exposed to asbestos.

Emergency Response

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local government and private agencies. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services (OES), which coordinates the responses of other agencies, including Cal EPA, CHP, CDFG, the San Francisco Bay RWQCB, and the Oakland Fire Department (OFD). The OFD provides first response capabilities, if needed, for hazardous materials emergencies within the Amendment Area.

Structural and Building Components

Implementation of development facilitated by the Proposed Amendments could include demolition of structures which, due to their age, may contain asbestos, PCBs, or lead and lead-based paint. In addition, removal of existing aboveground tanks or USTs may be required.

Asbestos

State laws and regulations prohibit emissions of asbestos from asbestos-related manufacturing, demolition, or construction activities; require medical examinations and monitoring of employees engaged in activities that could disturb asbestos; specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos fibers; and require notice to federal and local governmental agencies prior to beginning renovation or demolition that could disturb asbestos. Asbestos represents a human health risk when asbestos fibers become airborne (friable) and are inhaled into the lungs.

The BAAQMD is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified ten days in advance of any proposed demolition or abatement work. Cal/OSHA regulates asbestos removal to ensure the health and safety of workers removing asbestos containing materials and also must be notified of asbestos abatement activities.

Polychlorinated Biphenyls (PCBs)

As previously discussed, PCBs are organic oils that were formerly placed in many types of electrical equipment and in fluorescent lighting ballasts. PCBs are highly persistent in the environment and

are toxic. In 1979, the USEPA banned the use of PCBs in most new electrical equipment and began a program to phase out certain existing PCB-containing equipment. The use and management of PCBs in electrical equipment is regulated pursuant to the Toxic Substances Control Act (40 CFR). Fluorescent lighting ballasts that contain PCBs, regardless of size and quantity, are regulated as hazardous waste and must be transported and disposed of as hazardous waste.

Lead and Lead-Based Paint

The California Code of Regulations, Title 22, considers waste soil with concentrations of lead to be hazardous if it exceeds a total concentration of 1,000 ppm and a soluble¹ concentration of 5 ppm. Both the federal and California OSHAs regulate all worker exposure during construction activities that involve lead-based paint. The Interim Final Rule found in 29 CFR Part 1926.62 covers construction work where employees may be exposed to lead during such activities as demolition, removal, surface preparation for re-painting, renovation, clean up and routine maintenance. The OSHA-specified method of compliance includes respiratory protection, protective clothing, housekeeping, hygiene facilities, medical surveillance, training, etc.

Hazardous Materials and Redevelopment

Polanco Redevelopment Act

In a redevelopment area, the Polanco Redevelopment Act authorizes an agency undertaking redevelopment activities to require the current site owner or operator to investigate and clean up an identified release of hazardous materials in accordance with applicable state and federal laws. The redeveloping 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. The Polanco Act can expedite the cleanup process and provide the redeveloping entity immunity from liability for pre-existing hazardous material contamination.

Alameda County Plans and Policies

Soil and Groundwater Contamination

In Alameda County, remediation of contaminated sites is performed under the oversight of the ACDEH and the San Francisco Bay RWQCB. The ACDEH implements a local oversight program under contract with the SWRCB to provide regulatory oversight of the investigation and cleanup of soil and groundwater contamination from leaking petroleum USTs and aboveground storage tanks. As part of the planning application process, project sponsors would be required to ascertain whether their site is listed on a hazardous materials database such as Cortese, LUST or others lists discussed above. At sites where contamination is suspected or known to have occurred, the project sponsor is required to perform a site investigation and prepare a remediation plan, if necessary. For typical development projects, actual site remediation is completed either before or

¹ Capable of being dissolved, especially in water.

during the construction phase of the project. Site remediation or development may be subject to regulation by other agencies. As noted above, several properties slated for acquisition have contaminated soil and groundwater which is currently subject to oversight by ACDEH. Future investigation and remediation of soil or groundwater contamination that is known, or has not yet been identified, would be subject to oversight by ACDEH.

Alameda County Hazardous Waste Management Program

Assembly Bill (AB) 2948 requires counties and cities either to adopt a county Hazardous Waste Management Plan as part of their general plan, or enact an ordinance requiring that all applicable zoning subdivision, conditional use permit, and variance decisions be consistent with the county hazardous waste management plan. Once each County had its Hazardous Waste Management Program approved by the State, each city had 180 days to either 1) adopt a City Hazardous Waste Management Plan containing specified elements consistent with the approved County Hazardous Waste Management Program, 2) incorporate the applicable portions of the approved Program, by reference, into the City's General Plan, or 3) enact an ordinance which requires that all applicable zoning, subdivision, conditional use permits, and variance decisions be consistent with the specified portions of the Program. Alameda County has adopted a Hazardous Waste Management Program that addresses procedures for hazardous materials incidents.

Under the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, the ACDEH is certified by the DTSC to implement the following programs:

- Hazardous Materials Management Plan and Inventory (HMMP) and the Hazardous Materials Business Plan (HMBP)
- Risk Management Program (RMP)
- UST program
- Spill Prevention, Control and Countermeasure (SPCC) Plan for aboveground storage tanks
- Hazardous waste generators
- On-site hazardous waste treatment (tiered permit).

City of Oakland Plans and Policies

Discussion of development facilitated by the Proposed Amendments' overall consistency with the Oakland General Plan is provided in Section 4.9, *Land Use, Plans and Policies*, of this SEIR. General Plan policies that are also significance criteria or contain a regulatory threshold, which the project must meet, are addressed in this section.

Oakland Urban Land Redevelopment Program

The Oakland Urban Land Redevelopment 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 (City of Oakland Public Works, 2000).

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

- 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 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.

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.

City of Oakland General Plan

- *Safety Element, Chapter 6-Fire Hazards, Policy FI-3*: Prioritize the reduction of the wildfire hazard, with an emphasis on prevention.
- *Safety Element, Chapter 6-Hazardous Materials, Policy HM-1*: Minimize the potential risks to human and environmental health and safety associated with the past and present use, handling, storage and disposal of hazardous materials.

Action HM-1.2: Continue to enforce provisions under the zoning ordinance regulating the location of facilities which use or store hazardous materials.

Action HM-1.4: Continue to participate in the Alameda County Waste Management Authority and, as a participant, continue to implement policies under the county's hazardous-waste management plan to minimize the generation of hazardous wastes.

Action HM-1.6: Through the Urban Land Redevelopment program, and along with other participating agencies, continue to assist developers in the environmental clean-up of contaminated properties.

Action HM-1.7: Create and maintain a database with detailed site information on all brownfields and contaminated sites in the city.

- *Safety Element, Chapter 6-Hazardous Materials, Policy HM -3:* Seek to prevent industrial and transportation accidents involving hazardous materials, and enhance the city's capacity to respond to such incidents.

Action HM-3.1: Continue to enforce regulations limiting truck travel through certain areas of the city to designated routes, and consider establishing timebased restrictions on truck travel on certain routes to reduce the risk and potential impact of accidents during peak traffic hours.

Action HM-3.4: Continue to rely on, and update, the city's hazardous materials area plan to respond to emergencies related to hazardous materials.

Oakland Municipal Code

To protect sensitive receptors from public health effects from a release of hazardous substances, the Oakland Municipal Code, Title 8 Section 42.105 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, 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.

City of Oakland Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The City's Standard Conditions of Approval (SCAs) relevant to hazards and hazardous materials are listed below. All applicable SCAs would be adopted as conditions of approval for projects

facilitated by the Redevelopment Plan, as Amended, to reduce significant impacts to hazards and hazardous materials. The SCAs are incorporated and required as part of the development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures. The SCAs applicable to potential hazards and hazardous materials impacts due to the development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures.

The City's SCAs relevant to hazards and hazardous material impacts are show below.

- **SCA 35: Hazards Best Management Practices**

Prior to the commencement of demolition, grading, or construction. The project applicant and construction contractor shall ensure that construction of Best Management Practices (BMPs) is implemented as part of construction to minimize the potential negative effects to groundwater and soils. These shall include the following:

- a) Follow manufacturers' recommendations on use, storage, and disposal of chemical products used in construction;
- b) Avoid overtopping construction equipment fuel gas tanks;
- c) During routine maintenance of construction equipment, properly contain and remove grease and oils;
- d) Properly dispose of discarded containers of fuels and other chemicals.
- e) Ensure that construction would not have a significant impact on the environment or pose a substantial health risk to construction workers and the occupants of the proposed development. Soil sampling and chemical analyses of samples shall be performed to determine the extent of potential contamination beneath all UST's, elevator shafts, clarifiers, and subsurface hydraulic lifts when on-site demolition, or construction activities would potentially affect a particular development or building.
- f) If soil, groundwater or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notification of regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

- **SCA 41: Asbestos Removal in Structures**

Prior to issuance of a demolition permit. If asbestos-containing materials (ACM) are found to be present in building materials to be removed, demolition and disposal, the project applicant shall submit specifications signed by a certified asbestos consultant for the removal, encapsulation, or enclosure of the identified ACM in accordance with all applicable laws and regulations, including but not necessarily limited to: California Code of Regulations, Title 8; Business and Professions Code; Division 3; California Health &

Safety Code 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended.

- **SCA 61: Site Review by the Fire Services Division**

Prior to the issuance of demolition, grading or building permit. The project applicant shall submit plans for site review and approval to the Fire Prevention Bureau Hazardous Materials Unit. Property owner may be required to obtain or perform a Phase II hazard assessment.

- **SCA 62: Phase I and/or Phase II Reports**

Prior to issuance of a demolition, grading, or building permit. Prior to issuance of demolition, grading, or building permits the project applicant shall submit to the Fire Prevention Bureau, Hazardous Materials Unit, a Phase I environmental site assessment report, and a Phase II report if warranted by the Phase I report for the project site. The reports shall make recommendations for remedial action, if appropriate, and should be signed by a Registered Environmental Assessor, Professional Geologist, or Professional Engineer.

- **SCA 63: Lead-based Paint/Coatings, Asbestos, or PCB Occurrence Assessment**

Prior to issuance of any demolition, grading or building permit. If lead-based paint is present, the project applicant shall submit specifications to the Fire Prevention Bureau, Hazardous Materials Unit signed by a certified Lead Supervisor, Project Monitor, or Project Designer for the stabilization and/or removal of the identified lead paint in accordance with all applicable laws and regulations, including but not necessarily limited to: Cal/OSHA's Construction Lead Standard, 8 CCR1532.1 and DHS regulation 17 CCR Sections 35001 through 36100, as may be amended.

- **SCA 64: Environmental Site Assessment Reports Remediation**

Prior to issuance of a demolition, grading, or building permit. If the environmental site assessment reports recommend remedial action, the project applicant shall:

- a) Consult with the appropriate local, State, and federal environmental regulatory agencies to ensure sufficient minimization of risk to human health and environmental resources, both during and after construction, posed by soil contamination, groundwater contamination, or other surface hazards including, but not limited to, underground storage tanks, fuel distribution lines, waste pits and sumps.
- b) Obtain and submit written evidence of approval for any remedial action if required by a local, State, or federal environmental regulatory agency.
- c) Submit a copy of all applicable documentation required by local, State, and federal environmental regulatory agencies, including but not limited to: permit applications, Phase I and II environmental site assessments, human health and ecological risk assessments, remedial action plans, risk management plans, soil management plans, and groundwater management plans.

- **SCA 65: Lead-based Paint Remediation**

Prior to issuance of any demolition, grading or building permit. If lead-based paint is present, the project applicant shall submit specifications to the Fire Prevention Bureau, Hazardous Materials Unit signed by a certified Lead Supervisor, Project Monitor, or Project Designer for the stabilization and/or removal of the identified lead paint in accordance with all applicable laws and regulations, including but not necessarily limited

to: Cal/OSHA's Construction Lead Standard, 8 CCR1532.1 and DHS regulation 17 CCR Sections 35001 through 36100, as may be amended.

- **SCA 66: Other Materials Classified as Hazardous Waste**

Prior to issuance of any demolition, grading or building permit. If other materials classified as hazardous waste by State or federal law are present, the project applicant shall submit written confirmation to Fire Prevention Bureau, Hazardous Materials Unit that all State and federal laws and regulations shall be followed when profiling, handling, treating, transporting and/or disposing of such materials.

- **SCA 67: Health and Safety Plan per Assessment**

Prior to issuance of any demolition, grading or building permit. If the required lead-based paint/coatings, asbestos, or PCB assessment finds presence of such materials, the project applicant shall create and implement a health and safety plan to protect workers from risks associated with hazardous materials during demolition, renovation of affected structures, and transport and disposal.

- **SCA 68: Hazard Best Management Practices for Soil and Groundwater Hazards**

The project applicant shall implement all of the following Best Management Practices (BMPs) regarding potential soil and groundwater hazards:

- a) Soil generated by construction activities shall be stockpiled onsite in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state and federal agencies laws, in particular, the Regional Water Quality Control Board (RWQCB) and/or the Alameda County Department of Environmental Health (ACDEH) and policies of the City of Oakland.
- b) Groundwater pumped from the subsurface shall be contained onsite in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies of the City of Oakland, the RWQCB and/or the ACDEH. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building (pursuant to the Standard Condition of Approval regarding Radon or Vapor Intrusion from Soil and Groundwater Sources);
- c) Prior to issuance of any demolition, grading, or building permit, the applicant shall submit for review and approval by the City of Oakland, written verification that the appropriate federal, state or county oversight authorities, including but not limited to the RWQCB and/or the ACDEH, have granted all required clearances and confirmed that the all applicable standards, regulations and conditions for all previous contamination at the site. The applicant also shall provide evidence from the City's Fire Department, Office of Emergency Services, indicating compliance with the Standard Condition of Approval requiring a Site Review by the Fire Services Division pursuant to City Ordinance No. 12323, and compliance with the Standard Condition of Approval requiring a Phase I and/or Phase II Reports.

- **SCA 69: Radon or Vapor Intrusion from Soil or Groundwater Sources**

The project applicant shall submit documentation to determine whether radon or vapor intrusion from the groundwater and soil is located on-site as part of the Phase I documents. The Phase I analysis shall be submitted to the Fire Prevention Bureau, Hazardous Materials Unit, for review and approval, along with a Phase II report if warranted by the Phase I report for the project site. The reports shall make recommendations for remedial action, if appropriate, and should be signed by a Registered Environmental Assessor, Professional Geologist, or Professional Engineer. Applicant shall implement the approved recommendations.

- **SCA 74: Hazardous Materials Business Plan**

Prior to issuance of a business license. The project applicant shall submit a Hazardous Materials Business Plan for review and approval by Fire Prevention Bureau, Hazardous Materials Unit. Once approved this plan shall be kept on file with the City and will be updated as applicable. The purpose of the Hazardous Business Plan is to ensure that employees are adequately trained to handle the materials and provides information to the Fire Services Division should emergency response be required. The Hazardous Materials Business Plan shall include the following:

- a) The types of hazardous materials or chemicals stored and/or used on site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids.
- b) The location of such hazardous materials.
- c) An emergency response plan including employee training information.
- d) A plan that describes the manner in which these materials are handled, transported and disposed.

4.7.4 Impacts and Mitigation Measures

Significance Criteria

The Redevelopment Plan, as Amended, would have a significant impact on the environment if it would:

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

5. Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would result in a safety hazard for people residing or working in the project area;
6. Be located within the vicinity of a private airstrip, and would result in a safety hazard for people residing or working in the project area;
7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
8. 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.

Approach to Analysis

Prior to approval of any project that is facilitated by the Redevelopment Plan, as Amended, the project would be subject to project-level environmental review as well as the SCAs and the goals and policies of the City's General Plan as outlined above.

The 2000 EIR analyzed the potential environmental effects on hazardous materials and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As previously indicated in Section 4.7.1, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes that have occurred to the hazardous materials setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

The approach to the analysis herein compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.² Based on the information in each of the aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding hazardous materials relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for this topic. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of hazardous materials in the Existing Project Area in this SEIR. Therefore, the impact discussions and analyses below focus on the activities facilitated by the Proposed Amendments and the potential for hazardous materials

² Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes that have occurred to the environmental setting since the 2000 EIR are also evaluated as “past, present or reasonably foreseeable” projects and accordingly, are considered in the cumulative analysis in this SEIR (see Updated Impact HAZ-6).

Retail, residential, office, industrial, and commercial activities within the Amendment Area would typically use hazardous chemicals common in these types of settings. These chemicals would include familiar materials, such as toners, paints, lubricants, kitchen and restroom cleaners, and other maintenance materials as well as chemicals used during operations. These common consumer products would be used for the same purposes as in any office or support setting, including residences. Commercial uses can also handle hazardous materials that are stored in containers provided by manufacturer. The amounts of hazardous materials that would be stored or handled cannot be determined at this time, however assumptions can be made that the amounts of hazardous materials and waste would not significantly change from existing conditions.

Based on the characteristics of the Proposed Amendments and the existing conditions, development facilitated by the Proposed Amendments would not result in impacts related to safety hazards associated with an airstrip or airport, interfere with an adopted emergency response or evacuation plan, or expose people and structures to wildland fires. No impact discussion is provided for these topics for the following reasons:

1. Interfere with Airstrip/Airport. The Amendment Area is located more than two miles from the nearest airstrip or airport and therefore, would not interfere with any airport use plan or otherwise create a safety hazard related to any such facility.

This significance criterion was not identified or addressed in the 2000 EIR. However, application of these thresholds/significance criteria, guidelines and thresholds that were not established when the 2000 EIR was prepared update the 2000 EIR and do not represent a change to the environment, the Existing Redevelopment Plan or the Existing Project Area. As with the Amendment Area, the Existing Project Area is not located near an airstrip or airport and therefore, would not interfere with any airport use plan or otherwise create a safety hazard related to any such facility. Therefore, the application of this new significance criterion does not result in a new significant environmental effects or a substantial increase in the severity of previously identified significant effects and the conclusion of no impact applies to the Redevelopment Plan, as Amended.

2. Emergency Response/Evacuation Plan. Overall, the development facilitated by the Proposed Amendments would not impede an emergency access route and would continue to maintain the existing city grid system. Additionally, the development facilitated by the Proposed Amendments would not result in permanent road closures, and therefore, would not physically interfere with emergency response or evacuation plans. In addition, construction activities that would result in temporary road closures would include traffic control plans to ensure emergency vehicle access and therefore would not cause an impact. This is consistent with the determination in the 2000 EIR (Initial Study Checklist Item #25).
3. Wildland Fires. The Amendment Area is located in an urbanized area that is not adjacent to any wildland areas. Fire protection services are provided by the City of Oakland Fire

Department and all proposed new construction would be constructed according to the most current fire safety code requirements. Therefore, development facilitated by the Proposed Amendments would not be susceptible to wildland fires and there is no impact. This is consistent with information presented in the 2000 EIR (Chapter 4.A, impact statement A.2)

To ensure overall conformance within the SEIR, and to reflect City of Oakland's *CEQA Thresholds/Criteria of Significance Guidelines* (initially established in 2008) and new City requirements and analysis methods, such as the incorporation of the City's *Standard Conditions of Approval and Uniformly Applied Development Standards* established since the 2000 EIR, this SEIR updates or replaces some of the impact conclusions and mitigation measures in the 2000 EIR. In accordance with CEQA Guidelines Section 15163, the SEIR contains the information necessary to make the 2000 EIR adequate for the Redevelopment Plan, as Amended.

Impacts

Hazardous Materials Use, Storage and Disposal

Updated Impact HAZ-1: Development facilitated by the Redevelopment Plan, as Amended, would result in an increase in the routine transportation, use, and storage of hazardous chemicals. (Less than Significant)

Issues related to routine transportation, use, and storage of hazardous chemicals was not discussed in the 2000 EIR as it was not an established significance threshold at that time. As such, the discussion that follows focuses on the effects of the Redevelopment Plan, as Amended.

Ongoing commercial, industrial, and residential uses in the Project Area, as Amended, involve the use of chemical compounds and products that are considered hazardous materials. Implementation of development facilitated by the Redevelopment Plan, as Amended, could require the transportation, use and storage of additional quantities of hazardous materials to new businesses and entities. Accidental release of these hazardous materials could result in risks to public health and safety. If not handled, stored, or transported appropriately, these impacts could be potentially significant.

Implementation of development facilitated by the Redevelopment Plan, as Amended, would require project-level environmental review, as needed and appropriate. This review would include an assessment of potential risks resulting from the site specific transport, use and disposal of hazardous materials pursuant to the California Environmental Quality Act (CEQA). However, handling and use of these hazardous materials and the disposal of the resulting hazardous wastes would be required to follow the applicable laws and regulations, as described in *Regulatory Setting* above. Additionally, projects requiring the use and disposal of hazardous materials would be required to comply SCA 35: *Best Management Practices* during construction and would be required to prepare a Hazardous Materials Management Plan (HMMP) and Hazardous Materials Business Plan (HMBP) as required by Alameda County and the City's SCA 74, *Hazardous Materials Business Plan* for operations.

Hazardous materials would be stored according to manufacturer's recommendations and according to the specifications within the project-specific HMMP and HMBP. As required, the hazardous materials would be stored in locations according to compatibility and in storage enclosures (i.e., flammable material storage cabinets) or in areas or rooms specially designed, protected, and contained for such storage, in accordance with applicable regulations. Hazardous materials would be handled and used in accordance with applicable regulations by personnel that have been trained in the handling and use of the material and that have received proper hazard-communication training. Hazardous materials reporting (i.e., California Hazardous Materials Business Planning, California Proposition 65 notification, and Emergency Planning and Community-Right-to-Know Act reporting) would be completed as required.

All hazardous materials would be transported to the Project Area, as Amended, in accordance with applicable hazardous materials shipping regulations. Hazardous materials and waste would be delivered, stored, and handled in accordance with the HMMP. The HMMP would also provide details on appropriate personal protective equipment, disposal procedures, and spill response measures in the case of accidental upset conditions. Required compliance with applicable regulatory requirements would minimize hazards to workers, visitors, the public, and the environment from waste products. As a result of these requirements, impacts resulting from hazardous materials and hazardous waste transport, use and disposal would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* The conclusion regarding potential impacts resulting from hazardous materials and hazardous waste transport, use and disposal was not identified, nor was this topic addressed, in the 2000 EIR; this significance criterion was not addressed in the previous document. The new criterion and new SCAs apply and update the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Updated Impact HAZ-2: Development facilitated by the Redevelopment Plan, as Amended, would result in the accidental release of hazardous materials used during construction through improper handling or storage. (Less than Significant)

Issues related to hazardous materials use during construction was not discussed in the 2000 EIR as it was not an established significance threshold at that time. As such, the discussion that follows focuses on the effects of the Redevelopment Plan, as Amended.

Development facilitated by the Redevelopment Plan, as Amended, could require construction activities which would use certain hazardous materials such as fuels, oils, lubricants, solvents, and glues. Inadvertent release of large quantities of these materials into the environment could adversely impact soil, surface waters, or groundwater quality. These impacts would be potentially significant.

However, the hazardous materials used on a construction site would be used in accordance with manufacturer recommendations. Spills of hazardous materials on construction sites are typically localized and are cleaned up in a timely manner. In most cases, the individual construction contractors are responsible for their hazardous materials and are required under their contract to properly store and dispose of these materials in compliance with state and federal laws. Additionally, the use of construction best management practices which would be required to be implemented as part of construction and required by SCA 35, *Hazards Best Management Practices*, would minimize the potential adverse effects to groundwater and soils.

Given the use of best management practices as required by the individual construction contractors, the threat of exposure to the public or contamination to soil and groundwater from construction-related hazardous materials is considered less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* The conclusion regarding potential impacts resulting from hazardous materials use during construction was not identified, nor was this topic addressed, in the 2000 EIR; this significance criterion was not addressed in the previous document. The new criterion and new SCAs apply and update the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Exposure to Hazardous Materials

Updated Impact HAZ-3: Development facilitated by the Redevelopment Plan, as Amended, would result in the exposure of hazardous materials in soil and ground water. (Less than Significant)

Issues related to exposure of hazardous materials in soil and ground water within the Existing Project Area were discussed in the 2000 EIR (Initial Study Checklist Item # 8), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change related to hazardous materials has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing hazardous materials effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Development facilitated by the Proposed Amendments could require excavation for installation of building foundations and underground utilities. Some of the excavation could be substantial for projects that might include subterranean garages. The development sites could have had previous unauthorized releases of hazardous materials that have contaminated subsurface soils and groundwater that would be exposed during excavation activities. Known sites with releases

are present in the Amendment Area as discussed above in the Environmental Setting section. Consequently, construction in the Amendment Area could potentially intercept and disturb impacted soil and/or groundwater. Disturbed contaminated soils could expose construction workers and the public to contaminants causing various short-term health effects such as nausea, vomiting, headache, dizziness, or burns. These impacts would be considered potentially significant.

Implementation of a project could require land transfers or changes to land use. If a specific development site is the location of a documented release of hazardous materials and is listed on a regulatory database it would be subject to site cleanup regulations as required by a designated regulatory agency, such as the SWRCB or DTSC. If the proposed land use were more sensitive than the existing land use, such as changing an industrial building to a residential building, more stringent clean up regulations would apply even if the site has been considered remediated or closed based on complying with standards for its current land use. However, compliance with standards set forth in the Oakland Urban Land Redevelopment Program would ensure any redeveloped site undergoes risk-based corrective action. Planning applications, including for change of activities such as to school or day care on contaminated properties, would also require site cleanup procedures.

Development facilitated by the Proposed Amendments would undergo project-level environmental review as appropriate. This would include an assessment of potential risks resulting from the exposure of hazardous materials in soil and groundwater pursuant to the CEQA. Projects proposed under the Proposed Amendments would require a review of environmental databases for a given project site. If database review indicates there is contamination at the site, construction and operation of the project would be subject to the stringent state and local policies regarding the handling of contaminated soils and groundwater. Compliance with the Oakland Urban Land Redevelopment Program, SCA 68, *Best Management Practices for Soil and Groundwater Hazards*, and SCA 69, *Radon or Vapor Intrusion from Soil or Groundwater Sources*, would be required, ensuring that any potential impacts are less than significant.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant effects related to discharge of hazardous materials identified in the 2000 EIR. Adherence to the SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact related to discharge of hazardous materials is substantially the same as identified in the 2000 EIR (Initial Study Checklist Item # 8). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Updated Impact HAZ-4: Development facilitated by the Redevelopment Plan, as Amended, would result in the exposure of hazardous building materials during building demolition or façade improvements. (Less than Significant)

Issues related to exposure of hazardous building materials within the Existing Project Area were discussed in the 2000 EIR (Initial Study Checklist Item # 24), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change related to hazardous materials has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing hazardous materials effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Demolishing or improving the facades of existing structures or portions thereof within the Amendment Area may expose construction workers, the public, or the environment to hazardous materials such as lead-based paint, asbestos, and PCBs. The level of potential impact is dependent upon the age, construction, and building materials in each area of the building. As discussed above, asbestos containing materials may be present at the site which, if disturbed, could expose workers and the public during these activities. Any remaining asbestos containing materials would need appropriate abatement of identified asbestos prior to demolition. Asbestos containing materials are regulated both as a hazardous air pollutant under the Clean Air Act and as a potential worker safety hazard under the authority of Cal-OSHA. Cal-OSHA also regulates worker exposure to lead-based paint. These impacts would be potentially significant.

Potential exposure to these hazardous building materials will be reduced through appropriate identification, removal and disposal according to applicable regulations to less-than-significant levels. In structures slated for demolition for development facilitated by the Proposed Amendments, any asbestos-containing materials would be abated in accordance with state and federal regulations prior to the start of demolition or renovation activities. Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. The BAAQMD is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified 10 days in advance of any proposed demolition or abatement work.

Notification includes the names and addresses of operations and persons responsible; description and location of the structure to be demolished/alterd including size, age, and prior use, and the approximate amount of friable asbestos; scheduled starting and completion dates of demolition or abatement; nature of planned work and methods to be employed; procedures to be employed to meet BAAQMD requirements; and the name and location of the waste disposal site to be used. The BAAQMD randomly inspects asbestos removal operations and will inspect any removal operation about which a complaint has been received.

Asbestos abatement contractors must follow state regulations contained in 8 CCR 1529 and 8 CCR 341.6 through 341.14 where there is asbestos-related work involving 100 square feet or more of asbestos-containing material. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California. The owner of the property where abatement is to occur must have a hazardous waste generator number assigned by and registered with the DTSC in Sacramento. The site owner or responsible party and the transporter of the waste are required to file a hazardous waste manifest that details the transportation of the material from the site and its disposal.

Both the federal OSHA and Cal-OSHA regulate worker exposure during construction activities that disturb lead-based paint. The Interim Final Rule found in 29 CFR 1926.62 covers construction work in which employees may be exposed to lead during such activities as demolition, removal, surface preparation for repainting, renovation, cleanup, and routine maintenance. The OSHA-specified compliance includes respiratory protection, protective clothing, housekeeping, special high-efficiency filtered vacuums, hygiene facilities, medical surveillance, and training. No minimum level of lead is specified to activate the provisions of this regulation.

Compliance with these regulations and procedures, as well as SCA 63, *Lead-base Paint Remediation*, and SCA 41, *Asbestos Removal in Structures*, would ensure that any potential impacts due to lead-base paint or asbestos are less than significant.

Fluorescent lighting ballasts manufactured prior to 1978, and electrical transformers, capacitors, and generators manufactured prior to 1977, may contain PCBs. In accordance with the Toxic Substances Control Act and other federal and state regulations, development facilitated by the Proposed Amendments would be required to properly handle and dispose of electrical equipment and lighting ballasts that contain PCBs, reducing potential impacts to a less-than-significant level.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant effects on risk of explosion identified in the 2000 EIR. Adherence to the SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact related to exposure of hazardous building materials is substantially the same as identified in the 2000 EIR (Initial Study Checklist Item # 24). The new criterion and new SCAs apply and update the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Hazardous Materials within a Quarter Mile of a School

Updated Impact HAZ-5: Development facilitated by the Proposed Redevelopment Plan, as Amended, would require use of hazardous materials within 0.25 mile of a school. (Less than Significant)

Issues related to use of hazardous materials within 0.25 mile of a school were not discussed in the 2000 EIR as this was not an established significance threshold at that time. The discussion that follows updates the 2000 EIR to reflect impacts and requirement for the Redevelopment Plan, as Amended.

There are five schools located within approximately 0.25 mile of the San Pablo Subarea of the Existing Project Area and Amendment Area. These include the Santa Fe Elementary School located at 915 54th Street, Civicorps Charter Elementary School located at 1086 Alcatraz Avenue, Grace Children's Center pre-school located at 993 53rd St. Golden Gate Elementary School located at 6200 San Pablo Avenue and Pacific Rim International School located at 5521 Doyle Street in Emeryville. In addition, OUSD has approximately seven schools located within approximately 0.25 mile of the Broadway/MacArthur Subarea of the Existing Project Area. These include Street Academy High School, Oakland International High School, Oakland Tech High School, Bay Area Tech Charter School, Westlake Middle School, Emerson Elementary School, and Hoover Elementary School. There are also a number of Pre-K programs located within 0.25 mile of the Broadway/MacArthur Subarea of the Existing Project Area.

As discussed in the Environmental Setting section and Updated Impact HAZ-1 above, development facilitated by the Redevelopment Plan, as Amended, as well as existing, zoned land uses in the Project Area, as Amended, could require the use, transport and storage of hazardous materials. In the event of an accidental release of hazardous materials in the vicinity of a school, as outlined below, these potential risks would be less than significant due to the incorporation of SCAs and other existing regulatory requirements.

Development facilitated the Redevelopment Plan, as Amended, would require project-level environmental review as needed and appropriate. This would include an assessment of potential hazards to schools pursuant to the CEQA. Consequently, development facilitated by the Redevelopment Plan, as Amended, would be required to comply with City of Oakland's Ordinances and General Plan Policies require hazardous material handlers within 1,000 feet of a school or other sensitive receptor to prepare a Hazardous Materials Assessment Report and Remediation Plan (HMARRP). The HMARRP would disclose the use of hazardous materials at the site, conduct assessments of potential off-site risks (such as a Health Risk Assessment), and implement precautions to reduce identified risks. The HMARRP must identify hazardous materials used at a project site, the potential on-site and off-site risks, and measures to be implemented to reduce or eliminate these risks. The HMARRP is subject to review and approval by the City of Oakland and public review and comment to ensure that potential threats to public health are adequately addressed. Additionally, those handling or storing hazardous materials would be required to prepare a Hazardous Materials Management Plan (HMMP) and Hazardous Materials Business Plan (HMBP) as required by Alameda County and the City's SCA 74, *Hazardous Materials Business*

Plan. Completing these requirements would reduce to a less-than-significant level the potential for an unacceptable release of hazardous materials within 0.25 mile of a school.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* The conclusion regarding the potential impact related to use of hazardous materials within 0.25 mile of a school was not identified, nor was this topic addressed, in the 2000 EIR; this significance criterion was not addressed in the previous document. The new criterion and new SCAs apply and update the 2000 EIR No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Cumulative Impacts

Updated Impact HAZ-6: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, would not result in cumulative hazards. (Less than Significant)

Geographic Context

The cumulative geographic context for hazardous materials for the development facilitated by the Proposed Amendments consists of the Amendment Area in addition to all areas of the City and area roadways used to transport hazardous materials.

The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Changes to the to the existing settings regarding hazards and hazardous materials relevant to the Existing Project Area that have occurred since preparation of the 2000 EIR are incorporated into the “past, present or reasonably foreseeable” projects that accordingly are considered in this analysis f. As discussed in the *Approach to Analysis*, above, no substantial change to the issues related to hazards and hazardous materials has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments and considers the City’s current SCAs, significance criteria and approach to assessing hazards and hazardous materials effects under CEQA, concluding with discussion of the impact of the Redevelopment Plan, as Amended.

Impacts

Cumulative health and safety effects could occur if activities in the Amendment Area and other existing and proposed development, together, could increase risks in the Amendment Area. Cumulative health and safety impacts could occur if outdoor or off-site hazards related to development facilitated by the Proposed Amendments were to interact or combine with those of

other cumulative development within and around the Amendment Area (as described in Major Projects List in Appendix B to this Draft SEIR, and discussed in Section 4.09, *Cumulative Context*, at the beginning of Chapter 4 of this Draft SEIR). These impacts could occur through limited mechanisms: air emissions, transport of hazardous materials and waste to or from a project site, inadvertent release of hazardous materials to the sewer or non-hazardous waste landfill, and potential accidents that require hazardous materials emergency response capabilities. Air emissions are addressed in Section 4.2, *Air Quality*. The other mechanisms for cumulative off-site effects are discussed below.

The development facilitated by the Proposed Amendments could contribute to cumulative increases in the amount of hazardous material transported to and from the Amendment Area because reasonably foreseeable development projects within the Amendment Area could involve the same roads. Cumulative increases in the transportation of hazardous materials and wastes would cause a less-than-significant impact because the probability of such accidents is relatively low due to the stringent policies regulated the transport, use and storage of hazardous materials. Development projects in the Amendment Area would be required to comply with the City's SCA 66, *Other Materials Classified as Hazardous Waste*, and SCA 74, *Hazardous Materials Business Plan*, which outlines the guidance for transporting hazardous materials safely to and from the project sites, in addition to SCA 61, *Site Review by Fire Services Division*, to ensure overall compliance of projects for hazardous materials.

Development facilitated by the Proposed Amendments would contribute to cumulative increases in the demand for hazardous materials emergency response capabilities in Oakland. Any growth involving increased hazardous materials use has the potential to increase the demand for emergency response capabilities in the area. However, first response capabilities and hazardous materials emergency response capabilities are currently available and sufficient for all cumulative projects. Furthermore, substantive hazardous materials accidents at the project site or vicinity are expected to be rare, and when such incidents would occur, only one such incident would be expected at any one time (except during major catastrophes, such as major earthquakes). Due to the controls in place at the site, no off-site effects would be expected. Furthermore, additional hazardous materials response services could be available through other jurisdictions, and private hazardous materials emergency response agencies could be used. Therefore, this cumulative impact would be less than significant.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant effects on cumulative hazards identified in the 2000 EIR. Adherence to the SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential cumulative hazards impact is substantially the same as identified in the 2000 EIR (Initial Study Checklist Mandatory Findings "c" and "d"). New SCAs apply and are consistent with and update

the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

4.7.5 References

- California State Water Quality Control Board (SWQCB), available online at <http://www.geotracker.swrcb.gov>, accessed on April 26, 2011.
- California Department of Toxic Substances Control (DTSC), Envirostor Database, available online at <http://www.envirostor.dtsc.ca.gov/public/>, accessed April 26, 2011.
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- City of Oakland, *Broadway/MacArthur Redevelopment Plan Initial Study and Environmental Review Checklist*, March 1999.
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- City of Oakland, *Broadway/MacArthur/San Pablo Redevelopment Plan Final Environmental Impact Report*, June 2000.
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- City of Oakland, *MacArthur Transit Village Final Environmental Impact Report*, May 2008.
- City of Oakland Public Works, *Oakland Urban Land Redevelopment Program Guidance Document*, January 2000.
- Oakland Unified School District (OUSD), District Locations Map, available online at <http://publicportal.ousd.k12.ca.us/19941010614854177/site/default.asp>, accessed July 20, 2011.

4.8 Hydrology and Water Quality

This section analyzes how the development facilitated by the Redevelopment Plan, as Amended, may affect hydrology and water quality. Specifically, this section describes hydrology and water quality conditions in the Amendment Area, and as appropriate, the Existing Project Area, to provide relevant background information. Potential hydrology and water quality impacts are discussed and evaluated, and appropriate standard conditions of approval are identified, as necessary. Pursuant to CEQA Guidelines Section 15162 regarding an SEIR, this section also discusses whether there are any new or more severe significant impacts than those identified in the 2000 EIR that result from changed circumstances or new information.

4.8.1 2000 EIR and Existing Project Area

Hydrology and water quality were evaluated in the 2000 EIR (Initial Study Checklist (Items # 6-10)). The Initial Study conducted for the 2000 EIR included a description of the Existing Project Area environmental setting as it relates to hydrology and water quality. Since 2000, an approximately 145 foot-long segment of western branch of the Glen Echo Creek was daylighted (restored to natural and open). The daylighted segment runs north-south between Broadway and 38th Street, Manila Avenue and West MacArthur Boulevard. Improvements to this creek segment, including bank stabilization and revegetation, were approved as a part of the Kaiser Permanente Oakland Medical Center Master Plan (2007).

The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Also, changes that have occurred to the hydrology and water quality setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

Because the only new impacts regard the Redevelopment Plan, as Amended are associated with the Proposed Amendments and would not involve any new significant impacts with respect to the Existing Project Area, the remainder of this Hydrology and Water Quality Environmental Setting, and Regulatory Setting, and Impacts and Mitigation Measures analysis herein focuses primarily on the Amendment Area and the additions/changes related to the Proposed Amendments.

4.8.2 Environmental Setting for the Amendment Area

Regional Drainage Patterns

The Amendment Area is located within the San Francisco Bay Hydrologic Region. San Francisco Bay provides a topographic separation between the northern and southern coastal mountain ranges. The San Francisco Bay estuarine system conveys the waters of the San Joaquin and Sacramento rivers into the Pacific Ocean. These rivers enter the San Francisco Bay at the eastern end of Suisun Bay. Locally, the Amendment Area is part of the Temescal Creek Watershed of the east bay region (Oakland Museum, 2011).

Surface Water and Local Drainage Patterns

Temescal Creek is a major local creek that intersects the southern portion of the Amendment Area along 52nd Street. However, in this area the creek is culverted and is not day-lighted until after flowing through Oakland and into Emeryville, the eventually draining into the San Francisco Bay. The Amendment Area is relatively flat and drainage patterns vary with local topography. The Amendment Area is largely developed and surface runoff generally flows eastward through Emeryville towards the San Francisco Bay. Flows are predominately captured by City of Oakland drainage systems. While the portion of Temescal Creek within the Amendment Area is culverted, it is possible that local storm drains discharge into the creek. Therefore, a small amount of stormwater from the Amendment Area could potentially flow into Temescal Creek.

Water Quality

The Amendment Area lies in a predominantly urbanized area adjacent to San Francisco Bay. The Lower San Francisco Bay is classified as a 303(d)-listed impaired water body due to high levels of numerous contaminants and exotic species (RWQCB, 2007). There are no other impaired water bodies in the vicinity of the Amendment Area. More details about the 303(d) classification are in the *Regulatory Setting* section below.

Stormwater Runoff and Drainage Facilities

Stormwater runoff in Oakland is generally collected from the Oakland-Berkeley Hills to the northeast through the developed flatlands where it then flows primarily through underground storm drains and culverts to the San Francisco Bay via the Oakland Estuary or through the City of Emeryville. The Alameda County Flood Control and Water Conservation District (ACFCWCD) constructs, operates, and maintains major trunk lines and flood-control facilities in Oakland, and the Oakland Public Works Agency is responsible for construction and maintenance of the local storm drainage system within Oakland's public areas and roads. Stormwater runoff is conveyed in the Amendment Area through onsite pavement gutters, surface drains, parking lots, and roof drains that discharge to local storm drains.

Flooding

Flooding is inundation of normally dry land as a result of rapid accumulation of stormwater runoff or rise in the level of surface waters. Flooding becomes a hazard when the flow of water exposes people or structures to a significant risk of loss, injury, or death. Flooding generally occurs due to excess runoff due to heavy snowmelt or rainfall, but it can also result from the interaction with natural hazards, such as tsunamis, seiches, or failure of dams.

The Federal Emergency Management Agency (FEMA), through its Flood Insurance Rate Map (FIRM) program, designates areas where flooding could occur during a one percent annual chance (100-year) or a 0.2 percent annual chance (500-year) flood events. The Amendment Area is outside any flood zones as mapped by FEMA (FEMA, 2009).

Flooding could also occur due to dam failure. The California Department of Water Resources, Division of Safety of Dams (DSOD) oversees the construction of dams that are over 25 feet high and impound over 15 acre-feet of water, or those that are over six feet high and impound over 50 acre-feet of water. The DSOD requires dam owners to develop maps designating potential dam failure. ABAG compiled these maps into a central database for many Bay Area cities. Based on these maps, the Amendment Area would be at risk for dam failure inundation along the southern portion of the Amendment Area boundary. Inundation in this area could originate from failure of the Temescal Dam (ABAG, 2011 and City of Oakland, 2004).

Groundwater

A groundwater basin is a hydrogeologic unit containing several connected and interrelated aquifers or one large aquifer. The Amendment Area lies in the East Bay Plain Groundwater Basin (Basin No. 2-9-04), which extends from Richmond to Hayward. The basin is a northwest-trending alluvial plain bounded on the west by San Francisco Bay, on the north by San Pablo Bay, on the east by Franciscan Basement rock, and on the south by the Niles Cone Groundwater Basin (DWR, 2004). The alluvial materials that extend westward from the East Bay hills to San Francisco Bay constitute the deep water-bearing strata for the groundwater basin (DWR, 2004). The basin is identified as a potential water source for agricultural, industrial, and municipal use (RWQCB, 2007). Since the early 1950s, historic groundwater levels in the deep aquifer in the basin have varied between 10 and 140 feet below mean sea level (DWR, 2004). Groundwater in the Amendment Area occurs at relatively shallow depths of 5-10 feet but there are no water supply wells in the Amendment Area.

4.8.3 Regulatory Setting

Federal

Clean Water Act (CWA)

The CWA established the basic structure for regulating discharges of pollutants into the waters of the U.S. and gave the USEPA the authority to implement pollution control programs such as setting wastewater standards for industry. The CWA sets water quality standards for all contaminants in surface waters. The statute employs a variety of regulatory and nonregulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The U.S. Army Corps of Engineers (USACE) has jurisdiction over all waters of the U.S. including, but not limited to, perennial and intermittent streams, lakes, and ponds, as well as wetlands in marshes, wet meadows, and side hill seeps. Under Section 401 of the CWA every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with state water quality standards.

The National Pollutant Discharge Elimination System (NPDES) permit program under the CWA controls water pollution by regulating point and nonpoint sources that discharge pollutants into “waters of the U.S.” California has an approved state NPDES program. The USEPA has delegated

authority for NPDES permitting to the California State Water Resources Control Board (SWRCB), which has nine regional boards. The San Francisco Bay RWQCB regulates water quality in the Amendment Area.

Section 303(d) of the CWA requires that each state identify water bodies or segments of water bodies that are “impaired” (i.e., not meeting one or more of the water quality standards established by the state). These waters are identified in the Section 303(d) list as waters that are polluted and need further attention to support their beneficial uses. Once the water body or segment is listed, the state is required to establish Total Maximum Daily Load (TMDL) for the pollutant causing the conditions of impairment. TMDL is the maximum amount of a pollutant that a water body can receive and still meet water quality standards. Generally, TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The intent of the Section 303(d) list is to identify water bodies that require future development of a TMDL to maintain water quality.

In accordance with Section 303(d), the San Francisco Bay RWQCB has identified impaired water bodies within its jurisdiction, along with the pollutant or stressor responsible for impairing the water quality (SWRCB, 2007). In the San Francisco Bay region, the RWQCB has designated the South Basin of San Francisco Bay as an impaired water body. Pollutants that contribute to this impairment are chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, polychlorinated biphenyls, and selenium (SWRCB, 2007).

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, Division 7 of the California Water Code, allows the SWRCB to adopt statewide water quality control plans. The purpose of the plans is to establish water quality objectives for specific water bodies. The act also authorizes the NPDES program under the CWA, which establishes water quality requirements for discharges to waters of the state. Most of the implementation of SWRCB’s responsibilities is delegated to nine regional boards. The San Francisco Bay RWQCB has established permit requirements for stormwater runoff for the Amendment Area (see *Regulatory Setting* section below).

California Toxics Rule

Under the California Toxics Rule, the USEPA has proposed water quality criteria for priority toxic pollutants for inland surface waters, enclosed bays, and estuaries. These federally promulgated criteria create water quality standards for California waters. The California Toxic Rule satisfies CWA requirements and protects public health and the environment. The USEPA and the SWRCB have the authority to enforce these standards. However, actions under the Proposed Amendments could require discharge of toxic pollutants into the inland surface waters, such as Temescal Creek, or San Francisco Bay, via stormwater drains therefore the California Toxic Rule would apply.

Regional

Regional Water Quality Control Board

The San Francisco Bay RWQCB is responsible for the protection of beneficial uses and the water quality of water resources within the San Francisco Bay region. The San Francisco Bay RWQCB administers the NPDES stormwater permitting program and regulates stormwater in the San Francisco Bay region. The City of Oakland is a permittee under the NPDES Municipal Stormwater Permit for the Alameda Countywide Clean Water Program (see below for detailed discussion). Project applicants are required to apply for a NPDES General Permit for discharges associated with project construction activities of greater than one acre.

General Construction Permit

Stormwater discharges from construction activities on one acre or more are regulated by the RWQCB and are subject to the permitting requirements of the NPDES General Permit for Discharges of Stormwater Runoff Associated with Construction Activity (General Construction Permit, 99-08-DWQ). All dischargers are required to obtain coverage under the Construction General Permit Order 2009-0009-DWQ adopted on September 2, 2009. The RWQCB established the General Construction Permit program to reduce surface water impacts from construction activities. Construction associated with development facilitated by the Proposed Amendments would be required to comply with the current NPDES permit requirements to control stormwater discharges from the construction site. The General Construction Permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for construction activities. The SWPPP must be prepared before the construction begins, and in certain cases, before demolition begins. The SWPPP must include specifications for BMPs that would need to be implemented during project construction. BMPs are measures that are undertaken to control degradation of surface water by preventing soil erosion or the discharge of pollutants from the construction area. The SWPPP must describe measures to prevent or control runoff after construction is complete and identify procedures for inspecting and maintaining facilities or other project elements. Required elements of a SWPPP include:

1. Site description addressing the elements and characteristics specific to the site;
2. Descriptions of BMPs for erosion and sediment controls;
3. BMPs for construction waste handling and disposal;
4. Implementation of approved local plans;
5. Proposed post-construction controls; and
6. Non-stormwater management.

Examples of typical construction BMPs include scheduling or limiting activities to certain times of year, installing sediment barriers such as silt fence and fiber rolls, maintaining equipment and vehicles used for construction, tracking controls such as stabilizing entrances to the construction site, and developing and implementing a spill prevention and cleanup plan. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, vehicle and equipment washing and fueling. The California Stormwater

Quality Association established BMPs for the State of California in the *California Storm Water Best Management Practice Handbook* (2003).

Regional Water Quality Control Plan

The San Francisco Bay RWQCB prepared the *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan) for San Francisco Bay (RWQCB, 2007). The Basin Plan contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the region and describes beneficial uses of major surface waters and their tributaries. The Basin Plan lists following beneficial uses for the South Basin of San Francisco Bay:

- Ocean, Commercial, and Sport Fishing
- Estuarine Habitat
- Industrial Service Supply
- Fish Migration
- Navigation
- Preservation of Rare and Endangered Species
- Water Contact Recreation
- Noncontact Recreation
- Shellfish Harvesting
- Wildlife Habitat

For development facilitated by the Proposed Amendments, the RWQCB is responsible for regulating construction activities to ensure the protection of the above beneficial uses.

Alameda County Regulations

The ACFCWCD and the City of Oakland Public Works Agency share responsibility for maintaining drainage facilities in Oakland. The Amendment Area lies within the jurisdiction of Zone 12 of the ACFCWCD (ACFCWCD, 2010). A project applicant would comply with the requirements of these agencies during construction and operation of projects facilitated by the Proposed Amendments.

Alameda Countywide Clean Water Program (ACCWP)

The ACCWP includes 17 member agencies that work together to protect creeks, wetlands and the San Francisco Bay. The City of Oakland and ACFCWCD are two of the agencies that participate in the ACCWP. The member agencies have developed performance standards to clarify the requirements of the stormwater pollution prevention program, adopted stormwater management ordinances, conducted extensive education and training programs, and reduced stormwater pollutants from industrial areas and construction sites. In the Amendment Area, the ACCWP administers the stormwater program to meet CWA requirements by controlling pollution in the local storm drain sewer systems.

The ACCWP is part of the Municipal Regional Stormwater NPDES Permit (MRP) that was adopted by the RWQCB on October 14, 2009. The new NPDES permit (Order R2-2009-0074

Permit No. CAS612008) issued by the RWQCB is designed to enable the ACCWP agencies to meet CWA requirements. The permit addresses the following major program areas: regulatory compliance, focused watershed management, public information/participation, municipal maintenance activities, new development and construction controls, illicit discharge controls, industrial and commercial discharge controls, monitoring and special studies, control of specific pollutants of concern, and performance standards. The permit also includes performance standards for new development and construction activities also referred to as Provision C.3 requirements. The C.3 requirements include measures for Permittees to use in planning appropriate source controls in site designs to include stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges. An additional goal is to prevent increases in runoff flows primarily accomplished through implementation of low impact development (LID) techniques.

According to the C.3 provision in the ACCWP NPDES permit, the potential actions under the Proposed Amendments fall in the “significant redevelopment projects” category under Group 1 Projects. A significant redevelopment project is defined as a project on a previously developed site that results in addition or replacement of total of 43,560 square feet (one acre) or more of impervious surface. The permit requires that in the case of a significant redevelopment project that would result in an increase of, or replacement of, more than 50 percent of the impervious surface of a previously existing development, and the existing development was not subject to stormwater treatment measures, the entire project be included in the treatment measure design.

The C.3 provision also requires preparation of a hydrograph modification management plan (HMP) in cases where the changes in the amount and timing of runoff would increase stormwater discharge rates and/or duration and increase the potential for erosion or other significant adverse impacts to beneficial uses. The actions under the Proposed Amendments shall comply with the provisions of the ACCWP NPDES Permit.

Oakland has jurisdiction over and/or maintenance responsibility for its municipal separate storm drain systems and/or watercourses in the City. Construction activities associated with development facilitated by the Proposed Amendments would be subject to the NPDES permit requirements for stormwater management and discharges.

Local

City of Oakland Municipal Code

The City of Oakland implements the following regulations to protect water quality and water resources:

- *Creek Protection, Stormwater Management, and Discharge Control Ordinance* (part of Chapter 13 of the Oakland Municipal Code). This ordinance prohibits activities that would result in the discharge of pollutants to Oakland's waterways or in damage to creeks, creek functions, or habitat. The ordinance requires the use of standard BMPs to prevent pollution or erosion to creeks and/or storm drains. Additionally, a creek protection permit is required for any construction work on creekside properties. The ordinance establishes comprehensive

guidelines for the regulation of discharges to the city's storm drain system and the protection of surface water quality. The ordinance identifies BMPs and other protective measures for development projects. Under the ordinance, the City of Oakland Public Works Agency issues permits for storm drainage facilities that would be connected to existing city drainage facilities. In 1997, the ordinance was amended to include the requirement for a creek protection permit for any construction or related activity on creekside property. The ordinance includes enforcement provisions to provide more effective methods to deter and reduce the discharge of pollutants to the storm drain system, local creeks, and San Francisco Bay. The provisions also list clear guidelines for creekside residents to protect the creek and habitat.

- Grading Ordinance (part of Chapter 15 of the Oakland Municipal Code). The Grading Ordinance requires a permit for grading activities on private or public property for projects that exceed certain criteria, such as amount of proposed excavation and degree of site slope. During project construction, the volume of the excavated fill material could exceed 50 cubic yards and could result in a 20 percent slope onsite, or the depth of excavation could exceed five feet at any location. Therefore, the project sponsor would be required to apply for the grading permit and prepare a grading plan, erosion and sedimentation control plan, and drainage plan.

City of Oakland General Plan

The following objectives, policies, and actions from City of Oakland's General Plan are applicable to development facilitated by the Proposed Amendments:

- OSCAR, Chapter 3-Conservation, Water Resources, Objective CO-5: Water Quality: To minimize the adverse effects of urbanization on Oakland's groundwater, creeks, lakes, and nearshore waters.
- Safety Element, Chapter 6-Flooding Hazards, Policy FL-1: Enforce and update local ordinance, and comply with regional orders that would reduce the risk of storm-induced flooding.

Action FL-1.1: Amend, as necessary, the city's regulations concerning new construction and major improvements to existing structures within flood zones in order to maintain compliance with federal requirements and, thus, remain a participant in the National Federal Insurance Program.

Action FL-1.3: Comply with all applicable performance standards pursuant to the 2003 Alameda countywide National Pollutant Discharge Elimination System municipal stormwater permit that seek to manage increases in stormwater runoff flows from new-development and redevelopment construction projects.

Action FL-1.4: Continue to enforce the grading, erosion, and sedimentation ordinance by prohibiting the discharge of concentrated stormwater flows by other than approved methods.

- Safety Element, Chapter 6-Flooding Hazards, Policy FL-2: Continue or strengthen city programs that seek to minimize the storm-induced flooding hazard.

Action FL-2.1: Continue to repair and make structural improvements to storm drains to enable them to perform to their design capacity in handling water flows.

- Safety Element, Chapter 6-Flooding Hazards, Policy FL-4: Minimize further the relatively low risks from non-storm-related forms of flooding.

Action FL-4.1: Request from the state Division of Safety of Dams a timeline for the maintenance inspection of all operating dams in the city.

Action FL-4.2: Review for adequacy, and update if necessary, procedures adopted by the city pursuant to the Dam Safety Act for the emergency evacuation of areas located below major water-storage facilities.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The City of Oakland SCA relevant to hydrology and water quality are listed below. All applicable SCAs would be adopted as conditions of approval for projects facilitated by the Redevelopment Plan, as Amended, to reduce significant impacts to hydrology and water quality. The SCAs are incorporated and required as part of the development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures. SCA's applicable to potential geologic impacts could also affect hydrologic resources and are listed in Section 4.5, *Geology, Soils and Geohazards*.

The City's SCAs relevant hydrology and water quality are shown below:

- **SCA 55: Erosion and Sedimentation Control Plan**

Prior to any grading activities.

- a. The project applicant shall obtain a grading permit if required by the Oakland Grading Regulations pursuant to Section 15.04.780 of the Oakland Municipal Code. The grading permit application shall include an erosion and sedimentation control plan for review and approval by the Building Services Division. The erosion and sedimentation control plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading operations. The plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the Director of Development or designee. The plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.

Ongoing throughout grading and construction activities.

- b. The project applicant shall implement the approved erosion and sedimentation plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Building Services Division.

- **SCA 75: Stormwater Pollution Prevention Plan (SWPPP)**

Prior to and ongoing throughout demolition, grading, and/or construction activities. The project applicant must obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit) issued by the State Water Resources Control Board (SWRCB). The project applicant must file a notice of intent (NOI) with the SWRCB. The project applicant will be required to prepare a stormwater pollution prevention plan (SWPPP) and submit the plan for review and approval by the Building Services Division. At a minimum, the SWPPP shall include a description of construction materials, practices, and equipment storage and maintenance; a list of pollutants likely to contact stormwater; site-specific erosion and sedimentation control practices; a list of provisions to eliminate or reduce discharge of materials to stormwater; Best Management Practices (BMPs), and an inspection and monitoring program. Prior to the issuance of any construction-related permits, the project applicant shall submit to the Building Services Division a copy of the SWPPP and evidence of submittal of the NOI to the SWRCB. Implementation of the SWPPP shall start with the commencement of construction and continue through the completion of the project. After construction is completed, the project applicant shall submit a notice of termination to the SWRCB.

- **SCA 78: Site Design Measures for Post-Construction Stormwater Management**

Prior to issuance of building permit (or other construction-related permit). The project drawings submitted for a building permit (or other construction-related permit) shall contain a final site plan to be reviewed and approved by Planning and Zoning. The final site plan shall incorporate appropriate site design measures to manage stormwater runoff and minimize impacts to water quality after the construction of the project. These measures may include, but are not limited to, the following:

- i. Minimize impervious surfaces, especially directly connected impervious surfaces;
- ii. Utilize permeable paving in place of impervious paving where appropriate;
- iii. Cluster buildings;
- iv. Preserve quality open space; and
- v. Establish vegetated buffer areas.

Ongoing. The approved plan shall be implemented and the site design measures shown on the plan shall be permanently maintained.

- **SCA 79: Source Control Measures to Limit Stormwater Pollution**

Prior to issuance of building permit (or other construction-related permit). The applicant shall implement and maintain all structural source control measures imposed by the Chief of Building Services to limit the generation, discharge, and runoff of stormwater pollution.

Ongoing. The applicant, or his or her successor, shall implement all operational Best Management Practices (BMPs) imposed by the Chief of Building Services to limit the generation, discharge, and runoff of stormwater pollution.

- **SCA 80: Post-construction Stormwater Management Plan**

Prior to issuance of building permit (or other construction-related permit). The applicant shall comply with the requirements of Provision C.3 of the National Pollutant Discharge Elimination System (NPDES) permit issued to the Alameda Countywide Clean Water Program. The applicant shall submit with the application for a building permit (or other

construction-related permit) a completed Construction-Permit-Phase Stormwater Supplemental Form to the Building Services Division. The project drawings submitted for the building permit (or other construction-related permit) shall contain a stormwater management plan, for review and approval by the City, to manage stormwater run-off and to limit the discharge of pollutants in stormwater after construction of the project to the maximum extent practicable.

- a. The post-construction stormwater management plan shall include and identify the following:
 - i. All proposed impervious surface on the site;
 - ii. Anticipated directional flows of on-site stormwater runoff; and
 - iii. Site design measures to reduce the amount of impervious surface area and directly connected impervious surfaces; and
 - iv. Source control measures to limit the potential for stormwater pollution;
 - v. Stormwater treatment measures to remove pollutants from stormwater runoff; and
 - vi. Hydromodification management measures so that post-project stormwater runoff does not exceed the flow and duration of pre-project runoff, if required under the NPDES permit.
- b. The following additional information shall be submitted with the post-construction stormwater management plan:
 - i. Detailed hydraulic sizing calculations for each stormwater treatment measure proposed; and
 - ii. Pollutant removal information demonstrating that any proposed manufactured/mechanical (i.e., non-landscape-based) stormwater treatment measure, when not used in combination with a landscape-based treatment measure, is capable of removing the range of pollutants typically removed by landscape-based treatment measures and/or the range of pollutants expected to be generated by the project.

All proposed stormwater treatment measures shall incorporate appropriate planting materials for stormwater treatment (for landscape-based treatment measures) and shall be designed with considerations for vector/mosquito control. Proposed planting materials for all proposed landscape-based stormwater treatment measures shall be included on the landscape and irrigation plan for the project. The applicant is not required to include on-site stormwater treatment measures in the post-construction stormwater management plan if he or she secures approval from Planning and Zoning of a proposal that demonstrates compliance with the requirements of the City's Alternative Compliance Program.

Prior to final permit inspection. The applicant shall implement the approved stormwater management plan.

- **SCA 81: Maintenance Agreement for Stormwater Treatment Measures**

Prior to final zoning inspection. For projects incorporating stormwater treatment measures, the applicant shall enter into the "Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement," in accordance with Provision C.3.e of the NPDES permit, which provides, in part, for the following:

- i. The applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and
- ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The agreement shall be recorded at the County Recorder's Office at the applicant's expense.

- **SCA 83: Creek Protection Plan**

Prior to and ongoing throughout demolition, grading, and/or construction activities

- a. The approved creek protection plan shall be included in the project drawings submitted for a building permit (or other construction-related permit). The project applicant shall implement the creek protection plan to minimize potential impacts to the creek during and after construction of the project. The plan shall fully describe in plan and written form all erosion, sediment, stormwater, and construction management measures to be implemented on-site.
- b. If the plan includes a stormwater system, all stormwater outfalls shall include energy dissipation that slows the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains.

- **SCA 84: Regulatory Permits and Authorizations**

Prior to issuance of a demolition, grading, or building permit within vicinity of the creek. Prior to construction within the vicinity of the creek, the project applicant shall obtain all necessary regulatory permits and authorizations from the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), California Department of Fish and Game, and the City of Oakland, and shall comply with all conditions issued by applicable agencies. Required permit approvals and certifications may include, but not be limited to the following:

- a. U.S. Army Corps of Engineers (Corps): Section 404. Permit approval from the Corps shall be obtained for the placement of dredge or fill material in Waters of the U.S., if any, within the interior of the project site, pursuant to Section 404 of the federal Clean Water Act.
- b. Regional Water Quality Control Board (RWQCB): Section 401 Water Quality Certification. Certification that the project will not violate state water quality standards is required before the Corps can issue a 404 permit, above.
- c. California Department of Fish and Game (CDFG): Section 1602 Lake and Streambed Alteration Agreement. Work that will alter the bed or bank of a stream requires authorization from CDFG.

- **SCA 85: Creek Monitoring**

Prior to issuance of a demolition, grading, or building permit within vicinity of the creek. A qualified geotechnical engineer and/or environmental consultant shall be retained and paid

for by the project applicant to make site visits during all grading activities; and as a follow-up, submit to the Building Services Division a letter certifying that the erosion and sedimentation control measures set forth in the Creek Protection Permit submittal material have been instituted during the grading activities.

- **SCA 86: Creek Landscaping Plan**

Prior to issuance of a demolition, grading, or building permit within vicinity of the creek.

The project applicant shall develop a final detailed landscaping and irrigation plan for review and approval by the Planning and Zoning Division prepared by a licensed landscape architect or other qualified person. Such a plan shall include a planting schedule, detailing plant types and locations, and a system for temporary irrigation of plantings.

- a. Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival.
- b. All landscaping indicated on the approved landscape plan shall be installed prior to the issuance of a Final inspection of the building permit, unless bonded pursuant to the provisions of Section 17.124.50 of the Oakland Planning Code.
- c. All landscaping areas shown on the approved plans shall be maintained in neat and safe conditions, and all plants shall be maintained in good growing condition and, whenever necessary replaced with new plant materials to ensure continued compliance with all applicable landscaping requirements. All paving or impervious surfaces shall occur only on approved areas.

- **SCA 87: Creek Dewatering and Aquatic Life**

Prior to the start of and ongoing throughout any in-water construction activity.

- a. If any dam or other artificial obstruction is constructed, maintained, or placed in operation within the stream channel, ensure that sufficient water is allowed to pass down channel at all times to maintain aquatic life (native fish, native amphibians, and western pond turtles) below the dam or other artificial obstruction.
- b. The project applicant shall hire a biologist, and obtain all necessary State and federal permits (e.g. CDFG Scientific Collecting Permit), to relocate all native fish/native amphibians/pond turtles within the work site, prior to dewatering. The applicant shall first obtain a project-specific authorization from the CDFG and/or the USFWS, as applicable to relocate these animals. Captured native fish/native amphibians/pond turtles shall be moved to the nearest appropriate site on the stream channel downstream. The biologist/contractor shall check daily for stranded aquatic life as the water level in the dewatering area drops. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Capture methods may include fish landing nets, dip nets, buckets, and by hand. Captured aquatic life shall be released immediately in the nearest appropriate downstream site. This condition does not allow the take or disturbance of any state or federally listed species, nor state-listed species of special concern, unless the applicant obtains a project specific authorization from the CDFG and/or the USFWS, as applicable.

- **SCA 88: Creek Dewatering and Diversion**

Prior to the start of any in-water construction activities. If installing any dewatering or diversion device(s), the project applicant shall develop and implement a detailed dewatering and diversion plan for review and approval by the Building Services Division. All proposed dewatering and diversion practices shall be consistent with the requirements of the Streambed Alteration Agreement issued by the California Department of Fish and Game.

- a. Ensure that construction and operation of the devices meet the standards in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB).
- b. Construct coffer dams and/or water diversion system of a non-erodible material which will cause little or no siltation. Maintain coffer dams and the water diversion system in place and functional throughout the construction period. If the coffer dams or water diversion system fail, repair immediately based on the recommendations of a qualified environmental consultant. Remove devices only after construction is complete and the site stabilized.
- c. Pass pumped water through a sediment settling device before returning the water to the stream channel. Provide velocity dissipation measures at the outfall to prevent erosion.

- **SCA 89: Regulatory Permits and Authorizations**

Prior to issuance of a demolition, grading, or building permit. Prior to construction within the floodway or floodplain, the project applicant shall obtain all necessary regulatory permits and authorizations from the Alameda County Flood Control and Water Conservation District and shall comply with all conditions issued by that agency.

- **SCA 90: Structures within a Floodplain**

Prior to issuance of a demolition, grading, or building permit.

- a. The project applicant shall retain the civil engineer of record to ensure that the project's development plans and design contain finished site grades and floor elevations that are elevated above the Base Flood Elevation (BFE) if established within a 100-year flood event.
- b. The project applicant shall submit final hydrological calculations that ensure that the structure will not interfere with the flow of water or increase flooding.

- **SCA 91: Stormwater and Sewer**

Prior to completing the final design for the project's sewer service. Confirmation of the capacity of the City's surrounding stormwater and sanitary sewer system and state of repair shall be completed by a qualified civil engineer with funding from the project applicant. The project applicant shall be responsible for the necessary stormwater and sanitary sewer infrastructure improvements to accommodate the proposed project. In addition, the applicant shall be required to pay additional fees to improve sanitary sewer infrastructure if required by the Sewer and Stormwater Division. Improvements to the existing sanitary sewer collection system shall specifically include, but are not limited to, mechanisms to control or minimize increases in infiltration/inflow to offset sanitary sewer increases associated with the proposed project. To the maximum extent practicable, the applicant will be required to implement Best Management Practices to reduce the peak stormwater runoff

from the project site. Additionally, the project applicant shall be responsible for payment of the required installation or hook-up fees to the affected service providers.

4.8.4 Impacts and Mitigation Measures

Significance Criteria

The Redevelopment Plan, as Amended, would have a significant impact on the environment if it would:

1. Violate any water quality standards or waste discharge requirements;
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted);
3. Result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters;
4. Result in substantial flooding on- or off-site;
5. Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems;
6. Create or contribute substantial runoff which would be an additional source of polluted runoff;
7. Otherwise substantially degrade water quality;
8. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows;
9. Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
10. Expose people or structures to a substantial risk of loss, injury or death involving flooding;
11. Result in inundation by seiche, tsunami, or mudflow;
12. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a creek, river or stream in a manner that would result in substantial erosion, siltation, or flooding, both on- or off-site; or
13. Fundamentally conflict with elements of the City of Oakland Creek Protection (Oakland Municipal Code Chapter 13.16) ordinance intended to protect hydrologic resources. Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of water quality through (a) discharging a substantial amount of pollutants into a creek; (b) significantly

modifying the natural flow of the water or capacity; (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or (d) substantially endangering public or private property or threatening public health or safety.

Approach to Analysis

Prior to approval of any project that is facilitated by the Redevelopment Plan, as Amended, the project would be subject to project-level environmental review as well as the SCAs and the goals and policies of the City's General Plan as outlined above.

The 2000 EIR analyzed the potential environmental effects on hydrology and water quality and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As previously indicated in Section 4.8.1, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes that have occurred to the hydrology and water setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

The approach to the analysis herein compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.¹ Based on the information in each of the aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding hydrology and water relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for these topics. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of hydrology and water in the Existing Project Area in this SEIR. Therefore, the impact discussions and analyses below focus on the activities facilitated by the Proposed Amendments and the potential for hydrology and water impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes that have occurred to the environmental setting since the 2000 EIR are also evaluated as "past, present or reasonably foreseeable" projects and accordingly, are considered in the cumulative analysis in this SEIR (see Updated Impact HYD-4).

Implementation of development facilitated by the Proposed Amendments would not result in direct physical impacts within the Amendment Area. However, expanding the boundaries of the Existing Redevelopment Plan could eventually result in various types of construction activities

¹ Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

within the Amendment Area that would require ground disturbance and use of hazardous materials. These types of construction activities could result in impacts to hydrology and water quality.

Potential impacts to hydrology and water quality are analyzed within the context of existing plans and policies, permitting requirements, local ordinances, and the City of Oakland's SCAs. Impacts that would be substantially reduced or eliminated by compliance with these policies or requirements are found to be less-than-significant. Mitigation measures are proposed for potential impacts that would not be reduced by these policies and requirements. Additional discussion of potential erosion impacts is presented in Section 4.5, *Geology, Soils and Geohazards*, of this SEIR. Detailed analysis of potential impacts due to the use of hazardous materials is presented in Section 4.7, *Hazardous Materials*, of this SEIR. Potential impacts to stormwater infrastructure are discussed in Section 4.14, *Utilities and Service Systems*, of this SEIR. Based on available mapping, the Amendment Area would not be susceptible to inundation due to sea level rise (ABAG, 2011). Therefore, this issue is not discussed further in this SEIR.

Based on the characteristics of development facilitated by the Proposed Amendments and the existing conditions, development facilitated by the Proposed Amendments would not result in impacts related to the following criteria:

1. *Place housing or structures within a 100-year flood hazards area or obstruct 100-year flood flows.* The Amendment Area is not located within a FEMA mapped flood zone. As a result there would be no impacts associated with 100-year flood hazards. This is consistent with information presented in the 2000 EIR (Initial Study Checklist Item #10).
2. *Result in inundation from seiche, tsunami or mudflow.* The Amendment Area is not located near the coast or an enclosed water body. Consequently, there would be no impacts associated with inundation from seiche, tsunami or mudflow. This is consistent with information presented in the 2000 EIR (Chapter 4.A, impact statement A.2)

To ensure overall conformance within the SEIR, and to reflect City's *CEQA Thresholds/Criteria of Significance Guidelines* (initially established in 2008) and new City requirements and analysis methods, such as the incorporation of the City's *Standard Conditions of Approval and Uniformly Applied Development Standards* established since the 2000 EIR, this SEIR updates or replaces some of the impact conclusions and mitigation measures in the 2000 EIR. In accordance with CEQA Guidelines Section 15163, the SEIR contains only the information necessary to make the 2000 EIR adequate for the Redevelopment Plan, as Amended.

Impacts

Stormwater, Drainages and Water Quality

Updated Impact HYD-1: Development facilitated by the Redevelopment Plan, as Amended, would alter drainage patterns and increase the volume of stormwater, level of contamination or siltation in stormwater flowing from the Project Area, as Amended. (Less than Significant)

Issues related to drainage patterns and stormwater flows within the Existing Project Area were discussed in the 2000 EIR (Initial Study Checklist Item # 6-10), and the impact was determined to be less than significant. As discussed in Section 4.8.1, above, since 2000, an approximately 145 foot-long segment of western branch of the Glen Echo Creek was daylighted (restored to natural and open) within the Existing Project Area. A review of the Kaiser Permanente Oakland Medical Center Master Plan EIR (2007) shows that construction activities in proximity to the creek could induce construction-related onsite soil erosion causing increased sediment in surface water runoff. This runoff could accumulate in downstream drainage facilities, interfere with flow, aggravating downstream flooding conditions that may exist, and potentially increase sediment in Glen Echo Creek and ultimately Lake Merritt and San Francisco Bay. The project-level analysis in the EIR concluded the potential impact on siltation and stormwater flow would be fully mitigated by existing City SCAs. This SEIR updates the impact statement in the 2000 EIR by incorporating the City's SCAs and, thus, no further analysis is required. No other change to drainage patterns and stormwater flows has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing siltation and stormwater effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

As discussed in Chapter 3, *Project Description*, a key purpose of the Proposed Amendments is to enhance the condition of the Amendment Area. The City could accomplish the project objectives through various means including those that require new construction or redevelopment of buildings and utilities. As such, implementation of development facilitated by the Proposed Amendments could potentially result in impacts to water quality from changes to stormwater flows, drainage patterns, and overall water quality. Impacts to these resources would occur if construction-related erosion or discharges of polluted waters were to reduce the quality of surface waters (both day-lighted and culverted) with or in the vicinity of the Amendment Area. Impact would also occur if an action increased the amount of impervious surface at a site resulting in increased stormwater runoff and flooding. These types of impacts would be considered potentially significant if new development or redevelopment is not designed appropriately.

Development facilitated by the Proposed Amendments could include construction activities that employ excavation, soil stockpiling, grading, and use of hazardous chemicals, such as petroleum and oil. Construction could occur along Temescal Creek culvert (on 52nd Street) or within 1 block of the Temescal Creek culvert, just beyond the southern border of the Amendment Area. Construction activities could result in temporary erosion; transportation of sediments; and generate chemical wastes that, if not properly managed, could flow into the local storm drainage system and the storm drainage system could discharge into the culvert. In these instances, construction could cause increased sediment in stormwater runoff that could accumulate in downstream drainage facilities; interfere with existing drainage patterns; and aggravate downstream flooding conditions that may exist and potentially increase sediment in Temescal Creek and ultimately San Francisco Bay. Construction could also result in transport of hazardous chemicals downstream and into the San Francisco Bay, which is listed as impaired water bodies by the SWRCB.

Development facilitated by the Proposed Amendments would undergo project-specific environmental review pursuant to the California Environmental Quality Act (CEQA) as necessary and appropriate. As such, the potential impacts to hydrology resulting from construction and operation of these projects would be analyzed at a project level of detail, taking into account specific project conditions and actions. As would be required for all redevelopment projects in Oakland, any project facilitated by the Proposed Amendments would be required to comply with uniformly-applied SCAs (City of Oakland, 2008), consistent with General Plan Policies, that include preparation of a Grading Plan, Erosion and Sedimentation Control Plan, and Drainage Plan. Additionally, any discharges into Temescal Creek would be permitted in compliance with the Creek Protection Ordinance. Compliance with the ACCWP NPDES Permit and implementation of the Construction Stormwater Pollution Prevention Plan (SWPPP) would require any project to incorporate Best Management Practices (BMPs) to control sedimentation, erosion, hazardous materials contamination of runoff during construction. Further, the C.3 provision of the ACCWP NPDES Permit requires that there be no net increase in stormwater runoff at a site after project construction. Thus, water quality and flooding impacts would be minimized for any construction facilitated by the Proposed Amendments.

Additionally, compliance with the City of Oakland Grading Ordinance; the Creek Protection, Stormwater Management, and Discharge Control Ordinance; and the SCAs would minimize sedimentation and contamination to stormwater and surface water during construction activities. SCA 55, *Erosion and Sedimentation Control Plan*; SCA 75, *Stormwater Pollution Prevention Plan*; SCA 80, *Post-construction Stormwater Pollution Management Plan*; SCA 81, *Maintenance Agreement for Stormwater Treatment Measures*, would be applicable to the construction of redevelopment projects facilitated by the Proposed Amendments for protecting water quality during construction and after construction. SCA 91, *Stormwater and Sewer*, would be applicable to the construction of redevelopment projects facilitated by the Proposed Amendments ensuring that stormwater infrastructure has the capacity for flows produced in the Amendment Area. SCA 83, *Creek Protection Plan*, would be applicable to development facilitated by the Proposed Amendments that could have impacts to creeks and other water bodies. Therefore, the implementation of these plans, and adherence to the SCAs would reduce impact to a less-than-significant level.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant stormwater, drainages, and water quality effect identified in the 2000 EIR. Adherence to the SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential for stormwater, drainages, or water quality impacts is substantially the same as identified in the 2000 EIR (Initial Study Checklist Items #6 and #7). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the

severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Flooding

Updated Impact HYD-2: Development facilitated by the Redevelopment Plan, as Amended, could be susceptible to flooding hazards in the event of dam or reservoir failure. (Less than Significant)

Issues related to flooding hazards within the Existing Project Area were discussed in the 2000 EIR (Initial Study Checklist Item # 10), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to flood hazards has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing flood hazards effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Strong ground shaking cause by an earthquake could damage a local dam or reservoir resulting in failure and downstream flooding. Dam or reservoir failure would result in significant impacts where people experience increased risk or exposure to flood hazards as a result of development implemented by the Proposed Amendments. The East Bay Municipal Utility District has four reservoirs located northeast of the Amendment Area. As discussed in the setting, the southern portion of Amendment Area could experience flooding if the Temescal dam were to experience dam failure. Thus, actions from the Proposed Amendments could experience potentially significant impacts as a result of dam or reservoir failure.

As discussed in Updated Impact HYD-1, environmental review for specific redevelopment projects would indicate mitigation measures for flooding as needed. Further, the Safety Element of the City of Oakland General Plan policy states that the City will “minimize further the relatively low risks from non-storm-related forms of flooding” by requesting from the state Division of Safety of Dams submit a timeline for the maintenance inspection of all operating dams in the City and reviewing procedures adopted by the City pursuant to the Dam Safety Act for the emergency evacuation of areas located below major water-storage facilities. DSOD requires all dam operators to comply with annual inspections and seismic standards that minimize the potential for a catastrophic failure of the dam. Continued compliance with these General Plan policies would reduce potential impacts to a less-than-significant level.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant flooding effect identified in the 2000 EIR. Adherence to the SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential flooding impact is substantially the same as identified in the 2000 EIR (Initial Study Checklist Item # 10). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Use of Groundwater

Updated Impact HYD-3: Development facilitated by the Redevelopment Plan, as Amended, would not adversely affect the availability of groundwater supplies or interfere substantially with groundwater recharge. (Less than Significant)

Issues related to groundwater within the Existing Project Area were discussed in the 2000 EIR (Initial Study Checklist Item # 9), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to groundwater resources has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing groundwater effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

The Amendment Area is underlain by the East Bay Plain groundwater basin. The San Francisco RWQCB has identified groundwater supplies in this basin for municipal, industrial and agricultural water supply. Impacts to the aquifer would occur if actions facilitated by the Proposed Amendments resulted in reduced recharge to the aquifer or increased extraction from the aquifer. The amount of water able to infiltrate the aquifer through pervious areas within the Amendment Area would not substantially decrease because the Amendment Area is already largely developed and covered in impervious surfaces. Additionally, compliance with the C.3 provisions of the NPDES Municipal Stormwater Permit for the ACCWP would require that recharge rates at the site of significant redevelopment projects is equivalent to the recharge rate at the site prior to the implementation of development facilitated by the Proposed Amendments. Also, potable water is supplied to the Amendment Area through imported surface water by the East Bay Municipal Utility District. Therefore, the existing and potential use of groundwater for actions facilitated by the Proposed Amendments would not increase. Consequently, impacts to groundwater would be less than significant.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant groundwater effect identified in the 2000 EIR. The same effects would apply to the Project Area, as Amended. Adherence to the SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact to groundwater resources is substantially the same as identified in the 2000 EIR (Initial Study Checklist Item # 9). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Cumulative Impacts

Updated Impact HYD-4: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, would not result in potentially significant cumulative impacts to hydrologic resources. (Less than Significant)

Geographic Context

The geographic context used for the cumulative assessment of water quality and hydrology impacts is the East Bay Plain of the San Francisco Bay Basin. This includes the City of Oakland and its surrounding areas.

The development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended. As discussed in the *Approach to Analysis*, above, no substantial change to hydrologic conditions, including the daylighting of a segment of Glen Echo Creek, has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing hydrology and water quality effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Impacts

As discussed above, implementation of development facilitated by the Proposed Amendments would include conformance with State and local policies as well as City of Oakland Standard Conditions of Approval that would reduce hydrology and water quality impacts to less-than-significant levels. Specifically, potential changes related to stormwater quality, stormwater flows, drainage, impervious surfaces, and flooding would be minimized via the implementation of stormwater control measures, stormwater retention measures, stormwater quality control measures, and project-specific environmental review that would integrate measures to reduce these potential impacts.

Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. Cumulative projects that could combine with the less-than significant

incremental impacts of development facilitated by the Proposed Amendments to compound or increase any existing hydrology- or water-quality-related cumulative impacts include, for example, potential cumulative reductions in the water quality of San Francisco Bay, or degradation of urban stormwater quality. Other projects resulting in construction occurring within or nearby the Amendment Area could result in similar or greater impacts to those caused by development facilitated by the Proposed Amendments. These projects include those listed in the City's Major Projects List in Appendix B to this Draft SEIR, and discussed in Section 4.09, *Cumulative Context*, at the beginning of Chapter 4 of this Draft SEIR. All projects would be subject to similar permit requirements and would be required to comply with City of Oakland ordinances and General Plan policies, as well as numerous SCAs that address the potential effects of hydrology and water quality and are discussed throughout this analysis. The potential impacts of development facilitated by the Proposed Amendments discussed previously in this section regarding hydrology and water quality would not be substantial, and would not substantially contribute to any cumulative impacts. Therefore, the Proposed Amendments impacts on hydrology and water quality are not cumulatively considerable when viewed in connection with the effects of the other past, present, and reasonably foreseeable probable future projects within the Amendment Area and in the vicinity of the Amendment Area.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant cumulative effect identified in the 2000 EIR. Adherence to the SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential for a cumulative impact related to hydrology or water quality is substantially the same as identified in the 2000 EIR (Initial Study Checklist Mandatory Finding "c"). New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

4.8.5 References

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- Association of Bay Area Governments (ABAG), Hazards Maps and Information –Dam Inundation, available online at http://gis.abag.ca.gov/Website/dam_inundation/viewer.htm, accessed on April 29, 2010a.
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- City of Oakland. *2007-2014 Housing Element EIR*, Section 3.3, Air Quality. August 2010.
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- City of Oakland, *Broadway/MacArthur/San Pablo Redevelopment Plan Draft Environmental Impact Report*, April 2000.
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- City of Oakland, *Kaiser Permanente Oakland Medical Center Master Plan Project Final Environmental Impact Report*, May 2006.
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- Department of Water Resources (DWR), Bulletin 118, 1995, Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin, updated February 2004, available online at

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Oakland Museum, Temescal Watershed Map, <http://museumca.org/creeks/1160-OMTemescal.html>, 2011.

Regional Water Quality Control Board (RWQCB), San Francisco Bay Region, San Francisco Bay Basin Water Quality Control Plan (Basin Plan), www.waterboards.ca.gov/sanfranciscobay/basin_planning.shtml, updated January 18, 2007.

4.9 Land Use, Plans and Policies

This section analyzes how the development facilitated by the Redevelopment Plan, as Amended, may affect and comply with existing land uses, plans and policies. Specifically, it describes the existing land use patterns, adopted General Plan land use classifications, and zoning designations in and around the Amendment Area and, as appropriate, the Existing Redevelopment Plan. This section also describes the applicable plans and policies that guide development in the Amendment Area and the Project Area, as Amended, and evaluates the consistency of the development facilitated by the Proposed Amendments, and as appropriate the Redevelopment Plan, as Amended, with these plans and policies and other applicable land use regulations.

This section identifies any potentially significant land use impacts and, as necessary, appropriate mitigation measures. Pursuant to the City of Oakland's General Plan (General Plan) (City of Oakland, 2005, as well as Section 15358(b) of the CEQA Guidelines), mitigation measures are proposed only to address physical impacts that may result from development facilitated by the Proposed Amendments.

Pursuant to CEQA Guidelines Section 15162 regarding an SEIR, this section also discusses whether there are any new or more severe significant impacts than those identified in the 2000 EIR that result from changed circumstances or new information.

4.9.1 2000 EIR and Existing Project Area

Land use was evaluated in the 2000 EIR Land Use, Plans and Policies chapter (Chapter 4.A). The 2000 EIR included a detailed description of the Existing Project Area environmental setting as it relates to land use, plans and policies. Since 2000, some incremental changes in land use that are anticipated and encouraged over the course of focused redevelopment efforts have occurred, such as the development of historically vacant lots, infill residential occurring within neighborhood commercial areas (such as along San Pablo Avenue north of 65th Street), and the transition of commercial uses to medical office uses at Broadway and West MacArthur Boulevard, for example.

The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Also, changes to the land use setting that have occurred since preparation of the 2000 EIR are considered in the analysis in this SEIR.

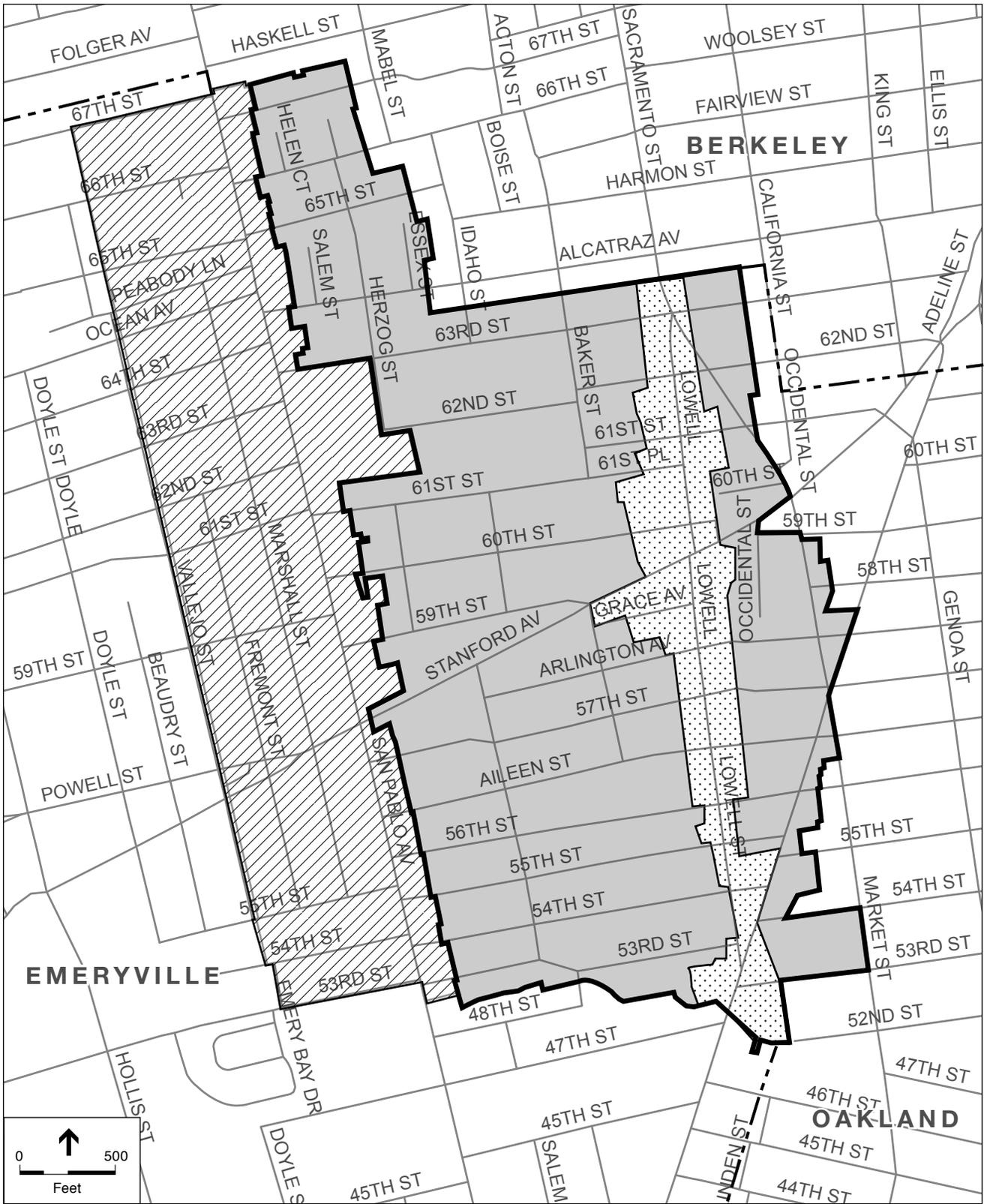
Because only new impacts regarding the Redevelopment Plan, as Amended, are associated with the Proposed Amendments and would not involve any new significant impacts with respect to the Existing Project Area, the remainder of this Land Use, Plans and Policies Setting, and Regulatory Setting, and Impacts and Mitigation Measures analysis herein focuses primarily on the Amendment Area and the additions/changes related to the Proposed Amendments.

4.9.2 Land Use Classifications and Zoning for the Amendment Area

The Amendment Area covers approximately 1,300 parcels (210 acres) mostly within the *Mixed Housing Type Residential* General Plan land use designation (see **Figure 4.9-1**, General Plan Land Use Classifications). The area along both sides of Lowell Street is within the *Housing and Business Mix* General Plan land use designation (see City of Oakland General Plan subheading below for a description of the intent and location of each land use classification) (City of Oakland, 2011).

There are six zones within the Amendment Area. The large majority of the area is within the Mixed Housing Type Residential Zone (RM-2) which is intended for residential areas characterized by a mix of single-family homes, duplexes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate. The area east of the Golden Gate Recreation Center and generally between Baker, 61st, Herzog and 63rd streets, falls within the RM-3 Zone which accommodates residential development with somewhat higher density than RM-2. A few lots west of Herzog Street and north of Alcatraz fall within the RM-4 Zone which accommodates an even higher density residential development type. The RM-4/C combining Zone overlies the Amendment Area in two locations: on lots surrounding the intersection of Arlington Avenue and Market Street, and lot south of Market Street between Stanford Avenue and 62nd Street. This zone provides for expanded commercial uses within the residential zone. All lots fronting Lowell Street fall within the Housing Business Mix Commercial Zone (HBX-1), which is intended to guide compatible coexistence of industrial/heavy commercial uses and medium density residential development. One parcel on the southeastern boundary of the Amendment Area, south of 53rd Street, falls within the HBX-2 Zone which differs from HBX-1 in that it can accommodate higher density residential development.

Surrounding areas east and west of the Amendment lie within the RM zones with the exception of the Neighborhood Center and Community Commercial zones along San Pablo Avenue and the Open Space Neighborhood Park Zone aligning the Golden Gate Recreation Center and the Berkeley Maynard Academy Charter Elementary School (City of Oakland, 2011a; City of Oakland 2011b).



 Existing Redevelopment Project Area San Pablo subarea
 Amendment Area

 Mixed Housing Type Residential
 Housing and Business Mix

SOURCE: City of Oakland, 2009

Proposed Amendments to B/M/SP Redevelopment Plan . 210505.02

Figure 4.9-1
General Plan Land Use Classifications

4.9.3 Environmental Setting

The General Plan Land Use and Transportation Element (LUTE) organizes the city into six general planning areas, each with distinct sets of target areas for development and improvement strategies. The Amendment Area is located within the North Oakland general planning area. This planning area, annexed to the City in 1897, is made up primarily of 20th century housing stock and strong neighborhood communities, including the Golden Gate neighborhood. Within the North Oakland planning area, the LUTE identifies nine key geographic areas targeted for community and economic expansion, none of which directly overly the Amendment Area. However, the adjacent commercial corridor along San Pablo Avenue is recognized as demonstrating the greatest need for commercial corridor improvements and is designated as a Target Area within North Oakland. This corridor, which serves as a link for travel between Berkeley and Emeryville, has been highlighted, in the LUTE and in the Existing Redevelopment Plan, for revitalization and mixed-use development (City of Oakland, 1998; Oakland Redevelopment Agency, 2000).

The Amendment Area is clearly defined on the northern and southern sides by the city borders with Berkeley and Emeryville. The regional transportation and commercial corridor along San Pablo Avenue results in a clear visual and land use distinction from the Amendment Area along its western boundary. The eastern boundary is less distinct in terms of land uses as the medium density residential character continues eastward to Martin Luther King Jr. Way.

Amendment Area Existing Land Uses

The Amendment Area encompasses approximately 1,300 parcels on 210 acres, the entirety of which is considered urbanized. Existing land use patterns across the Amendment Area and surrounding areas generally follow the pattern of General Plan land use designations. Thus, Figure 4.9-1 and the accompanying land use classification descriptions, serve as a rough guide to existing land use patterns on the ground.

The land in the Amendment Area west of Lowell Street is characterized by the Gaskill residential neighborhood. This neighborhood is dominated by single-family residents with multi-family structures and associated parking scattered throughout and a number of Churches on corner lots.

Existing land uses along the Lowell Street corridor include a mixture of industrial/commercial uses and residential uses. Currently, industrial structures along the corridor are used by various business activities, including small manufacturers, artisans and crafts businesses and studios, and other businesses (such as a sound studio, furniture refinishing, and supply/storage/warehousing).

Vacant lots (some used for parking) and vacant/abandoned structures are distributed throughout the corridor. Occupied structures vary widely in terms of building types and states of disrepair. Detached, single-family residences remain in a few pockets including on the west side of Lowell Street between 53rd and 56th streets, on both sides of Lowell Street south of its intersection with Arlington Avenue, on the east side of Lowell Street near its intersection with 60th Street, and on the east side of Lowell Street between 61st and 62nd streets.

The majority of the redevelopment programs that would be facilitated by the Proposed Amendments; such as the streetscape/infrastructure improvements, right-of-way adjustments, remediation assistances, development assistance and site acquisitions; would occur in the Lowell Street corridor.

4.9.4 Regulatory Setting

Local Plans and Policies

Presented below are applicable plans and regulations that pertain to the development facilitated by the Proposed Amendments, followed by a discussion of the overall consistency (or inconsistency) with each plan.

City of Oakland General Plan

The General Plan establishes comprehensive, long-term land use policies for the City and provides the primary policy direction for development in the City and within the Amendment Area. The General Plan comprises a series of elements, each of which deals with a particular topic, which apply citywide. Consistent with state law, the General Plan includes the Land Use and Transportation Element; the Historic Preservation Element; the Open Space, Conservation, and Recreation Element; the Safety Element; the Housing Element; the Noise Element; and the Scenic Highways Element. The Bicycle Master Plan Update and Pedestrian Master Plan have also been adopted into, and are now a part of, the General Plan.

Conflicts with a General Plan do not inherently result in a significant effect on the environment within the context of CEQA. As stated in Section 15358(b) of the CEQA Guidelines, “effects analyzed under CEQA must be related to a physical change.” Section 15125(d) of the Guidelines states that EIRs shall discuss any inconsistencies between the development facilitated by the Proposed Amendments and applicable General Plans in the Setting section of the document (not under Impacts).

Further, Appendix G of the CEQA Guidelines (Environmental Checklist Form) makes explicit the focus on *environmental* policies and plans, asking if the project would “conflict with any applicable land use plan, policy, or regulation . . . *adopted for the purpose of avoiding or mitigating an environmental effect*” (emphasis added). Even a response in the affirmative, however, does not necessarily indicate the project would have a significant effect, unless a physical change would occur. To the extent that physical impacts may result from such conflicts, such physical impacts are analyzed elsewhere in this SEIR. The compatibility of the development facilitated by the Proposed Amendments with General Plan policies that do not relate to physical environmental issues will be considered by decision-makers as part of their decision whether to approve or disapprove the Proposed Amendments.

Land Use and Transportation Element (LUTE)

The City adopted the LUTE on March 24, 1998. The LUTE identifies policies for utilizing Oakland’s land as change takes place and sets forth an action program to implement the land use

policy through development controls and other strategies. As noted above, the LUTE shows the Amendment Area primarily within the *Mixed Housing Type Residential* classification (see Figure 4.9-1). The area along both sides of Lowell Street is within the *Housing and Business Mix* General Plan land use classification. The intent and desired character of these classifications is described below.

- ***Mixed Housing Type Residential:*** The four neighborhood housing classifications, including the *Mixed Housing Type Residential* classification, generally encourage residential development along with schools, community facilities and “corner store” type developments where appropriate. The intent of the *Mixed Housing Type Residential* classification is “to create, maintain, and enhance residential areas typically located near the City’s major arterials and characterized by a mix of single-family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate.” The desired character and uses include residential, “... live-work type development, small commercial enterprises, schools, and other small scale, compatible civic uses” Although the maximum allowable residential density in this classification is 30 units per acre, the intent is to preserve existing pockets of lower density residential development through zoning designations.
- ***Housing and Business Mix:*** The *Housing and Business Mix* land use classification overlays areas where a “complex mix of residences and businesses has evolved due to converging historic development patterns.” This classification carefully weighs the importance of housing and business equally and encourages site specific buffers to assist in their coexistence. The intent is to “guide a transition from heavy industry to low impact light industrial and other businesses that can co-exist compatibly with residential development. In addition to residential uses, permitted uses also include live-work space, low-impact light industrial, commercial, service businesses, and community facilities. The permitted residential density is the same as is permitted for the *Mixed Housing Type Residential* classification—30 units per gross acre. Non-residential uses have a maximum permitted floor-area ratio (FAR)¹ of 3.0.

Project Consistency with the General Plan

The Existing Redevelopment Plan was written to be consistent with the General Plan in accordance with state law (California Health and Safety Code Section 33346). The Existing Redevelopment Plan includes a broad list of potential programs and projects intended to reduce blight, and a funding mechanism via tax increment financing. These programs and projects—which are intended to enhance the Existing Project Area’s function, appearance, and economic vitality in ways that would not otherwise be available—are guided by the General Plan and applicable zoning regulations.

The Proposed Amendments would govern the Redevelopment Agency’s actions and set forth parameters on the Agency’s authority to conduct activities within the Amendment Area. Specifically, the Proposed Amendments would expand the Existing Project Area boundaries to include the Amendment Area, extend the Agency’s eminent domain authority, and increase the cap on the bonding capacity in an amount proportional to the redevelopment needs of the

¹ Floor-area ratio (FAR) is gross floor area of a building divided by total site area, excluding parking.

Amendment Area. These amendments would not alter the development objectives, techniques, methods of financing or general provisions of the Existing Redevelopment Plan.

The development facilitated by the Proposed Amendments would be consistent with the General Plan policies, including those listed in the LUTE, because all potential redevelopment projects facilitated by the Proposed Amendments would conform to the General Plan's policy directions regarding development and redevelopment within the Amendment Area. The intent of specific redevelopment projects and future development activity within the Amendment Area will be to implement the General Plan according to its policies, land use designations and zoning classifications. Furthermore, the Existing Redevelopment Plan explicitly includes controls on its actions with respect to right-of-way adjustments, number of buildings, number of dwelling units and any permit variation stating that such actions must be found to be in accordance with the General Plan (Oakland Redevelopment Agency, 2007).

Bicycle Master Plan Update and Pedestrian Master Plan

In December 2007, the City Council adopted the Oakland Bicycle Master Plan Update and in November 2002, the City Council adopted the Pedestrian Master Plan as part of the LUTE. The City of Oakland Bicycle Master Plan Update (December 2007) calls for the implementation of the bikeway network improvements including Bicycle Boulevards (signage and striping on local streets) on the northern and southern ends of the Amendment Area and Bike Lanes (striped-set aside bike lanes) along the eastern end of the Amendment Area (City of Oakland, 2007).

The Pedestrian Master Plan identifies policies and implementation measures for achieving LUTE policies that promote a walkable city. The Plan designates a Pedestrian Route Network throughout Oakland with identified pedestrian routes (including "City Routes" and "District Routes") within the Amendment Area (see Section 4.13, *Transportation and Circulation*) (City of Oakland, 2002).

Project Consistency with the Bicycle Master Plan Update and Pedestrian Master Plan

The development facilitated by the Proposed Amendments would not conflict with the Bicycle Master Plan Update or Pedestrian Master Plan because all potential redevelopment activities facilitated by the Proposed Amendments would comply with City of Oakland's Standard Conditions of Approval that ensures the submittal, approval and implementation of plans to the City to implement bicycle storage and parking facilities to accommodate the bicycle parking spaces required for the potential redevelopment projects. Compliance with the Standard Conditions of Approval would also ensure pedestrian safety, as discussed in detail in Section 4.13, *Transportation and Circulation*.

Oakland Zoning Code

The Planning Code serves to implement General Plan policies through the City's Zoning Code which is found in the Oakland Municipal Code, Title 17. The Zoning Code governs land uses and development standards, such as building height and density for specific zoning districts within Oakland. Permits to construct new buildings or to alter or demolish existing ones may not be

issued unless the project proposed conforms to the Zoning Code or an exception is granted pursuant to provisions of the Planning Code. The zoning districts existing in the Amendment Area are described above in the *Land Use Classification and Zoning* section.

Project Consistency with Oakland Zoning

As described above under the City of Oakland General Plan discussion, the Proposed Amendments would not alter the development objectives of the Existing Redevelopment Plan. Inasmuch as these development objectives are guided by the General Plan and applicable zoning regulations, the development facilitated by the Proposed Amendments would not conflict with the Oakland Zoning Code.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

There are no City of Oakland SCAs specific to land use.

4.9.5 Impacts and Mitigation Measures

Significance Criteria

The Redevelopment Plan, as Amended, would have a significant impact on the environment if it would:

1. Physically divide an established community;
2. Fundamentally conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and result in a physical change in the environment; or
3. Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan

Approach to Analysis

Prior to approval of any project that is facilitated by the Redevelopment Plan, as Amended, the project would be subject to project-level environmental review as well as the SCAs and the goals and policies of the City's General Plan as outlined above.

The 2000 EIR analyzed the potential environmental effects on land use, plans and policies, and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As previously indicated in Section 4.9.1, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes that have occurred to the land use, plans and policies setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

The approach to the analysis herein compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.² Based on the information in each of the aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding land use, plans and policies relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for these topics. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of land use, plans and policies in the Existing Project Area in this SEIR. Therefore, the impact discussions and analyses below focus on the activities facilitated by the Proposed Amendments and the potential for land use, plans and policies impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes that have occurred to the environmental setting since the 2000 EIR are also evaluated as “past, present or reasonably foreseeable” projects and accordingly, are considered in the cumulative analysis in this SEIR.

This SEIR analysis evaluates the development facilitated by the Proposed Amendments’ general consistency with applicable plans and policies in order to determine the potential for significant environmental impacts. As discussed in the Setting of this section, the General Plan has determined that “the fact that a specific project does not meet all General Plan goals, policies, and objectives does not inherently result in a significant effect on the environment within the context of [CEQA]” (City of Oakland, 2005). In addition, the development facilitated by the Proposed Amendments was evaluated in terms of its compatibility with nearby existing land uses.

Based on the Amendment Area boundaries and its existing land uses, development facilitated by the Proposed Amendments would not result in impacts related to the following criteria. No impact discussion is provided for these topics for the following reasons:

- *Conflict with any applicable habitat conservation plan or natural community conservation plan.* The Amendment Area is not located within or in proximity to an area guided by a Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, development facilitated by the Proposed Amendments would not conflict with such plans. This is consistent with the determination in the 2000 EIR (p.4.A-29)

To ensure overall conformance within the SEIR, and to reflect City of Oakland’s *Thresholds/Criteria of Significance Guidelines* (initially established in 2008) and new City

² Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

requirements and analysis methods, such as the incorporation of the City's *Standard Conditions of Approval and Uniformly Applied Development Standards* established since the 2000 EIR, this SEIR updates or replaces some of the impact conclusions and mitigation measures in the 2000 EIR. In accordance with CEQA Guidelines Section 15163, the SEIR contains only the information necessary to make the 2000 EIR adequate for the Redevelopment Plan, as Amended.

Impacts

Land Use Compatibility / Physical Division of an Established Community

Updated Impact A.1 (LU): Development facilitated by the Redevelopment Plan, as Amended, would blend with the established communities of the Project Area, as Amended, and would not result in the physical division of an existing community or conflict with nearby land uses. (Less than Significant)

Issues related to land use compatibility within the Existing Project Area were discussed in the 2000 EIR (Chapter 4.A), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to the environment relevant to land use has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing land use effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

As noted above, all potential redevelopment activities facilitated by the Proposed Amendments would conform to the Existing Redevelopment Plan and therefore to the General Plan's policy directions regarding development and redevelopment within the Amendment Area. As such, development facilitated by the Proposed Amendments would adhere to the permitted land uses and development standards in each of the General Plan land use designations. Inasmuch as these land use classifications mirror existing land use patterns across the Amendment Area, development facilitated by the Proposed Amendments would be consistent with existing uses and would represent a strengthening and revitalization of existing communities rather than a perceived or physical division.

In addition, the General Plan contains substantial policy requirements pertaining to compatibility of land uses that must be implemented throughout all of the City's neighborhoods, including those within the Amendment Area. Conformance to the General Plan, including LUTE policies listed below, would prohibit development of incompatible land uses or land uses that would result in a division within an established community.

- ***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 the 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.

Further, development facilitated by the Proposed Amendments would undergo subsequent project-specific environmental review as needed and appropriate, including project-level analysis of land use compatibility. The Proposed Amendments do not contain specific development proposals for individual sites, nor do they mandate particular actions the Redevelopment Agency will take with regard to specific projects. Because no specific development projects are proposed as a part of the Proposed Amendments, there is not sufficient information currently available to analyze the project-level impact; however, based on the information currently available, implementation of General Plan Policies, including but not limited to those described above, mean that no significant land use impacts related to land use incompatibility or the physical division of an established community would occur as a result of the development facilitated by the Proposed Amendments.

This analysis of the Redevelopment Plan, as Amended, considers the issues related to land use compatibility described above for the Amendment Area, in combination with the less-than-significant effects on land use compatibility identified in the 2000 EIR. Given adherence to the General Plan policies discussed above, and due to project-specific environmental review that would occur for future development under the Redevelopment Plan, as Amended, (through which potential conflicts will be identified and avoided or mitigated to less than significant), the land use compatibility impact of development facilitated by the Redevelopment Plan, as Amended, would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential land use compatibility impact is substantially the same as identified in the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Policy Consistency / Change in Environment

Updated Impact A.2 (LU): Development facilitated by the Redevelopment Plan, as Amended, would not conflict with applicable land use plans and policies adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)

Issues related to policy consistency for the Existing Redevelopment Plan were discussed in the 2000 EIR (Chapter 4.A), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to the land use environment has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing land use effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Conflicts between a project and applicable policies do not constitute significant physical environmental impacts in and of themselves. A policy inconsistency is considered a significant adverse environmental impact only when it is related to a policy adopted for the purpose of avoiding or mitigating an environmental effect and it is anticipated that the inconsistency would result in a significant adverse physical impact based on the established significance criteria.

The intent of Existing Redevelopment Plan is to implement the General Plan according to its policies, land use designations and zoning classifications. Because the development facilitated by the Proposed Amendments would not alter the development objectives, techniques, methods of financing or general provisions of the Existing Redevelopment Plan, and because the Existing Redevelopment Plan was written to be consistent with the General Plan in accordance with State law (California Health and Safety Code Section 33346), development facilitated by the Proposed Amendments would not result in a conflict with General Plan policies, including those adopted for the purpose of avoiding or mitigating an environmental effect.

Development facilitated by the Proposed Amendments would not conflict with any applicable land use policies adopted for the purpose of avoiding or mitigating an environmental effect. As a result, no significant land use impacts related to the development facilitated by the Proposed Amendments' consistency with land use policies would occur.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant determination regarding policy consistency made in the 2000 EIR. Given adherence to the General Plan policies discussed above, the effect of development facilitated by the Redevelopment Plan, as Amended, regarding consistency with existing plans and policies would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impacts related to policy consistency is substantially the same as identified in the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously

identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Cumulative Impacts

New Impact LU-3: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, does not reveal any significant adverse cumulative impacts in the area. (Less than Significant)

Geographic Context

The cumulative geographic context for land use, plans and policy considerations for the development facilitated by the Proposed Amendments consists of the Amendment Area in addition to all areas of the City since cumulative effects must be considered with policies or regulations that apply citywide.

The development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended. Land use changes that have occurred since preparation of the 2000 EIR are included in the “past, present or reasonably foreseeable” projects that accordingly are considered in the cumulative analysis. As discussed in the *Approach to Analysis*, above, no substantial change to the land use environment has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current significance criteria and approach to assessing land use effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Impacts

As analyzed throughout this section, development facilitated by the Proposed Amendments would not result in a significant land use impact by potentially physically dividing an established community; conflicting with adjacent or nearby land uses; or conflicting with applicable land use plans, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Development facilitated by the Proposed Amendments is not located in or near an area guided by a habitat conservation plan or natural community conservation plan. Thus, development facilitated by the Proposed Amendments would not combine with, or add to, any potential adverse land use impacts that may be associated with other cumulative development. Similarly, because development facilitated by the Proposed Amendments would not result in a conflict with a land use plan, policy or regulation in manner that could result in a significant environmental effect, whether other present or future development would have such a conflict, the effect would not combine to create cumulative “conflict.”

In addition, past projects have been, and present and reasonably foreseeable future projects would be, subject to development guidance contained within the General Plan and other

applicable land use plans to ensure land use compatibility. These projects include those in the Major Projects List in Appendix B to this Draft SEIR, and discussed in Section 4.09, *Cumulative Context*, in the front of Chapter 4 of this Draft SEIR. Based on the information in this land use section and for the reasons summarized above, development facilitated by the Proposed Amendments would not contribute to any significant adverse cumulative land use impacts when considered together with past, present, and reasonably foreseeable development.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant effects on cumulative land use compatibility and policy consistency impacts identified in the 2000 EIR. Given adherence to General Plan policies and the implementation of project-specific environmental review for future development, as appropriate, the potential cumulative land use impacts due to development facilitated by the Redevelopment Plan, as Amended, would also be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* This cumulative impact was not identified in the 2000 EIR, although the topic was discussed at a project level. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

2000 EIR Impacts Replaced or that Require No Further Analysis in this SEIR

The 2000 EIR identified the following impacts that are no longer applicable or not addressed in detail in this SEIR either because (1) the impact addresses a specific geographic area not affected by the Proposed Amendments, is addressed by another impact in this SEIR, and does not warrant further analysis beyond that in the 2000 EIR to adequately apply to the Project Area, as Amended, or (2) is fundamentally inconsistent with the current CEQA analysis approaches conducted by the City of Oakland to assess General Plan policy consistency. Impacts under the first instance (geographically specific) are carried forward from the 2000 EIR (and are included in the summary table of impacts in Chapter 2, *Summary*). This is done particularly to ensure consideration of previously identified mitigation measures approved for the Existing Redevelopment Plan in the Existing Project Area and that may still be relevant (even if not warranted). The impact under the second instance is also carried forward in this SEIR.

The impacts and mitigation measures are listed below and may reflect minor revisions made for clarity and consistency within the context of this SEIR, for example, topic designators, e.g., “(LU)” or references to distinguish that the impact is pertinent to the “Existing Project Area” analyzed in the 2000 EIR. (Revisions are shown in Appendix G to this SEIR in underlined/strikeout format.)

- **Updated Impact A.3 (LU): The Redevelopment Plan, as Amended, could result in land use conflicts in Subarea 3, particularly along San Pablo Avenue and Stanford Avenue because of the proximity of schools and parks. (Less than Significant)**

Mitigation Measure A.3a (LU): The City of Oakland will work closely with the Oakland Public School District to assure that land uses proposed by the Redevelopment Plan, as Amended, are compatible with school and park uses, and will restrict uses near schools and parks, which are incompatible with persons under the age of 18.

Mitigation Measure A.3b (LU): The City of Oakland will explore the potential rezoning of areas near schools and parks, if necessary, to permanently restrict land uses near public schools, parks and some residential areas that could be incompatible for persons under the age of 18. The City will coordinate its efforts with adjacent municipalities if the proposed rezoning occurs in adjacent areas.

Significance after Mitigation: Less than Significant prior to mitigation; mitigation measures not required, but retained.

Impact A.3 (LU) in the 2000 EIR is adequately addressed and mitigated, and is further addressed in Updated Impact A.1 (LU), above. No further discussion is required in this SEIR to address this potential effect, which specifically pertains to a geographic area within the Amendment Area. Mitigation Measures A.3a and A.3b will continue to apply.

- **Updated Impact A.4 (LU): The Redevelopment Plan, as Amended, could potentially conflict with the General Plan Historic Preservation Element. (Potentially Significant)**

Updated Mitigation Measure A.4 (LU): Same as New Mitigation Measures CUL-1.

Significance after Mitigation: Less than Significant (Land Use, Plans and Policies).

Impact A.4 (LU) in the 2000 EIR addresses a topic that is adequately addressed by Updated Impact A.2 (LU) (discussed above) regarding policy consistency, in which a less-than-significant is determined. As discussed under Updated Impact A.2 (LU), consistent with the City's current CEQA analysis approach to assessing General Plan policy consistency in EIRs, conflicts between a project and applicable policies do not constitute significant physical environmental impacts in and of themselves. A policy inconsistency is considered a significant adverse environmental impact only when it is related to a policy adopted for the purpose of avoiding or mitigating an environmental effect and it is anticipated that the inconsistency would result in a significant adverse physical impact based on the established significance criteria.

The Oakland Historic Preservation Element contains such policies, and the potential environmental effects of conflicts that may occur with those policies is adequately addressed in New Impact CUL-1 regarding historical resources (see Section 4.04 of this SEIR). New Mitigation Measure CUL-1 is identified, and the potential historic resources impact of the Redevelopment Plan, as Amended, with implementation of New Mitigation

Measure CUL-1 is significant and unavoidable. However, the Redevelopment Plan, as Amended does not result in a significant and unavoidable land use impact; Updated Impact A.4 (LU) and Updated Mitigation Measure A.4 (which is New Mitigation Measure CUL-1) would reduce the potential land use, plans and policies impact to less than significant, as updated in this SEIR.

- **Updated Impact A.5 (LU): The Redevelopment Plan, as Amended, could result in land use conflicts between the City of Berkeley, the City of Emeryville and the City of Oakland in Subarea 3. (Less than Significant)**

Mitigation Measure A.5a (LU): Representatives from the City of Oakland will meet and confer with representatives of the cities of Berkeley and Emeryville to discuss land uses along borders shared with Subarea 3. Such meetings will have the goal of establishing an agreement concerning land uses along the Subarea 3 border, to include present and future uses, building heights, maximum allowable densities, parking, set backs, rehabilitation standards, historic resources, open space requirements and recreational opportunities.

Mitigation Measure A.5b (LU): Representatives from the City of Oakland will confer with representatives of the cities of Berkeley and Emeryville, as part of any rezoning of adjacent areas, and as part of ongoing City-wide zoning update efforts.

Significance after Mitigation: Less than Significant prior to mitigation; mitigation measures not required, but retained.

Updated Impact A.5 (LU) in the 2000 EIR is adequately addressed and mitigated, and is further addressed in Updated Impact A.1 (LU), above. No further discussion is required in this SEIR to address this potential effect, which specifically pertains to a geographic area near the Amendment Area. Mitigation Measures A.5a and A.5b will continue to apply.

4.9.6 References

- City of Oakland, *Land Use and Transportation Element of the Oakland General Plan*, March 24, 1998, amended to June 21, 2005.
- City of Oakland. *2007-2014 Housing Element EIR*, Section 3.3, Air Quality. August 2010.
- City of Oakland, *2935 Telegraph Avenue Courthouse Condominiums Project Environmental Impact Report*, March 2007.
- City of Oakland, *2935 Telegraph Avenue Courthouse Condominiums Project Final Environmental Impact Report*, June 2007.
- City of Oakland, *Alta Bates Summit Medical Center, Summit Campus Seismic Upgrade and Master Plan Draft Environmental Impact Report*, December 2009.
- City of Oakland, *Alta Bates Summit Medical Center, Summit Campus Seismic Upgrade and Master Plan Final Environmental Impact Report*, May 2010.
- City of Oakland, *Bicycle Master Plan Update. Part of the Land Use and Transportation Element of the Oakland General Plan*, adopted December 2007.
- City of Oakland, *Broadway/MacArthur Redevelopment Plan Initial Study and Environmental Review Checklist*, March 1999.
- City of Oakland, *Broadway/MacArthur/San Pablo Redevelopment Plan Draft Environmental Impact Report*, April 2000.
- City of Oakland, *Broadway/MacArthur/San Pablo Redevelopment Plan Final Environmental Impact Report*, June 2000.
- City of Oakland, *City of Oakland Zoning and Estuary Policy Planning Map*. CEDA: Planning and Zoning Division, April 14, 2011a.
- City of Oakland, *City of Oakland Planning Code*. CEDA: Planning and Zoning.
<http://www2.oaklandnet.com/oakca/groups/ceda/documents/report/oak028430.pdf>, accessed April 26, 2011b.
- City of Oakland, *General Plan Land Use Designations Map*. CEDA, April 2011.
- City of Oakland, *Kaiser Permanente Oakland Medical Center Master Plan Project Draft Environmental Impact Report*, March 2006.
- City of Oakland, *Kaiser Permanente Oakland Medical Center Master Plan Project Final Environmental Impact Report*, May 2006.
- City of Oakland, *MacArthur Transit Village Draft Environmental Impact Report*, January 2008.
- City of Oakland, *MacArthur Transit Village Final Environmental Impact Report*, May 2008.
- City of Oakland, *Pedestrian Master Plan. Part of the Land Use and Transportation Element of the Oakland General Plan*, adopted November 2002.
- Oakland Redevelopment Agency, *Redevelopment Plan for the Broadway/MacArthur/San Pablo Redevelopment Project*, Adopted June 25, 2000, as amended through March 6, 2007.

4.10 Noise

This section analyzes the potential noise impacts associated with development facilitated by the Redevelopment Plan, as Amended. Specifically, this section analyzes potential impacts on the ambient noise environment caused by construction and implementation of development facilitated by the Proposed Amendments and, as appropriate, the Existing Redevelopment Plan. It also analyzes the compatibility of noise-sensitive uses proposed to be developed, such as residences and public open spaces with the existing noise environment. This section describes the environmental and regulatory setting of the Amendment Area and, as appropriate, the Project Area, as Amended, as well as the basics of environmental acoustics, including definitions of terms commonly used in noise analysis. Potential impacts are discussed and evaluated, and appropriate standard conditions of approval (SCAs) and/or mitigation measures are identified, as necessary. Pursuant to CEQA Guidelines Section 15162 regarding an SEIR, this section also discusses whether there are any new or more severe significant impacts than those identified in the 2000 EIR that result from changed circumstances or new information.

4.10.1 2000 EIR and Existing Project Area

Noise was evaluated in the Noise chapter of the 2000 EIR (Chapter 4.D). The 2000 EIR included a detailed description of noise sources, levels and sensitive receptors within the Existing Project Area at the time.

The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Also, changes that have occurred to the noise setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

Because only the new impact regarding the Redevelopment Plan, as Amended, are associated with the Proposed Amendments and would not involve any new significant impacts with respect to the Existing Project Area, the remainder of this Noise Environmental Setting, and Regulatory Setting, and Impacts and Mitigation Measures analysis herein focuses primarily on the Amendment Area and the additions/changes related to the Proposed Amendments, although part of the setting discussion pertains to the City of Oakland at-large.

4.10.2 Environmental Setting for the Amendment Area

Technical Background

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the “loudness” of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of decibels (dBA).¹ Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

Some representative noise sources and their corresponding A-weighted noise levels are shown in **Table 4.10-1**.

**TABLE 4.10-1
TYPICAL NOISE LEVELS**

| Noise Level (dBA) | Outdoor Activity | Indoor Activity |
|-------------------|---|---|
| 90+ | Gas lawn mower at 3 feet, jet flyover at 1,000 feet | Rock Band |
| 80-90 | Diesel truck at 50 feet | Loud television at 3 feet |
| 70-80 | Gas lawn mower at 100 feet, noisy urban area | Garbage disposal at 3 feet, vacuum cleaner at 10 feet |
| 60-70 | Commercial area | Normal speech at 3 feet |
| 40-60 | Quiet urban daytime, traffic at 300 feet | Large business office, dishwasher next room |
| 20-40 | Quiet rural, suburban nighttime | Concert hall (background), library, bedroom at night |
| 10-20 | | Broadcast / recording studio |
| 0 | Lowest threshold of human hearing | Lowest threshold of human hearing |

SOURCE: Modified from Caltrans, 2009

Noise Exposure and Community Noise

An individual's noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. The noise levels presented in Table 4.10-1 represent noise measured at a given instant in time; however, noise levels rarely persist consistently over a long period of time. Rather, community noise varies continuously over time because of the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and wind.

¹ All noise levels reported herein reflect A-weighted decibels unless otherwise stated.

What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment varies the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to accurately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

- Leq:** The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
- Lmax:** The instantaneous maximum noise level for a specified period of time.
- L50:** The noise level that is equaled or exceeded 50 percent of the specified time. This is the median noise level during the specified time.
- L90:** The noise level that is equaled or exceeded 90 percent of the specified time. The L90 is often considered the background noise level averaged over the specified time.
- DNL:** The Day/Night Average Sound Level is the 24-hour day and night A-weighted noise exposure level, which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night. Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance from nighttime noise. (Also referred to as “Ldn.”)
- CNEL:** Similar to the DNL, the Community Noise Equivalent Level (CNEL) adds a 5-dBA “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.

Effects of Noise on People

The effects of noise on people can be placed into three categories:

- Subjective effects of annoyance, nuisance, dissatisfaction;
- Interference with activities such as speech, sleep, learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants generally experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance, and different tolerances to noise tend to develop based on an individual’s past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called “ambient noise” level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Under controlled conditions in an acoustics laboratory, the trained healthy human ear is able to discern changes in sound levels of 1 dBA;
- Outside these controlled conditions, the trained ear can detect changes of 2 dBA in normal environmental noise;
- It is widely accepted that the average healthy ear, however, can barely perceive changes in the noise level of 3 dBA;
- A change in level of 5 dBA is a readily perceptible increase in noise level; and
- A 10 dBA change is recognized as twice as loud as the original source (Caltrans, 1998b).

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 to 7.5 dBA per doubling of distance from the source, depending on the topography of the area and environmental conditions (i.e., atmospheric conditions and noise barriers, either vegetative or manufactured, etc.). Widely distributed noise, such as a large industrial facility spread over many acres or a street with moving vehicles (known as a “line” source), would typically attenuate at a lower rate, approximately 3 to 4.5 dBA each time the distance doubles from the source, which also depends on environmental conditions (Caltrans, 1998b). Noise from large construction sites will exhibit characteristics of both “point” and “line” sources, and attenuation will therefore generally range between 4.5 and 7.5 dBA each time the distance doubles.

Existing Noise Sources and Levels

Transportation sources, such as automobiles, trucks, trains, and aircraft, are the principal sources of noise in the urban environment. Along major transportation corridors, noise levels can reach 80 DNL, while along arterial streets, noise levels typically range from 65 to 70 DNL. However, noise levels on roadways, like all areas, can be affected by intervening development, topography, or landscaping. Industrial and commercial equipment and operations also contribute to the ambient noise environment in their vicinities.

Roadway traffic generates noise throughout the city of Oakland. Railroad trains and BART intermittently generate noise levels that are significant along the railroad tracks. General aviation aircraft and jet aircraft contribute to intermittent noise levels in the city. Noise is also generated on individual parcels whether industrial, commercial or residential. These noise sources do not affect the overall noise environment throughout the community (Illingworth and Rodkin, 2004).

Primary noise sources in the Amendment Area vicinity include traffic on the network of the surrounding streets. Local road traffic and arterials are major sources of noise within the Amendment Area. No major stationary or industrial noise sources are located within the Amendment Area. **Table 4.10-2** presents noise data for roadways near the Amendment Area as compiled in the City’s General Plan Noise Element.

**TABLE 4.10-2
 MONITORED NOISE ENVIRONMENTS WITHIN THE AMENDMENT AREA**

| Location | Duration/Descriptor | Noise Level (dBA) | Distance (feet) | Major Noise Source |
|-----------------------------------|---------------------|-------------------|-----------------|--------------------|
| 62nd St btwn San Pablo & Marshall | unknown | 60 Leq | 25 feet | Vehicle traffic |

SOURCE: City of Oakland, 2005.

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others because of the amount of noise exposure, in terms of both duration and insulation from noise, and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and parks and other outdoor recreation areas generally are more sensitive to noise than are commercial and industrial land uses.

The Amendment Area consists of primarily of residential and some institutional (churches and schools) uses in the Mixed Housing Type Residential General Plan land use designation. Light industrial uses are mixed with residential uses along Lowell Street. A few commercial uses existing within the Amendment Area east of Lowell Street. Table 4.10-2 shows the monitored noise environment at a road segment within one block of the Amendment Area.

4.10.3 Regulatory Setting

Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies. Local regulation of noise involves implementation of general plan policies and noise ordinance standards. Local general plans identify general principles intended to guide and influence development plans; local noise ordinances establish standards and procedures for addressing specific noise sources and activities.

Federal

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under Title 40 Code of Federal Regulations (CFR) Part 205, Subpart B. The federal truck pass-by noise standard is 80 dB at 15 meters from the centerline of the vehicle pathway. These standards are implemented through regulatory controls on truck manufacturers.

State of California

The State of California establishes noise limits for vehicles licensed to operate on public roads. The pass-by standard for heavy trucks is consistent with the federal limit of 80 dB. The pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dB at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanctions on vehicle operators by state and local law enforcement officials.

Title 24 of the California Code of Regulations, the Building Standards Administrative Code, contains the State Noise Insulation Standards (Part 2, Appendix Chapter 12A), which specify interior noise standards for new hotels, motels, apartment houses, and dwellings other than single-family dwellings. Such new structures must be designed to reduce outdoor noise to an interior level of (no more than) 45 Ldn. The California Noise Insulation Standards also establish standards for sound isolation of separating walls, corridor walls, and floor/ceiling assemblies in multi-family residential construction. State noise standards for on-road motor vehicles are contained in the Motor Vehicle Code.

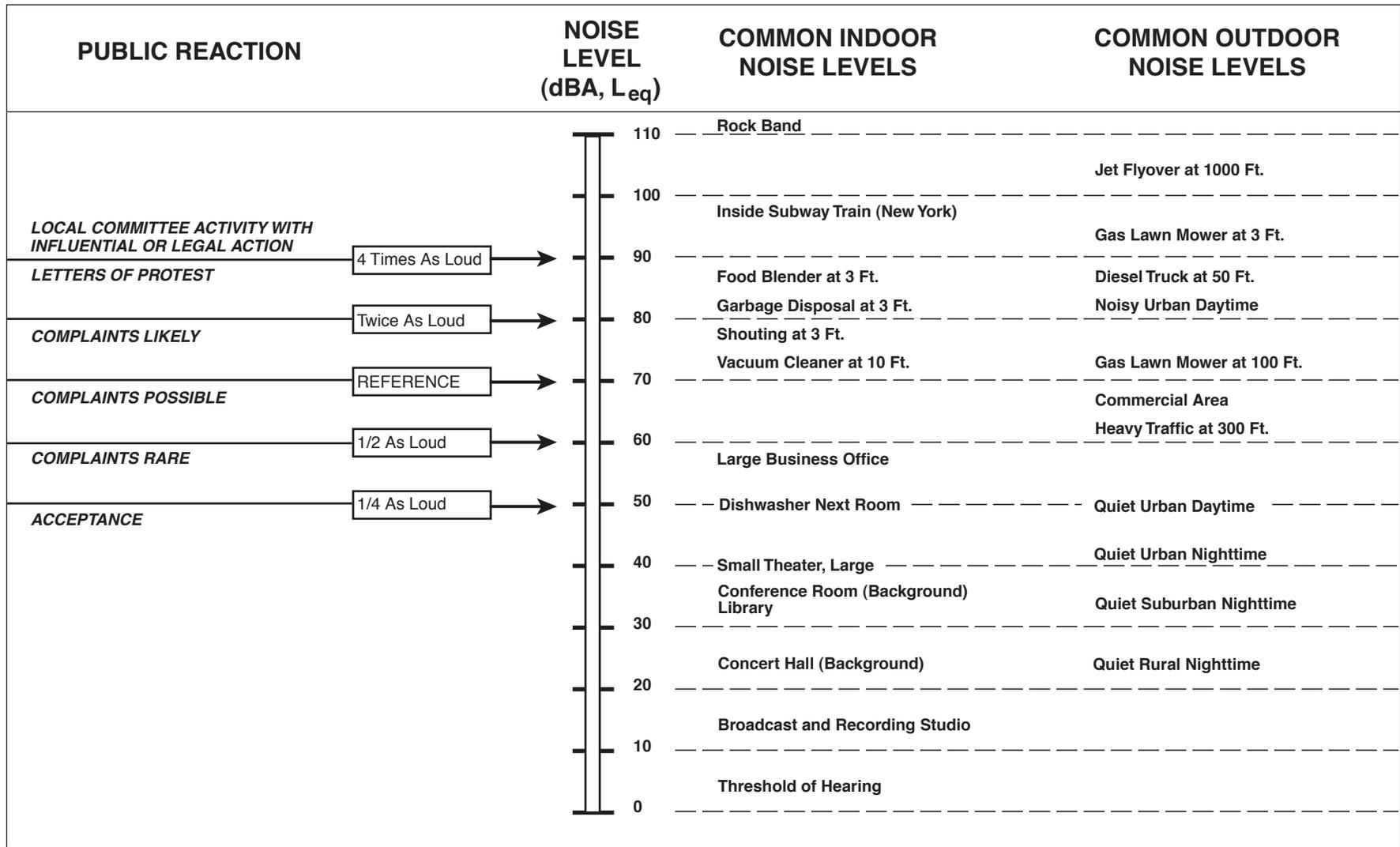
Local Plans and Policies

City of Oakland General Plan

The Oakland General Plan contains guidelines for determining the compatibility of various land uses with different outdoor noise environments (City of Oakland, 2005). The Noise Element recognizes that some land uses are more sensitive to ambient noise levels than others, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. The City uses state noise guidelines for judging the compatibility between various land uses and their noise environments, which are summarized in **Figure 4.10-1** for various common land uses.

The Oakland General Plan Noise Element also identifies maximum interior noise levels generally considered acceptable for various common land uses (with windows closed). Relevant to the development facilitated by the Proposed Amendments, 50 dB is the maximum level acceptable for professional offices, research and development, auditoria, meeting halls, and 55 dB is the maximum level acceptable for retail, banks, restaurants, and sports clubs. The Noise Element contains the following applicable goals and policies:

- **Goal 1:** To protect Oakland's quality of life and the physical and mental well-being of residents and others in the City by reducing the community's exposure to noise; and



- **Goal 2:** To safeguard Oakland's economic welfare by mitigating noise incompatibilities among commercial, industrial and residential land uses.
 - Policy 1: Ensure the compatibility of existing and, especially, of proposed development projects not only with neighboring land uses but also with their surrounding noise environment.
 - Policy 2: Protect the noise environment by controlling the generation of noise by both stationary and mobile noise sources.
 - Policy 3: Reduce the community's exposure to noise by minimizing the noise levels that are *received* by Oakland residents and others in the City. (This policy addresses the *reception* of noise whereas Policy 2 addresses the *generation* of noise.)

City of Oakland Noise Ordinance

The City of Oakland also regulates noise through enforcement of its noise ordinance, which is found in Sections 8.18 and 17.120 of the Oakland Municipal Code. Per Chapter 8.18.020, the persistent maintenance or emission of any noise or sound produced by human, animal or mechanical means, between the hours of 9:00 p.m. and 7:00 a.m. which shall disturb the peace or comfort, or be injurious to the health of any person shall constitute a nuisance. Failure to comply with the following provisions shall constitute a nuisance.

- A. All construction equipment powered by internal combustion engines shall be properly muffled and maintained. Unnecessary idling of internal combustion engines is prohibited.
- B. All stationary noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.
- C. Quiet construction equipment, particularly air compressors, is to be selected whenever possible.
- D. Use of pile drivers and jack hammers shall be prohibited on Sundays and holidays, except for emergencies and as approved in advance by the Building Official.

Whenever the existence of any such nuisance shall come to the attention of the Health Officer, it shall be his or her duty to notify in writing the occupant of the premises upon which such nuisance exists, specifying the measures necessary to abate such nuisance, and unless the same is abated within forty-eight (48) hours thereafter, the occupant so notified shall be guilty of an infraction, and the Health Officer shall summarily abate such nuisance. (Prior code § 3-1.02)

Chapter 17.120.050 of the Oakland Planning Code regulates only operational noise from stationary sources, as cities and counties do not have regulatory authority over noise from mobile sources (transportation noise). As mentioned above, transportation noise is regulated at the state and federal level by noise limits placed on vehicle manufacturers. **Table 4.10-3** (Table 1 of the City's *CEQA Thresholds/Criteria of Significance Guidelines*) presents maximum allowable receiving noise standards applicable to long-term exposure for residential and civic land uses, for noise from stationary noise sources (not transportation noise). Once constructed, noise from a stationary source would be limited by the standards in Table 4.10-3. For example, between

**TABLE 4.10-3
CITY OF OAKLAND OPERATIONAL NOISE STANDARDS AT RECEIVING PROPERTY LINE, DBA¹
(from stationary sources)**

| Receiving Land Use | Cumulative Number of Minutes in a 1-Hour Time Period ² | Maximum Allowable Noise Level Standards (dBA) | |
|--------------------------------------|---|---|--------------------------------------|
| | | Daytime 7:00 a.m. to 10:00 p.m. | Nighttime 10:00 p.m. to 7:00 a.m. |
| Residential and Civic ³ | 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 |
| Anytime | | | |
| Commercial | 20 (L ₃₃) | 65 | |
| | 10 (L _{16.7}) | 70 | |
| | 5 (L _{8.3}) | 75 | |
| | 1 (L _{1.7}) | 80 | |
| | 0 (L _{max}) | 85 | |
| Anytime | | | |
| Manufacturing, Mining, and Quarrying | 20 (L ₃₃) | 70 | |
| | 10 (L _{16.7}) | 75 | |
| | 5 (L _{8.3}) | 80 | |
| | 1 (L _{1.7}) | 85 | |
| | 0 (L _{max}) | 90 | |

¹ These standards are reduced 5 dBA for simple tone noise, noise consisting primarily 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.
² L_x represents the noise level that is exceeded X percent of a given period. L_{max} is the maximum instantaneous noise level.
³ Legal residences, schools and childcare facilities, health care or nursing home, public open space, or similarly sensitive land uses

SOURCE: City of Oakland, 2008

7:00 a.m. and 10:00 p.m., residential and civic land uses, including public open spaces, may only be exposed to noises up to 60 dBA for a period of 20 cumulative minutes in a one-hour time period and a maximum of 80 dBA. The noise ordinance states that if the measured ambient noise level exceeds the applicable noise level standard in any category, then the stated applicable noise level shall be adjusted so as to equal the ambient noise level. In other words, if existing noise is measured to be louder than the maximum allowed (i.e., the “applicable noise level standard”), the existing noise level shall be considered the maximum allowed.

Commercial uses, between 7:00 a.m. and 10:00 p.m., may only be exposed to noises up to 65dBA for a period of 20 cumulative minutes in a one-hour time period and a maximum of 85 dBA.

Per Chapter 17.120.060 of the Oakland Planning Code, all activities, except those located within the M-40 zone, or in the M-30 zone more than 400 feet from any legal residentially occupied property, shall be so operated as not to create a vibration which is perceptible without instruments by the average person at or beyond any lot line of the lot containing such activities. Ground vibration caused by motor vehicles, trains, and temporary construction or demolition work is exempted from this standard (Ord. 11895 § 8, 1996: prior planning code § 7711).

Table 4.10-4 (Table 2 of the City of Oakland's *CEQA Thresholds/Criteria of Significance Guidelines*) presents noise level standards from the noise ordinance that applies to temporary exposure to short- and long-term construction noise. In this context, short-term refers to construction activity lasting less than 10 days at a time while long-term refers to construction activities lasting greater than 10 days at a time.

**TABLE 4.10-4
CITY OF OAKLAND CONSTRUCTION NOISE STANDARDS AT
RECEIVING PROPERTY LINE, DBA**

| Receiving Land Use | Daily 7:00 a.m. to 7:00 p.m. | Weekends 9:00 a.m. to 8:00 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:

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 use from construction or demolition shall not exceed the applicable nighttime operational noise level standard (see Table 4.10-4)

If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.

SOURCE: City of Oakland, 2008

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The City of Oakland SCAs relevant to noise and vibration impacts are listed below. All applicable SCA would be adopted as conditions of approval for projects facilitated by the Redevelopment Plan, as Amended, to reduce significant noise and vibration impacts. The SCA are incorporated and required as part of development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures.

The City's SCAs relevant to noise and vibration impacts are shown below.

- **SCA 28: Days/Hours of Construction Operation**

Ongoing throughout demolition, grading, and/or construction. The project applicant shall require construction contractors to limit standard construction activities as follows:

- a) Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pile driving and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday.
- b) Any construction activity proposed to occur outside of the standard hours of 7:00 a.m. to 7:00 p.m. Monday through Friday for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case by

case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened and such construction activities shall only be allowed with the prior written authorization of the Building Services Division.

- c) Construction activity shall not occur on Saturdays, with the following possible exceptions:
 - i. Prior to the building being enclosed, requests for Saturday construction for special activities (such as concrete pouring which may require more continuous amounts of time), shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened. Such construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division.
 - ii. After the building is enclosed, requests for Saturday construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division, and only then within the interior of the building with the doors and windows closed.
- d) No extreme noise generating activities (greater than 90 dBA) shall be allowed on Saturdays, with no exceptions.
- e) No construction activity shall take place on Sundays or federal holidays.
- f) Construction activities include but are not limited to: truck idling, moving equipment (including trucks, elevators, etc) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.
- g) Applicant shall use temporary power poles instead of generators where feasible.

- **SCA 29: Noise Control**

Ongoing throughout demolition, grading, and/or construction. To reduce noise impacts due to construction, the project applicant shall require construction contractors to implement a site-specific noise reduction program, subject to the Planning and Zoning Division and the Building Services Division review and approval, which includes the following measures:

- a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).
- b) Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available and this could achieve a reduction of 5 dBA. Quieter procedures shall be

used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

- c) Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures as determined by the City to provide equivalent noise reduction.
- d) The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determined an extension is necessary and all available noise reduction controls are implemented.

- **SCA 30: Noise Complaint Procedures**

Ongoing throughout demolition, grading, and/or construction. Prior to the issuance of each building permit, along with the submission of construction documents, the project applicant shall submit to the Building Services Division a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include:

- a) A procedure and phone numbers for notifying the Building Services Division staff and Oakland Police Department; (during regular construction hours and off-hours);
- b) A sign posted on-site pertaining with permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours);
- c) The designation of an on-site construction complaint and enforcement manager for the project;
- d) Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of extreme noise generating activities about the estimated duration of the activity; and
- e) A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

- **SCA 31: Interior Noise**

Prior to issuance of a building permit. If necessary to comply with the interior noise requirements of the City of Oakland's General Plan Noise Element and achieve an acceptable interior noise level, noise reduction in the form of sound-rated assemblies (i.e., windows, exterior doors, and walls) shall be incorporated into project building design, based upon recommendations of a qualified acoustical engineer and submitted to the Building Services Division for review and approval. Final recommendations for sound-rated assemblies will depend on the specific building designs and layout of buildings on the site and shall be determined during the design phases. Written confirmation by the acoustical consultant, HVAC or HERS specialist, shall be submitted for City review and approval, prior to Certificate of Occupancy (or equivalent) that:

- (a) Quality control was exercised during construction to ensure all air-gaps and penetrations of the building shell are controlled and sealed; and

- (b) Demonstrates compliance with interior noise standards based upon performance testing of a sample unit.
- (c) Inclusion of a Statement of Disclosure Notice in the CC&R's on the lease or title to all new tenants or owners of the units acknowledging the noise generating activity and the single event noise occurrences. Potential features/measures to reduce interior noise could include, but are not limited to, the following:
 - i. Installation of an alternative form of ventilation in all units identified in the acoustical analysis as not being able to meet the interior noise requirements due to adjacency to a noise generating activity, filtration of ambient make-up air in each unit and analysis of ventilation noise if ventilation is included in the recommendations by the acoustical analysis.
 - ii. Prohibition of Z-duct construction.
- **SCA 32: Operational Noise - General**

Ongoing. Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services.
- **SCA 38: Vibration**

A qualified acoustical consultant shall be retained by the project applicant during the design phase of the project to comment on structural design as it relates to reducing groundborne vibration at the project site. If required in order to reduce groundborne vibration to acceptable levels, the project applicant shall incorporate special building methods to reduce groundborne vibration being transmitted into project structures. The City shall review and approve the recommendations of the acoustical consultant and the plans implementing such recommendations. Applicant shall implement the approved plans. Potential methods include the following:

 - (a) Isolation of foundation and footings using resilient elements such as rubber bearing pads or springs, such as a "spring isolation" system that consists of resilient spring supports that can support the podium or residential foundations. The specific system shall be selected so that it can properly support the structural loads, and provide adequate filtering of ground-borne vibration to the residences above.
 - (b) Trenching, which involves excavating soil between the railway/freeway and the project so that the vibration path is interrupted, thereby reducing the vibration levels before they enter the project's structures. Since the reduction in vibration level is based on a ratio between trench depth and vibration wavelength, additional measurements shall be conducted to determine the vibration wavelengths affecting the project. Based on the resulting measurement findings, an adequate trench depth and, if required, suitable fill shall be identified (such as foamed styrene packing pellets (i.e., Styrofoam) or low-density polyethylene).
- **SCA 39: Pile Driving and Other Extreme Noise Generators**

Ongoing throughout demolition, grading, and/or construction. To further reduce potential pier drilling, pile driving and/or other extreme noise generating construction impacts greater

than 90dBA, a set of site-specific noise attenuation measures shall be completed under the supervision of a qualified acoustical consultant. Prior to commencing construction, a plan for such measures shall be submitted for review and approval by the Planning and Zoning Division and the Building Services Division to ensure that maximum feasible noise attenuation will be achieved. This plan shall be based on the final design of the project. A third-party peer review, paid for by the project applicant, may be required to assist the City in evaluating the feasibility and effectiveness of the noise reduction plan submitted by the project applicant. A special inspection deposit is required to ensure compliance with the noise reduction plan. The amount of the deposit shall be determined by the Building Official, and the deposit shall be submitted by the project applicant concurrent with submittal of the noise reduction plan. The noise reduction plan shall include, but not be limited to, an evaluation of the following measures. These attenuation measures shall include as many of the following control strategies as applicable to the site and construction activity:

- a) Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;
 - b) Implement “quiet” pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;
 - c) Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;
 - d) Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example; and
 - e) Monitor the effectiveness of noise attenuation measures by taking noise measurements.
- **SCA 57: Vibrations Adjacent to Historic Structures**

Prior to issuance of a demolition, grading or building permit. The project applicant shall retain a structural engineer or other appropriate professional to determine threshold levels of vibration and cracking that could damage other nearby historic structures, and design means and methods of construction that shall be utilized to not exceed the thresholds.

4.10.4 Impacts and Mitigation Measures

Significance Criteria

The Redevelopment Plan, as Amended, would have a significant impact on the environment if it would:

1. Expose persons to or generate noise levels in excess of standards established in the Oakland General Plan or applicable standards of other agencies (e.g., OSHA);
2. Violate the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise per Table 4.10-3;
3. Violate the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise per Table 4.10-4, except if an acoustical analysis is performed;

4. Violate the City of Oakland Noise Ordinance (Oakland Municipal Code Section 8.18.020) regarding nuisance of persistent construction-related noise;
5. Create a vibration not associated with motor vehicles, trains, or temporary construction or demolition work which is perceptible without instruments by the average person at or beyond any lot line containing the vibration-causing activity, except vibration-causing activities located in the M-40 zone or in the M-30 zone more than 400 feet from any legally occupied residential property (Oakland Planning Code Section 17.120.060) (See criterion 6 for the threshold for rail-related vibration);
6. Expose persons to or generate rail-related groundborne vibration in excess of standards established by the Federal Transit Administration (FTA);
7. Generate interior Ldn or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24);
8. Result in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project. If the cumulative increase in noise results in a 5 dBA permanent increase in ambient noise levels in the project vicinity above existing levels without the project (i.e., cumulative conditions including the proposed project compared to existing conditions), the project's contribution to the cumulative increase would be cumulative considerable and significant if it results in a 3dBA permanent increase attributable to the project (i.e., cumulative conditions including the proposed project compared to cumulative conditions without the proposed project);
9. Conflict with land use compatibility guidelines for all specified land uses for determination of acceptability of noise (see Table 4.10-3) after incorporation of all applicable Standard Conditions of Approval;
10. Be located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels; or
11. Be located within the vicinity of a private airstrip, and would expose people residing or working in the project area to excessive noise levels.

Approach to Analysis

Prior to approval of any project that is facilitated by the Redevelopment Plan, as Amended, the project would be subject to project-level environmental review as well as the SCAs and the goals and policies of the City's General Plan as outlined above.

The 2000 EIR analyzed the potential environmental effects on noise and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As previously indicated in Section 4.10.1, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes that have occurred to the noise setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

The approach to the analysis herein compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other

project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.² Based on the information in each of the aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding noise relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for this topic. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of noise in the Existing Project Area in this SEIR. Therefore, the impact discussions and analyses below focus on the activities facilitated by the Proposed Amendments and the potential for noise impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes that have occurred to the environmental setting since the 2000 EIR are also evaluated as “past, present or reasonably foreseeable” projects and accordingly, are considered in the cumulative analysis in this SEIR.

Implementation of development facilitated by the Proposed Amendments would not result in direct physical impacts within the Amendment Area. However, expanding the boundaries of the Existing Redevelopment Plan could eventually result in various types of construction activities within the Amendment Area. Based on the characteristics of development facilitated by the Proposed Amendments and the existing conditions, development facilitated by the Proposed Amendments would not result in impacts related to the following criteria:

1. *Expose persons to or generate rail-related groundborne vibration in excess of standards.* Since development facilitated by the Proposed Amendments would not include any vibration-causing activity aside from that associated with construction and motor vehicles, it can be assumed that no impact would occur with regard to Criterion 6.

This significance criterion was not identified or addressed in the 2000 EIR. However, application of the aforementioned “new information” – thresholds/significance criteria, guidelines and thresholds that were not established when the 2000 EIR was prepared, does not represent a change to the environment, the Redevelopment Plan or the Existing Project Area. As with the development facilitated by the Proposed Amendments, development facilitated by the Existing Redevelopment Plan would not include any vibration-causing activity aside from that associated with construction and motor vehicles. Therefore, the application of this new significance criterion does not result in a new significant environmental effect or a substantial increase in the severity of previously identified significant effects and the conclusion of no impact applies to the Redevelopment Plan, as Amended.

² Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

2. *Be located within an airport land use plan or in the vicinity of a private airstrip.* The Amendment Area is not located within the vicinity of a private airstrip nor is it located within the land use plan area for Oakland Airport or any other airport. Therefore, impacts associated with Criteria 10 and 11 are not discussed further in this SEIR.

Significance Criteria 10 and 11 were not identified or addressed in the 2000 EIR. However, application of the aforementioned “new information” – thresholds/significance criteria, guidelines and thresholds that were not established when the 2000 EIR was prepared, does not represent a change to the environment, the Redevelopment Plan or the Existing Project Area. As with the Amendment Area, the Existing Project Area is not located within the vicinity of a private airstrip nor is it located within the land use plan area for Oakland Airport or any other airport. Therefore, the application of these new significance criteria do not result in a new significant environmental effects or a substantial increase in the severity of previously identified significant effects and the conclusion of no impact applies to the Redevelopment Plan, as Amended.

To ensure overall conformance within the SEIR, and to reflect City of Oakland’s *Thresholds/ Criteria of Significance Guidelines* (initially established in 2008) and new City requirements and analysis methods, such as the incorporation of the City’s *Standard Conditions of Approval and Uniformly Applied Development Standards* established since the 2000 EIR, this SEIR updates or replaces some of the impact conclusions and mitigation measures in the 2000 EIR. In accordance with CEQA Guidelines Section 15163, the SEIR contains only the information necessary to make the 2000 EIR adequate for the Redevelopment Plan, as Amended.

Impacts

Construction Noise

Updated Impact D.2 (NOI): Development facilitated by the Redevelopment Plan, as Amended, would result in substantial temporary or periodic increases in ambient noise levels in the Project Area, as Amended, above levels existing without the Redevelopment Plan, as Amended, and in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant)

Issues related to construction noise within the Existing Project Area were discussed in the 2000 EIR (Chapter 4.D, impact statements D.2), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to the noise environment has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing noise effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

As indicated in Table 3-1 in Chapter 3, *Project Description*, development facilitated by the Proposed Amendments would allow for construction of up to 110,000 square feet of industrial incubator space, potential small commercial projects, and remediation assistance, as well as up to 280 residential and 90 live/work units. Furthermore, development facilitated by the Proposed Amendments would include infrastructure improvements, including such items as streetscape

improvements, right-of-way adjustments, building renovations, and support for new development projects.

Construction, although typically short-term, can be a significant source of noise. Construction is most significant when it takes place near sensitive land uses, occurs at night, or in early morning hours. The City of Oakland regulates noise associated with construction equipment and activities through enforcement of noise ordinance standards, implementation of General Plan policies and imposition of conditions of approval for building or grading permits. **Table 4.10-5** shows typical exterior noise levels at various phases of commercial construction and **Table 4.10-6** shows typical noise levels associated with various types of construction related machinery.

**TABLE 4.10-5
TYPICAL CONSTRUCTION NOISE LEVELS**

| Phase | Noise Level (L_{eq}) ^a |
|--------------------|---------------------------------------|
| Ground Clearing | 84 |
| Excavation | 89 |
| Foundations | 78 |
| Erection | 85 |
| Exterior Finishing | 89 |
| Pile Driving | 90-105 |

^a Estimates correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase and 200 feet from the other equipment associated with that phase.

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

**TABLE 4.10-6
TYPICAL MAXIMUM NOISE LEVELS FROM CONSTRUCTION EQUIPMENT**

| Construction Equipment | Noise Level (dBA, L_{eq} at 50 feet) |
|------------------------|---|
| Backhoe | 80 |
| Rock Drill | 98 |
| Air Compressor | 81 |
| Dozer | 85 |
| Air Compressor | 85 |
| Mobile Crane | 83 |
| Grader | 85 |
| Front End Loader | 85 |
| Trucks | 88 |
| Cranes | 83 |
| Pile Driver (Sonic) | 96 |
| Pile Driver (Impact) | 101 |

SOURCE: FTA, 2006.

Construction-related activities would temporarily increase ambient noise levels within the Amendment Area over the duration of construction. Construction-related noise levels within and adjacent to the Amendment Area would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. The effect of construction noise would depend upon the level of construction activity on a given day, the related noise generated by that activity, the distance between construction activities, the nearest noise-sensitive uses, and the existing noise levels at those uses.

The dominant construction equipment noise source is usually a diesel engine without sufficient muffling. Stationary equipment consists of equipment that generates noise from one general area and includes items such as pumps, generators, compressors, etc. These types of equipment operate at a constant noise level under normal operation and are classified as non-impact equipment. Stationary equipment such as pile drivers, jackhammers, and pavement breakers, etc., produce variable and sporadic noise levels and often produce impact-type noises. Impact equipment is equipment that generates impulsive noise, where impulsive noise is defined as noise of short duration (generally less than one second), high intensity, abrupt onset, rapid decay, and often rapidly changing spectral composition. For impact equipment, the noise is produced by the impact of a mass on a surface, typically repeating over time. Mobile equipment such as dozers, scrapers, graders, etc., may operate with power applied in a cyclic fashion in which a period of full power is followed by a period of reduced power. Other equipment such as compressors, although generally considered to be stationary when operating, can be readily relocated to another location for the next operation. Construction-related noise levels generally 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 the noise source and receptor.

Noise from construction activity generally attenuates (decreases) at a rate of 6.0 to 7.5 dBA per doubling of distance. Development of new land uses proposed in the Amendment Area could expose nearby residences to noise levels as high as 89 dBA at 50 feet using typical construction methods and up to 105 dBA at 50 feet if pile driving is required. However even without pile driving, noise levels associated with construction would be significantly greater than existing noise levels at nearby receptors.

Compliance with City of Oakland Noise Standards

The City of Oakland noise ordinance establishes quantitative limits for construction-related noise. As noted above, building construction noise during the noisiest phases, primarily pile driving, of construction would be 90 to 105 Leq at 50 feet. These predicted noise levels would exceed the standards of the City of Oakland's Noise Ordinance, which states that, for residential receptors, the maximum allowable receiving noise for weekdays (Monday through Friday, 7:00 a.m. to 7:00 p.m.) is 65 dBA for construction activity of greater than 10 days duration and 80 dBA for construction activity of 10 days or less. Also, during nighttime, temporary construction-related noise could be more disturbing given the more sensitive nature of the nighttime period. Temporary construction noise impacts could be significant unless proper mitigation is followed.

According to Section 8.18.020 of the Health and Safety Code, the persistent emission of any noise produced by mechanical means between the hours of 9:00 p.m. and 7:00 a.m., could constitute a nuisance if the raucous noise disturbs the peace or comfort or is injurious to the health of any exposed individual. The nuisance of persistent construction-related noise impacts could be significant unless proper mitigation is followed.

Effects of Extreme Noise Activities

Noise from construction activities generally attenuates at a rate of 6.0 to 7.5 dBA per doubling of distance. As discussed above, the nearest sensitive uses could be as close as 50 feet from a given development project site. These areas would temporarily and intermittently experience maximum noise levels of up to 105 dBA with pile driving, typically the loudest source of construction noise. Impacts from pile driving can result from both elevated single-event or “impact” noise levels and from vibration. Pile driving could produce elevated noise levels, even when feasible noise reduction methods are used.

Implementation of SCA 28, *Days/Hours of Construction Operation*, SCA 29, *Noise Control*, SCA 30, *Noise Complaint Procedures*, and SCA 39, *Pile Driving and Other Extreme Noise Generators*, would reduce construction noise levels by limiting hours of construction activities, requiring best available noise control technology, and by requiring a project applicant and/or its contractors to notify any local residents (if any) of construction activities and to track and respond to noise complaints. To specifically address impacts from pile drilling and other extreme noise generating construction activities that may expose sensitive receptors to noise levels greater than 90 dBA, Lmax, part of SCA 39 requires a project applicant to develop and submit for review and approval by the City a Site-specific Construction Noise Reduction Plan that would ensure that maximum feasible noise attenuation will be achieved.

Implementation of SCAs 28, 29, 30, and 39 would reduce impacts from construction noise. SCA's have been developed by the City of Oakland over the past decade to reduce construction noise impacts to the degree feasible. SCA 28 restricts the hours and days of construction activity. SCA 29 requires contractors to implement a construction noise reduction program, SCA 30 establishes construction noise complaint procedures, while SCA 39 establishes a set of site-specific noise attenuation measures to address noise from pile driving. These SCA's are comprehensive in their content and for practical purposes represent all feasible measures available to mitigate construction noise. Implementation of these measures would reduce construction impacts associated with extreme noise actions to less-than-significant levels.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the 2000 EIR analysis which identified a potentially significant but mitigable to less-than-significant impact regarding temporary (construction) noise levels. Similar construction activities would occur with development under the Redevelopment Plan, as Amended, and that construction could occur in proximity to sensitive noise receptors and at levels that may exceed the local noise ordinance. Given adherence to the Oakland noise standards and numerous applicable SCAs discussed above, the effect of development facilitated

by the Redevelopment Plan, as Amended, regarding temporary or periodic increases in ambient noise levels would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion, but Previous Mitigation Measure Replaced by new SCA.* The conclusions regarding the potential impact regarding temporary or periodic increases in ambient noise levels is substantially the same as identified in the 2000 EIR. However, Mitigation Measure D.2 identified therein specifically requires compliance with the Oakland Noise Ordinance and the implementation of measures that minimize pile driving noise and vibration impacts. The City's current SCAs discussed above incorporate and, in many cases, exceed the requirements specified in Mitigation Measure D.2, and moreover are required for all future development projects. Adhering here to the City's current approach to employing SCAs, the impact is less than significant and no mitigation measure is required. Therefore, Mitigation Measure D.2 is no longer required to apply to reduce effects of Development facilitated by the Redevelopment Plan, as Amended. (The replacement of Mitigation Measure D.2 with current applicable SCAs is documented in underlined/strikeout format in Appendix G.) The new mitigation measures and SCA update the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Updated Impact NOI-2: Development facilitated by the Redevelopment Plan, as Amended, could expose persons to or create excessive groundborne vibration or groundborne noise levels. (Less than Significant)

Issues related to construction noise within the Existing Project Area were discussed in the 2000 EIR (Chapter 4.D, impact statements D.2), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to the noise environment has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing noise effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Depending on the construction equipment used, groundborne vibrations can be perceptible within 100 feet of a source. Structural damage from pile driving typically does not occur in buildings more than 50 feet from the location of the activity (Caltrans, 2004). However, these vibrations could result in cosmetic or structural damage to within 50 feet of a project site and construction area. All projects facilitated by the Proposed Amendments, if approved, would be required to incorporate SCA 38, *Vibration*, and SCA 57, *Vibrations Adjacent to Historic Structures*, to address the potential effects of groundborne vibration. SCA 38 requires a qualified acoustical consultant be retained by the project applicant during the design phase of the project to comment on structural design as it relates to reducing groundborne vibration at the project site. SCA 57 requires that a project applicant retain a structural engineer or other appropriate professional to

determine threshold levels of vibration and cracking that could affect portions of adjacent structures and design means and methods of construction that shall be utilized to avoid potential impacts. Implementation of these measures would reduce construction impacts associated with groundborne vibrations to less-than-significant levels.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the 2000 EIR analysis regarding temporary (construction) noise levels. See discussion under Update Impact D.2 (NOI), above. Similar construction activities involving groundbourne vibration and noise may occur with development under the Redevelopment Plan, as Amended, and in proximity to sensitive receptors and historic structures. Given adherence to the applicable SCAs discussed above, the effect of development facilitated by the Redevelopment Plan, as Amended, regarding groundbourne vibration and noise levels would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion, but Previous Mitigation Measure Replaced by new SCA.* The conclusions regarding the potential impact related to groundborne vibration and noise levels is substantially the same as identified in the 2000 EIR. However, Mitigation Measure D.2 identified therein specifically requires compliance with the Oakland Noise Ordinance and the implementation of measures that minimize pile driving noise and vibration impacts. The City's current SCAs discussed above incorporate and, in many cases, exceed the requirements specified in Mitigation Measure D.2, and moreover are required for all future development projects. Adhering here to the City's current approach to employing SCAs, the impact is less than significant and no mitigation measure is required. Therefore, Mitigation Measure D.2 is no longer required to apply to reduce effects of Development facilitated by the Redevelopment Plan, as Amended. (The replacement of Mitigation Measure D.2 with current applicable SCAs is documented in underlined/strikeout format in Appendix G.) The new mitigation measures and SCA update the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Operational Noise

Updated Impact D.4 (NOI): Development facilitated by the Redevelopment Plan, as Amended, could increase noise levels in the Project Area, as Amended, to levels in excess of standards established in the Oakland Noise Ordinance and Planning Code, which may result in noise compatibility problems due to the proximity of residential uses with other uses (including commercial and employment uses). (Less than Significant)

Issues related to noise levels and noise compatibility within the Existing Project Area were discussed in the 2000 EIR (Chapter 4.D, impact statements D.4), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to the noise environment has occurred that would warrant further analysis of the Existing Project

Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing noise effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Chapter 17.120.050 of the City of Oakland Planning Code specifies the maximum sound level received at public open spaces and commercial land uses. The maximum sound level (L_{max}) received by public open spaces cannot exceed 80 dBA and commercial land uses cannot exceed 85 dBA. Per Table 4.10-4, public open spaces must not exceed 60 dBA and commercial land uses cannot exceed 65 dBA during daytime hours as measured at the property line over a period of 20 minutes in a one-hour time period. However, per the City of Oakland, if the existing noise environment is measured to be louder than the applicable noise level standard, the existing noise level shall be considered the maximum allowed, which is the case along many of the arterial streets in the Amendment Area (see Table 4.10-2).

The industrial and commercial developments facilitated by the Proposed Amendments would generate some noise from heating, ventilating, and air conditioning mechanical equipment. Since the mechanical equipment would be standardized for commercial and industrial buildings, the equipment's noise generation would not be expected to exceed the City's established threshold of 67 dBA. Potential noise from delivery trucks loading/unloading at industrial facilities could be located adjacent to or across the street from existing or proposed residences as well. However, development would adhere to SCA 31, *Interior Noise*, and SCA 32, *Operational Noise (General)*, therefore, noise impacts from development facilitated by the Proposed Amendments related to stationary sources would be less than significant.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the 2000 EIR analysis regarding noise compatibility conflicts. Given adherence to the applicable SCAs discussed above, the effect of development facilitated by the Redevelopment Plan, as Amended, and in proximity to sensitive receptors and historic structures, regarding noise levels and noise compatibility conflicts would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact related to noise compatibility conflicts is substantially the same as identified in the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Traffic Noise

Updated Impact D.1 (NOI): Traffic generated by development facilitated by the Redevelopment Plan, as Amended, could substantially increase traffic noise levels in the Project Area, as Amended. (Less than Significant)

Issues related to traffic generated noise within the Existing Project Area were discussed in the 2000 EIR (Chapter 4.D, impact statements D.1), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to the noise environment has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing noise effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Additional vehicles traveling throughout the Amendment Area as a result of the development facilitated by the Proposed Amendments would increase noise levels adjacent to nearby roads. Based on the City of Oakland's CEQA Thresholds, a project would be considered to generate a significant impact if it were to result in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Noise levels were determined for this analysis using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model and the turning movements in the traffic section for Existing (2011), Existing Plus Project, Cumulative Year 2015 No Project conditions, Cumulative Year 2015 Plus Project conditions, Cumulative Year 2035 No Project conditions and Cumulative Year 2035 Plus Project conditions. The Near Term Plus Project scenario includes Project traffic plus traffic from other approved or pending projects for the year 2015 (assumed build-out year of all projects).

Project trips (associated with development facilitated by the Proposed Amendments) would be distributed over the local street network and would affect roadside noise levels. Peak hour (morning) intersection turning data from the traffic study were analyzed to evaluate increases and resulting traffic-generated noise increases on roadway links most affected by Project-related traffic and nearest the Amendment Area. Noise levels at other times would be lower. The segments analyzed and the results of the noise increases modeling are shown in **Table 4.10-7**, below.

The increase in traffic noise from the Existing Plus Project (2011) scenario compared to the Existing (2011) scenario would increase peak hour noise levels by less than 5 dBA at all studied roadway segments. This impact would be considered less than significant.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant traffic noise impacts evaluated in the 2000 EIR for Impact D.1. As discussed in Chapter I, *Introduction* the Proposed Amendments do not change the development assumed for the Existing Redevelopment Plan or the Existing Project Area. Therefore this SEIR first focuses first on the environmental effects that would occur from development facilitated by the Proposed Amendments. Generally, the greatest cumulative increases in roadside noise levels (approximately 0 to 1 dBA) identified in the 2000 EIR primarily occur in Subarea 1 (along segments of Broadway, Telegraph Avenue, West MacArthur Boulevard and

**TABLE 4.10-7
PEAK-HOUR TRAFFIC NOISE LEVELS IN THE VICINITY OF THE AMENDMENT AREA
EXISTING (2011) VERSUS NEAR TERM PLUS PROJECT (2015)**

| Roadway Segment | A.M. Peak Hour Noise Levels, dBA, Leq ^a | | | | | |
|--------------------------|--|------------------------------------|--|--|---|--|
| | (A) Existing | (B) Existing Plus Project | (B-A) Difference between Existing Plus Project and Existing | (C) Near Term Without Project (2015) | (D) Near Term Plus Project (2015) | (D-A) Difference between Near Term Plus Project and Existing ^d |
| Sacramento N of Alcatraz | 65.5 | 65.6 | 0.1 | 65.8 | 65.8 | 0.3 |
| Sacramento S of Alcatraz | 64.6 | 64.7 | 0.1 | 64.9 | 65.0 | 0.4 |
| Alcatraz E of Sacramento | 64.5 | 65.4 | 0.8 | 64.9 | 65.2 | 0.6 |
| Alcatraz W of Sacramento | 63.4 | 64.6 | 1.1 | 64.2 | 64.3 | 0.8 |
| Market N of 63rd | 64.1 | 64.1 | 0.0 | 64.5 | 64.5 | 0.4 |
| Market S of 63rd | 64.5 | 64.5 | 0.0 | 64.6 | 64.9 | 0.4 |
| 63rd E of Market | 49.1 | 49.1 | 0.0 | 55.7 | 52.7 | 3.6 |
| 63rd W of Market | 55.8 | 55.8 | 0.0 | 56.7 | 56.7 | 0.9 |
| Christie N of Powell | 64.6 | 64.6 | 0.0 | 64.9 | 64.9 | 0.3 |
| Christie S of Powell | 62.4 | 62.4 | 0.0 | 62.8 | 62.8 | 0.4 |
| Powell E of Christie | 67.1 | 67.3 | 0.1 | 67.3 | 67.5 | 0.3 |
| Powell W of Christie | 68.9 | 68.9 | 0.1 | 69.1 | 69.2 | 0.3 |
| Hollis N of Powell | 62.9 | 62.9 | 0.0 | 62.8 | 63.4 | 0.5 |
| Hollis S of Powell | 63.5 | 63.5 | 0.0 | 63.1 | 63.7 | 0.3 |
| Powell E of Hollis | 63.7 | 64.0 | 0.3 | 64.1 | 64.3 | 0.6 |
| Powell W of Hollis | 66.2 | 66.3 | 0.2 | 66.4 | 66.6 | 0.4 |
| San Pablo N of Stanford | 66.0 | 66.0 | 0.0 | 66.4 | 66.4 | 0.4 |
| San Pablo S of Stanford | 66.6 | 66.6 | 0.1 | 67.0 | 67.0 | 0.4 |
| Stanford E of San Pablo | 63.1 | 63.6 | 0.5 | 63.5 | 63.9 | 0.8 |
| Stanford W of San Pablo | 63.6 | 63.9 | 0.3 | 64.1 | 64.3 | 0.7 |
| Lowell N of Stanford | 54.0 | 56.1 | 2.1 | 54.0 | 56.1 | 2.1 |
| Lowell S of Stanford | 51.8 | 54.9 | 3.1 | 51.9 | 54.9 | 3.1 |
| Stanford E of Lowell | 63.5 | 64.0 | 0.5 | 63.7 | 64.1 | 0.7 |
| Stanford W of Lowell | 63.7 | 64.1 | 0.4 | 64.0 | 64.3 | 0.6 |
| 60th N of Stanford | 50.0 | 51.1 | 1.1 | 51.9 | 52.6 | 2.7 |
| Stanford E of 60th | 61.5 | 61.8 | 0.3 | 61.7 | 62.0 | 0.5 |
| Stanford W of 60th | 63.4 | 63.8 | 0.4 | 63.7 | 64.0 | 0.6 |
| Market N of Stanford | 64.6 | 64.7 | 0.1 | 65.0 | 65.1 | 0.5 |
| Market S of Stanford | 65.0 | 65.1 | 0.2 | 65.6 | 65.8 | 0.8 |
| Stanford E of Market | 62.3 | 62.3 | 0.1 | 62.7 | 62.8 | 0.5 |
| Stanford W of Market | 62.7 | 63.1 | 0.3 | 63.6 | 63.9 | 1.1 |
| Market N of 57th | 64.3 | 64.4 | 0.2 | 64.7 | 64.9 | 0.6 |
| Market S of 57th | 64.3 | 64.5 | 0.2 | 64.7 | 64.9 | 0.6 |
| 57th E of Market | 47.7 | 47.7 | 0.0 | 52.7 | 52.7 | 5.0 |
| 57th W of Market | 44.0 | 44.0 | 0.0 | 52.7 | 52.7 | 8.8 |
| Lowell N of Adeline | 54.7 | 55.8 | 1.1 | 56.1 | 56.9 | 2.3 |
| Adeline E of Lowell | 60.7 | 60.9 | 0.2 | 61.4 | 61.5 | 0.8 |

TABLE 4.10-7 (Continued)
PEAK-HOUR TRAFFIC NOISE LEVELS IN THE VICINITY OF THE AMENDMENT AREA
EXISTING (2011) VERSUS NEAR TERM PLUS PROJECT (2015)

| Roadway Segment | A.M. Peak Hour Noise Levels, dBA, Leq ^a | | | | | |
|------------------------|--|------------------------------------|--|--|---|--|
| | (A) Existing | (B) Existing Plus Project | (B-A) Difference between Existing Plus Project and Existing | (C) Near Term Without Project (2015) | (D) Near Term Plus Project (2015) | (D-A) Difference between Near Term Plus Project and Existing ^d |
| Adeline W of Lowell | 54.7 | 54.7 | 0.0 | 55.3 | 55.3 | 0.7 |
| Market N of 55th | 64.7 | 64.9 | 0.2 | 65.1 | 65.2 | 0.5 |
| Market S of 55th | 62.8 | 62.8 | 0.0 | 63.0 | 63.0 | 0.2 |
| 55th E of Market | 63.2 | 63.4 | 0.2 | 63.4 | 63.6 | 0.4 |
| 55th W of Market | 57.8 | 57.8 | 0.0 | 58.3 | 58.3 | 0.5 |
| MLK N of 55th | 69.4 | 69.4 | 0.0 | 69.6 | 69.6 | 0.2 |
| MLK S of 55th | 69.9 | 69.9 | 0.0 | 70.1 | 70.1 | 0.2 |
| 55th E of MLK | 62.1 | 62.2 | 0.2 | 62.3 | 62.5 | 0.4 |
| 55th W of MLK | 63.4 | 63.6 | 0.2 | 63.6 | 63.8 | 0.4 |
| Adeline N of 40th | 61.7 | 61.9 | 0.2 | 62.2 | 62.4 | 0.7 |
| Adeline S of 40th | 60.4 | 60.5 | 0.1 | 60.6 | 60.8 | 0.5 |
| 40th E of Adeline | 63.5 | 63.5 | 0.0 | 64.3 | 64.3 | 0.7 |
| 40th W of Adeline | 63.9 | 63.9 | 0.0 | 64.5 | 64.5 | 0.6 |
| San Pablo N of Adeline | 67.3 | 67.3 | 0.0 | 67.7 | 67.7 | 0.4 |
| San Pablo S of Adeline | 67.4 | 67.5 | 0.1 | 67.8 | 67.9 | 0.5 |
| Adeline E of San Pablo | 60.5 | 60.7 | 0.2 | 60.8 | 61.1 | 0.6 |
| Adeline W of San Pablo | 59.7 | 59.7 | 0.0 | 60.1 | 60.1 | 0.4 |
| San Pablo N of 36th | 67.2 | 67.3 | 0.1 | 67.6 | 67.6 | 0.4 |
| San Pablo S of 36th | 65.4 | 65.5 | 0.1 | 65.9 | 66.0 | 0.6 |
| 36th E of San Pablo | 64.6 | 64.6 | 0.0 | 64.7 | 64.8 | 0.2 |
| 36th W of San Pablo | 59.2 | 59.2 | 0.0 | 59.5 | 59.4 | 0.2 |
| San Pablo N of 35th | 65.4 | 65.6 | 0.1 | 65.9 | 66.0 | 0.6 |
| San Pablo S of 35th | 64.9 | 65.0 | 0.1 | 65.4 | 65.5 | 0.6 |
| 35th E of San Pablo | 61.0 | 61.0 | 0.1 | 61.2 | 61.2 | 0.2 |
| 35th W of San Pablo | 57.6 | 57.6 | 0.0 | 57.9 | 57.9 | 0.4 |
| Lowell S of 63rd | 53.6 | 54.7 | 1.1 | 55.3 | 56.1 | 2.5 |
| Adeline N of 57th | 55.6 | 55.6 | 0.0 | 57.5 | 57.5 | 1.8 |
| Adeline S of 57th | 55.4 | 55.4 | 0.0 | 57.2 | 57.2 | 1.8 |

^a Considered significant if the incremental increase in noise from traffic is greater than the existing ambient noise level by 5 dBA Leq, per City of Oakland, CEQA Thresholds/Criteria of Significance Guidelines. Violations are in **bolded** text.

^b Road center to receptor distance is 15 meters (approximately 50 feet) for all roadway segments. Noise levels were determined using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model.

^c The analysis considered the vehicle mix based on – cars 97 percent, medium trucks 2 percent, and heavy trucks 1 percent. Traffic speeds for all vehicle classes were set at 30 mph.

^d Considered significant if the incremental increase in noise is greater than 5 dBA.

SOURCE: ESA, 2011

Shattuck Avenue). The greatest increases identified for the Proposed Amendments would occur along nearby roadway segments (notably, 57th at Market Street), which are distant from those identified in the 2000 EIR, which envisions the most intense development approximately one mile southeast of the Amendment Area. The impact of development facilitated by the Redevelopment Plan, as Amended, on traffic noise would not be significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact related to traffic noise is substantially the same as identified in the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Cumulative Noise Impacts

Updated Impact NOI-5: Traffic generated by development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, could substantially increase traffic noise levels in the Project Area, as Amended; and construction and operational noise levels in combination with traffic from past, present, and reasonably foreseeable future projects, could increase ambient noise levels. (Less than Significant)

Geographic Context

The geographic area considered for cumulative noise analysis includes areas within and surrounding the Amendment Area and roadways examined in the transportation analysis in Section 4.13, *Transportation and Circulation*. These include areas of Oakland that encompass the projects included in the City of Oakland’s Major Projects List in Appendix B to this Draft SEIR and area projects incorporated into the regional travel demand model, as discussed in Section 4.09, *Cumulative Context*, in the front of Chapter 4 of this Draft SEIR.

The development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended. Changes to the noise environment that have occurred since preparation of the 2000 EIR are considered to be “past, present or reasonably foreseeable” projects that accordingly are considered in the cumulative analysis in this SEIR. As discussed in the *Approach to Analysis*, above, no substantial change to the noise environment has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing noise effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Impacts

Longer-term noise from cumulative development, which is the development facilitated by the Proposed Amendments combined with past, present, pending, and reasonably foreseeable development in the area, would primarily occur from motor vehicle traffic. When considered alone, the development facilitated by the Proposed Amendments would generate noise mainly by adding more traffic to the area. Other anticipated projects would contribute to noise in the area due to increased traffic volumes. Notably, any project that individually would have a significant project level noise impact would also be considered to have a significant cumulative noise impact.

As noted in Updated Impact D.1 (NOI) and based on the City of Oakland's CEQA Thresholds, a project would be considered to generate a significant impact if it were to result in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Noise levels were determined using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model and the turning movements in the traffic section for Near-term without Project (2015), Near-term with Project (2015), Cumulative Without Project (2035), and Cumulative Plus Project (2035) conditions (see Appendix C). The segments analyzed and the results of the noise increases modeling are shown in **Table 4.10-8** for Cumulative Plus Project traffic, which includes Project traffic combined with traffic from other approved or pending projects for the year 2035 (assumed build-out year of all projects).

Table 4.10-7 shows the traffic noise from the Near Term Plus Project (2015) scenario, when compared to the Existing (2011) scenario, would increase peak hour noise levels by less than 5 dBA at all roadway segments except along 57th Street east and west of Market Street. However the change between the Near-term Plus Project (2015) and Near-term without Project (2015) for those road segments is 0 dBA. These results indicated the development facilitated by the Proposed Amendments would not contribute to significant increases in noise levels in the noise environments along the road segments studied. Cumulative impacts for the year 2015 are considered less-than-significant.

Table 4.10-8 shows the traffic from the Cumulative Plus Project (2035) scenario, when compared with the Existing (2011) scenario, would increase peak hour noise levels by less than 5 dBA at most roadway segments, except at the roadway segments 57th Street east of Market, where the increase is 5.0 dBA, and 57th Street west of Market, where the increase is 8.7 dBA. However, the difference between the Cumulative Plus Project (2035) scenario and the Cumulative without Project (2035) scenario is 0.0 for each of these roadway segments. Therefore, the development facilitated by the Proposed Amendments would not contribute to the 2035 peak hour noise level increases. Because these increases are less than the significance threshold of 3dBA, this is not considered a considerable contribution to the cumulative impact in 2035 and a less-than significant-cumulative noise impact.

Construction impacts resulting from cumulative development would remain less than significant as all cumulative development in the cumulative geographic context would incorporate SCAs for construction activities, as discussed in Updated Impact D.2 (NOI) and Updated Impact NOI-2. Similarly, operational noise associated primarily with mechanical operations of cumulative

**TABLE 4.10-8
PEAK-HOUR TRAFFIC NOISE LEVELS IN THE VICINITY OF THE AMENDMENT AREA
EXISTING (2011) VERSUS CUMULATIVE PLUS PROJECT (2035)**

| Roadway Segment | A.M. Peak Hour Noise Levels, dBA, Leq ^a | | | | |
|--------------------------|--|--|---|---|---|
| | (A) Existing | (B) Cumulative Without Project (2035) | (C) Cumulative Plus Project (2035) | (C-A) Difference between Cumulative Plus Project (2035) and Existing ^d | (C-B) Difference between Cumulative Plus Project and Cumulative Without Project ^e (2035) |
| Sacramento N of Alcatraz | 65.5 | 66.9 | 66.9 | 1.4 | 0.0 |
| Sacramento S of Alcatraz | 64.6 | 66.1 | 66.2 | 1.6 | 0.1 |
| Alcatraz E of Sacramento | 64.5 | 65.9 | 65.9 | 1.4 | 0.0 |
| Alcatraz W of Sacramento | 63.4 | 65.2 | 65.2 | 1.8 | 0.0 |
| Market N of 63rd | 64.1 | 65.8 | 65.8 | 1.7 | 0.0 |
| Market S of 63rd | 64.5 | 66.1 | 66.1 | 1.7 | 0.0 |
| 63rd E of Market | 49.1 | 52.7 | 52.7 | 3.6 | 0.0 |
| 63rd W of Market | 55.8 | 57.2 | 57.2 | 1.5 | 0.0 |
| Christie N of Powell | 64.6 | 65.6 | 66 | 1.4 | 0.4 |
| Christie S of Powell | 62.4 | 63.8 | 63.8 | 1.4 | 0.0 |
| Powell E of Christie | 67.1 | 67.8 | 68.1 | 1.0 | 0.3 |
| Powell W of Christie | 68.9 | 69.9 | 70 | 1.1 | 0.1 |
| Hollis N of Powell | 62.9 | 65.2 | 65.2 | 2.3 | 0.0 |
| Hollis S of Powell | 63.5 | 66.4 | 65 | 1.5 | -1.4 |
| Powell E of Hollis | 63.7 | 65.6 | 65.8 | 2.1 | 0.2 |
| Powell W of Hollis | 66.2 | 67.3 | 67.5 | 1.3 | 0.2 |
| San Pablo N of Stanford | 66.0 | 67.8 | 67.8 | 1.8 | 0.0 |
| San Pablo S of Stanford | 66.6 | 68.2 | 68.2 | 1.6 | 0.0 |
| Stanford E of San Pablo | 63.1 | 64.8 | 65.1 | 2.0 | 0.3 |
| Stanford W of San Pablo | 63.6 | 65.5 | 65.7 | 2.1 | 0.2 |
| Lowell N of Stanford | 54.0 | 54.9 | 56.7 | 2.7 | 1.8 |
| Lowell S of Stanford | 51.8 | 52.7 | 55.3 | 3.5 | 2.6 |
| Stanford E of Lowell | 63.5 | 64.7 | 65.1 | 1.6 | 0.4 |
| Stanford W of Lowell | 63.7 | 64.9 | 65.2 | 1.5 | 0.3 |
| 60th N of Stanford | 50.0 | 51.9 | 52.6 | 2.6 | 0.7 |
| Stanford E of 60th | 61.5 | 62.5 | 64.9 | 3.4 | 2.4 |
| Stanford W of 60th | 63.4 | 64.7 | 64.9 | 1.5 | 0.2 |
| Market N of Stanford | 64.6 | 66.3 | 66.4 | 1.8 | 0.1 |
| Market S of Stanford | 65.0 | 66.9 | 67 | 2.0 | 0.1 |
| Stanford E of Market | 62.3 | 64.1 | 64.1 | 1.8 | 0.0 |
| Stanford W of Market | 62.7 | 64.8 | 65 | 2.3 | 0.2 |
| Market N of 57th | 64.3 | 65.7 | 65.8 | 1.5 | 0.1 |
| Market S of 57th | 64.3 | 65.7 | 65.8 | 1.5 | 0.1 |
| 57th E of Market | 47.7 | 52.7 | 52.7 | 5.0 | 0.0 |
| 57th W of Market | 44.0 | 52.7 | 52.7 | 8.7 | 0.0 |
| Lowell N of Adeline | 54.7 | 56.7 | 57.4 | 2.7 | 0.7 |

TABLE 4.10-8 (Continued)
PEAK-HOUR TRAFFIC NOISE LEVELS IN THE VICINITY OF THE AMENDMENT AREA
EXISTING (2011) VERSUS CUMULATIVE PLUS PROJECT (2035)

| Roadway Segment | A.M. Peak Hour Noise Levels, dBA, Leq ^a | | | | |
|------------------------|--|--|---|---|---|
| | (A) Existing | (B) Cumulative Without Project (2035) | (C) Cumulative Plus Project (2035) | (C-A) Difference between Cumulative Plus Project (2035) and Existing ^d | (C-B) Difference between Cumulative Plus Project and Cumulative Without Project ^e (2035) |
| Adeline E of Lowell | 60.7 | 62.8 | 63 | 2.3 | 0.2 |
| Adeline W of Lowell | 54.7 | 55.7 | 56.4 | 1.7 | 0.7 |
| Market N of 55th | 64.7 | 66.2 | 66.3 | 1.6 | 0.1 |
| Market S of 55th | 62.8 | 64.3 | 64.3 | 1.5 | 0.0 |
| 55th E of Market | 63.2 | 64.3 | 64.4 | 1.2 | 0.1 |
| 55th W of Market | 57.8 | 59.2 | 59.2 | 1.4 | 0.0 |
| MLK N of 55th | 69.4 | 70.1 | 70.1 | 0.7 | 0.0 |
| MLK S of 55th | 69.9 | 70.5 | 70.6 | 0.7 | 0.1 |
| 55th E of MLK | 62.1 | 63.1 | 63.2 | 1.1 | 0.1 |
| 55th W of MLK | 63.4 | 64.2 | 64.4 | 1.0 | 0.2 |
| Adeline N of 40th | 61.7 | 63.6 | 63.8 | 2.1 | 0.2 |
| Adeline S of 40th | 60.4 | 62.0 | 62.2 | 1.8 | 0.2 |
| 40th E of Adeline | 63.5 | 66.3 | 66.3 | 2.8 | 0.0 |
| 40th W of Adeline | 63.9 | 66.4 | 66.5 | 2.6 | 0.1 |
| San Pablo N of Adeline | 67.3 | 68.9 | 68.9 | 1.6 | 0.0 |
| San Pablo S of Adeline | 67.4 | 69.0 | 69.1 | 1.7 | 0.1 |
| Adeline E of San Pablo | 60.5 | 61.8 | 62 | 1.5 | 0.2 |
| Adeline W of San Pablo | 59.7 | 61.2 | 61.2 | 1.5 | 0.0 |
| San Pablo N of 36th | 67.2 | 68.8 | 68.9 | 1.7 | 0.1 |
| San Pablo S of 36th | 65.4 | 67.5 | 67.6 | 2.2 | 0.1 |
| 36th E of San Pablo | 64.6 | 65.2 | 65.2 | 0.6 | 0.0 |
| 36th W of San Pablo | 59.2 | 60.1 | 60.1 | 0.9 | 0.0 |
| San Pablo N of 35th | 65.4 | 67.5 | 67.6 | 2.2 | 0.1 |
| San Pablo S of 35th | 64.9 | 67.0 | 67.1 | 2.2 | 0.1 |
| 35th E of San Pablo | 61.0 | 61.9 | 62 | 1.0 | 0.1 |
| 35th W of San Pablo | 57.6 | 58.5 | 58.5 | 1.0 | 0.0 |
| Lowell S of 63rd | 53.6 | 56.4 | 57.0 | 3.4 | 0.6 |
| Adeline N of 57th | 55.6 | 59.8 | 60.0 | 4.4 | 0.2 |
| Adeline S of 57th | 55.4 | 59.7 | 59.7 | 4.3 | 0.0 |

^a Considered significant if the incremental increase in noise from traffic is greater than the existing ambient noise level by 5 dBA Leq, per City of Oakland, CEQA Thresholds/Criteria of Significance Guidelines. Violations are in **bolded** text.

^b Road center to receptor distance is 15 meters (approximately 50 feet) for all roadway segments. Noise levels were determined using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model.

^c The analysis considered the vehicle mix based on – cars 97 percent, medium trucks 2 percent, and heavy trucks 1 percent. Traffic speeds for all vehicle classes were set at 25 mph.

^d Considered significant cumulative incremental increase in noise is greater than 5 dBA.

^e If Cumulative plus Project related noise increase is considered significant (greater than 5 dBA), the impact is considered significant if the incremental increase in roadway noise from the Cumulative With Project compared to Cumulative Without Project is greater than 3 dBA when compared to existing conditions.

SOURCE: ESA, 2011

development also would be at less-than-significant levels; all development would adhere to SCAs for operational noise, as discussed in Updated Impact D.4 (NOI). All cumulative noise impacts associated with traffic noise, construction and operations, would be less than significant.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the noise effects evaluated in the 2000 EIR. As discussed throughout each of the preceding impacts addressed in this section, activities resulting in construction and operational noise would occur in the Project Area, as Amended, in a similar manner as anticipated in the Amendment Area and surroundings. Further, as discussed specifically for roadway noise, the combined effects are reasonably not expected to result in significant cumulative noise impacts. Development facilitated by the Redevelopment Plan, as Amended, considered with other cumulative development, would result in a less-than-significant cumulative noise impact.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential cumulative noise impact is substantially the same as identified in the 2000 EIR for Impact D.1 (NOI), which presented cumulative year roadway noise estimates. However, the discussion is expanded to address the potential cumulative effect regarding short-term noise effects. Several SCAs are identified. This new information and SCAs update the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

2000 EIR Impacts Replaced or that Require No Further Analysis in this SEIR

The 2000 EIR identified the following impact that is not addressed in detail in this SEIR because the impact addresses a specific geographic area not affected by the Proposed Amendments and does not warrant further analysis beyond that in the 2000 EIR to adequately apply to the Project Area, as Amended. This is done particularly to ensure consideration of previously identified mitigation measures approved for the Existing Redevelopment Plan in the Existing Project Area and that may still be relevant (even if not warranted). The impact under the second instance is also carried forward in this SEIR. The impact and mitigation measure are listed below and may reflect minor revisions made for clarity and consistency within the context of this SEIR, for example, topic designators, e.g., “(NOI)” and references to distinguish that the impact is pertinent to the “Existing Project Area” analyzed in the 2000 EIR. (Revisions are shown in Appendix G to this SEIR in underlined/strikeout format.)

- **Updated Impact D.3 (NOI): The Redevelopment Plan, as Amended, would encourage new residential uses as part of mixed-use retail areas within the Project Area, as Amended, and future noise levels in some areas could be incompatible with these new residential uses. (Potentially Significant)**

Mitigation Measure D.3 (NOI): A detailed analysis of noise reduction requirements shall be required for any future residential development proposals along arterials or in the vicinity of the MacArthur BART Station, and the design of residential development shall incorporate recommendations of such analyses in the project.

Significance after Mitigation: Less than Significant.

Impact D.3 (NOI) and the corresponding mitigation measure are carried forward in this SEIR, and no further analysis is required in this document to make the 2000 EIR adequately address the potential impacts of the land use compatibility for the Redevelopment Plan, as Amended. The development facilitated by the Proposed Amendments do not include residential development along arterials or near the Macarthur BART Station, thus Impact D.3 (NOI) would not pertain to the development envisioned for the Amendment Area.

4.10.5 References

- City of Oakland, *Broadway/MacArthur Redevelopment Plan Initial Study and Environmental Review Checklist*, March 1999.
- City of Oakland, *Broadway/MacArthur/San Pablo Redevelopment Plan Draft Environmental Impact Report*, April 2000.
- California Department of Transportation (Caltrans), *Technical Noise Supplement*, Prepared by Jones & Stokes, November 2009.
- California Department of Transportation (Caltrans), *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects*, October 1998b.
- California Department of Transportation (Caltrans), *Transportation- and Construction-Induced Vibration Guidance Manual*, June 2004.
- City of Oakland. *2007-2014 Housing Element EIR*, Section 3.3, Air Quality. August 2010.
- City of Oakland, *2935 Telegraph Avenue Courthouse Condominiums Project Environmental Impact Report*, March 2007.
- City of Oakland, *2935 Telegraph Avenue Courthouse Condominiums Project Final Environmental Impact Report*, June 2007.
- City of Oakland, *Alta Bates Summit Medical Center, Summit Campus Seismic Upgrade and Master Plan Draft Environmental Impact Report*, December 2009.
- City of Oakland, *Alta Bates Summit Medical Center, Summit Campus Seismic Upgrade and Master Plan Final Environmental Impact Report*, May 2010.
- City of Oakland, *Broadway/MacArthur Redevelopment Plan Initial Study and Environmental Review Checklist*, March 1999.
- City of Oakland, *Broadway/MacArthur/San Pablo Redevelopment Plan Draft Environmental Impact Report*, April 2000.
- City of Oakland, *Broadway/MacArthur/San Pablo Redevelopment Plan Final Environmental Impact Report*, June 2000.
- City of Oakland, "CEQA Thresholds/Criteria of Significance Guidelines," 2010.
- City of Oakland, *Kaiser Permanente Oakland Medical Center Master Plan Project Draft Environmental Impact Report*, March 2006.
- City of Oakland, *Kaiser Permanente Oakland Medical Center Master Plan Project Final Environmental Impact Report*, May 2006.
- City of Oakland, *MacArthur Transit Village Draft Environmental Impact Report*, January 2008.
- City of Oakland, *MacArthur Transit Village Final Environmental Impact Report*, May 2008.

City of Oakland, *Noise Element, City of Oakland General Plan*, June 21, 2005.

Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06)*, May 2006.

Layne-Christiansen, Safety and Environmental Health Sciences Department, *Noise Evaluation: Ingersoll-Rand TH-75E Reverse Circulation Air Rotary Drilling Rig*, 2004.

4.11 Population, Housing and Employment

This section analyzes how the development facilitated by the Redevelopment Plan, as Amended, may affect population, housing and employment. Specifically, this section addresses existing conditions, trends, and impacts of the development facilitated by the Proposed Amendments related to population, housing, business activity, and employment. Population and employment growth to be facilitated by the Proposed Amendments are quantified and described along with the anticipated contributions to citywide growth, providing the context for considering and understanding potential physical environmental impacts analyzed in this and other sections of the SEIR. Information is also discussed and presented for the Existing Redevelopment Plan (referred to specifically in this section for clarity as “San Pablo Subarea” and “Broadway/MacArthur Subarea”). The impact assessment in this section focuses on possible displacement of housing, people, businesses, and jobs, and on the inducement of population and employment growth. Pursuant to CEQA Guidelines Section 15162 regarding an SEIR, this section also discusses whether there are any new or more severe significant impacts than those identified in the 2000 EIR that result from changed circumstances or new information.

4.11.1 2000 EIR and Existing Project Area

Population, housing and employment were evaluated in the 2000 EIR (Chapter 6, *Impact Overview*). The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Also, changes that have occurred to the population, housing and employment setting since preparation of the 2000 EIR are included in the analysis in this SEIR. Because the only new impacts regarding the Redevelopment Plan, as Amended, are associated with the Proposed Amendments and would not involve any new significant impacts with respect to the Existing Project Area, the Environmental Setting, Regulatory Setting, and Impacts and Mitigation Measures analysis this SEIR focus on the activities facilitated by the Proposed Amendments, provides substantial context with data for the Existing Project Area, and concludes with the impact of the Redevelopment Plan, as Amended. This is also consistent with the citywide and regional context of the analysis for this topic.

4.11.2 Environmental Setting

The following setting identifies existing conditions and trends for the Amendment Area, the Existing Project Area, and surrounding parts of Oakland. It presents the citywide and regional context for employment, housing, and population, along with identification of the relationships between jobs and housing. Then, the population and employment growth in development to be facilitated by the Redevelopment Plan, as Amended are identified and described to provide context for the impact assessment in this and other sections of the SEIR.

Amendment Area

The Lowell/Gaskill neighborhood area, or Amendment Area, is largely an established residential neighborhood that accommodates approximately 2,150 households with a population of

approximately 5,310 residents (see **Table 4.11-1**). There are approximately 2,260 housing units in the area, the large majority of which are lower-density single-family homes, duplexes, and units in three- to four-plexes. About 35 percent of the housing is owner-occupied and about 65 percent is renter-occupied. The majority of residents in the area are black/African American (almost 60 percent), and the next largest share are white (about 20 percent). Incomes for residents in the neighborhood are below citywide averages for Oakland.¹

The Amendment Area is located to the east of the San Pablo Avenue corridor, adjacent to the San Pablo subarea of the Existing Project Area. The Proposed Amendments would more than double the housing and population within the Redevelopment Project Area in this part of Oakland (see **Table 4.11-2**).

The Amendment Area also includes business activity with estimated employment of approximately 510 jobs. At the eastern edge, there is an older industrial corridor along Lowell Street (referred to as the Lowell corridor), that originally developed around rail spurs serving the area. Currently, industrial structures along the corridor are used by various business activities, including small manufacturers, artisans and crafts businesses and studios, and other businesses (such as a sound studio, furniture refinishing, and supply/storage/warehousing). Some of the industrial buildings along Lowell Street remain vacant and in disrepair, many are old and obsolete for modern business activities, and there is a lack of modern streetscape infrastructure in the area (lack of sidewalks, curbs, and gutters).

In addition, there also are commercial and institutional land uses in the Amendment Area that include jobs and activities in churches, schools, corner stores, and small medical/dental offices. These other uses are primarily located along the arterial corridors including Lowell Street, Adeline Street, and Market Street.

The Amendment Area has seen little change over the past decade. The area is unlikely to experience much improvement in the future without the Proposed Amendments. The revitalization and growth that could be facilitated by the Proposed Amendments are addressed later in this section (see Section 4.11.3, *Contributions to Amendment Area Growth from Proposed Amendments*).

¹ The demographic and housing data presented in this paragraph are estimates for the Amendment Area based on block and tract data from the 2000 Census. It is assumed that the housing stock and population in the area have not changed substantially since 2000. The data analyzed do not include results from the 2010 Census which were not released for small areas within Oakland at the time of this analysis.

**TABLE 4.11-1
 EMPLOYMENT, HOUSEHOLDS, AND POPULATION FOR AMENDMENT AREA
 AND EXISTING PROJECT AREA: 2000, 2005, 2010, 2015, AND 2035**

| | 2000 | 2005 | 2010 ^d | 2015 | 2035 | 2005 – 2035 ^e | | 2010 – 2035 | |
|---|--------|--------|-------------------|--------|--------|--------------------------|---------|-------------|---------|
| | | | | | | Growth | Percent | Growth | Percent |
| Amendment Area^{a, b} | | | | | | | | | |
| Employment | 480 | 510 | 510 | 540 | 700 | 190 | 35% | 190 | 35% |
| Households | 2,150 | 2,150 | 2,150 | 2,220 | 2,560 | 410 | 19% | 410 | 19% |
| Population ^c | 5,390 | 5,360 | 5,310 | 5,290 | 6,100 | 740 | 14% | 790 | 15% |
| Existing Project Area^{a, b} | | | | | | | | | |
| San Pablo Subarea | | | | | | | | | |
| Employment | 1,290 | 1,280 | 1,240 | 1,250 | 1,410 | 130 | 10% | 170 | 14% |
| Households | 600 | 710 | 940 | 1,070 | 1,440 | 730 | 103% | 500 | 53% |
| Population ^c | 1,390 | 1,700 | 2,180 | 2,420 | 3,270 | 1,570 | 92% | 1,090 | 50% |
| Broadway/MacArthur Subarea | | | | | | | | | |
| Employment | 10,220 | 11,000 | 11,240 | 12,690 | 17,590 | 6,590 | 60% | 6,350 | 56% |
| Households | 2,030 | 2,120 | 2,250 | 2,550 | 4,800 | 2,680 | 126% | 2,550 | 113% |
| Population ^c | 4,290 | 4,610 | 4,870 | 5,560 | 10,370 | 5,760 | 125% | 5,500 | 113% |

NOTE: The 2035 scenario includes growth and change in the Amendment Area that would be facilitated by the Proposed Amendments.

- ^a The household and population estimates for 2000 are based on block data from the 2000 Census. The employment data for 2000 are based on data for traffic analysis zones (TAZs) and estimated "splits" of TAZ data when area boundaries include only parts of TAZs. The employment data also incorporate analysis of County Assessor's data for non-residential land uses, employment density factors for uses in the areas, and field work by City of Oakland staff and Hausrath Economics Group.
- ^b The data for future years are based on the Oakland Cumulative Growth Scenario as updated for the *MacArthur Transit Village EIR*, July 2007, and TAZ land use data that incorporate major development projects in Oakland as updated for this project. The projections are consistent with citywide *ABAG Projections 2007*. The future scenario for the Amendment Area reflects the growth to be facilitated by the Proposed Amendments, as described later in this section (see Table 4.11-9 and Table 4.11-10).
- ^c Changes in population reflect the growth of housing and households in the future as well as changes over time in the demographics (persons per household) of residents in existing housing in the area, as forecast in the ABAG projections.
- ^d Data for 2010 do not incorporate results from the 2010 Census, which were not yet released for areas within Oakland at the time of this analysis. The household and population estimates for 2010 assume that new housing built since 2000 has been completed by 2010 and is occupied with average vacancy of 4 percent, although vacancies may be higher due to the recent downturn in the housing market.
- ^e Change 2005-2035 is included as it reflects longer-term trends independent of the effects of the recent economic recession.

SOURCE: Hausrath Economics Group based on sources identified above.

**TABLE 4.11-2
 HOUSEHOLDS, POPULATION, AND EMPLOYMENT
 FOR AMENDMENT AREA AND ADJACENT SAN PABLO SUBAREA
 OF EXISTING PROJECT AREA, 2010**

| | Households | Population | Employment |
|-------------------|--------------|--------------|--------------|
| Amendment Area | 2,150 | 5,310 | 510 |
| San Pablo Subarea | 940 | 2,180 | 1,240 |
| Total | 3,090 | 7,490 | 1,750 |

SOURCE: Table 4.11-1

Existing Project Area

San Pablo Subarea

Activities in this subarea focus on the older commercial corridor along San Pablo Avenue and on the residential neighborhoods on the blocks west of San Pablo Avenue. Employment in the subarea is estimated at 1,240 jobs, and approximately 940 households accommodate about 2,180 residents in the subarea (see Tables 4.11-1 and 4.11-2).

Over the past decade, the area has benefited from Redevelopment Agency (Agency) efforts and investments to address conditions of blight and facilitate area revitalization. New housing has been developed in the subarea, which is part of a larger trend of new housing being built along transportation corridors and in nearby parts of the City of Emeryville. More housing development along the San Pablo corridor is anticipated in the future, in this part of Oakland as well as to the north and south, in adjacent parts of the corridor in Berkeley and Emeryville. The projections for 2035 indicate the potential for a 50 percent increase in households and population in the subarea. Commercial activities also are anticipated to increase along San Pablo Avenue, supported by new residents in the future. Redevelopment activities are anticipated to continue to support revitalization of the area.

Broadway/MacArthur Subarea

This subarea is located largely to the east of I-980/Hwy 24. The area includes Oakland’s historic Broadway Auto Row, two major hospital medical centers, and a variety of institutional and commercial uses. There also are established residential neighborhoods ranging in density from apartment buildings to lower-density, single-family homes. Employment in the subarea totals approximately 11,240 jobs, and approximately 2,250 households accommodate approximately 4,870 residents in the subarea (see Table 4.11-1).

Trends for the future include growth of the hospital medical centers, including hospital replacements to meet state seismic standards, and associated outpatient facility expansions nearby. Growth in residential and commercial uses in mixed-use development is also anticipated, including the ongoing Broadway/Valdez Specific Plan effort and MacArthur Transit Village

project. The MacArthur Transit Village project, along Telegraph Avenue at the BART station, is supported by redevelopment activities and funding and is anticipated to include 624 new housing units along with retail/commercial and community space. The ongoing Broadway/Valdez Specific Plan is planning for retail and mixed use development along Broadway, and additional housing is anticipated in nearby areas. The projections for 2035 indicate the long-term potential for employment growth of more than 50 percent in the subarea and a doubling of households and population (see Table 4.11-1).

Surrounding North Oakland and Greater Downtown

The Existing Project Area is in the North/Central parts of Oakland. The proposed Amendment Area, San Pablo subarea, and the northern half of the Broadway/MacArthur subarea (above I-580) are located in North Oakland (the area approximately bounded by I-580 on the south, west, and north, and Broadway, Pleasant Valley Avenue, the City of Piedmont, and Oakland Avenue on the east). The southern half of the Broadway/MacArthur subarea (below I-580) is located in the Greater Downtown area (area approximately bounded by I-580, Lake Merritt and the Channel, the Oakland Estuary, and I-980). Employment, households, and population in the surrounding areas are summarized in **Table 4.11-3** and described below. The table identifies existing conditions and future trends. It also includes the data for the Amendment Area and the Existing Project Area for comparison to the totals for North Oakland and Downtown (including the Amendment Area and Existing Project Area) and the City of Oakland overall.

Business Activity and Employment

Current business activities and employment in the surrounding North/Central Oakland area focus on three hospital medical centers (Kaiser Permanente, Alta Bates/Summit, and Children's Hospitals) and related medical offices and facilities, active neighborhood commercial districts and shopping areas, and Oakland's Broadway Auto Row. Overall, the surrounding North Oakland area includes approximately 21,010 jobs, representing about 11 percent of total employment in Oakland.

Greater Downtown to the south of most of the Existing Project Area includes approximately 76,500 jobs representing an additional 41 percent of citywide employment. Office employment in both private sector and government office activities represents the large majority of downtown employment. There also is employment in retail, restaurant, entertainment, and hotel activities, and employment in various service, cultural/arts, auto-related, and institutional activities. Downtown Oakland is the major employment center in Oakland.

Trends indicate employment growth potentials in the surrounding North/Central Oakland areas in the future. The three hospital medical centers are undertaking hospital replacement projects to meet state seismic standards, and outpatient medical services are anticipated to grow. Facility expansions also could occur to support medical research programs. Growth of commercial activity is anticipated in the neighborhood commercial districts and shopping areas, supported by the growth

**TABLE 4.11-3
 EMPLOYMENT, HOUSEHOLDS, AND POPULATION FOR AMENDMENT AREA, EXISTING PROJECT AREA, SURROUNDING AREAS, AND
 THE CITY OF OAKLAND: 2000, 2005, 2010, AND 2035**

| | 2000 ^d | 2005 ^d | 2010 ^{d,e} | 2035 ^f | Growth 2005 – 2035 ^g | | |
|------------------------------------|-------------------|-------------------|---------------------|-------------------|---------------------------------|---------|-------------|
| | | | | | Growth | Percent | Annual Rate |
| Employment | | | | | | | |
| Amendment Area ^a | 480 | 510 | 510 | 700 | 190 | 35% | 1.06% |
| Existing Project Area ^a | 11,510 | 12,280 | 12,480 | 19,000 | 6,720 | 55% | 1.47% |
| North Oakland ^b | 20,740 | 22,120 | 21,010 | 28,000 | 5,880 | 27% | 0.79% |
| Greater Downtown ^c | 80,440 | 82,160 | 76,500 | 122,010 | 39,850 | 49% | 1.33% |
| City of Oakland | 199,470 | 202,570 | 188,600 | 285,600 | 83,030 | 41% | 1.15% |
| Households | | | | | | | |
| Amendment Area ^a | 2,150 | 2,150 | 2,150 | 2,560 | 410 | 19% | 0.58% |
| Existing Project Area ^a | 2,630 | 2,830 | 3,190 | 6,240 | 3,410 | 120% | 2.67% |
| North Oakland ^b | 22,590 | 22,860 | 23,550 | 27,180 | 4,320 | 19% | 0.58% |
| Greater Downtown ^c | 18,040 | 19,650 | 21,950 | 43,310 | 23,660 | 120% | 2.67% |
| City of Oakland | 150,790 | 154,580 | 159,180 | 207,250 | 52,670 | 34% | 0.98% |
| Population | | | | | | | |
| Amendment Area ^a | 5,390 | 5,360 | 5,310 | 6,100 | 740 | 14% | 0.43% |
| Existing Project Area ^a | 5,680 | 6,310 | 7,050 | 13,640 | 7,330 | 116% | 2.60% |
| North Oakland ^b | 46,930 | 48,320 | 49,920 | 57,350 | 9,030 | 19% | 0.57% |
| Greater Downtown ^c | 32,190 | 35,640 | 39,550 | 83,340 | 47,700 | 134% | 2.87% |
| City of Oakland | 399,480 | 410,600 | 430,670 | 542,500 | 131,900 | 32% | 0.93% |

NOTE: The 2035 scenario includes growth to be facilitated by the proposed amendments.

^a See Table 4.11-1.

^b The North Oakland area is approximately bounded by I-580 on the south, the cities of Emeryville and Berkeley on the south, west, and north, and Broadway, Pleasant Valley Avenue, the City of Piedmont, and Oakland Avenue on the east. The Amendment Area, the San Pablo subarea, and the northern portion of the Broadway/MacArthur subarea are included in North Oakland.

^c Greater Downtown or Central Oakland includes the area bounded by I-580, Lake Merritt and the Channel, the Oakland Estuary, and I-980 and Market/Brush Street. The southern portion of the Broadway/MacArthur subarea is included in Greater Downtown.

^d ABAG *Projections 2007* and *2009*, and 2000 Census. Allocations within the City are based on the Oakland Cumulative Growth Scenario as updated for *MacArthur Transit Village EIR*, July 2007, and TAZ land use data that incorporate major development projects in Oakland as updated for this analysis.

^e 2010 employment from ABAG *Projections 2009* to reflect recent economic conditions. 2010 households and population for the City are from California Department of Finance as of 1/1/2010. Allocations within Oakland are based on Oakland Cumulative Growth Scenario, *MacArthur Transit Village EIR Update* and locations of recent housing developments from *Oakland Draft Housing Element, 2007-2014*. The data do not incorporate results of the 2010 Census, which had not been released for areas within Oakland at the time of this analysis.

^f 2035 projections are consistent with citywide ABAG *Projections 2007*. Allocations within the City are based on TAZ land use data and Oakland Cumulative Growth Scenario, *MacArthur Transit Village EIR Update*, July 2007, as updated for this analysis.

^g Growth is shown for 2005-2035 to reflect longer-term trends independent of the effects of the recent economic recession.

SOURCE: City of Oakland and Hausrath Economics Group, 2007 and 2009 based on sources identified above and in Table 4.11-1.

of housing and population nearby, and by City/Redevelopment efforts to expand comparison shopping opportunities in Oakland. Employment in the surrounding North Oakland area is projected to increase to 28,000 jobs by 2035, reflecting growth of employment of about 27 percent.

Employment in Greater Downtown could increase to 122,000 jobs by 2035, reflecting employment growth of about 50 percent since 2005. Downtown job growth is anticipated to reflect the continuing growth of office activities, the expansion of cultural and entertainment activities, the re-establishment of major comparison shopping downtown, and the growth of eating and drinking and local-serving retailing.

Housing and Population

The surrounding North Oakland residential neighborhoods are characterized by a mix of single-family and apartment housing types. There are about 23,550 households residing in North Oakland currently, with a population of approximately 49,900 residents. This population accounts for 12 percent of total population in the City of Oakland. In addition, there are about 22,000 households and 39,500 residents in the Greater Downtown, representing an additional nine percent of citywide population. The downtown includes higher-density multi-family housing types.

Housing and population have the potential to grow substantially in surrounding parts of Oakland in the future, once the housing market recovers from the recent economic downturn. The largest amounts of new housing in North Oakland and northern Downtown are anticipated in the Broadway/MacArthur subarea of the Existing Project Area and in the adjacent downtown areas extending south to Grand Avenue. These areas include the planned development of the MacArthur Transit Village project, and potential housing and mixed-use developments along and in the vicinity of Telegraph Avenue, Broadway, and Grand Avenue. Other potential housing development in North Oakland includes additional loft housing and live/work development in the western parts of the area (including the San Pablo subarea of the Existing Project Area and the proposed Amendment Area), and additional housing on other infill sites in North Oakland. The projections indicate potential growth of about 3,600 households and 7,400 residents by 2035 in North Oakland, reflecting a 15 percent increase over 2010. In addition, there is potential for substantial housing growth downtown. The projections anticipate an increase of up to 21,000 households and 43,000 residents in greater downtown Oakland from 2010 to 2035.

City of Oakland and the Region

Oakland is the third largest city in the Bay Area region and the largest city in the East Bay. Employment, housing, and population are projected to continue to grow in the future, bolstering Oakland's role as a centrally-located place of employment and place of residence within the large Bay Area region. Growth and revitalization in Oakland will continue to be supported by Agency efforts in 10 project areas throughout the City.

Business Activity and Employment

Employment in Oakland was estimated at 202,570 in 2005, representing about six percent of all employment in the region (see **Table 4.11-4**). Business activity and employment grew substantially in Oakland in the late 1990s and early 2000s, reflecting strong economic trends throughout the region and an enhanced market position for Oakland, particularly within the region's office market. While regional trends favored growth in the suburbs in prior decades, recent trends "back to the center" have now recognized the value of Oakland's central location, its good transportation/transit accessibility, and its relative affordability as a business location. These factors are anticipated to become increasingly important in the future, enabling Oakland to retain and enhance its competitive position as a business center for the region.

As the region's economy rebounds from the recent national recession, economic growth is forecast for the future. Projections for Oakland show growth of about 83,000 jobs from 2005 to 2035, at an annual average rate of 1.15 percent (see Table 4.11-4). Downtown Oakland is anticipated to remain strong and to grow as a major office center. Growth is anticipated to continue in the transportation-related sectors centered on the City's growing airport and seaport, and in medical and health services, in professional and personal services, and in manufacturing and wholesale activities in the City's industrial areas. Retail, restaurant, and entertainment activities also are anticipated to grow in Oakland as a result of citywide efforts to attract more retailing in Oakland and supported by the growth of housing and population throughout the City.

Population and Housing

Existing Conditions and Recent Trends

Currently, there are 430,670 people living in Oakland, about six percent of the total population of the Bay Area. The number of people occupying housing in the City (household population) totaled 423,410 in 2010, with an additional 7,260 people living in group quarters such as dormitories, group homes, nursing homes, shelters, correction facilities, etc. There were 159,180 households in Oakland in 2010 and an average household size of 2.66 persons per household. (California Department of Finance, 2010).²

The 2000 Census identified 157,508 housing units in Oakland (see **Table 4.11-5**). Of the occupied housing units (150,790), 59 percent were renter-occupied and 41 percent owner-occupied. From 1990 to 2000, Oakland's housing stock increased by 2,771 units. However, the number of households in the City grew by 6,269 during the 1990s, reflecting increased occupancy of the existing housing stock, as the overall housing vacancy rate declined from 6.6 percent in 1990 to 4.3 percent in 2000 (see Table 4.11-5). The City's population increased by 27,240 residents during that period as a result of housing production, occupancy of vacant units, and an increase in the population in existing households.

² The data for 2010 do not incorporate the results of the 2010 Census, which had not been released at the time of the analysis.

**TABLE 4.11-4
 TRENDS IN EMPLOYMENT, HOUSEHOLDS, AND POPULATION FOR OAKLAND, THE EAST BAY, AND BAY AREA REGION:
 1990, 2000, 2005 AND 2035**

| | 1990 | 2000 | 2005 | 2035 | 1990 – 2005 | | 2005 – 2035 | | |
|-----------------------------|-----------|-----------|-----------|-----------|-------------|-------------|-------------|---------|-------------|
| | | | | | Growth | Annual Rate | Growth | Percent | Annual Rate |
| Employment | | | | | | | | | |
| Oakland | 173,270 | 199,470 | 202,570 | 285,600 | 29,300 | 1.05% | 83,030 | 41% | 1.15% |
| Inner East Bay ^a | 353,640 | 376,710 | 373,650 | 520,160 | 20,010 | 0.37% | 146,510 | 39% | 1.11% |
| Total East Bay ^b | 953,580 | 1,121,470 | 1,109,030 | 1,691,200 | 155,450 | 1.01% | 582,170 | 52% | 1.42% |
| Total Bay Area | 3,201,010 | 3,753,460 | 3,449,640 | 5,247,780 | 248,630 | 0.50% | 1,798,140 | 52% | 1.41% |
| Households | | | | | | | | | |
| Oakland | 144,520 | 150,790 | 154,580 | 207,250 | 10,060 | 0.45% | 52,670 | 34% | 0.98% |
| Inner East Bay ^a | 260,350 | 271,400 | 278,100 | 351,750 | 17,750 | 0.44% | 73,650 | 26% | 0.79% |
| Total East Bay ^b | 779,810 | 867,500 | 912,100 | 1,155,300 | 132,290 | 1.05% | 243,200 | 27% | 0.79% |
| Total Bay Area | 2,245,870 | 2,466,020 | 2,583,080 | 3,292,500 | 337,210 | 0.94% | 709,450 | 27% | 0.81% |
| Total Population | | | | | | | | | |
| Oakland | 372,240 | 399,480 | 410,600 | 542,500 | 38,360 | 0.66% | 131,900 | 32% | 0.93% |
| Inner East Bay ^a | 649,840 | 688,220 | 706,800 | 892,600 | 56,960 | 0.56% | 185,800 | 26% | 0.78% |
| Total East Bay ^b | 2,080,430 | 2,392,560 | 2,528,700 | 3,239,200 | 448,270 | 1.31% | 710,500 | 28% | 0.83% |
| Total Bay Area | 6,020,150 | 6,783,760 | 7,096,100 | 9,031,500 | 763,610 | 1.10% | 1,935,400 | 27% | 0.81% |

^a Inner East Bay includes Oakland and nearby cities of Albany, Berkeley, Emeryville, Piedmont, Alameda, and San Leandro.

^b Total East Bay includes all of Alameda and Contra Costa counties, and total Bay Area includes all nine Bay Area counties.

SOURCE: U.S. Census; ABAG *Projections 2007*.

**TABLE 4.11-5
 CHANGES IN HOUSING STOCK IN OAKLAND, 1990-2010**

| | 1990 | | 2000 | | 2010 | | Change | |
|-------------------------|---------|-------|---------|-------|---------|-------|-----------|-----------|
| | | | | | | | 1990-2000 | 2000-2010 |
| Total Housing Units | 154,737 | | 157,508 | | 166,274 | | +2,771 | +8,766 |
| Occupied Housing Units | 144,521 | 93.4% | 150,790 | 95.7% | 159,182 | 95.7% | +6,269 | +8,392 |
| Vacant Housing Units | 10,216 | 6.6% | 6,718 | 4.3% | 7,092 | 4.3% | (3,498) | +374 |
| Owner-occupied Housing | 60,153 | 41.6% | 62,489 | 41.4% | N.A. | | +2,336 | N.A. |
| Renter-occupied Housing | 84,368 | 58.4% | 88,301 | 58.6% | N.A. | | +3,933 | N.A. |

SOURCE: U.S. Census, 1990 and 2000; CA Dept. of Finance, 1/1/2010.

Since 2000, the City’s housing supply has increased substantially. This represents a significant change from prior decades during which very little new housing was developed in Oakland. In the 1970s and 1980s, housing development bypassed Oakland and other inner city areas in favor of the suburbs. In the 1990s, regional trends began to change. Household and population growth occurred in existing housing in Oakland; the vacancy rate declined and average persons per household increased. Most of the units added in Oakland during the 1990s were built in the latter part of the decade as the region’s housing market began to rediscover Oakland. Since 2000, strong regional housing demand, fewer remaining locations for development in the suburbs, renewed interest in center city living particularly in proximity to employment centers, and a relatively affordable land supply with favorable land use policies were all factors in favor of renewed housing development in Oakland. In addition, new housing development has been encouraged in Oakland by regional and local Smart Growth land use policies and by other local efforts such as the 10K Initiative to attract new housing development and bring 10,000 additional residents to downtown Oakland.

During the recent decade from 2000 to 2010, housing development in Oakland has averaged about 900 units per year (see **Table 4.11-6**). Absorption of housing units by household growth appears to have averaged about 860 units per year. Both housing unit development and household growth represent increases over prior decades.

As identified in Oakland’s Draft Housing Element, new housing is being built in Downtown Oakland (representing about one-half the new units built citywide 2000-2009) and in many other parts of the City, including West Oakland, East Oakland, North Oakland, and along the Estuary waterfront. Most of the new housing is multi-family housing. New housing development is focused in the downtown area, around the City’s BART stations, along transportation/transit corridors, and in mixed-use neighborhoods. New housing in Oakland includes units covering a range of prices and rents, reflecting Oakland’s land use policies encouraging higher-density development and the investment of substantial public funding for affordable housing.

**TABLE 4.11-6
 HOUSING DEVELOPMENT AND HOUSEHOLD GROWTH IN OAKLAND**

| | Housing Units | | Occupied Units/Households | |
|---|---------------|-----------------------|---------------------------|-----------------------|
| | Growth | Average Annual Growth | Growth | Average Annual Growth |
| 1990 – 2000 | | | | |
| U.S. Census 1990-2000 | 2,770 | 277 | 6,270 | 627 |
| Since 2000 | | | | |
| Oakland Development, 2000-2005 ^a | 4,307 | 749 | | |
| Oakland Development, 2006-mid 2009 ^b | <u>4,090</u> | 1,169 | | |
| <i>Subtotal (9-1/4 yrs.)</i> | 8,397 | 908 | | |
| Under Construction, 2009 | <u>1,097</u> | | | |
| Total (10-11 yrs.) | 9,494 | 863-949 | | |
| CA Dept. of Finance, 2000-2010 ^c | 8,766 | 899 | 8,392 | 861 |

^a April 2000 (Census) through 2005, 5.75 years.
^b 2006 through mid-2009, 3.5 years.
^c Estimates of household growth April 2000 to January 1, 2010 (9.75 years).

SOURCE: Hausrath Economics Group; *Oakland Housing Element 2007-2014*; Oakland Cumulative Growth Scenario, June 2006 and July 2007; CA Department of Finance, 1/1/2010.

In addition to the completed housing developments in Oakland, there are a large number of approved housing projects. As of mid-2009, there were over 8,600 units in approved projects that were on hold pending recovery and improvement of the economy and housing market. There also were proposed housing projects in various stages of predevelopment planning at the City. The projects in predevelopment include an additional 9,000 housing units that could be built further in the future. In addition, Oakland’s Housing Element identifies the potential for 8,670 to 10,760 additional units on housing opportunity sites in strategic areas of the City that are actively being promoted for housing development. **Table 4.11-7** summarizes the magnitudes of housing recently built, housing in the pipeline, and housing potential on identified opportunity sites in Oakland. About half of the housing development potential identified citywide is located in Downtown Oakland.

Population and Household Projections

Long-term projections for Oakland indicate potentials for substantial growth of housing, households, and population. The ABAG projections anticipate growth of up to 48,000 households and 112,000 residents, from 2010 through 2035 (see Table 4.11-3). The ABAG projections reflect market factors as well as policy direction to increase the share of regional development that occurs in the Bay Area’s major cities, in higher-density, urban locations that have good accessibility and are well served by transit. The rates of growth of households and population in Oakland are forecast to exceed the rates of growth for the East Bay and Bay Area overall (see Table 4.11-4).

**TABLE 4.11-7
HOUSING DEVELOPMENT IN OAKLAND AND GREATER DOWNTOWN:
UNITS BUILT, IN THE PIPELINE, AND ON OPPORTUNITY SITES**

| | City of Oakland | Greater Downtown | |
|---|----------------------|----------------------|---------------|
| | Housing Units | Housing Units | % of City |
| Built 2000 – mid-2009 | 8,400 | 4,094 | 49% |
| Under Construction, 2009 | <u>1,100</u> | <u>622</u> | <u>57%</u> |
| Built and Under Construction | 9,500 | 4,716 | 50% |
| Approved, as of mid-2009 | 8,630 | 2,782 | 32% |
| Proposed/Predevelopment, as of mid-2009 | <u>9,000</u> | <u>3,620</u> | <u>40%</u> |
| Approved and Predevelopment | 17,630 | 6,402 | 36% |
| Housing Opportunity Sites ^a | 8,670-10,760 | 5,430-6,570 | 61-63% |
| Total | 35,800-37,890 | 16,548-17,688 | 46-47% |

^a Housing opportunity sites identified in Oakland's Housing Element 2007-2014. This was not an exhaustive inventory and focused only on strategic areas where the City is actively promoting development or assessing development capacity. Development potential over the long-term future through 2035, is larger than identified for the Housing Element given its shorter-term focus on eight years 2007-2014. The calculation of number of potential units for development on opportunity sites is below the maximum allowable under the General Plan and Zoning Ordinance and is based on typical densities for recent, actual developments.

SOURCE: Hausrath Economics Group; Oakland Housing Element 2007-2014; Oakland Cumulative Growth Scenario, June 2006 and July 2007.

Employed Residents and Jobs/Housing Relationship

Employed Residents and Where Oakland Residents Work

In 2000, 174,740 people living in Oakland were employed according to the U.S. Census, representing 56 percent of the working age population (the population 16 years of age and older) and 92 percent of the civilian labor force (those 16 years of age and older working or looking for work).^{3 4} In the future, the number of employed residents is anticipated to increase at a faster rate than the growth of population, due to the growth of higher-density new housing in Oakland with proportionally more adult residents in their working years and to regional demographic trends related to the overall aging of the population and higher labor force participation rates.

Census data indicate that in 2000, about 39 percent of the employed residents of Oakland held jobs in Oakland. Another 16 percent worked in nearby cities of the Inner East Bay, indicating that the majority (55 percent) of Oakland's employed residents work close to home, in Oakland and adjacent cities. Another 18 percent worked in San Francisco, and about 19 percent worked elsewhere in Alameda County outside the Inner East Bay and in Contra Costa County. The remaining eight (8) percent worked in other locations, most in other Bay Area counties (ABAG, 2000 Census).

³ The 2000 demographic data for Oakland discussed in this and the next two paragraphs are from the U.S. Census for 2000. There is a small difference between the number of employed residents in Oakland in 2000 from the Census (174,740) and from ABAG *Projections 2007* (178,716). The data in Table 4.11-8 and related text include the ABAG data for Oakland for 2000, so as to be consistent with the ABAG projections for future years.

⁴ Comparable data from the 2010 Census were not available at the time of this analysis. The relationships described herein are still relevant as the patterns of where people live and work are relatively stable and change only slowly over time.

Oakland Jobs and Where People Working in Oakland Live

About 36 percent of the jobs in Oakland in 2000 were held by people who also lived in the City. Another 15 percent of jobs were held by residents of nearby cities in the Inner East Bay, indicating that over half (51 percent) of Oakland's jobs are held by residents of Oakland and its adjacent cities. Residents of other parts of Alameda County and Contra Costa County held another 31 percent of Oakland's jobs, San Francisco residents held about five (5) percent, with the remaining 13 percent of jobs held by residents of other counties in the Bay Area, adjacent areas, and beyond.

Overall Relationship of Jobs and Housing

As described above, Oakland is both a place of residence and a place of employment. The total number of jobs in the City (202,570 in 2005) is relatively similar to the total number of employed residents (175,180 in 2005) (see **Table 4.11-8**). The overall relationship between jobs and employed residents in an area identifies the extent to which a community enjoys a balanced mix of land uses thereby offering job opportunities to local residents and housing opportunities for workers employed in local jobs. The resultant mix of who lives in Oakland and who works in Oakland and the extent to which these are the same individuals results from a complex set of interactions and decision factors that determine where people choose to live and work, how much they spend for housing, and their travel patterns. Jobs/housing balance evolves over time and reflects the role and location of particular areas within the larger regional context. Regional planning efforts in the Bay Area seek to "balance" the number of jobs and the number of employed residents, or to improve existing imbalances, for purposes of achieving goals related to improved housing availability and affordability, commute distances, congestion, and air quality.

Data and projections for Oakland indicate that Oakland has a good balance of jobs and housing, and that it will continue to have a relatively similar number of jobs and employed residents. In the future, the growth of employed residents of the City (114,440 employed resident growth 2005 to 2035) is anticipated to exceed the growth of jobs in Oakland (83,030 job growth 2005 to 2035), improving the "balance" of jobs and housing over time, as shown in Table 4.11-8. By 2035, the number of employed residents is anticipated to be similar to and even exceed the number of jobs in Oakland (ratio of jobs to employed residents of 0.99:1 in 2035 under the ABAG projections). Data for the Inner East Bay, including Oakland and its nearby cities, show that this larger surrounding area will have a slightly higher ratio of jobs to employed residents than Oakland alone. Overall, data for the East Bay in total (all of Alameda and Contra Costa counties including the Inner East Bay) show more employed residents than jobs, both currently and in the future, indicating the important role of the East Bay as a place of residence for people employed in the East Bay and other parts of the region.

**TABLE 4.11-8
TRENDS IN JOBS AND EMPLOYED RESIDENTS: 1990-2035**

| | 1990 | 2000 | 2005 | 2035 | 1990-2005 | | 2005-2035 | |
|--|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-------------|
| | | | | | Growth | Annual Rate | Growth | Annual Rate |
| Total Jobs | | | | | | | | |
| Oakland | 173,270 | 199,470 | 202,570 | 285,600 | 29,300 | 1.05% | 83,030 | 1.15% |
| Inner East Bay ^a | 353,640 | 376,710 | 373,650 | 520,160 | 20,010 | 0.37% | 146,510 | 1.11% |
| Total East Bay ^b | 953,580 | 1,121,470 | 1,109,030 | 1,691,200 | 155,450 | 1.01% | 582,170 | 1.42% |
| Total Bay Area | 3,201,010 | 3,753,460 | 3,449,640 | 5,247,780 | 248,630 | 0.50% | 1,798,140 | 1.41% |
| Employed Residents | | | | | | | | |
| Oakland | 162,490 | 178,716 | 175,180 | 289,620 | 12,690 | 0.50% | 114,440 | 1.69% |
| Inner East Bay ^a | 312,070 | 332,135 | 325,490 | 509,410 | 13,420 | 0.28% | 183,920 | 1.50% |
| Total East Bay ^b | 1,053,430 | 1,171,549 | 1,165,500 | 1,848,800 | 112,070 | 0.68% | 683,300 | 1.55% |
| Total Bay Area | 3,147,610 | 3,452,117 | 3,225,100 | 5,016,500 | 77,490 | 0.16% | 1,791,400 | 1.48% |
| Ratio Jobs-to-Employment Residents | | | | | | | | |
| Oakland | 1.07:1 | 1.12:1 | 1.16:1 | 0.99:1 | | | | |
| Inner East Bay ^a | 1.13:1 | 1.13:1 | 1.15:1 | 1.02:1 | | | | |
| Total East Bay ^b | 0.91:1 | 0.96:1 | 0.95:1 | 0.91:1 | | | | |
| Total Bay Area | 1.02:1 | 1.09:1 | 1.07:1 | 1.05:1 | | | | |
| Employed Residents as Percent of Population | | | | | | | | |
| Oakland | 44% | 45% | 43% | 53% | | | | |
| Inner East Bay ^a | 48% | 48% | 46% | 57% | | | | |
| Total East Bay ^b | 51% | 49% | 46% | 57% | | | | |
| Total Bay Area | 52% | 51% | 45% | 56% | | | | |

^a Inner East Bay includes Oakland and nearby cities of Albany, Berkeley, Emeryville, Piedmont, Alameda, and San Leandro. Data and projections from ABAG, *Projections 2007*.

^b Total East Bay includes all of Alameda and Contra Costa counties, and total Bay Area includes all nine Bay Area counties. Totals are from ABAG, *Projections 2007*.

SOURCE: U.S. Census; ABAG *Projections 2007*.

4.11.3 Contributions to Amendment Area Growth from Proposed Amendments

This section specifically describes and quantifies the potential growth in households, population, and employment that could occur in the Amendment Area as a result of the Proposed Amendments. Population and employment changes in and of themselves, are not normally considered to be significant environmental effects under CEQA. However, these changes and effects can be indicators of other impacts, and they can have influence on the significance of those impacts. Thus, the description of population and employment changes that follows is included to provide context for considering and understanding potential physical environmental impacts associated with changes in housing, population, and employment that are analyzed later in this section and in other sections of this SEIR (e.g., traffic, public services, and air quality). In addition, the description also identifies beneficial aspects of the Proposed Amendments in terms of additional business activity, employment opportunities, and housing choices.

Potential Growth and Development to Be Facilitated By Proposed Amendments

Redevelopment Activities and Potential New Development

The Proposed Amendments could facilitate the development of up to 110,000 square feet of industrial incubator space and up to 370 housing units, potentially including up to 280 residential units and 90 live/work units, and development would be focused along the Lowell Street corridor (see Table 3-1 in Chapter 3, *Project Description*). The Proposed Amendments would expand the boundaries of the Existing Project Area to include the Lowell/Gaskill neighborhood (the Amendment Area). They also would provide the ability to finance redevelopment activities in the Amendment Area. Such activities could include a broad range of potential projects, programs, and strategies intended to reduce blight, improve conditions, and facilitate revitalization and growth in the Amendment Area.

Redevelopment activities to be facilitated by implementation of the Proposed Amendments are anticipated to focus in the areas along Lowell Street and Stanford Avenue in the eastern portions of the Amendment Area. Along the Lowell Street corridor, streetscape improvements are anticipated to provide basic infrastructure improvements that are lacking along this older industrial corridor. Improvements could include right-of-way adjustments, sidewalks, curbs, gutters, lighting, and other related improvements. Potential redevelopment activities are described in Chapter 3, *Project Description* (see Table 3-1 and associated text in Chapter 3, *Project Description*).

As conditions in the area are improved, new development and renovations of existing buildings are likely to occur over time. As previously indicated, the new development would be focused along the Lowell Street corridor, and it would occur on sites that are vacant or that include older industrial structures. The new development is assumed to occur over time, primarily in the 20 years from 2015 through 2035 for purposes of the SEIR analysis.

Beyond the Lowell corridor, housing rehabilitation loan or grant programs may be established for the residential neighborhood portions of the Amendment Area. Other redevelopment programs could be implemented, consistent with those being implemented through the Existing Redevelopment Plan. Growth and new development are not anticipated in the existing neighborhood areas.

Growth To Be Accommodated in Potential New Development

Potential new development along the Lowell corridor to be facilitated by the Proposed Amendments is summarized in **Table 4.11-9** along with the employment, households, and population that it would accommodate. The 110,000 square feet of industrial incubator space would accommodate business activities (small manufacturers, artisans and crafts businesses, custom products design and sales, arts and music studios, and other activities) that are anticipated to accommodate 210 jobs. The live/work development also would accommodate business activity and about 80 jobs, potentially involved in arts and music, small manufacturing, professional services (design, architecture, research and consulting, software design, etc.) and other activities.

**TABLE 4.11-9
 AMENDMENT AREA: POTENTIAL GROWTH IN EMPLOYMENT AND HOUSEHOLDS
 TO BE FACILITATED BY THE PROPOSED AMENDMENTS**

| | Industrial Space (Sq. Ft.) | Units | Employment^c | Households^d | Population^e |
|---|-----------------------------------|--------------|-------------------------------|-------------------------------|-------------------------------|
| Potential New Development on Sites Along Lowell Corridor^a | | | | | |
| Housing Development | - | 280 | - | 269 | 646 |
| Live/Work Development | - | 90 | 76 | 87 | 209 |
| Industrial Incubators | <u>110,000</u> | = | <u>210</u> | = | = |
| Total | 110,000 | 370 | 286 | 356 | 855 |
| Existing Uses Potentially Removed Along Lowell Corridor^b | | | | | |
| Older Industrial (primarily) | (359,000) | (12) | (246) | (12) | (29) |
| Net Change to Be Facilitated By Proposed Amendments | (249,000) | 358 | 40 | 344 | 826 |

^a City of Oakland, March 2011.
^b Based on Alameda County Assessors data and field work by City of Oakland staff and Hausrath Economics Group.
^c Employment estimated by Hausrath Economics Group, based on density factors by use, for the types of development and uses proposed for and existing in the area.
^d Assumes an average, four percent vacancy factor.
^e Assumes an average of 2.4 persons per household, appropriate for loft housing and live-work development in this part of Oakland.

SOURCE: City of Oakland; Hausrath Economics Group.

New housing of up to 370 units of residential and live/work development would accommodate about 360 households along the Lowell corridor and population of approximately 850 residents (see Table 4.11-9).

Although there are no specific development proposals, it is likely that the new development would replace some existing uses in older buildings along the Lowell corridor. For the SEIR analysis, it is conservatively assumed that up to 360,000 square feet of older industrial space could be removed, some vacant, some occupied by business activity potentially employing up to 250 people, and a small amount occupied by live/work activities, potentially affecting up to 12 units. Accounting for uses that could be removed, the potential net changes in employment and households from the new development are shown in Table 4.11-9. Overall, total potential growth from new development could include a net increase of approximately 40 jobs and approximately 340 households with 830 residents in the Amendment Area as a result of the Proposed Amendments.

Overall Growth Scenario Including Growth in Already Entitled Development in Addition To Growth To Be Facilitated By Proposed Amendments

Currently, there are sites along the Lowell corridor in the Amendment Area with already entitled projects for new housing, ground-floor commercial, and commercial/live-work uses.⁵ These are considered reasonably foreseeable projects without approval of the Proposed Amendments. Thus, the growth they would accommodate is included in the cumulative analysis of growth that could occur with or without approval of the Proposed Amendments.

Overall, total growth in the Amendment Area in the future, 2010-2035, includes both growth in already entitled development and the growth to be facilitated by the Proposed Amendments, as summarized in **Table 4.11-10**. When combined, total change in the Amendment Area could include increased business activity supporting additional employment of approximately 90 jobs and 427 additional housing units accommodating 410 households and approximately 980 residents.

Area Affordable Housing Production Obligations With Proposed Amendments

With approval of the Proposed Amendments, the affordable housing production requirements under California Community Redevelopment Law (CRL) would apply in the Amendment Area. Under the CRL, there is an obligation that at least 15 percent of all housing developed in a redevelopment project area be affordable to persons and families of low- or moderate-income.⁶ Of these low-moderate units, at least 40 percent must be affordable to and restricted for occupancy by very-low income households. The housing production obligation applies to the redevelopment project area overall, and is to be met over a 10-year period. To the extent there is a

⁵ These include a 7-unit residential project on 56th Street, a 61-unit project on 53rd St, and 1 residential unit at 967 Stanford Street.

⁶ It is anticipated that new housing developed in the B/M/SP Project Area as amended would be private, unassisted and assisted development, as has been the case for other housing development in Oakland. Thus, the 15 percent affordable housing obligation described in the text would apply. If the Agency were to develop housing, the obligation would be for 30 percent affordable housing. However, the Agency does not plan to develop housing, but rather to assist in private sector affordable housing development, as appropriate.

**TABLE 4.11-10
 OVERALL GROWTH SCENARIO FOR AMENDMENT AREA
 EMPLOYMENT AND HOUSEHOLDS, 2010 TO 2035**

| | Ind'l/Com'l Space (sq. ft.) | Units | Employment ^d | Households ^e | Population ^f |
|--|-----------------------------------|------------|-------------------------|-------------------------|-------------------------|
| Growth in Already Entitled Development^{a,b} | | | | | |
| Housing Development | - | 68 | - | 65 | 156 |
| Ground Floor Commercial | 3,200 | - | 9 | - | - |
| Commercial/Live-Work | 25,000 | 1 | 43 | 1 | 2 |
| Existing Uses Removed | - | - | - | - | - |
| Total | 28,200 | 69 | 52 | 66 | 158 |
| Growth To Be Facilitated By Proposed Amendments | | | | | |
| Potential New Development on Sites Along Lowell Corridor ^a | | | | | |
| Housing Development | - | 280 | - | 269 | 646 |
| Live/Work Development | - | 90 | 76 | 87 | 209 |
| Industrial Incubators | <u>110,000</u> | = | <u>210</u> | = | = |
| Total | 110,000 | 370 | 286 | 356 | 855 |
| Existing Uses Potentially Removed Along Lowell Corridor ^c | | | | | |
| Older Industrial (primarily) | (359,000) | (12) | (246) | (12) | (29) |
| Net Change | (249,000) | 358 | 40 | 344 | 826 |
| Total Change, 2010-2035 | (220,800) | 427 | 92 | 410 | 984 |

^a City of Oakland, March 2011.

^b Growth in already entitled development along the Lowell corridor could occur with or without approval of the Proposed Amendments, and is considered as cumulative growth for the SEIR analyses.

^c Based on Alameda County Assessors data and field work by City of Oakland staff and Hausrath Economics Group.

^d Employment estimated by Hausrath Economics Group, based on density factors by use, for the types of development and uses proposed for and existing in the area.

^e Assumes an average, four percent vacancy factor.

^f Assumes an average of 2.4 persons per household, appropriate for loft housing and live-work development in this part of Oakland.

SOURCE: City of Oakland; Hausrath Economics Group.

deficit of affordable units constructed over time by the private and non-profit sectors, the Agency is to identify projects and, if necessary, provide financial assistance to ensure that the required number of affordable units are developed or otherwise made available.

The affordable housing production requirements would apply to housing development facilitated by the Proposed Amendments (up to 370 units). They also could apply to housing developed in already entitled projects if the housing is built after the Proposed Amendments are implemented. For the SEIR analysis, the potential obligation is conservatively estimated to apply to eight (8) units in two projects that have land use entitlements but that may not proceed before the Proposed Amendments are implemented. (The remaining 61 units are in one entitled project that has already received grading and building permits from the City.)

Based on the potential number of up to 378 new housing units built in the Amendment Area after implementation of the Proposed Amendments, there could be a housing production obligation of up to 57 affordable units (15 percent of 378 units). Of these, up to 23 units would be required to be affordable to very-low income households. (See top portion of **Table 4.11-11**).

**TABLE 4.11-11
 POTENTIAL SCENARIO FOR AFFORDABLE HOUSING PRODUCTION OBLIGATIONS
 FOR AMENDMENT AREA AND THE PROJECT AREA, AS AMENDED**

| | | Housing Units |
|--|-------|---------------|
| Amendment Area | | |
| Units Potentially Built and Subject to Obligation ^a | | 378 |
| - In development facilitated by Proposed Amendments | 370 | |
| - In already entitled projects built after Amendments | 8 | |
| Area Affordable Housing Production Obligation ^b (15% of housing development) | | 57 |
| - Minimum affordable to very-low income households (40% of 15% obligation) | 23 | |
| - Other affordable units | 34 | |
| Total Project Area, as Amended | | |
| Units Potentially Built in Amended Project Area, by 2035 ^c | | 3,555 |
| - Amendment Area | 378 | |
| - San Pablo Subarea | 521 | |
| - Broadway/MacArthur Subarea | 2,656 | |
| Area Affordable Housing Production Obligation ^b (15% of housing development) | | 533 |
| - Minimum affordable to very low income households (40% of 15% obligation) | 213 | |
| - Other affordable units | 320 | |
| Planned Affordable Housing ^d | | 108 |
| - Affordable to very low income households | 90 | |
| - Other affordable units | 18 | |
| Balance of Obligation | | 425 |
| - Minimum affordable to very low income households | 123 | |
| - Other affordable units | 302 | |

^a Housing development facilitated by Proposed Amendments (up to 370 units) plus housing (up to 8 units) in already entitled projects possibly built after Amendments are implemented.
^b Under CA Redevelopment Law, at least 15 percent of housing development in a redevelopment project area is required to be affordable to persons and families of low- or moderate-income. Of these low-mod units, at least 40 percent must be affordable to persons and families of very-low income. The requirement applies to the Redevelopment Area overall and is to be met over a 10-year period.
^c Housing units added in the Existing Project Area are consistent with the household growth forecast summarized in Table 4.11-1. Household growth is assumed to represent 96 percent of housing growth, assuming an average vacancy factor of four percent.
^d Planned in MacArthur Transit Village Project.

SOURCE: City of Oakland; Hausrath Economics Group.

The affordable housing production obligation associated with housing development in the Amendment Area would apply on an areawide basis and could be met throughout the Project Area, as Amended. Affordable units could be included among the 378 units to be built in the Amendment Area and/or among the large amount of housing development anticipated in the Existing Project Area in the future. With the Proposed Amendments, the Agency also would be required to allocate at least 20 percent of gross tax increment from the Amendment Area to affordable housing (the housing “set-aside”). The housing set-aside could be used to provide financial assistance for meeting the Agency’s 15 percent affordable housing production obligation.

Cumulatively, the potential development of housing throughout the Amended Project Area through 2035 could result in an overall affordable housing production obligation for up to 533 affordable units in the Amended Project Area, as shown in Table 4.11-11 (lower part). Currently, there are plans to develop 108 affordable housing units in the Existing Project Area, leaving a balance of up to 425 affordable units over the next 20 to 25 years.

4.11.4 Regulatory Setting

Local Plans and Policies

Oakland General Plan and Housing Element policies and other applicable plans and policies that pertain to housing, jobs, and related effects, and that apply under the Proposed Amendments, are identified and discussed in Section 4.9 Land Use, Plans and Policies.

Much of the consideration of compliance with local plans and policies is already addressed by the requirements of CRL. Under state law, the redevelopment plan and the activities of the redevelopment agency must conform to the general plan of the community, including the community’s housing element (which must comply with state planning and zoning law) (§33367 (d)(4) of the CRL). Thus, because the growth facilitated by the Redevelopment Plan, as Amended, must conform with Oakland’s General Plan and Housing Element, the Redevelopment Plan, as Amended, would be consistent with the General Plan and Housing Element.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards

There are no City of Oakland *Standard Conditions of Approval and Uniformly Applied Development Standards* (SCAs) that are specific to Population, Housing, and Employment.

4.11.5 Impacts and Mitigation Measures

Significance Criteria

The Redevelopment Plan, as Amended, would have a significant impact on the environment if it would:

1. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere, in excess of that contained in the City’s Housing Element.

2. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere, in excess of that contained in the City's Housing Element.
3. Displace substantial numbers of businesses and jobs, necessitating the construction of replacement facilities elsewhere, in excess of that contemplated in the City's General Plan.
4. Induce substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads and other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed.

Approach to Analysis

The Redevelopment Plan, as Amended, is evaluated relevant to the above criteria in the rest of this section. As stated in Section 4.11.1, this analysis focuses on the Amendment Area and provides contextual information about the Existing Project Area, citywide and the region, all toward an determination of impact of development facilitated by the Redevelopment Plan, as Amended. Oakland General Plan and Housing Element policies, Redevelopment Plan policies, and CRL are discussed in this section, as relevant to the significance criteria above. Oakland General Plan policies and other applicable plans and policies that may pertain to housing, jobs, and related effects are also addressed in Section 4.9 Land Use, Plans and Policies.

The 2000 EIR analyzed the potential environmental effects on population, housing and employment and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As previously indicated in Section 4.11.1, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes that have occurred to the population, housing and employment setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

The approach to the analysis herein compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.⁷ Based on the information in each of the aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding population, housing and employment relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for these topics. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

⁷ Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of population, housing and employment in the Existing Project Area in this SEIR. Therefore, the impact discussions and analyses below focus on the activities facilitated by the Proposed Amendments and the potential for population, housing and employment impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes that have occurred to the environmental setting since the 2000 EIR are also evaluated as “past, present or reasonably foreseeable” projects and accordingly, are considered in the cumulative analysis in this SEIR.

Impacts

Displacement of Substantial Housing, Population, Businesses, or Jobs

New Impact POP-1: Development facilitated by the Redevelopment Plan, as Amended, could displace a small number of existing housing units and residents, but not in substantial numbers necessitating the construction of replacement housing elsewhere, in excess of that anticipated in the City’s Housing Element. (Less than Significant)

Development in the Amendment Area, as facilitated by the Proposed Amendments, could require the demolition of a small number of existing housing units. Although there are no development proposals, redevelopment activities to be facilitated by the Proposed Amendments are anticipated to focus in the areas along Lowell Street and Stanford Avenue in the eastern parts of the Amendment Area. As conditions in those areas are improved, new development and renovations of existing buildings are likely to occur over time, particularly on sites that are vacant or that include older industrial buildings. Some of the industrial buildings along the Lowell corridor include live/work use. Thus, as revitalization occurs, older industrial buildings with a small number of live/work units could be demolished for new development or substantially renovated for new uses. Industrial buildings that have already been renovated for live/work units are unlikely to be affected.

The number of units that could be demolished is not known. For the SEIR analysis, the estimates of potential growth and development to be facilitated by the Proposed Amendments assume that demolitions could include up to 12 units removed, based on review of possible development opportunity sites along the Lowell corridor. The number of residents that could be displaced also is not known, and was estimated at up to 29 people, assuming an average of 2.4 persons per unit and up to 12 units removed (see Table 4.11-9).

State and City Regulations for Removing Units from the Housing Market

There are State and City regulations governing the process for removal of housing by a redevelopment agency and for removal of rental housing by the private sector. These are described below. The regulations and required procedures would mitigate some of the potential impacts associated with possible displacement. Whether the procedures relevant to Agency activities or to the private sector would apply depends on the roles and responsibilities for each entity in the eventual developments. However, the specific roles for the private sector and/or the

Agency in development in the Amendment Area are not yet known. The regulations that would apply in each case are described.

Agency Activities. To carry out the goals and objectives of the Redevelopment Plan, the Agency may acquire, assemble, and dispose of property that may result in the displacement of residents or businesses. In such instances, the Agency must comply with the applicable state and local relocation laws, including those set forth in the *Redevelopment Plan for the Broadway/MacArthur/San Pablo Redevelopment Project* (Section III.F), the California Relocation Assistance Act (Government Code Section 7260 *et seq.*), and other state relocation regulations and guidelines. Prior to any displacement of residents or businesses in the Project Area as a result of activities undertaken by the Agency or under agreement with the Agency, the Agency would prepare a plan for the relocation of displaced residents or businesses which contains all of the elements required by law. Typically, the Agency will be required to: (1) inform persons to be displaced as early as possible and keep them informed throughout the process; (2) provide displaced occupants with advisory assistance in finding comparable replacement housing; (3) make relocation payments to displaced occupants for moving expenses, direct losses of personal property, and additional payments as may be required by law; and (4) provide for the replacement of any units removed from the low- and moderate-income housing stock.

Private Sector Development. Development by the private sector that requires demolition of rental housing is subject to the Ellis Act (Government Code Sections 7060-7060.7) and the City of Oakland's Ellis Act Ordinance (Oakland Municipal Code Sections 8.22.400-8.22.480). Under that Ordinance, any owner can withdraw property from the rental market by filing with the City's Rent Adjustment Program a series of documents called the "Withdrawal Notices", including notices of termination given to existing tenants. The withdrawal of the units is effective after 120 days or is extended to one year for tenants who are disabled or 62 years of age or older. Under the Ordinance, lower-income households are entitled to relocation assistance of two months' rent in effect at the time of the notice of termination, to mitigate the adverse impacts of displacement. The Ordinance also gives the tenants the right to re-rent the withdrawn units should the units be re-offered for rent within 10 years.

In the case of owner-occupied housing that might be purchased and demolished for development, there are no filing or relocation procedures. The residents would receive the agreed-upon sales price for the housing, and would attempt to address relocation in the process of negotiating a sales price.

Relocation Implications for Residents

The people residing in housing units to be demolished would have to find other housing, potentially in nearby areas or in other parts of Oakland. There could be economic implications for the individuals involved. Households required to relocate would incur expenses associated with moving. However, those displaced by Agency activities would receive relocation assistance and payments as described above. Lower-income households in rental housing displaced by private sector development would be entitled to relocation assistance under the City's Ellis Act, as described above. For some, rents/prices could be higher at a new location, or the housing might be less desirable for similar rents/prices. Others, however, might find it beneficial to relocate, if

they find preferable or improved housing that better meets their needs, in terms of location, unit size/quality, and/or rent/price.

Replacement Housing As Part of Housing Production Citywide and in the Project Area, as Amended

From the perspective of the City's housing stock, the potential loss of a small number of housing units as a result of development facilitated by the Proposed Amendments could be offset by the production of a large amount of new housing in Oakland as has been occurring and is expected to occur in the future, consistent with the City's Housing Element. As described earlier in the setting, approximately 8,400 new units were added in Oakland from 2000 through 2009, with another 1,100 units still under construction as of the end of 2009 (see Table 4.11-7). Another 8,630 new housing units could be built in Oakland once the market recovers from the recent downturn, in already approved projects, and an additional 9,000 units could be built in proposed projects already in the predevelopment planning process (see Table 4.11-7). Over the longer-term future, the ABAG projections forecast substantial housing growth in Oakland, averaging about 2,000 units per year from 2010 through 2035.

The levels of housing development in Oakland are consistent with Oakland's Housing Element and the City's General Plan. The construction of replacement housing for the small number of units that could be removed as a result of the Proposed Amendments, would not be in excess of that anticipated in the City's Housing Element and related General Plan and zoning policies.

Within the citywide context, the development of housing in the Amendment Area and the Existing Project Area could provide replacement housing nearby for units that are removed to make way for new development. The Proposed Amendments are anticipated to facilitate the development of up to 370 units in the Amendment Area, potentially 90 units in live/work developments and 280 units in loft housing and other residential developments. There also are 69 units in already entitled development projects in the Amendment Area. In addition, substantial housing growth is forecast for the Existing Project Area from 2010 through 2035, up to an additional 520 units in the adjacent San Pablo subarea and up to 2,660 units in the Broadway/MacArthur subarea. In combination, 15 percent of the housing built in the Project Area, as Amended would be affordable housing, representing up to 533 affordable units for households covering a range of income levels (see Tables 4.11-9 through 4.11-11). Overall, the potential removal of up to 12 housing units would not represent "substantial" numbers in the context of a total of approximately 166,270 housing units in Oakland in 2010, and the construction of large numbers of housing units in the future as described above.

The effect of the development facilitated by the Redevelopment Plan, as Amended, is considered in analysis above, either as built or anticipated housing. Thus, the impact would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* This determination is consistent with the discussion in the 2000 EIR, which acknowledges acquisition

and demolition of existing property for redevelopment and states that the Existing Redevelopment Plan did not propose to displace and households or business activities that would then be forced to relocate elsewhere (2000 EIR, page 6-2). No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

New Impact POP-2: Development facilitated by the Redevelopment Plan, as Amended, could displace existing businesses and jobs, but not in substantial numbers necessitating construction of replacement facilities elsewhere, in excess of that anticipated in the City’s General Plan. (Less than Significant)

Development in the Amendment Area that would be facilitated by the Proposed Amendments, could require the demolition or substantial renovation of existing, older industrial buildings along the Lowell corridor. Businesses located in those buildings would be required to find new locations for their business operations.

Although there are no specific development proposals, redevelopment activities to be facilitated by the Proposed Amendments are anticipated to focus in the areas along Lowell Street and Stanford Avenue. As conditions in these areas are improved, new development and renovations of existing buildings are likely to occur over time, particularly on sites that are vacant or that include older industrial buildings. As revitalization occurs, older industrial buildings could be demolished or substantially renovated for new uses.

The amount of existing industrial space that could be removed, and the number of businesses and jobs that could be displaced are not known. For the SEIR analysis, the estimates of potential growth and development to be facilitated by the Proposed Amendments conservatively assume that up to 360,000 square feet of older industrial space could be removed along the Lowell corridor, some vacant and some occupied by business activities employing up to 250 people (see Table 4.11-9). The types of business activities currently located along the Lowell corridor include small manufacturers, artisans and crafts businesses, supply/storage/warehouse uses, and other industrial businesses (sound studio, furniture refinishing, etc.). Some of these types of business activities could be affected by new development in the future.

Relocation Implications for Businesses

The specifics of the timing of new development and the relocation needs of individual businesses are not yet known, and are not addressed in this program-level SEIR. However, possible relocation implications can be generally described for businesses that rent/lease space and those that own their properties, and for situations where the Agency may acquire properties for development.

The relocation issues for *businesses that rent/lease space* to be removed for new development would likely focus on locating comparable space at comparable rents, and covering the costs of relocation which can include expenses associated with searching for a new location, moving

costs, and costs associated with getting re-established at a new location. Such costs can be particularly difficult for small businesses. Businesses with longer-term leases would receive compensation for early termination of those leases and may be able to address relocation costs in those negotiations.

Businesses that own their properties would attempt to address relocation in the process of selling their properties. The objective for owners would be to try and obtain a sales price for their existing property that would cover the costs of a replacement property and improvements as well as the costs of moving and becoming re-established at a new location. The most difficulty for owner-occupants is likely to be finding another property of comparable size and location that is available for purchase. There could be adverse economic implications of relocation for some businesses and business owners, and there could be financial benefits in other cases, depending largely on sales prices for existing properties and ability to find comparable new business facilities and locations.

There is the *possibility that the Agency could acquire commercial/industrial properties*, through real estate negotiations or through the use of the powers of eminent domain as an option of last resort. If eminent domain were used, the Agency would have to comply with applicable relocation laws and requirements designed to assist displaced businesses. Relocation assistance to businesses could include help in finding a replacement location with a minimum of delay and loss of earnings, as well as monetary relocation payments for moving expenses, re-establishment expenses, personal property losses, and other costs pursuant to the California Relocation Assistance Act (Government Code Section 7260 *et seq.*), state relocation regulations, and other applicable rules and regulations. Relocation is specifically addressed in the *Redevelopment Plan for the Broadway/MacArthur/San Pablo Redevelopment Project* (Section III.F). As described in the previous assessment of displacement of housing, prior to displacement of residents or businesses in the Amendment Area as a result of activities undertaken by the Agency or under agreement with the Agency, the Agency would have to prepare a relocation plan that sets forth the procedures for notification, relocation assistance, and relocation payments as required by law.

Replacement Facilities Elsewhere in Oakland

The new development to be facilitated by the Proposed Amendments is anticipated to include more modern, industrial incubator space that may provide location options for some businesses that would have to relocate from their existing facilities. Up to 110,000 square feet of industrial incubator space is anticipated and could accommodate small manufacturers, artisans and crafts businesses, custom product design and sales, arts and music studios, and other businesses activities. There also is some existing industrial space in nearby locations in the vicinity of San Pablo Avenue that might provide location options.

Beyond the immediate areas, the City's General Plan designates areas for industrial uses along the I-880 corridor and San Leandro Street in East Oakland, and there is land along the waterfront that remains in industrial use. There also are location options for lighter industrial uses along the I-880 corridor, between I-880 and the Estuary, and in parts of West Oakland, including areas nearer Emeryville, along parts of Mandela Parkway, and to the west of the Jack London District

between the I-880 freeway and the Estuary. Thus, businesses relocating from the Amendment Area may be able to find other locations in Oakland. Businesses seeking centrally-located facilities nearby could increase demand for new or newly renovated industrial space in Oakland, thereby supporting the modernization of older areas designated to remain industrial and/or designated for business mix uses in the City's General Plan. There also could be options for relocation outside of Oakland, including locations along the I-880 corridor in San Leandro or Hayward/Union City, and along the I-80/580 corridors in Richmond.

Thus, the possible displacement of existing businesses and jobs from the Amendment Area would not necessitate construction of replacement facilities in excess of that anticipated in the City's General Plan. Further, while displacement of businesses with about 250 jobs is noteworthy, that does not represent "substantial" numbers in the context of a total of about 189,000 jobs citywide in 2010.

The effect of the development facilitated by the Redevelopment Plan, as Amended, is considered in analysis above, either as built or anticipated new employment-generation uses. Thus, the same effects would apply to the Project Area, as Amended. Thus, the same effects would apply to the Project Area, as Amended,. The impact would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* This determination is consistent with the discussion in the 2000 EIR, which acknowledges acquisition and demolition of existing property for redevelopment, and states that the Redevelopment Plan did not propose to displace and households or business activities that would then be forced to relocate elsewhere (2000 EIR, page 6-2). No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Inducement of Substantial Population Growth, Including Consideration of Indirect and Cumulative Project Effects

New Impact POP-3: Development facilitated by the Redevelopment Plan, as Amended, in combination with past, present, and reasonably foreseeable future projects, would not induce substantial population growth in a manner not contemplated in the General Plan, either directly by facilitating new housing or businesses, or indirectly through infrastructure improvements, such that additional infrastructure is required but the impacts of such were not previously considered or analyzed. (Less than Significant)

Cumulative Context

As described in Section 4.11.2, the analysis throughout this section considers the Amendment Area, the Existing Project Area, and surrounding parts of Oakland, as well as the citywide and regional context. This represents the cumulative geographic context for the cumulative analyses

presented throughout this section. Cumulative development includes all of the projects on Oakland’s Major Projects List as well as additional development to achieve the growth forecast for Oakland by the ABAG projections. This also includes the [four](#) major projects currently underway within the Existing Project Area, as well as the projects analyzed in the Oakland Housing Element, as discussed in the *Approach to Analysis*, above.

Impacts

Housing and Population Growth

Housing development facilitated by the Proposed Amendments could include up to 360 additional housing units in the Amendment Area, and accommodate growth of up to approximately 340 households and 830 residents. The housing development and population growth is consistent with Oakland’s General Plan, and is supported by General Plan Land Use and Housing Element policies and City zoning regulations.

The growth of households and population due to the Proposed Amendments would contribute to population growth expected in Oakland in the future. The amount of population growth anticipated because of the Proposed Amendments would account for less than one percent (0.7 percent) of total population growth projected for Oakland between 2010 and 2035, as shown in **Table 4.11-12**. When compared to *total* population anticipated in Oakland in 2035, the Proposed Amendments would have contributed much less than one percent (0.2 percent). Thus, the Proposed Amendments would not result in “substantial” population growth in comparison to the population growth and total population anticipated for Oakland in the future.

**TABLE 4.11-12
 POPULATION AND EMPLOYMENT GROWTH FACILITATED
 BY THE PROPOSED AMENDMENTS COMPARED TO FUTURE PROJECTIONS FOR OAKLAND**

| | Population | Employment |
|--|------------|------------|
| Growth Due to Amendments ^a | 830 | 40 |
| Growth in Oakland, 2010-2035 ^b | 111,830 | 97,000 |
| Amendment-related as Percent of City Growth | 0.7% | 0.04% |
| Total for City of Oakland, 2035 ^b | 542,500 | 285,600 |
| Amendment-related as Percent of City Total | 0.2% | 0.01% |

^a See Table 4.11-9.

^b ABAG, *Projections 2007*. See Table 4.11-3.

SOURCE: Hausrath Economics Group; Association of Bay Area Governments.

The Proposed Amendments would also facilitate development of up to 57 units of affordable housing due to the affordable housing production requirements under California redevelopment law (see Table 4.11-11). As described earlier in this section, 15 percent of total new housing units built in a redevelopment project area must be affordable to households of low- or moderate-income. With the Proposed Amendments, the Agency also would be required to allocate at least 20 percent of gross tax increment revenues from the Amendment Area to affordable housing (the

housing “set-aside”). The housing set-aside could be used to provide financial assistance for meeting the Agency’s 15 percent affordable housing production obligation. The affordable housing production obligation would apply on an areawide basis to the Project Area, as Amended. The affordable housing units to be facilitated by the Proposed Amendments could be included among the up to 370 new units anticipated in the Amendment Area or among the up to 3,180 units forecast for the San Pablo and Broadway/MacArthur subareas of the Existing Project Area. In either case, the housing development would be consistent with Oakland’s General Plan and General plan Land Use and Housing Element policies and City zoning regulations, and would not result in substantial population growth not otherwise contemplated.

If some of the housing set-aside funds were available for other affordable housing beyond the 15 percent production obligation, such funds could be used for additional affordable housing either inside or outside the Project Area, as Amended. Thus, it is possible that some additional affordable housing (beyond the 57 units assumed under the area housing production obligation) could be built in the Existing Project Area or elsewhere in Oakland as a result of the Proposed Amendments. If so, the additional affordable housing could be built in residential areas and locations identified for housing in the City’s General Plan Land Use and Housing Elements. Any additional affordable housing could be added within the growth already projected for Oakland in the ABAG projections for 2035.

Business and Employment Growth

Other development facilitated by the Proposed Amendments is anticipated to include up to 110,000 square feet of industrial incubator space and up to 90 live-work units, and would accommodate business activity with employment of approximately 290 jobs. As it is likely that some new development along the Lowell corridor (both residential and non-residential development) would replace older industrial structures, some occupied by business activity, there would be a net increase of business activity with approximately 40 jobs in new development in the Amendment Area as a result of the Proposed Amendments (see Table 4.11-9).

The growth of employment due to the Proposed Amendments would contribute to employment growth expected in Oakland in the future. The amount of employment growth anticipated because of the Proposed Amendments is small and would account for less than one percent (0.04 percent) of total employment growth projected for Oakland between 2010 and 2035 (see Table 4.11-12). When compared to *total* employment anticipated for Oakland in 2035, the Proposed Amendments would contribute a very small amount of employment (0.01 percent). Thus, the Proposed Amendments would not result in “substantial” employment growth in comparison to the employment growth and total employment anticipated for Oakland in the future.

Job-Induced Population Growth

The small amount of employment growth in development facilitated by the Proposed Amendments would support the growth of households and population to provide additional workers. The housing development facilitated by the Proposed Amendments, however, would accommodate a much larger number of additional workers, equivalent to almost 14 times the additional jobs. Cumulatively, citywide growth of employed residents in Oakland is projected to

exceed the growth of jobs over time (thereby improving the relationship of jobs and housing, as shown in Table 4.11-8). Thus, cumulatively, the substantial growth of housing and population anticipated to occur throughout the City could accommodate the number of additional workers due to the Proposed Amendments as well as the number of additional workers associated with other cumulative job growth.

Infrastructure-Induced Growth

The Proposed Amendments would facilitate urban infill development and the revitalization of activity in an older industrial enclave in North Oakland, located at the center of the large Bay Area region. The Amendment Area is well-served by existing transportation corridors and utility systems. Unlike industrial and residential development at an alternative location on vacant land in an outlying part of the region, the development and intensification of activity to be facilitated by the Proposed Amendments would occur in an already developed urban area and would not require construction or extension of new roads, utilities, and other infrastructure that might stimulate population growth in previously undeveloped areas.

Redevelopment activities to be facilitated by the Proposed Amendments are anticipated to include streetscape improvements focused along Lowell Street and Stanford Avenue to provide basic improvements that are lacking along these older industrial corridors. The improvements could include right-of-way adjustments, sidewalks, curbs, gutters, lighting, and other related improvements. These types of infrastructure improvements would address localized deficiencies and would not induce substantial additional population growth in other areas.

Summary

Therefore, due to: (a) the role of the Proposed Amendments in facilitating development and revitalization that would be consistent with Oakland's General Plan and that would meet objectives of the B/M/SP Redevelopment Plan, (b) the relatively small magnitude of Proposed Amendment-induced population and employment growth within the cumulative, citywide context, (c) the overall balance of growth of both jobs and housing anticipated in the Amendment Area and in Oakland in the future, and (d) the Amendment Area's location within an already developed part of Oakland, the Proposed Amendments would have a less-than-significant impact in inducing substantial population growth in a manner not anticipated by the General Plan, either directed by facilitating development of housing or businesses, or indirectly through infrastructure improvements.

The effect of the development facilitated by the Redevelopment Plan, as Amended, is considered in the analysis above, either as built or anticipated housing or new employment-generation uses. Also, the assessment of growth inducing impacts was presented in the 2000 EIR (page 6-12). Thus, the same effects would apply to the Project Area, as Amended,. Thus, the same effects would apply to the Project Area, as Amended,. The impact would result in a less-than-significant impact.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* This determination is consistent with the discussion in the 2000 EIR, which acknowledges acquisition and demolition of existing property for redevelopment activities, and that the redevelopment Plan did not propose to displace and households or business activities that would then be forced to relocate elsewhere (2000 EIR, page 6-2.) The 2000 EIR also assessed the potential for growth inducing impacts, and determined that the impact would be less than significant. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

4.11.6 References

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4.12 Public Services and Recreational Facilities

This section analyzes how the development facilitated by the Redevelopment Plan as Amended, may affect public services and recreational facilities. Specifically, this section describes existing public services and facilities in the Amendment Area. It also evaluates the potential impact of development facilitated by the Proposed Amendments, and as appropriate, the development facilitated by the Existing Redevelopment Plan on the delivery of public services, and possible adverse physical impacts on the environment that could result from a need to provide new or physically altered facilities. As necessary and appropriate, standard conditions of approval are identified. The analysis reviews police services, fire protection and emergency medical response, public schools, and parks and recreational facilities. Pursuant to CEQA Guidelines Section 15162 regarding an SEIR, this section also discusses whether there are any new or more severe significant impacts than those identified in the 2000 EIR that result from changed circumstances or new information.

4.12.1 2000 EIR and Existing Project Area

Public services were evaluated in the Public Services and Utilities chapter of the 2000 EIR (Chapter 4.E). The 2000 EIR included a detailed description of police and fire protection services; emergency medical response services; public schools; and parks, streets and roads available for the Existing Project Area at the time.

The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Also, changes that have occurred to the public services and recreation facilities setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

Because the only new impacts regarding the Redevelopment Plan, as Amended, are associated with the Proposed Amendments and would not involve any new significant impacts with respect to the Existing Project Area, the remainder of this Public Services Environmental Setting, and Regulatory Setting, and Impacts and Mitigation Measures analysis herein focuses primarily on the Amendment Area and the additions/changes related to the Proposed Amendments, although part of the setting discussion pertains to the City of Oakland at-large.

4.12.2 Environmental Setting for the Amendment Area

Police Services

The Oakland Police Department (OPD), headquartered at 455 7th Street in downtown Oakland approximately two and one half miles south of the Amendment Area, provides police services in the City. The Eastmont substation at 2671 73rd Avenue also provides police services. The Police Department currently employs over 650 sworn police officers and a civilian staff of over 350 persons (OPD, 2011). The City is geographically divided into 57 community policing beats and 35 patrol beats. Neighborhood service coordinators are civilian employees who serve as a

liaison between the community and the Police Department, and work with residents, businesses, schools, and other institutions to set priorities and develop strategies to improve public safety and reduce crime. Each neighborhood service coordinator handles multiple patrol beats.

The Amendment Area is primarily located within patrol beat 10X. This beat comprises the area bounded by the Oakland borders with Emeryville to the south and west, Berkeley to the north, and Market and California streets to the east. A few parcels in within the Amendment Area between 57th and 59th streets north of Market Street fall within patrol beat 10Y (OPD, 2008).

All emergency and non-emergency calls for police services are received through the Police Department's communications center located at 1701 Edgewater Drive. Calls for fire and medical services are routed to the Oakland Fire Department for dispatching. Priorities for responding to police calls are set by a computer-aided dispatch system that may be overridden by dispatchers. Police officers are dispatched from the police communications center by radio and/or laptop computers mounted in police vehicles.

There were 1,592 violent crimes, including 252 shootings and 24.5 homicides, per 100,000 population in 2009. Generally, the more dense neighborhoods between I-880 and I-580 report higher rates of violent crimes than areas north of I-580 (OPD, 2010).

The Police Department's response times to calls for police services are recorded for the City of Oakland as a whole; the Police Department does not track response times for individual service areas. Response times generally reflect the perceived seriousness of the call. The Police Department ranks incoming calls for police services as follows: Priority 1 means imminent danger of death or serious injury, felonies in progress, or serious public health hazards; Priority 2 refers to disputes with potential for violence, misdemeanor crimes in progress, stolen vehicle reports, and similar matters; and Priority 3 calls are reports of incidents that do not present danger to life or property. In 2009, OPD on average responded to Priority 1 calls in 14.8 minutes, 71 minutes for Priority 2 calls, and 148.3 minutes for Priority 3 calls. These response times did not meet Oakland's goals of 5 minutes for Priority 1 calls, between 10 and 15 minutes for Priority 2 calls, and 30 minutes for Priority 3 calls (OPD, 2010).

Fire Protection and Emergency Medical Services

The Oakland Fire Department (OFD) provides fire protection services and emergency medical services throughout the City. OFD operates 25 fire stations, including the Airport. The Department maintains 24 engine companies with approximately four personnel per engine, four truck companies with four personnel per truck, and three truck companies with five personnel per truck. Total Operations Division staffing consists of 500 uniformed personnel. The actual number of assigned personnel per station depends on the needs of that station. All personnel are trained as Paramedics or Emergency Medical Technicians (OFD, 2011).

The fire stations closest to the Amendment Area are Fire Station 8, located less than one mile east of the Amendment Area at 463 51st Street, and Fire Station 5, located less than one mile south of the Amendment Area at 934 34th Street (OFD, 2010).

In addition to firefighting and emergency medical response capabilities, the Fire Department also has a hazardous materials unit that operates from Station 3 at 1445 14th Street and responds citywide to emergencies involving hazardous materials (OFD, 2011).

The Oakland Fire Department Dispatch Center is located in downtown Oakland and is responsible for fire and medical emergency coordination and response. The Fire Department Dispatch Center receives approximately 58,000 calls for response annually, of which 80 percent are medical in nature (OFD, 2011). The Fire Department's response time goal is seven minutes or less, 90 percent of the time.

Public Schools

School Facilities and Attendance

The Oakland Unified School District (OUSD) operates the public school system in the City of Oakland. The OUSD administers 77 elementary schools, 19 middle schools, one junior high school, 31 high schools, and two K-12 schools. It is also responsible for three alternative schools, two special education schools, three continuation schools, three community day schools, and one opportunity schools (Ed-data, 2010).

The OUSD divides the City into three regional zones to manage resources. The Amendment Area is located within Region 1, West Oakland. There are 20 Elementary and 5 Middle schools serving Region 1 (OUSD, 2011). There are two elementary schools within the Amendment Area: the Santa Fe Elementary School at 915 54th Street in the southeast portion of the Amendment Area and the Civicorps Elementary Charter School at 1086 Alcatraz Avenue in the north end of the Amendment Area (OUSD, 2010a). In addition, the Berkeley Maynard Academy Elementary Charter School is just west of the Amendment Area at 6200 San Pablo Avenue. The Claremont and West Oakland middle schools and the Oakland International and Oakland Tech high schools are closest to the Amendment Area.

The District's overall enrollment peaked in 1999 at 55,000, dropping to 39,000 by 2007. Enrollment continued to decline by more than 3,000 students, and it is projected to continue to decline (OUSD, 2005; 2010b).

The Leroy F. Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50), authorizes school districts to levy developer fees to finance the construction or reconstruction of school facilities. In January 2010, the State Allocation Board (SAB) maintained Level 1 Fees at \$0.47 per square foot of enclosed and covered space in any commercial or industrial development and \$2.97 per square foot for residential development (SAB, 2010). These fees are intended to address the increased educational demands on the school district resulting from new development. Public school districts can, however, impose higher fees than those established by the SAB, provided they meet the conditions outlined in the act. Private schools are not eligible for fees collected pursuant to SB 50.

Parks and Recreational Facilities

The City of Oakland's Office of Parks and Recreation manages the City's parks and recreation centers within the city boundaries. Oakland's Public Works Agency maintains the park facilities. Oakland has approximately 5,219 acres of parkland, including 1,118 acres that are within the East Bay Regional Parks District (EBRPD), which is around 12.9 acres of parkland per 1,000 residents, based on a population of 404,155. Oakland also has 73 playgrounds, resulting in 1.8 playgrounds per 1,000 residents. The Office of Parks and Recreation employs a staff of 608, or about 15 workers for every 1,000 residents (Trust for Public Land, 2010).

The Oakland General Plan's Open Space, Conservation and Recreation (OSCAR) Element categorizes Oakland's parks by size and intended service area. Generally, local-serving parks "meet the active recreational needs of the community" surrounding the park, rather than the City as a whole (Oakland, 1996). The OSCAR Element divides the City into 12 strategic Planning Areas to identify existing resources and recommend specific priorities for smaller geographic areas. The Amendment Area falls within the 2,324-acre North Oakland Planning Area which has 1.18 acres of local serving parks per 1,000 residents. This is below the City's adopted standard for local park space is 4.0 acres per 1,000 residents, as stated in the General Plan (1996).

There are no public parks within the Amendment Area. However, Emeryville's 0.7 acre Temescal Creek Park lies along a portion of the Amendment Area's southern border. The 1.25-acre Doyle Hollis Park is also within Emeryville and is just over one quarter mile west of the Amendment Area (City of Emeryville, 2011). To the east, Dover Street Park is within one half mile of the Amendment Area. Slightly further east and within one mile of the Amendment Area, Bushrod Park offers over 10 acres of park, recreation center and community gardens (Office of Parks and Recreation, 2010). Berkeley's 3-acre Grove Playground and 13-acre San Pablo Park are just over one half mile north of the Amendment Area. Berkeley's Aquatic Park includes over 30 acres of parkland and is within one mile of the Amendment Area (City of Berkeley, 2011).

The City's Office of Parks and Recreation also operates several community-based centers located throughout the City. The centers offer various public recreation, programs, including sports, arts and crafts, culture arts and dance, computer lab, drama, mentoring, general learning, and after-school activities. Although there are no recreation centers within the Amendment Area, the 3.7-acre Golden Gate Recreation Center, which includes a community garden and playground, is located along the Amendment Area's western border at 1075 62nd Street (Office of Parks and Recreation, 2010).

The EBRPD, although responsible primarily for acquiring and developing regional parks, open spaces, and regional trails throughout the East Bay, also provides open space and recreational facilities within Oakland's city limits. EBRPD parks in Oakland include the 271-acre Leona Canyon Regional Open Space Preserve, the 1,220-acre Martin Luther King, Jr. Regional Shoreline Park, the 660-acre Robert Sibley Volcanic Regional Preserve, and the 100-acre Roberts Regional Recreational Area (Trust for Public Land, 2010).

4.12.3 Regulatory Setting

Local Plans and Policies

City of Oakland General Plan

Policies contained in the Oakland General Plan pertain to the various public services and recreation:

- *Policy N.12.1:* The development of public facilities and staffing of safety-related services, such as fire stations, should be sequenced and timed to provide a balance between land use and population growth, and public services at all times.
- *Policy N.12.2:* Adequate public school capacity should be available to meet the needs of Oakland's growing community. The City and the Oakland Unified School District (OUSD) should work together to establish a continuing procedure for coordinating residential and commercial development and exploring the imposition of mutually agreed upon reasonable and feasible strategies to provide for adequate school capacity. The City and OUSD should jointly consider, where feasible and appropriate, funding mechanisms such as assessment districts, redevelopment Agency funding (AB1290), uses of surplus City-owned land, bond issues, and adjacent or shared use of land or school facilities with recreation, libraries, child care and other public uses.
- *Policy N.12.5:* In its capital improvement and public service programs, the City should give priority to reducing deficiencies in, and disparities between, existing residential areas.
- *Policy FI-1:* Maintain and enhance the city's capacity for emergency response, fire prevention and fire fighting.
- *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-3.3:* Consider a range of factors when locating new parks or recreational facilities, including local recreational needs, projected operating and maintenance costs, budgetary constraints, surrounding land uses, citizen wishes, accessibility, the need to protect or enhance a historic resource, and site visibility.
- *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.

In addition, the park and recreation portion of the OSCAR Element contains the following principles applicable to the development facilitated by the Proposed Amendments:

- 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.
- 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 National Recreation and Park Association has developed the following method to calculate what is best for the individual city or community. The new guidelines address three particularly important social changes in the last decade:

- the need to accommodate different cultures;
- the need to include citizen opinion in the process;
- the identification of the wellness movement.

Most significantly, though, is a fourth change: the establishment of level of service standards (LOS) and the recognition that the residents of each community should be given the right to determine the size and use of land set aside for parks and recreation facilities.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The City of Oakland SCA relevant to public services are listed below. All applicable SCAs would be adopted as conditions of approval for the projects facilitated by the Redevelopment Plan, as Amended, to reduce significant impacts to public services. The SCA's are incorporated and required as part of development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures.

The City's SCAs relevant to public services impacts are shown below.

- **SCA 4: Conformance with other Requirements**

Prior to issuance of a demolition, grading, P-job, or other construction related permit

- a. The project applicant shall comply with all other applicable federal, state, regional and/or local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Building Services Division, the City's Fire Marshal, and the City's Public Works Agency. Compliance with other applicable requirements may require changes to the approved use and/or plans. These changes shall be processed in accordance with the procedures contained in SCA 3, *Scope of This Approval, Major and Minor Changes*.
- b. The applicant shall submit approved building plans for project-specific needs related to fire protection to the Fire Services Division for review and approval, including, but not limited to automatic extinguishing systems, water supply improvements and hydrants, fire department access, and vegetation management for preventing fires and soil erosion.

- **SCA 5: Conformance to Approved Plans; Modification of Conditions or Revocation**

Ongoing

- a. Site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60-90 days of approval, unless an earlier date is specified elsewhere.
- b. The City of Oakland reserves the right at any time during construction to require certification by a licensed professional that the as-built project conforms to all

applicable zoning requirements, including but not limited to approved maximum heights and minimum setbacks. Failure to construct the project in accordance with approved plans may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension or other corrective action.

- c. Violation of any term, conditions/mitigation measures or project description relating to the Approvals is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approvals or alter these conditions/mitigation measures if it is found that there is violation of any of the conditions/mitigation measures or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions. The project applicant shall be responsible for paying fees in accordance with the City's Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Conditions of Approval.
- **SCA 71: Fire Safety Phasing Plan**
Prior to issuance of a demolition, grading, and/or construction and concurrent with any p-job submittal permit; the project applicant shall submit a separate fire safety phasing plan to the Planning and Zoning Division and Fire Services Division for their review and approval. The fire safety plan shall include all of the fire safety features incorporated into the project and the schedule for implementation of the features. Fire Services Division may require changes to the plan or may reject the plan if it does not adequately address fire hazards associated with the project as a whole or the individual phase.

4.12.4 Impacts and Mitigation Measures

Significance Criteria

The Redevelopment Plan, as Amended, would have a significant impact on the environment if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:
 - Fire protection;
 - Police protection;
 - Schools; or
 - Other public facilities.
2. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
3. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Approach to Analysis

Prior to approval of any project that is facilitated by the Redevelopment Plan, as Amended, the project would be subject to project-level environmental review as well as the SCAs and the goals and policies of the City's General Plan as outlined above.

The 2000 EIR analyzed the potential environmental effects on public services and recreation facilities and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As previously indicated in Section 4.12.1, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes that have occurred to the public services and recreation facilities setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

The approach to the analysis herein compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.¹ Based on the information in each of the aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding public services and recreation facilities relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for these topics. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of public services and recreation facilities in the Existing Project Area in this SEIR. Therefore, the impact discussions and analyses below focus on the activities facilitated by the Proposed Amendments and the potential for public services and recreation facilities impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes that have occurred to the environmental setting since the 2000 EIR are also evaluated as “past, present or reasonably foreseeable” projects and accordingly, are considered in the cumulative analysis in this SEIR (see New Impact PSR-5).

The increases in population and land use intensity that would be facilitated by the Proposed Amendments were evaluated based on the web-based information regarding the various public services agencies with jurisdiction over the Amendment Area and their service capabilities, service ratios, response times, performance objectives, etc. Additionally, the development facilitated by the Proposed Amendments was evaluated for conformity with the goals, objectives and policies of the General Plan related to public services and recreation.

¹ Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

To ensure overall conformance within the SEIR, and to reflect City of Oakland's *Thresholds/ Criteria of Significance Guidelines* (initially established in 2008) and new City requirements and analysis methods, such as the incorporation of the City's *Standard Conditions of Approval and Uniformly Applied Development Standards* established since the 2000 EIR, this SEIR updates or replaces some of the impact conclusions and mitigation measures in the 2000 EIR. In accordance with CEQA Guidelines Section 15163, the SEIR contains only the information necessary to make the 2000 EIR adequate for the Redevelopment Plan, as Amended.

Impacts

Fire Protection and Emergency Response Impacts

Updated Impact E.1 (PSR): Development facilitated by the Redevelopment Plan, as Amended, could result in an increase in calls for fire protection and emergency medical response services, but would not require new or physically altered fire protection facilities in order to maintain acceptable performance objectives. (Less than Significant)

Fire Protection and Emergency Response within the Existing Project Area were discussed in the 2000 EIR (Chapter 4.E, impact statements E.1 and E.1), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to public services has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City's current SCAs, significance criteria and approach to assessing public services effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

The increase in development intensity and overall density in the Amendment Area could result in an increase in demand for fire protection and emergency services. Adherence to General Plan Policies N.12.1, N.12.5, and FI-1, as well as the SCAs described above, by the City during review of individual development projects would reduce the potential for service deficiencies and related impacts. Further, individual projects, when they are proposed, would be subject to project-specific environmental review as needed and appropriate, to assess their potential impacts. As such, it is anticipated that the Proposed Amendments would have a less-than-significant impact on fire protection and emergency medical response services.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant effect on fire prevention services identified in the 2000 EIR. Adherence to the General Plan policies and SCAs discussed above would be required, and the development facilitated by the Redevelopment Plan, as Amended, would result in a less-than-significant impact at a program level.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion, but Previous Mitigation Measure Replaced by New SCA.* The conclusions regarding the potential impact to the provision of fire protection services is substantially the same as identified in the 2000 EIR. Impact statement E.2

from the 2000 EIR is eliminated and impact statement E.1 from the 2000 EIR is updated to conform to current criterion and to this SEIR. New SCAs apply and are consistent with and update the 2000 analysis. The new SCA replaces the 2000 Mitigation Measure E.1 regarding project specific fire protection systems. No new significant environmental effects or substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Recreation Impacts

Updated Impact E.3 (PSR): Development facilitated by the Redevelopment Plan, as Amended, could increase the use of existing neighborhood and regional parks, including Mosswood Park and the Golden Gate Recreation Center, but not to the extent that substantial physical deterioration of the facilities would occur or be accelerated. (Less than Significant)

Recreational resources within the Existing Project Area were discussed in the 2000 EIR (Chapter 4.E, impact statements E.3 and E.4), and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to public services has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing public services effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

The Proposed Amendments would facilitate development that would increase residential population in the Amendment Area. These additional residents would increase demand for, and use of, neighborhood parks surrounding the Amendment Area, as well as regional parks serving the East Bay area. As stated above, the North Oakland Planning Area of the City currently has about 1.18 acres of local parkland per 1,000 residents, which is below the 4.0-acres per 1,000 residents standard. Growth and development facilitated by the Proposed Amendments would generate an increased demand for existing parkland, which would be incremental over the effective period of the Redevelopment Plan, as Amended.

Adherence to General Plan Policies REC-3.1, REC-3.3, and REC-10.2, described above, would reduce potential impacts to recreational facilities. Individual projects would be required to undergo subsequent environmental review as needed and appropriate, at which time project-specific impacts to the parkland ratio would be determined, and projects may be modified to meet some of the anticipated demand. Some of these projects could be required to provide new recreational resources to avoid disrupting conflict with the above General Plan Policies and avoid the accelerated deterioration of existing resources.

The potential construction of new recreational resources facilitated by the Proposed Amendments as mitigation for individual projects will be analyzed subsequently at the project-specific level, as needed. The impact would be less than significant.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant effect on recreational facilities identified in the 2000 EIR. Adherence to the General Plan policies discussed above would be required, and the development facilitated by the Proposed Redevelopment Plan, as Amended, would result in a less-than-significant impact at a program level.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion, but Previous Mitigation Measure Revised.* The conclusions regarding the potential impact to recreational resources is substantially the same as identified in the 2000 EIR. Impact statement E.4 from the 2000 EIR is eliminated and impact statement E.3 from the 2000 EIR is updated to conform to current criterion and to this SEIR. Existing requirements effectively replace the 2000 Mitigation Measure E.4 regarding minimum open space requirements. No new significant environmental effects or substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Police Services Impacts

Updated Impact E.5 (PSR): Development facilitated by the Proposed Amendments Redevelopment Plan, as Amended, could result in an increase in calls for police service in the Project Area, as Amended, but would not require new or physically altered police facilities in order to maintain acceptable performance objectives. (Less than Significant)

The provision of police protection services within the Existing Project Area is discussed in the 2000 EIR (Chapter 4.E) and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to public services has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing public services effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

New construction facilitated by the Proposed Amendments would increase development intensity and overall density in the Amendment Area, specifically in the Lowell Avenue corridor. The related population increase could result in an increase in reported crimes. However, adherence to General Plan Policies N.12.1 and N.12.5, described above, by the City during review of individual development projects would reduce the potential for project-related service deficiencies. Further, individual projects, when they are proposed, would be subject to project-specific environmental review to assess their potential impacts to police facilities and performance objectives. Although a population increase could result in an increase in reported crime, the combination of redevelopment activities facilitated by the Proposed Amendments including streetscape, façade, utility and infrastructure improvements; site remediation; new

construction, and rehabilitation of existing structures; would serve to revitalize the community and could result in a reduction in criminal activity within the Amendment Area.

Therefore, development facilitated by the Proposed Amendments would not result in an increased demand for police services such that new or physically altered police facilities would be required, the construction of which could have significant environmental effects. As such, the development facilitated by the Proposed Amendments would have a less-than-significant impact on police services.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant effect on police services identified in the 2000 EIR. Adherence to the General Plan policies discussed above would be required, and the development facilitated by the Proposed Redevelopment Plan, as Amended, would result in a less-than-significant impact at a program level.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusions regarding the potential impact to the provision of police protection services is substantially the same as identified in the 2000 EIR. The impact statement from the 2000 EIR is updated to conform to current criterion and to this SEIR. No new significant environmental effects or substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Public Schools Impacts

Updated Impact E.6 (PSR): Development facilitated by the Redevelopment Plan, as Amended, could add an estimated 537 new students for local schools, but would not require new or physically altered school facilities to maintain acceptable performance objectives. (Less than Significant)

School facilities within the Existing Project Area are discussed in the 2000 EIR (Chapter 4.E) and the impact was determined to be less than significant. As discussed in the *Approach to Analysis*, above, no substantial change to public services has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing public services effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

In June 2011, the Redevelopment Agency completed a School Impact Analysis for the California Department of Finance (City of Oakland, 2011). The analysis conservatively estimated the development facilitated by the Proposed Amendments could potentially increase student enrollment at local schools by approximately 324 new students. These new students would be added to the district-wide enrollment incrementally over the effective period of the Redevelopment Plan, as

Amended. Additionally, new students would be distributed among the schools serving OUSD's Region 1, thereby reducing substantial enrollment impacts to any one school.

Given the continuing, and projected continued, declining student enrollment in OUSD schools, the district would have adequate capacity within its existing facilities to accommodate new students generated by projects constructed pursuant to the Redevelopment Plan, as Amended. Moreover, development facilitated by the Proposed Amendments requiring discretionary review would be subject to CEQA as needed and appropriate, and their impacts to public school facilities would be analyzed at the project-specific level. At that time, adherence to General Plan Policy N.12.2, described above, would reduce the potential for impacts to school facilities associated with increased enrollment.

Pursuant to Senate Bill 50 (SB 50), applicants for individual development projects facilitated by the Proposed Amendments would be required to pay school impact fees established to offset potential impacts from new development on school facilities. Therefore, although new development facilitated by the Proposed Amendments could indirectly increase resident populations and potential student enrollment in Oakland, payment of fees mandated under SB 50 is the mitigation measure prescribed by the statute, and payment of such fees is deemed full and complete mitigation. Therefore, no additional mitigation would be required.

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the less-than-significant effect on public school facilities identified in the 2000 EIR. A total of 213 new students were estimated in the 2000 EIR analysis (Impact E.6), therefore, the effect of the Proposed Redevelopment, Plan as Amended, would be approximately 537 new students. Adherence to the General Plan policies discussed above would be required, and SB 50 would continue to apply and mitigate the potential effects of potential new student enrollment in Oakland resulting from development facilitated by the Proposed Redevelopment Plan, as Amended. The impact regarding public school facilities at a program level would be a less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *Same Impact and Conclusion.* The conclusion regarding the potential impact to the public school facilities is substantially the same as identified in the 2000 EIR. The impact statement from the 2000 EIR is updated to conform to current criterion and to this SEIR. No new significant environmental effects or substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Cumulative Impacts

New Impact PSR-5: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects within and around the Project Area, as Amended, would result in a cumulative increase in demand for police, fire, and school services. (Less than Significant)

Geographic Context

The cumulative geographic context for public services considerations for the activities facilitated by the Redevelopment Plan, as Amended, consists of the Project Area, as Amended, in addition to all areas of the City since public services and recreation facilities are provided citywide.

The development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended. Changes to the public services setting that have occurred since preparation of the 2000 EIR are included in the “past, present or reasonably foreseeable” projects and are accordingly considered in the cumulative analysis. As discussed in the *Approach to Analysis*, above, no substantial change to public services has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing public services effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Impacts

Cumulative development within the Amendment Area boundaries, combined with cumulative development (which considers those projects in the Major Projects List in Appendix B to this Draft SEIR, and discussed in Section 4.09, *Cumulative Context*, in the front of Chapter 4 of this Draft SEIR), would increase demand for police and fire protection services. These developments, however, would provide additional tax revenue and other development fees that would go toward paying for increased public services. Individual projects would be analyzed for their potential project-specific impacts to this demand. Adherence to the General Plan policies listed under Updated Impacts E.5 (PSR) and E.1(PSR) would reduce the potential for significant impacts. In combination with projects facilitated by the Proposed Amendments, cumulative development would result in a less-than-significant cumulative impact on police and fire services.

Regarding schools, as stated above under Updated Impact E.6 (PSR), OUSD has experienced substantially decreased enrollment over the decade, and enrollment is anticipated to continue decreasing. In addition, pursuant to Senate Bill 50 (SB 50), individual project applicants would be required to pay school impact fees established to offset potential impacts from new development on school facilities. Considering the declining enrollment trends and forecasts, the Proposed Amendments, in combination with past, present and reasonably foreseeable future projects, would not result in the need for new or physically altered school facilities and the impact would be less than significant.

This analysis of the Redevelopment Plan, as Amended, in addition to other cumulative development, considers the effects described above for the Amendment Area, in combination with the less-than-significant impact regarding public services identified in the 2000 EIR. As discussed above, development facilitated by the Proposed Redevelopment Plan, as Amended, in addition to other cumulative development, would provide additional revenues and fees that would address increased demand for public services, and project-specific effects to public services demand would be assessed, adhere to applicable SCAs. Therefore, the impact of cumulative effects related to public services from development facilitated by the Proposed Redevelopment Plan, as Amended, would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less Than Significant Impact and Conclusion.* The conclusions regarding the potential for a cumulative impact related to public services is a new impact not previously identified or analyzed in the 2000 EIR, except for the potential cumulative fire services protection impact discussed in Impact E.7, below. New SCAs apply and update the 2000 EIR. No new significant environmental effects or substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

New Impact PSR-6: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, would result in an increased demand for recreational facilities. (Less than Significant)

Geographic Context

The cumulative geographic context for recreation considerations for the activities facilitated by the Redevelopment Plan, as Amended, consists of the Project Area, as Amended, in addition to all areas of the City since public services and recreation facilities are provided citywide.

The development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended. Changes to the public services setting that have occurred since preparation of the 2000 EIR are “past, present or reasonably foreseeable,” projects that are considered in the cumulative analysis in this SEIR. As discussed in the *Approach to Analysis*, above, no substantial change to public services has occurred that would warrant further analysis of the Existing Project Area in this SEIR. Therefore, the discussion that follows focuses on effects of the Proposed Amendments; considers the City’s current SCAs, significance criteria and approach to assessing public services effects under CEQA; and concludes with the impact of the Redevelopment Plan, as Amended.

Impacts

As stated above, the City's goal is to provide 10 acres of total parkland and 4 acres of local-serving parkland per 1,000 residents, and the North Oakland Planning Area currently has 1.18 acres of local parkland per 1,000 residents. The Proposed Amendments would facilitate population growth, which would be combined with other growth in the vicinity to further reduce the 1.18-acre ratio. The growth in the vicinity could result from projects included in the Major Projects List in Appendix B to this Draft SEIR, and discussed in Section 4.09, *Cumulative Context*, in the front of Chapter 4 of this Draft SEIR. Therefore, growth facilitated by the Proposed Amendments, in combination with other past, present, and reasonably foreseeable future projects in the Amendment Area and vicinity, would contribute to a cumulatively considerable deficit of local-serving parkland per resident. Environmental review for the construction of new park and recreation facility expansion required as mitigation for individual projects would be conducted on a project-specific basis as needed and appropriate. This would ensure that services to accommodate current and future growth could be reasonably provided within the cumulative context.

The Redevelopment Agency's adherence to the General Plan policies REC-3.1, REC-3.3, and REC-10.2, described above, would reduce the potential impacts of projects facilitated by the Proposed Amendments. Therefore, the effect of the development facilitated by the Proposed Amendments, in combination with other foreseeable development, would not be cumulatively significant.

This analysis of the Redevelopment Plan, as Amended, in addition to other cumulative development, considers the effects described above for the Amendment Area, in combination with the less-than-significant impact regarding recreation facilities identified in the 2000 EIR (Impact E.3). As discussed above, development facilitated by the Proposed Redevelopment Plan, as Amended, in addition to other cumulative development, would increase the demand for parks and recreational facilities. Project-specific environmental review of future developments, as well as adherence to General Plan policies and applicable SCAs by future developments, would reduce the potential adverse effects of increased demand. Therefore, the impact of cumulative effects related to recreational facilities from development facilitated by the Proposed Redevelopment Plan, as Amended, would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less Than Significant Impact and Conclusion.* The conclusions regarding the potential for a cumulative impact related to recreational resources is a new impact not previously identified or analyzed in the 2000 EIR. New SCAs apply and update the 2000 EIR. No new significant environmental effects or substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

2000 EIR Impacts Replaced or that Require No Further Analysis in this SEIR

The 2000 EIR identified the following impacts that, while applicable to the CEQA analysis for the Redevelopment Plan when that EIR was prepared, are no longer applicable to current CEQA analysis approaches conducted by the City of Oakland. Some of these impacts and mitigation measures are carried forward from the 2000 EIR (and are included in the summary table of impacts in Chapter 2, *Summary*), particularly to ensure consideration of previously identified mitigation measures approved for the Existing Redevelopment Plan in the Existing Project Area and that may still be relevant (even if not warranted).

The impacts and mitigation measures are listed below and may reflect minor revisions made for clarity and consistency within the context of this SEIR, for example, topic designators, e.g., “(PSR)” or references to distinguish that the impact is pertinent to the “Existing Project Area” analyzed in the 2000 EIR. (Revisions are shown in Appendix G to this SEIR in underlined/strikeout format.)

- **Impact E.2 (PSR): The project could result in an incremental increase in ambulance service calls in the Existing Project Area. However, project operations would not require substantial changes in ambulance provider staffing or equipment. (Less than Significant)**

This impact is addressed by Updated Impact E.1 (PSR), consistent with current City significance criteria and approach to CEQA documents. Impact E.2 no longer applies to the project.

- **Eliminated Impact E.4 (PSR): The proposed project could result in a lack of adequate open space and recreational opportunities for residents of new housing developments in the Existing Project Area. (Potentially Significant)**

Mitigation Measure E.4 (PSR): Residential developments constructed as part of the Redevelopment Plan, as Amended, must provide the minimum open space required by the Zoning Regulations, with no variances, conditional use permits, or planned unit development applications granted by the City that would reduce the required open space. All residential developments of ten units or more must, in consultation with City staff, provide secure recreational areas, and a grassy open space that can be used by residents.

Significance after Mitigation: Less than Significant

Impact E.4 (PSR) (and its supporting discussion in the 2000 EIR) addresses a significance criterion that does not address the physical environmental effects under CEQA. The topic is not included in the City of Oakland’s Thresholds/Criteria of Significance Guidelines. Mitigation Measure E.4 is being eliminated because compliance with applicable zoning requirements, including but not limited to Usable Open Space Standards (OMC Section

17.126) and Design Review Procedures (OMC Section 17.136) addressed any potentially significant impact. This mitigation measure is therefore eliminated.

- **Updated Impact E.7 (PSR): Together with other existing and reasonably foreseeable future development in the vicinity in Oakland, the Redevelopment Plan, as Amended, would contribute to cumulative demand for increased fire protection services. (Potentially Significant)**

Mitigation Measure E.7 (PSR): Cumulative demand for fire protection services in Oakland would be mitigated to less than significant levels through individual project planning, design, and approvals, and, if necessary, through the expansion of fire protection services, through the use of tax increments funds, to accommodate growth.

Significance after Mitigation: Less than Significant

Impact E.7 (PSR) (and its supporting discussion in the 2000 EIR) addresses a significance criterion that has been updated to specifically address physical environmental effects under CEQA. The topic is addressed appropriately in New Impact PSR-5 (above) and determined to be less than significant with no mitigation measure required. Although Mitigation Measure E.7 will remain in this SEIR, is effectively consistent with the discussion in New Impact PSR-5 that future developments under the Redevelopment Plan, as Amended, would provide additional tax revenue and other development fees that would go toward paying for increased public services that may be warranted by cumulative development. Individual projects would be analyzed for their potential project-specific impacts to this demand in accordance with the current applicable thresholds/significance criteria.

4.12.5 References

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4.13 Transportation and Circulation

This section describes the transportation, circulation, and parking conditions, including transit services and pedestrian and bicycle facilities in the Amendment Area and its vicinity, and provides an analysis of the potential impacts of the development that would occur under the Proposed Amendments, in addition to the Existing Redevelopment Plan, considering the 2000 EIR analysis.

4.13.1 2000 EIR and Existing Project Area

Transportation and Circulation were evaluated in the 2000 EIR (Chapter 4.B). The 2000 EIR described the roadway network, transit services, bicycle and pedestrian facilities, and intersection “Level of Service” (LOS) for the Existing Project Area and surroundings.

The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Changes that have occurred to the transportation and circulation setting since preparation of the 2000 EIR and relevant primarily to the Amendment Area and the Proposed Amendments are included in the analysis in this SEIR.

There have been updates to regulatory conditions since preparation of the 2000 EIR, including the City’s *Bicycle Master Plan Update* (2007) and *Pedestrian Master Plan* (2002), as well as updates to similar plans by the cities of Berkeley and Emeryville (2005 and 2011, respectively). In addition to anticipated, periodic updates to industry standards and/or methods regarding the regional and local street network (ACCMA, 2010), traffic volumes (Caltrans, 2010b and 2011), trip generation rates, (ITE, 2008), and the approach to parking effects under CEQA, for example. Current regulatory setting information, which applies to the Amendment Area as well as the Existing Project Area, is addressed herein. These regulatory changes update the 2000 EIR and are not changed circumstances or new information with respect to the Existing Redevelopment Plan or Existing Project Area pursuant to CEQA Guidelines Section 15162.

Physical conditions have also occurred since the 2000 EIR and include limited roadway and development changes and improvements in the Existing Project Area. Some of these changes to physical conditions are identified, assessed and/or the result of mitigation measures identified in other EIRs certified for approved major projects in the Existing Project Area (see *Approach to Analysis* in Section 4.13.4, below). Circulation changes around the intersection of Broadway and MacArthur Boulevard (associated with the Kaiser Permanente Oakland Medical Center Project) are a primary example.

Because the only new impacts regarding the Redevelopment Plan, as Amended, are associated with the Proposed Amendments and would not involve any new significant impacts with respect to the Existing Project Area, the Traffic and Circulation Environmental Setting, and Regulatory Setting, and Impacts and Mitigation Measures analysis herein focuses primarily on the Amendment Area and the additions/updated related to the Proposed Amendments. Further, only minor additions/changes are necessary to make the previous EIR adequately apply to the

Redevelopment Plan, as Amended (i.e., an assessment of transportation and circulation impacts specific to the Amendment Area). For the reasons summarized above, this assessment evaluated the impacts of development that would be facilitated by the Proposed Amendments along the Lowell Street corridor only, which is referred to in this chapter as the “Project Study Area” and shown in **Figure 4.13-1**. The Figure 4.13-1 shows the Amendment Area, the Existing Project Area, and the local and regional street system.

4.13.2 Environmental Setting

The existing transportation-related context in which development facilitated by the Proposed Amendments would be developed as described below, beginning with a description of the Project Study Area (described below) and the street network in the Amendment Area and vicinity. Existing transit service, and bicycle and pedestrian facilities are also described. Intersection level of service is then defined, and current conditions summarized. This subsection also discusses planned transportation improvements in the vicinity as well as the applicable planning policies.

Project Study Area

Traffic operations at 17 intersections in the Amendment Area and vicinity (listed below) were evaluated during the weekday morning (AM) and evening (PM) peak periods under Existing, 2015 and 2035 conditions.

1. Alcatraz Avenue/Sacramento Street (Berkeley)
2. 63rd Street/Lowell Street/Market Street (Oakland)
3. Powell Street/Christie Avenue (Emeryville)
4. Powell Street/Hollis Street (Emeryville)
5. Stanford Avenue/San Pablo Avenue (Oakland)
6. Stanford Avenue/Lowell Street (Oakland)
7. Stanford Avenue/60th Street (Oakland)
8. Stanford Avenue/Market Street (Oakland)
9. 57th Street/Adeline Street/Market Street (Oakland)
10. 53rd Street/Adeline Street/Lowell Street (Oakland)
11. 55th Street/Market Street (Oakland)
12. 55th Street/Martin Luther King Jr. Way (Oakland)
13. 40th Street/Adeline Street (Emeryville)
14. Adeline Street/San Pablo Avenue (Emeryville)
15. 36th Street/San Pablo Avenue (Oakland)
16. 35th Street/San Pablo Avenue (Oakland)
17. 54th Street/Adeline Street (Oakland)

These intersections, as shown on Figure 4.13-1, were selected because the development facilitated by the Proposed Amendments would increase volumes by 30 or more peak-hour vehicle trips, or by 10 or more peak-hour vehicle trips at intersections already operating at unacceptable conditions during peak hours. As previously indicated, the assessment in this SEIR focuses on the potential impacts of development that would be facilitated by the Proposed Amendments along the Lowell Street corridor only, since the Proposed Amendments are not



SOURCE: Fehr & Peers

Proposed Amendments to B/M/SP Redevelopment Plan . 210505.02

Figure 4.13-1
Project Study Area

expected to change future developments or public infrastructure in the existing Redevelopment Plan Project Area. Previous analysis in the 2000 EIR is not changed by this analysis.

Existing Roadway Network

Regional access to the Lowell Street corridor is provided by I-80 and I-580, while local access is provided via San Pablo Avenue, Stanford and Alcatraz Avenues, and Market and Adeline Streets.

Major roadways in the vicinity of the Amendment Area are described below.

- ***I-80*** connects the San Francisco Bay Area with the Sacramento region and continues east across the United States. Near the project, I-80 has a north/south orientation and provides four mixed-flow lanes and a high occupancy vehicle (HOV) lane in each direction. Access between I-80 and the Amendment Area is provided via an interchanges at Powell Street. This segment of I-80 is also known as I-580. I-80 has an Annual Average Daily Traffic (AADT) of about 271,000 vehicles per day just north of Powell Street (Caltrans, 2010a).
- ***I-580*** is an eight-lane east-west freeway between U.S. 101 in Marin County, and I-5 near Tracy. Access between I-580 and the Amendment Area is provided via ramps along 35th and 36th Streets near Market and West Streets. I-580 has an AADT of about 220,000 vehicles per day between I-980 and San Pablo Avenue (Caltrans, 2010a).
- ***San Pablo Avenue*** is a major north-south arterial connecting Downtown Oakland with points north along San Francisco Bay and Carquinez Bridge. San Pablo Avenue is west of the Amendment Area. It is designated as State Route 123 (SR 123) and provides two travel lanes in each direction near the Amendment Area.
- ***Stanford Avenue*** is a generally northeast-southwest arterial connecting Adeline Street in Oakland to Hollis Street in Emeryville. Stanford Avenue provided two travel lanes in each direction within the Amendment Area.
- ***Market Street*** is a generally north-south arterial between Alcatraz Avenue in Berkeley and 3rd Street near the Port of Oakland. North of Alcatraz Avenue, Market Street continues as Sacramento Street. Market Street is in the eastern portion of the Amendment Area and provides two travel lanes in each direction north of Adeline Street and one travel lane in each direction south of Adeline Street.
- ***Adeline Street*** is generally northeast-southwest arterial between Shattuck Avenue in Berkeley and 3rd Street near the Port of Oakland. Adeline Street is in the southeastern portion of the Amendment Area and provides two travel lanes in each direction. Adeline Street provides one travel lane in each direction within Emeryville city limits.
- ***Alcatraz Avenue*** is an east-west arterial that extends from Claremont Avenue to San Pablo Avenue. Alcatraz Avenue is north of and within the Amendment Area and provides one travel lane in each direction.
- ***55th Street*** is an east-west collector between Doyle in Emeryville and Telegraph Avenue in Oakland. 55th Street provides one travel lane in each direction.
- ***Lowell Street*** is a north-south local street between Market and Adeline Streets. The majority of the development facilitated by the Proposed Amendments would occur along Lowell Street. Lowell Street provides one travel lane in each direction. The existing median on Stanford Avenue prohibits through travel on Lowell Street across Stanford Avenue.

Existing Transit Service

Transit service providers in the vicinity include Alameda-Contra Costa Transit District (AC Transit), which provides local and Transbay bus service with connections to the Transbay Terminal in San Francisco; Bay Area Rapid Transit (BART), which provides regional rail service; and Amtrak, which provides regional and national rail service. **Figure 4.13-2** shows existing transit service in the Amendment Area. Each service is described below.

AC Transit

AC Transit is the primary bus service provider in 13 cities and adjacent unincorporated areas in Alameda County and Contra Costa County, with Transbay service to San Francisco, San Mateo and Santa Clara counties. Six local routes, including one rapid route, one Transbay route, and one night-service route, operate within three blocks of the Lowell Street corridor. **Table 4.13-1** summarizes the characteristics of the AC Transit routes operating in the Amendment Area. The nearest bus stops to the Lowell Street corridor are along Market Street and San Pablo Avenue.

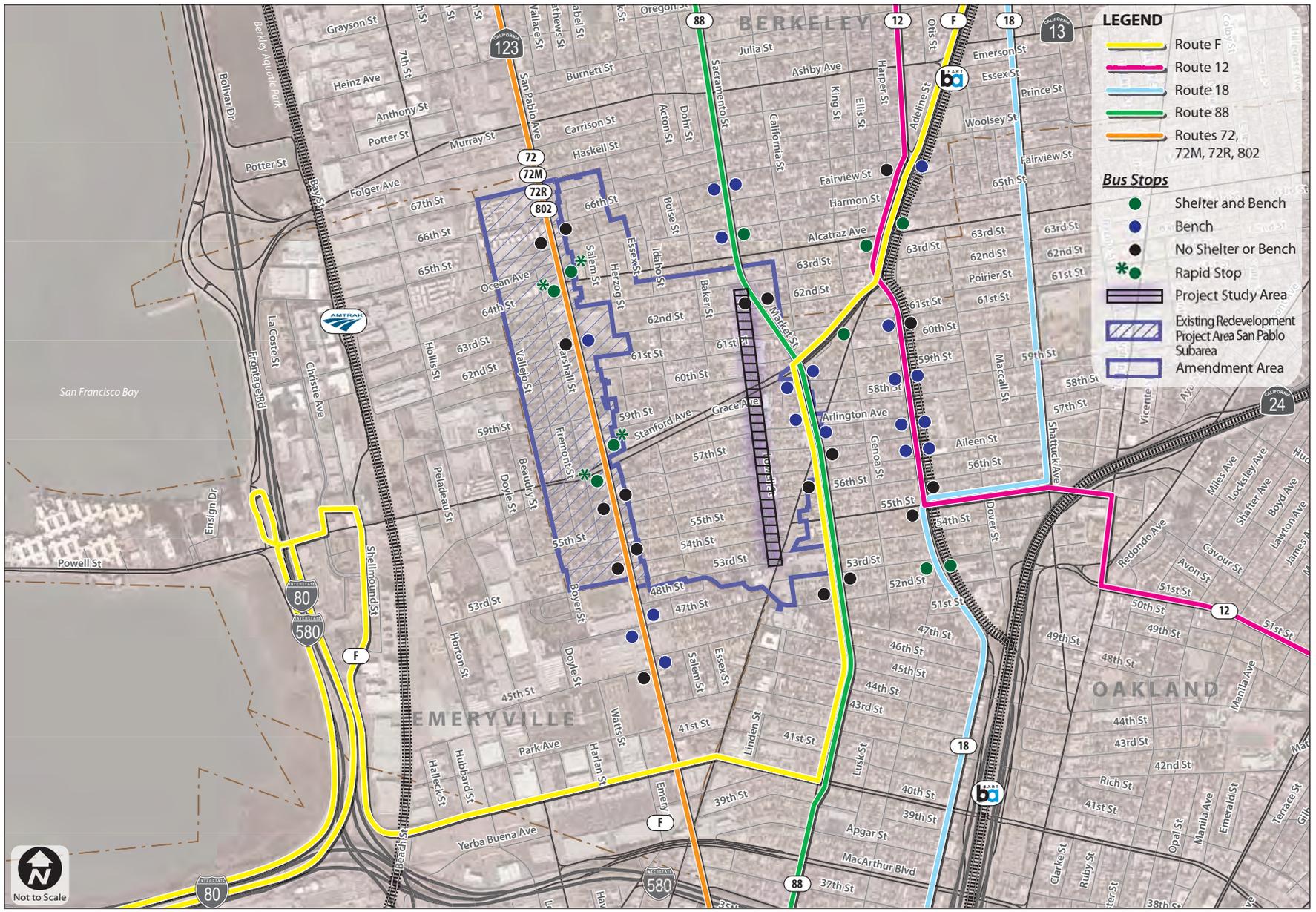
Table 4.13-2 shows the capacity and loads (passengers) of the AC Transit routes serving the Amendment Area and vicinity, based on 2010 and 2011 data from AC Transit. Table 4.13-2 also shows average and maximum load factors (defined as the ratio of occupied seats to the number of seats on the bus). An average load factor reflects load data over the length of a bus route, and a maximum load factor is the peak load point (i.e., the location along the route where the bus is most crowded). A load factor of 100 percent or more indicates that the bus operates at or above its seated capacity. As shown in Table 4.13-2, most bus routes have excess (unused) capacity, with average daily load factors of 56 percent or less. The maximum load factors for Routes 72, 72M, and 72R are near or above seated capacity.

BART

BART provides regional rail transit service to Alameda, San Francisco, Contra Costa, and San Mateo Counties. Weekday service is provided from 4:00 AM to 1:00 AM, while Saturday and Sunday service is provided from 6:00 AM to 1:00 AM, and 8:00 AM to 1:00 AM, respectively. Trains have a typical headway of 15 minutes on weekdays and 20 minutes on Saturday and Sundays. The nearest BART stations to the Lowell Street corridor are the Ashby and MacArthur stations, which are about one mile northeast and southeast of Lowell Street, respectively.

Amtrak

Amtrak provides inter-city rail service throughout California and the country. The Emeryville Amtrak Station is located about one mile west of the Lowell Street corridor near the Horton Street / 59th Street intersection. Four Amtrak routes serve this station, including the Capitol Corridor and San Joaquin commuter service routes. The Capitol Corridor route connects San Jose to the Sacramento region with more than 20 trains per day, and the San Joaquin route connects the



SOURCE: Fehr & Peers

Proposed Amendments to B/M/SP Redevelopment Plan . 210505.02
Figure 4.13-2
 Existing Transit Service in the Amendment Area Vicinity

**TABLE 4.13-1
AC TRANSIT SERVICE SUMMARY**

| Line | Route | Weekday | | Weekend | | Weekday Daily Boardings ^a |
|-------------------------|--|---------------------|------------------|---------------------|------------------|--------------------------------------|
| | | Hours | Headway | Hours | Headway | |
| Local Routes | | | | | | |
| 12 | UC Berkeley to Downtown Oakland | 6:00 AM to 10:40 PM | 20 to 30 minutes | 5:50 AM to 10:40 PM | 30 minutes | 1,660 |
| 18 | Albany City Hall to Montclair | 5:15 AM to 12:45 AM | 15 to 30 minutes | 6:00 AM to 12:50 AM | 20 to 30 minutes | 6,800 |
| 72 | Hilltop Mall to Jack London Square Amtrak | 5:00 AM to 1:20 AM | 30 to 40 minutes | 5:10 AM to 1:30 AM | 30 to 40 minutes | 3,750 |
| 72M | Point Richmond to Jack London Square Amtrak | 4:45 AM to 12:30 AM | 30 to 40 minutes | 5:30 AM to 1:10 AM | 30 to 40 minutes | 3,700 |
| 72R | Contra Costa College to Jack London Square (Rapid) | 6:00 AM to 8:15 PM | 10 to 15 minutes | No Weekend Service | | 6,320 |
| 88 | Berkeley BART to Lake Merritt BART | 5:15 AM to 10:45 PM | 20 to 30 minutes | 5:20 AM to 10:45 PM | 30 minutes | 1,830 |
| Transbay Service | | | | | | |
| F | Berkeley to San Francisco Transbay Terminal | 5:10 AM to 12:55 AM | 30 minutes | 5:15 AM to 12:55 AM | 30 minutes | 1,570 |
| Night Route | | | | | | |
| 802 | Berkeley Amtrak to Downtown Oakland | 12:10 AM to 5:30 AM | 60 minutes | 12:10 AM to 5:30 AM | 60 minutes | 60 |

^a Based on data collected by AC Transit in December 2010 through February 2011, and provided in April 2011. Data represents total daily boardings along the entire route.

SOURCE: AC Transit as summarized by Fehr & Peers, April 2011

Oakland/Emeryville area to Bakersfield with approximately eight trains per day. The Coast Starlight route (which connects Seattle to Los Angeles) and the California Zephyr route (which connects the Oakland/Emeryville area to Chicago, Illinois) also serve the Emeryville Station, each with one train per day.

Existing Pedestrian Network

Pedestrian facilities include off-street paths, sidewalks, crosswalks, and pedestrian signals. **Figure 4.13-3** shows the existing pedestrian facilities in the vicinity of the Lowell Street corridor. No off-street pedestrian paths are provided near the Lowell Street corridor.

Sidewalks are provided on both sides of most streets in the Amendment Area, with the exception of Lowell Street, where very few blocks have sidewalks. The existing intermittent sidewalks along Lowell Street are not uniform; they have varying width, elevation and material.

Striped crosswalks are provided on at least one approach for all signalized study intersections. All signalized study intersections also provide pedestrian signal heads; most have push-buttons; and some provide audible signals. Unsignalized intersections in the area provide striped crosswalks across some approaches.

**TABLE 4.13-2
 AC TRANSIT LOADS, BOARDINGS AND ALIGHTLINGS (AVERAGE WEEKDAY)**

| Bus Line | Stop Location | Direction | Average Capacity (seats) | Average Load ^a | Avg. Load Factor ^b | Maximum Load ^c | Max. Load Factor ^d | Boardings ("On"s) ^e | Boardings ("Off"s) ^f |
|--|-------------------------------------|-----------|--------------------------|---------------------------|-------------------------------|---------------------------|-------------------------------|--------------------------------|---------------------------------|
| Local Routes | | | | | | | | | |
| 12 | ML King Jr. Way at 55th St. | NB | 25 | 6.3 | 25% | 16 | 64% | 2 | 5 |
| | | SB | | 5.9 | 24% | 16 | 64% | 11 | 8 |
| | ML King Jr. Way at Aileen St. | NB | 25 | 6.4 | 26% | 16 | 64% | 13 | 6 |
| | | SB | | 5.9 | 24% | 14 | 56% | 9 | 5 |
| | ML King Jr. Way at Arlington St. | NB | 25 | 6.4 | 26% | 17 | 68% | 7 | 5 |
| | | SB | | 5.7 | 23% | 12 | 48% | 6 | 4 |
| ML King Jr. Way at 59th St. | NB | 25 | 6.4 | 26% | 17 | 68% | 7 | 8 | |
| | SB | | 5.7 | 23% | 11 | 44% | 15 | 11 | |
| ML King Jr. Way at 61ST St. | NB | 25 | 6.3 | 25% | 17 | 68% | 5 | 14 | |
| | SB | | 5.6 | 22% | 11 | 44% | 13 | 5 | |
| Adeline St. at Alcatraz Ave. | NB | 25 | 6.0 | 24% | 17 | 68% | 23 | 32 | |
| | SB | | 5.4 | 22% | 10 | 40% | 26 | 26 | |
| 18 | 55th St. at ML King Jr. Way | NB | 32 | 10.7 | 33% | 26 | 81% | 11 | 47 |
| | | SB | | 11.6 | 36% | 23 | 72% | 49 | 14 |
| 72 | San Pablo Ave. at 54th St./53rd St. | NB | 32 | 13.7 | 43% | 21 | 66% | 6 | 19 |
| | | SB | | 15.0 | 47% | 30 | 94% | 10 | 6 |
| | San Pablo Ave. at 56th St. | NB | 32 | 13.5 | 42% | 21 | 66% | 8 | 14 |
| | | SB | | 14.9 | 47% | 30 | 94% | 6 | 7 |
| | San Pablo Ave. at Stanford Ave. | NB | 32 | 13.5 | 42% | 22 | 69% | 26 | 27 |
| | | SB | | 14.9 | 47% | 30 | 94% | 35 | 21 |
| San Pablo Ave. at 62nd St. | NB | 32 | 13.0 | 41% | 22 | 69% | 6 | 23 | |
| | SB | | 14.5 | 45% | 31 | 97% | 9 | 10 | |
| San Pablo Ave. at Alcatraz Ave./64th St. | NB | 32 | 12.9 | 40% | 22 | 69% | 16 | 20 | |
| | SB | | 14.6 | 46% | 30 | 94% | 37 | 11 | |
| 72M | San Pablo Ave. at 54th St./53rd St. | NB | 32 | 15.4 | 48% | 33 | 103% | 6 | 15 |
| | | SB | | 16.8 | 53% | 34 | 106% | 13 | 12 |
| | San Pablo Ave. at 56th St. | NB | 32 | 15.1 | 47% | 32 | 100% | 5 | 13 |
| | | SB | | 16.7 | 52% | 34 | 106% | 8 | 4 |
| | San Pablo Ave. at Stanford Ave. | NB | 32 | 15.0 | 47% | 31 | 97% | 22 | 28 |
| | | SB | | 16.5 | 52% | 34 | 106% | 38 | 22 |
| San Pablo Ave. at 62nd St. | NB | 32 | 14.4 | 45% | 31 | 97% | 4 | 23 | |
| | SB | | 16.2 | 51% | 33 | 103% | 11 | 8 | |
| San Pablo Ave. at Alcatraz Ave./64th St. | NB | 32 | 14.5 | 45% | 30 | 94% | 22 | 20 | |
| | SB | | 16.1 | 50% | 33 | 103% | 41 | 32 | |
| 72R | San Pablo Ave. at Stanford Ave | NB | 32 | 17.6 | 55% | 29 | 91% | 89 | 108 |
| | | SB | | 18.0 | 56% | 30 | 94% | 103 | 73 |
| San Pablo Ave. at Alcatraz Ave./64th St. | NB | 32 | 17.2 | 54% | 27 | 84% | 80 | 107 | |
| | SB | | 17.6 | 55% | 27 | 84% | 104 | 63 | |
| 88 | Market St. at 55th St. | NB | 40 | 7.1 | 18% | 20 | 50% | 10 | 14 |
| | | SB | | 7.2 | 18% | 15 | 38% | 15 | 10 |
| | Market St. at Adeline St./56th St. | NB | 40 | 6.8 | 17% | 20 | 50% | 3 | 20 |
| | | SB | | 7.1 | 18% | 17 | 43% | 5 | 3 |
| | Market St. at Arlington Ave. | NB | 40 | 6.7 | 17% | 20 | 50% | 7 | 10 |
| | | SB | | 7.0 | 18% | 16 | 40% | 22 | 7 |
| Market St. at 59th St. | NB | 40 | 6.6 | 17% | 20 | 50% | 9 | 15 | |
| | SB | | 6.8 | 17% | 15 | 38% | 19 | 11 | |
| Market St. at 62nd St. | NB | 40 | 6.3 | 16% | 21 | 53% | 6 | 22 | |
| | SB | | 6.6 | 17% | 14 | 35% | 20 | 8 | |

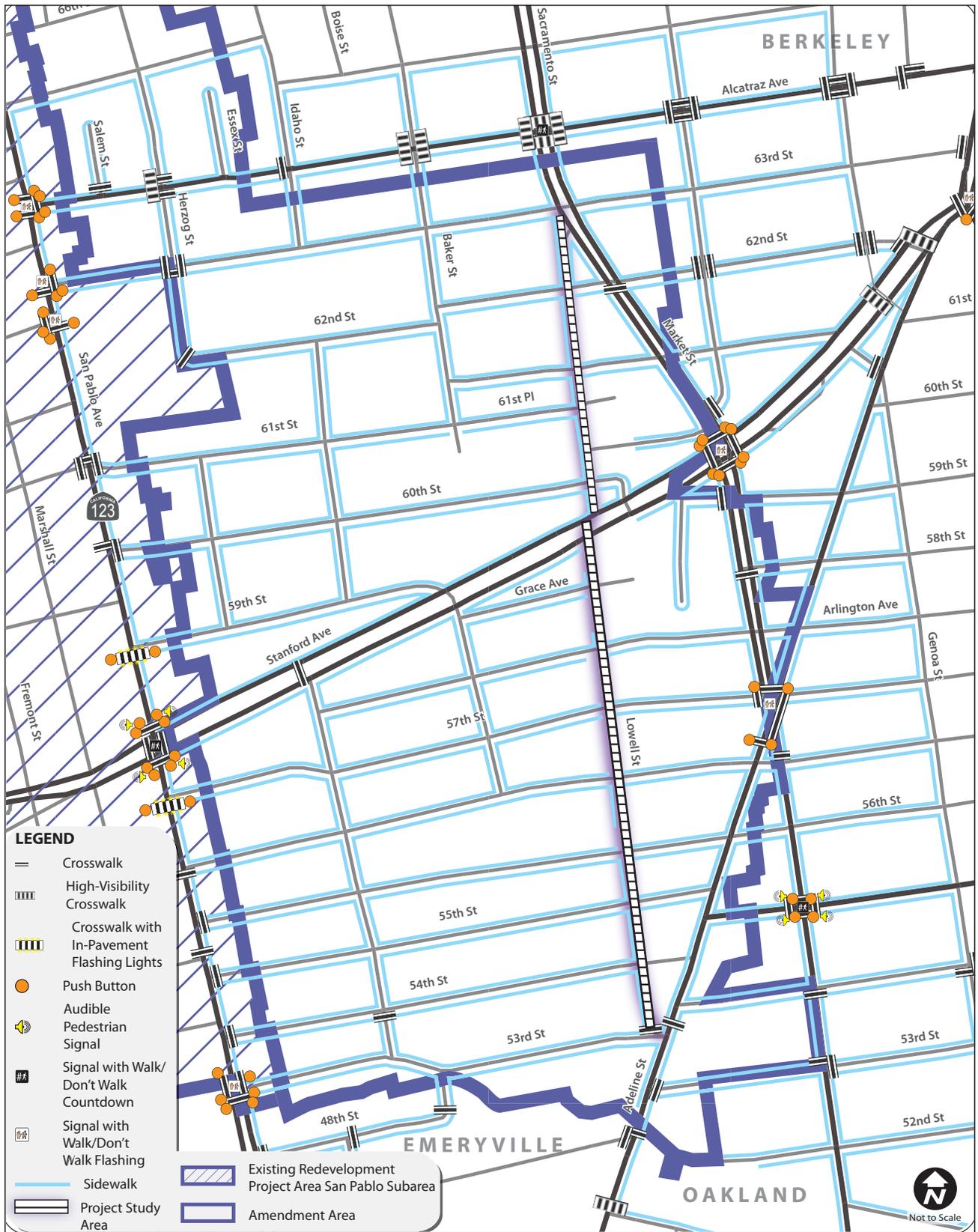
TABLE 4.13-2 (Continued)
AC TRANSIT LOADS, BOARDINGS AND ALIGHTLINGS (AVERAGE WEEKDAY)

| Bus Line | Stop Location | Direction | Average Capacity (seats) | Average Load ^a | Avg. Load Factor ^b | Maximum Load ^c | Max. Load Factor ^d | Boardings ("On"s) ^e | Boardings ("Off"s) ^f |
|--|-------------------------------------|-----------|--------------------------|---------------------------|-------------------------------|---------------------------|-------------------------------|--------------------------------|---------------------------------|
| Transbay Service | | | | | | | | | |
| F | Market St. at 55th St. | EB | 40 | 8.6 | 22% | 16 | 40% | 9 | 6 |
| | | WB | | 8.8 | 22% | 23 | 58% | 11 | 8 |
| | Market St. at Adeline St./56th | EB | 40 | 8.5 | 21% | 17 | 43% | 8 | 10 |
| | | WB | | 8.8 | 22% | 23 | 58% | 11 | 7 |
| | Market St. at Arlington Ave | EB | 40 | 8.6 | 22% | 17 | 43% | 5 | 4 |
| | | WB | | 8.6 | 22% | 23 | 58% | 8 | 3 |
| Market St. at 59th St. | EB | 40 | 8.4 | 21% | 18 | 45% | 16 | 23 | |
| | WB | | 8.5 | 21% | 24 | 60% | 11 | 8 | |
| Stanford Ave. at King St. | EB | 40 | 8.5 | 21% | 19 | 48% | 12 | 7 | |
| | WB | | 8.5 | 21% | 25 | 63% | 10 | 13 | |
| Adeline St. at Alcatraz Ave | EB | 40 | 8.9 | 22% | 21 | 53% | 32 | 16 | |
| | WB | | 8.6 | 22% | 26 | 65% | 18 | 29 | |
| Night Route | | | | | | | | | |
| 802 | San Pablo Ave. at 54th St./53rd St. | NB | 40 | 3.2 | 8% | 9 | 23% | 0 | 1 |
| | | SB | | 2.6 | 7% | 8 | 20% | 0 | 0 |
| | San Pablo Ave. at 56th St. | NB | 40 | 2.9 | 7% | 8 | 20% | 0 | 3 |
| | | SB | | 2.6 | 7% | 8 | 20% | 0 | 1 |
| | San Pablo Ave. at Stanford Ave. | NB | 40 | 2.8 | 7% | 8 | 20% | 0 | 1 |
| | | SB | | 2.7 | 7% | 8 | 20% | 3 | 2 |
| San Pablo Ave. at 62nd St. | NB | 40 | 2.5 | 6% | 7 | 18% | 0 | 3 | |
| | SB | | 2.5 | 6% | 6 | 15% | 0 | 0 | |
| San Pablo Ave. at Alcatraz Ave./64th St. | NB | 40 | 2.2 | 6% | 6 | 15% | 0 | 3 | |
| | SB | | 2.5 | 6% | 6 | 15% | 1 | 0 | |

Bold indicates maximum load factor above seating capacity.

- ^a Number of passengers on the bus averaged on a typical weekday.
- ^b Average load divided by average seated capacity.
- ^c Maximum number of passengers on the bus observed on a typical weekday.
- ^d Maximum load divided by average seated capacity.
- ^e Total number of passengers boarding the bus at this location on a typical weekday.
- ^f Total number of passengers alighting the bus at this location on a typical weekday.

SOURCE: AC Transit as summarized by Fehr & Peers, 2011



SOURCE: Fehr & Peers

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Figure 4.13-3
Existing Pedestrian Facilities Near the Amendment Area

The City of Oakland's *Pedestrian Master Plan* (PMP), November 2002, identifies the following pedestrian route types in the City of Oakland:

- “City routes designate streets that are destinations in themselves – places to live, work, shop, socialize and travel. They provide the most direct connections between walking and transit and connect multiple districts in the City.”
- “District routes have a more local function as the location of schools, community centers, and smaller scale shopping. They are often located within a single district and help to define the character of that district.”
- “Neighborhood routes are local streets that connect schools, parks, recreational centers, and libraries. They are places for people to meet and they provide the basis for neighborhood life. They are used for walking to school, walking for exercise, and safe walking at night.”

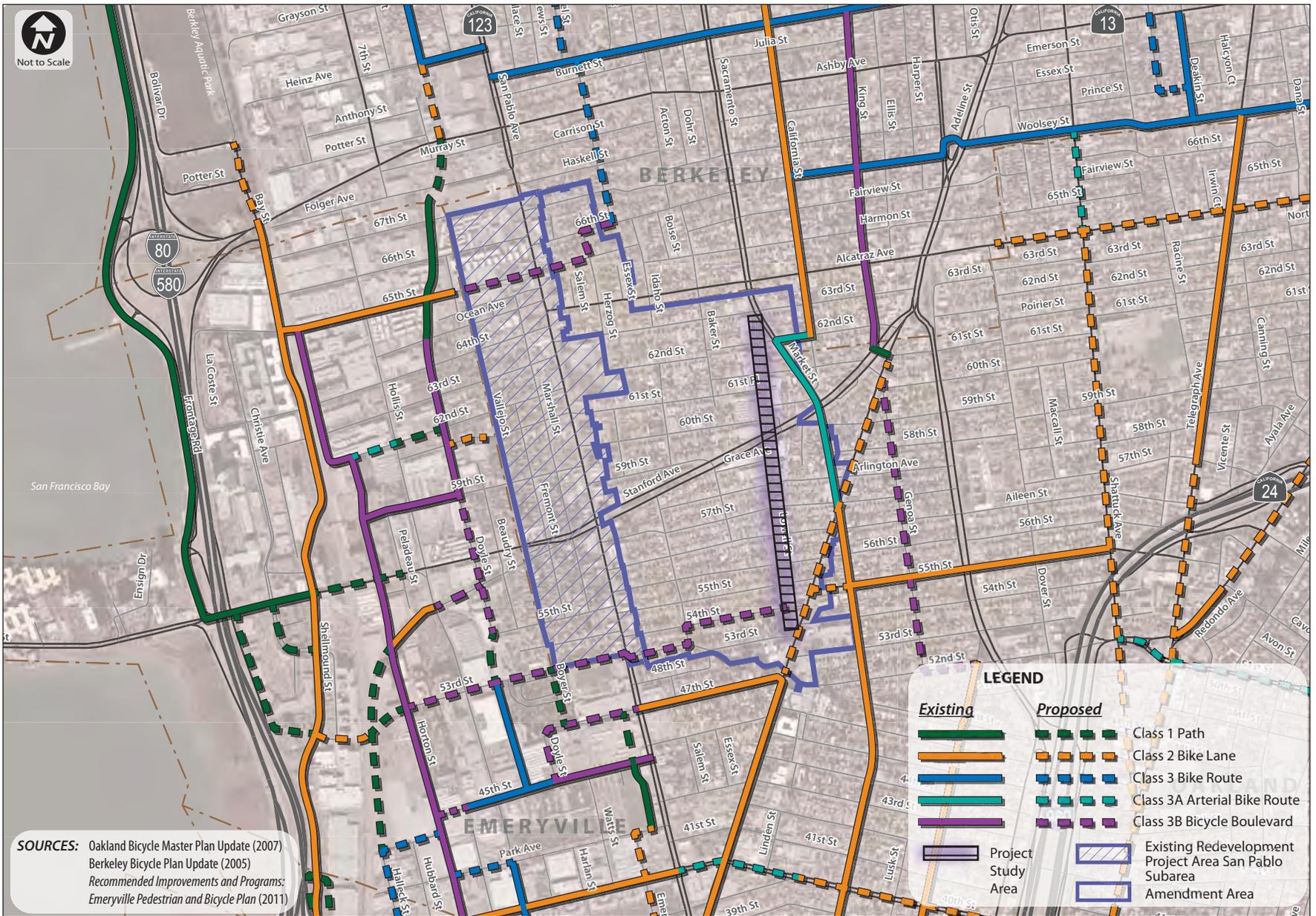
The PMP designates San Pablo Avenue and Market Street as City Routes, Alcatraz and Stanford Avenues and 55th and Adeline Streets as District Routes, and 63rd Street as a Neighborhood Route.

Existing Bicycle Network

Bicycle facilities are classified into the following types:

- ***Class 1 Paths*** – These facilities are located off-street and can serve both bicyclists and pedestrians. Recreational trails can be considered Class 1 facilities. Class 1 paths are generally paved and are typically 8 to 10 feet wide excluding shoulders.
- ***Class 2 Bicycle Lanes*** – These facilities provide a dedicated pavement width for bicyclists within the street width through the use of striping and appropriate signage. These facilities are typically five to six feet wide.
- ***Class 3 Bicycle Routes*** – These facilities are found along streets that do not provide sufficient width for dedicated bicycle lanes. The street is then designated as a bicycle route through the use of signage informing drivers to expect bicyclists.
 - ***Class 3A Arterial Bicycle Routes*** – These facilities are found along some arterial streets where bicycle lanes are not feasible and parallel streets do not provide adequate connectivity. Speed limits as low as 25 mph, shared lane bicycle stencils, wide curb lanes, and signage is used to encourage shared use.
 - ***Class 3B Bicycle Boulevards*** – These facilities are found along residential streets with low traffic volumes. Assignment of right-of-way to the route, traffic calming measures and bicycle traffic signal actuation are used to prioritize through-trips for bicycles.

Figure 4.13-4 shows the existing and planned bicycle facilities in the Amendment Area and vicinity based on the City of Oakland's 2007 *Bicycle Master Plan Update*, City of Berkeley's 2005 *Bicycle Plan Update*, and City of Emeryville's recommended bicycle circulation map in the draft *Pedestrian and Bicycle Plan*.



SOURCE: Fehr & Peers

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Figure 4.13-4
Existing and Planned Bicycle Facilities

Existing bicycle facilities in the area include:

- Class 2 bicycle lanes along Adeline Street within Emeryville city limits, Market Street south of Aileen Street, 55th Street east of Market Street, and California Street north of Berkeley city limit.
- Class 3A arterial bicycle routes along Market Street between Aileen and 61st Streets and 61st Street between Market Street and Occidental Street.
- Class 3B bicycle boulevard along King Street north of Berkeley city limit.

Existing Traffic Conditions

Weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak period intersection traffic counts (automobile and bicycle turning movements, and pedestrian crossings) were conducted at the study intersections in May 2010 and April 2011, while area schools were in normal session. Appendix E.1 presents the count data. For each intersection, the single hour with the highest traffic volumes during each of the two count periods was identified and used as the basis for the intersection operational analysis. **Figure 4.13-5** shows the existing peak-hour intersection vehicle turning movement volumes, **Figure 4.13-6** shows the intersection lane configurations and traffic controls, and **Figure 4.13-7** shows the pedestrian and bicycle volumes at the study intersections. Traffic signal timing data for the signalized study intersections was obtained from the City of Oakland Transportation Services Division and/or verified in the field.

Analysis Methods

Traffic operations are described using the term “Level of Service” (LOS). Level of Service is a qualitative description of traffic operations from the vehicle driver perspective and consists of the delay experienced by the driver on the roadway facility. It ranges from LOS A, with no congestion and little delay, to LOS F, with excessive congestion and delays. Different methods are used to assess different roadway facilities such as signalized and unsignalized (stop-controlled) intersections.

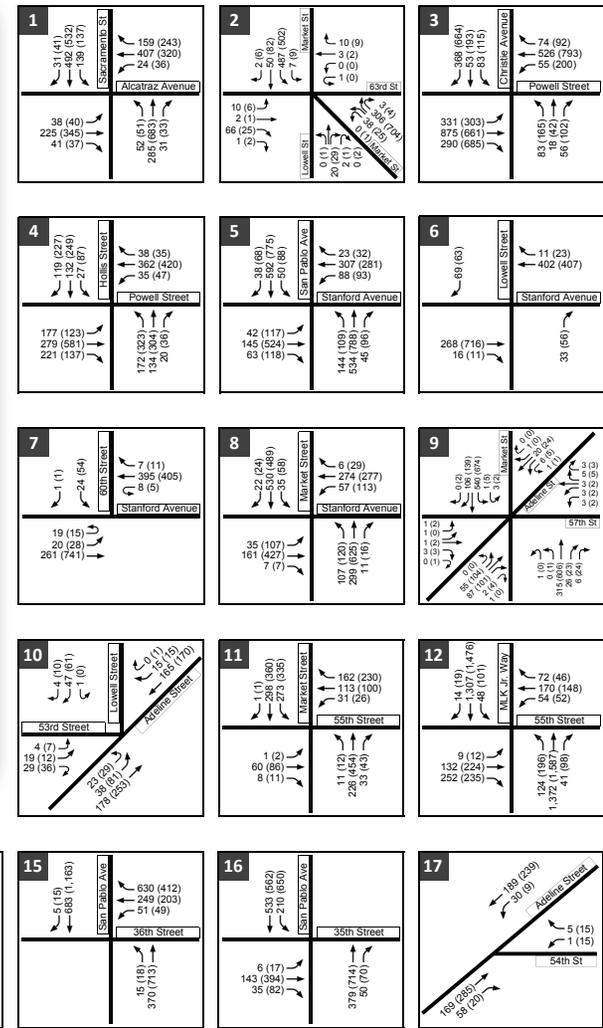
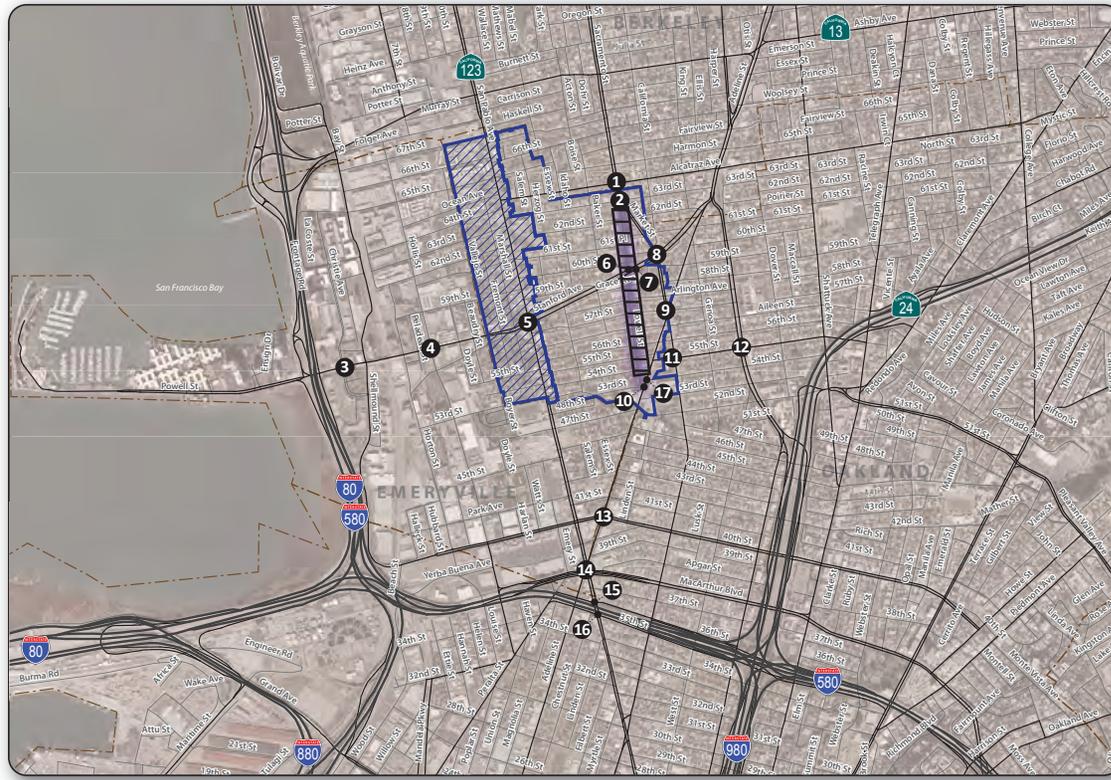
Signalized Intersections

Signalized intersection operations are generally evaluated using methods provided in the 2000 *Highway Capacity Manual* (HCM). These methods evaluate average control delays and then assign an LOS. Control delay is defined as the delay associated with deceleration, stopping, moving up in the queue, and acceleration experienced by drivers at an intersection.

Table 4.13-3 provides descriptions of various LOS and the corresponding ranges of delays for signalized intersections.

Unsignalized Intersections

Unsignalized intersection LOS also is analyzed using the 2000 HCM. Delay is calculated for movements that are controlled by a stop sign or that must yield the right-of-way. The movement or approach with the highest delay is reported. Table 4.13-3 shows the LOS ranges for unsignalized intersections. They are lower than the delay ranges for signalized intersections because drivers will tolerate more delay at signals.



MAP LEGEND

- 1** Study Intersection
- Project Study Area
- Existing Redevelopment Project Area San Pablo Subarea
- Amendment Area

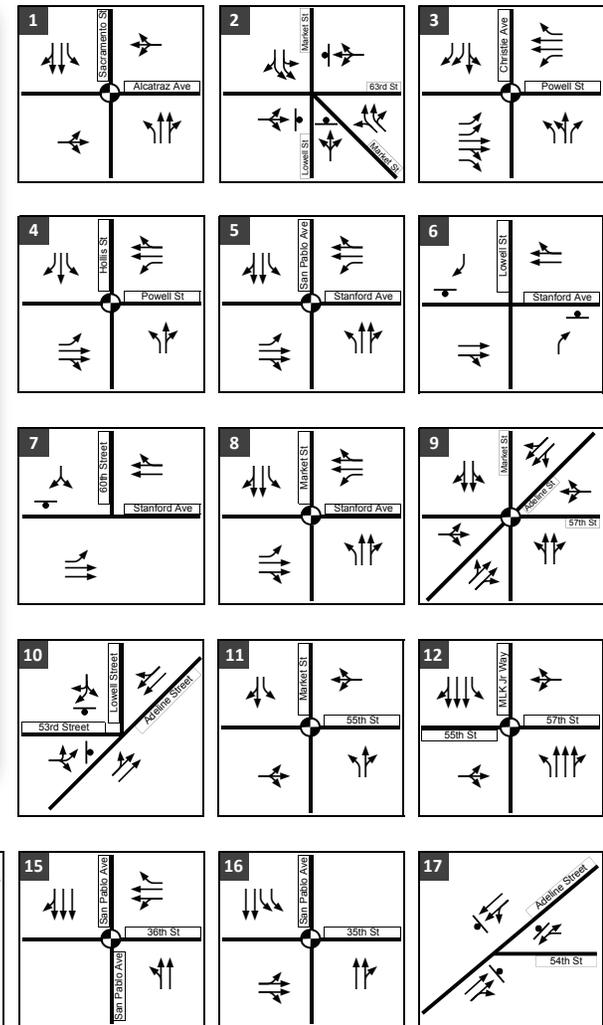
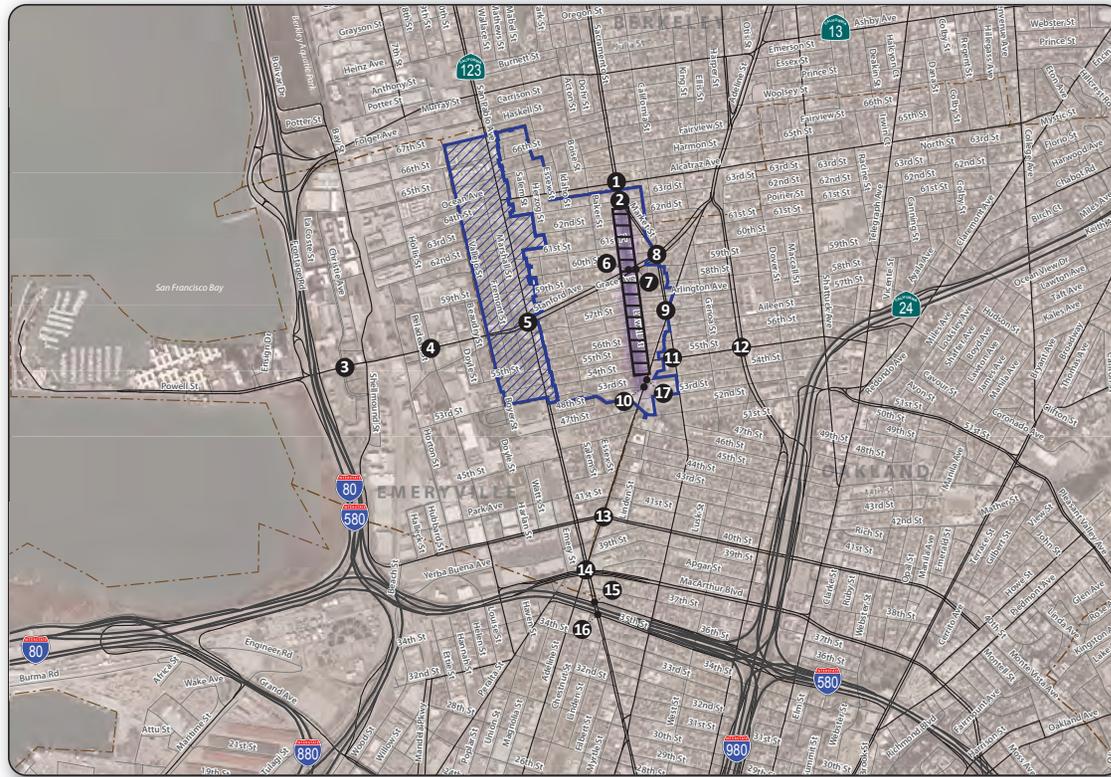
VOLUMES LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

SOURCE: Fehr & Peers

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Figure 4.13-5
Existing Peak Hour Volumes



MAP LEGEND

- ① Study Intersection
- ▭ Project Study Area
- ▨ Existing Redevelopment Project Area San Pablo Subarea
- ▭ Amendment Area

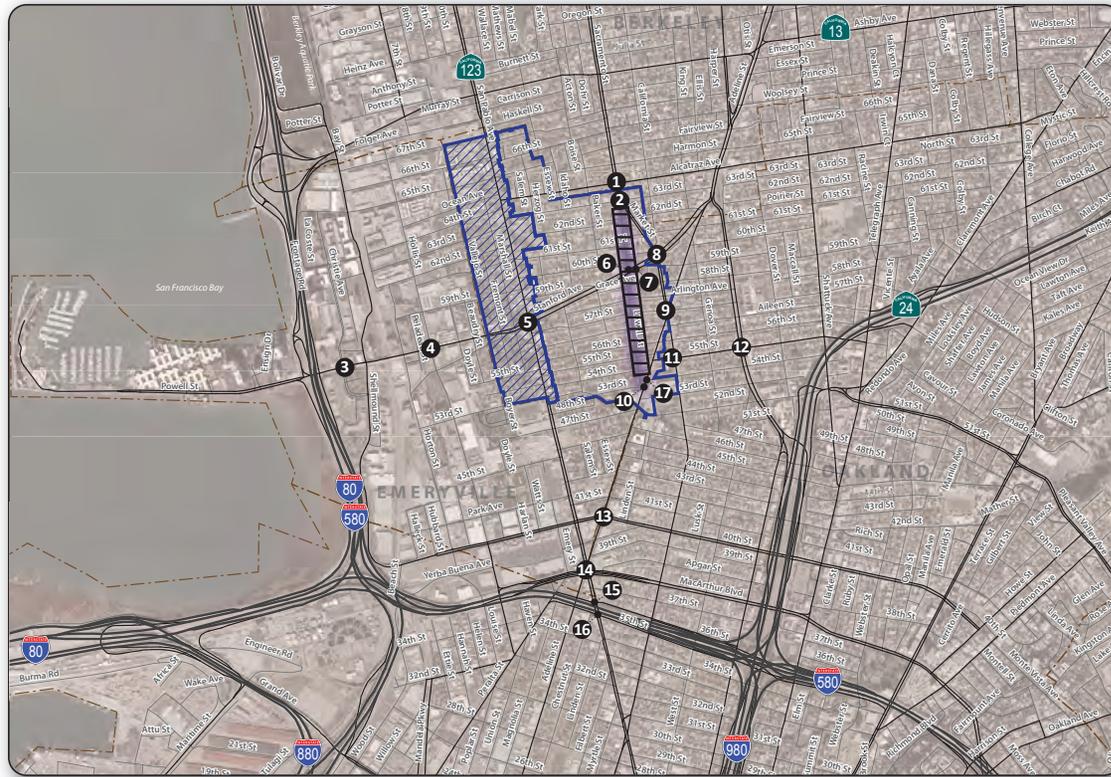
VOLUMES LEGEND

- ⦿ Signalized Intersection
- ⊥ Stop Sign

SOURCE: Fehr & Peers

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Figure 4.13-6
Existing Intersection Lane Configurations and Controls

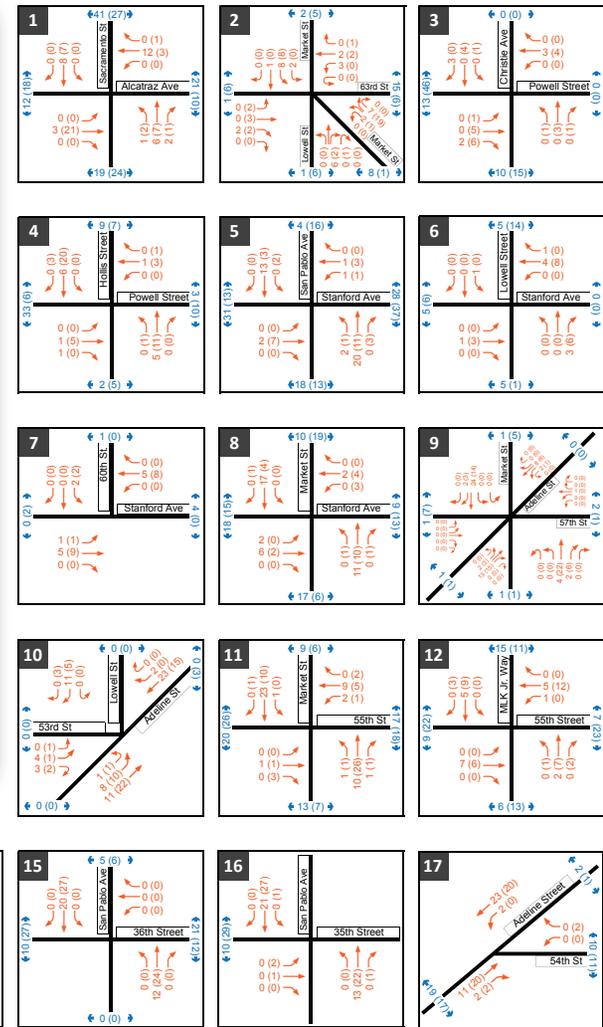


MAP LEGEND

- 1 Study Intersection
- Project Study Area
- Existing Redevelopment Project Area San Pablo Subarea
- Amendment Area

VOLUMES LEGEND

- XX (YY) AM (PM) Peak Hour Pedestrian Volume
- XX (YY) AM (PM) Peak Hour Bicycle Volume



SOURCE: Fehr & Peers

Proposed Amendments to B/M/SP Redevelopment Plan . 210505.02

Figure 4.13-7
Existing Bicycle and Pedestrian Volumes

**TABLE 4.13-3
 DEFINITIONS FOR INTERSECTION LEVEL OF SERVICE**

| Unsignalized Intersections | | Level of Service Grade | Signalized Intersections | |
|---|---------------------------------------|------------------------|---|--|
| Description | Average Total Vehicle Delay (Seconds) | | Average Control Vehicle Delay (Seconds) | Description |
| No delay for stop-controlled approaches. | ≤10.0 | A | ≤10.0 | Free Flow or Insignificant Delays: Operations with very low delay, when signal progression is extremely favorable and most vehicles arrive during the green light phase. Most vehicles do not stop at all. |
| Operations with minor delay. | >10.0 and ≤15.0 | B | >10.0 and ≤20.0 | Stable Operation or Minimal Delays: Generally occurs with good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay. An occasional approach phase is fully utilized. |
| Operations with moderate delays. | >15.0 and ≤25.0 | C | >20.0 and ≤35.0 | Stable Operation or Acceptable Delays: Higher delays resulting from fair signal progression and/or longer cycle lengths. Drivers begin having to wait through more than one red light. Most drivers feel somewhat restricted. |
| Operations with increasingly unacceptable delays. | >25.0 and ≤35.0 | D | >35.0 and ≤55.0 | Approaching Unstable or Tolerable Delays: Influence of congestion becomes more noticeable. Longer delays result from unfavorable signal progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop. Drivers may have to wait through more than one red light. Queues may develop, but dissipate rapidly, without excessive delays. |
| Operations with high delays, and long queues. | >35.0 and ≤50.0 | E | >55.0 and ≤80.0 | Unstable Operation or Significant Delays: Considered to be the limit of acceptable delay. High delays indicate poor signal progression, long cycle lengths and high volume to capacity ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles. Long queues form upstream from intersection. |
| Operations with extreme congestion, and with very high delays and long queues unacceptable to most drivers. | >50.0 | F | >80.0 | Forced Flow or Excessive Delays: Occurs with oversaturation when flows exceed the intersection capacity. Represents jammed conditions. Many cycle failures. Queues may block upstream intersections. |

SOURCE: Transportation Research Board, Special Report 209, *Highway Capacity Manual*, 2000.

Existing Intersection Operations

Existing operations were evaluated for the weekday AM and PM peak hours at the study intersections. The existing vehicle and pedestrian volumes were used with the existing lane configurations and signal timing parameters as inputs into the LOS calculations to evaluate current operations. **Table 4.13-4** summarizes intersections analysis results. Appendix E-2 presents the detailed intersection LOS calculation worksheets. All study intersections currently operate at acceptable LOS D or better during both AM and PM peak hours.

**TABLE 4.13-4
 EXISTING CONDITIONS INTERSECTION LOS SUMMARY**

| Intersection | | Jurisdiction | Traffic Control ^a | Peak Hour | Delay ^b (seconds) | LOS ^c |
|--------------|--|--------------|------------------------------|-----------|---------------------------------|------------------|
| #1 | Alcatraz Avenue/Sacramento Street | Berkeley | Signal | AM | 16.4 | B |
| | | | | PM | 22.7 | C |
| #2 | 63rd Street/Lowell Street/Market Street | Oakland | SSSC | AM | 1.9 (12.7) | A (B) |
| | | | | PM | 1.1 (14.1) | A (B) |
| #3 | Powell Street/Christie Avenue | Emeryville | Signal | AM | 31.9 | C |
| | | | | PM | 39.5 | D |
| #4 | Powell Street/Hollis Street | Emeryville | Signal | AM | 35.1 | D |
| | | | | PM | 44.3 | D |
| #5 | Stanford Avenue/San Pablo Avenue | Oakland | Signal | AM | 30.3 | C |
| | | | | PM | 34.4 | C |
| #6 | Stanford Avenue/Lowell Street | Oakland | SSSC | AM | 1.3 (10.6) | A (B) |
| | | | | PM | 1.0 (11.5) | A (B) |
| #7 | Stanford Avenue/60th Street | Oakland | SSSC | AM | 0.8 (14.9) | A (B) |
| | | | | PM | 1.1 (19.8) | A (C) |
| #8 | Stanford Avenue/Market Street | Oakland | Signal | AM | 17.8 | B |
| | | | | PM | 24.8 | C |
| #9 | 57th Street/Adeline Street/Market Street | Oakland | Signal | AM | 20.5 | C |
| | | | | PM | 21.4 | C |
| #10 | 53rd Street/Adeline Street/Lowell Street | Oakland | SSSC | AM | 3.0 (10.7) | A (B) |
| | | | | PM | 3.1 (10.1) | A (B) |
| #11 | 55th Street/Market Street | Oakland | Signal | AM | 10.0 | A |
| | | | | PM | 17.5 | B |
| #12 | 55th Street/Martin Luther King Jr. Way | Oakland | Signal | AM | 21.1 | C |
| | | | | PM | 38.7 | D |
| #13 | 40th Street/Adeline Street | Emeryville | Signal | AM | 14.3 | B |
| | | | | PM | 13.2 | B |
| #14 | Adeline Street/San Pablo Avenue | Emeryville | Signal | AM | 13.1 | B |
| | | | | PM | 13.6 | B |
| #15 | 36th Street/San Pablo Avenue | Oakland | Signal | AM | 31.6 | C |
| | | | | PM | 15.3 | B |
| #16 | 35th Street/San Pablo Avenue | Oakland | Signal | AM | 23.1 | C |
| | | | | PM | 30.3 | C |
| #17 | 54th Street/Adeline Street | Oakland | AWSC | AM | 7.4 | A |
| | | | | PM | 8.1 | A |

^a Signal = intersection is controlled by a traffic signal; AWSC = intersection is controlled by stop signs on all approaches; SSSC = Intersection is controlled by a stop-sign on the side-street approach.
^b For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst movement and average intersection delay are shown: intersection average (worst movement)
^c Intersections operating at unacceptable levels (LOS E or LOS F) are shown in **bold**.

SOURCE: Fehr & Peers, 2011.

Existing Signal Warrant Analysis

To assess consideration for signalization of stop-controlled intersections, the *California Manual on Uniform Traffic Control Devices* (MUTCD), presents eight signal warrants (Caltrans, 2010b).

Generally, meeting one of the signal warrants could justify signalizing an intersection. However, meeting one or more of the signal warrants does not mean that the intersections must be signalized. Therefore, an evaluation of all applicable warrants should be conducted and additional factors (e.g., congestion, approach conditions, collision record) should be considered before the decision to install a signal is made. The peak-hour vehicular volume warrant (Warrant 3) for urban conditions was evaluated using the existing traffic count data. As shown in **Table 4.13-5**, none of the stop-controlled study intersections currently meet the urban peak-hour volume traffic signal warrant. Appendix E-3 presents the detailed signal warrant sheets.

**TABLE 4.13-5
 EXISTING CONDITIONS PEAK HOUR SIGNAL WARRANT ANALYSIS**

| | Intersection | Jurisdiction | Traffic Control ^a | Peak Hour Warrant Met? |
|-----|-------------------------------|--------------|------------------------------|------------------------|
| #2 | Lowell Street/Market Street | Oakland | SSSC | No |
| #6 | Stanford Avenue/Lowell Street | Oakland | SSSC | No |
| #7 | Stanford Avenue/60th Street | Oakland | SSSC | No |
| #10 | Adeline Street/Lowell Street | Oakland | SSSC | No |
| #17 | 54th Street/Adeline Street | Oakland | AWSC | No |

^a SSSC = Side-Street Stop-Controlled intersection; AWSC = intersection is controlled by stop signs on all approaches.

^b Peak hour vehicular volume warrant in *California Manual on Uniform Traffic Control Devices* (Caltrans, 2010b)

SOURCE: Fehr & Peers, 2011.

Neighborhood Access and Traffic Calming Features

Figure 4.13-8 shows the existing traffic calming features in the neighborhoods surrounding the Lowell Street corridor. The intent of these traffic calming devices is to reduce speeding and cut-through traffic in residential neighborhoods, encouraging through traffic to use the arterials and major streets in the Amendment Area. Traffic calming devices have been installed on most residential streets in the Amendment Area, and consist of primarily speed humps in Oakland, and traffic circles, and full or half closures in Emeryville and Berkeley. A median on Stanford Avenue limits access between north and south segments of Lowell Street. This reduces the potential for cut-through traffic using Lowell Street to travel between Sacramento and Market Streets in the north and Adeline Street in the south.



SOURCE: Fehr & Peers

Proposed Amendments to B/M/SP Redevelopment Plan . 210505.02

Figure 4.13-8
Existing Traffic Calming Features

Alameda County Transportation Commission (ACTC) Analysis of Existing Conditions

The ACTC conducts periodic monitoring of the freeways and major roadways in Alameda County. The most recent *Level of Service Monitoring on the Congestion Management Program Roadway Network* was released in September 2010. The ACTC monitoring report assesses existing freeway operations through “floating car” travel time surveys, which are conducted on all freeway segments during the PM peak hours (4:00 PM to 6:00 PM), and on selected freeway segments during the AM peak hours (7:00 AM to 9:00 AM). Based on the results of these surveys, ACTC assigns a LOS grade to each segment according to the method described in the 1985 HCM. Any segment with an average speed less than 30 miles per hour is assigned LOS F.

Freeway interchanges with speeds below 50 percent of free flow speed are assigned LOS F. The travel time surveys concluded that 24 freeway segments, nine arterial segments and two freeway-to-freeway connectors within Alameda County operate at LOS F during the PM peak hours, including the following seven freeway segments in the vicinity:

- I-80 eastbound: I-80/I-580 (merge) to Powell Street (*grandfathered segment*)
- I-80 eastbound: Powell Street to Ashby Avenue (*grandfathered segment*)
- I-80 westbound: Ashby Avenue to Powell Street (*grandfathered segment*)
- I-580 eastbound: I-80 to I-980 (*grandfathered segment*)
- I-980 eastbound: I-880 to I-580/SR 24 junction (*grandfathered segment*)
- SR 24 eastbound: I-580 to Broadway/SR 13 (*grandfathered segment*)
- SR 24 eastbound: Broadway/SR 13 to Caldecott tunnel (*grandfathered segment*)
- SR 13/SR 24 Interchange: SR 13 northbound to SR 24 eastbound (*grandfathered segment*)

All these segments operated at LOS F during the initial data collection effort in 1991, and are therefore “grandfathered,” meaning that they are exempt from LOS standards.

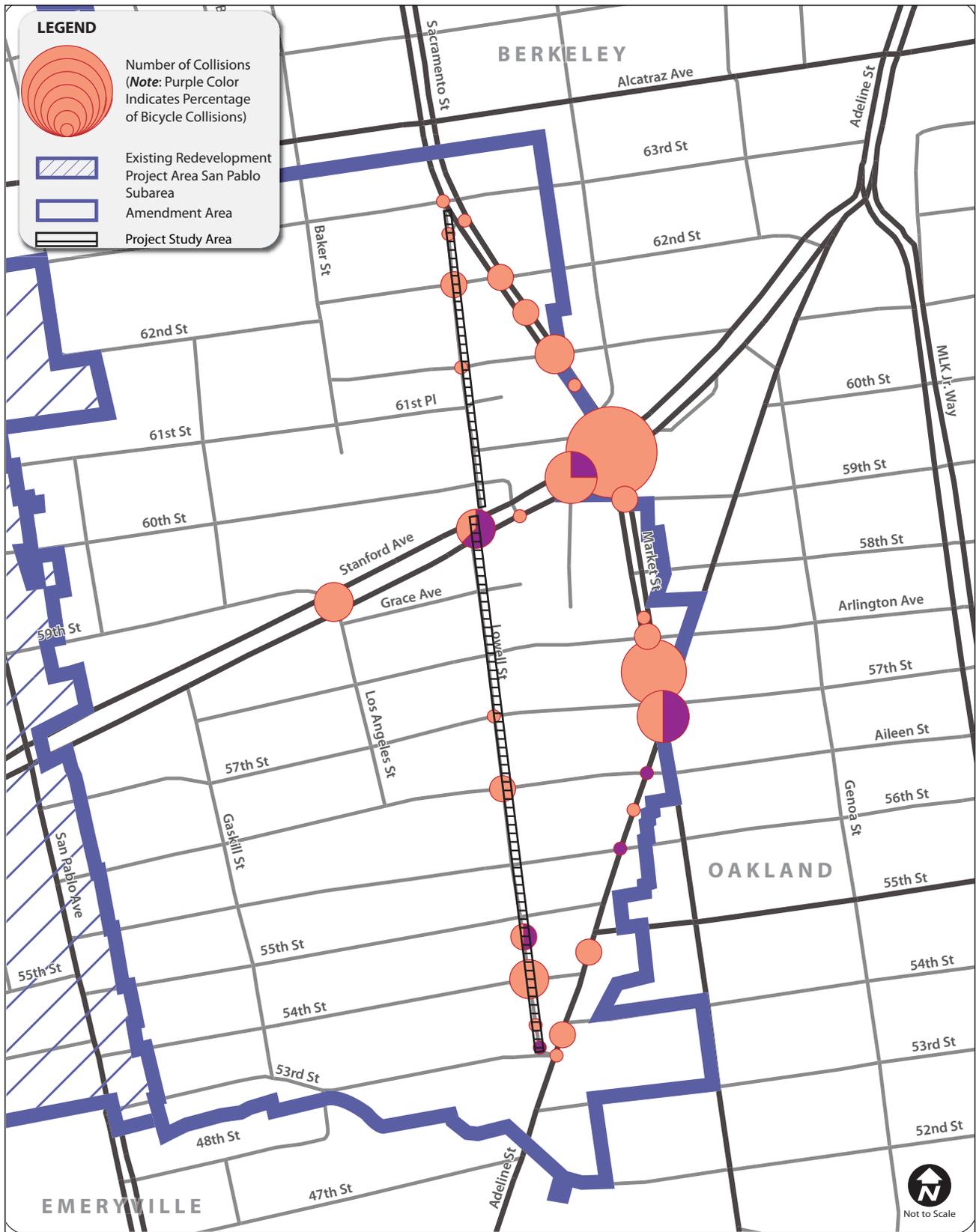
The following four freeway segments in the vicinity operate at LOS F during the AM peak hours:

- I-80 westbound: I-580 split to toll plaza
- I-80 westbound: toll plaza to San Francisco county line
- I-580 westbound: SR 24 on-ramp to I-80/I-580 split
- SR 24 eastbound: Broadway/SR 13 to SR 24

Collision Characteristics

Five years (2006-2010) of collision data was collected from the California Highway Patrol (CHP) for the following major streets in the vicinity of the Lowell Street corridor (as depicted on **Figure 4.13-9** and summarized in **Table 4.13-6**):

- Lowell Street between Market and Adeline Streets
- Adeline Street between Lowell and Market Streets
- Market Street between 63rd Street and Adeline Street
- Stanford Avenue between Los Angeles Street and Market Street.



SOURCE: Fehr & Peers

Proposed Amendments to B/M/SP Redevelopment Plan . 210505.02

Figure 4.13-9
Collisions (2006-2010)

**TABLE 4.13-6
 PROJECT STUDY AREA COLLISION DATA SUMMARY^a**

| Metric | Adeline Street ^b | | Lowell Street ^c | | Market Street ^d | | Stanford Avenue ^e | |
|--|-----------------------------|---------|----------------------------|---------|----------------------------|---------|------------------------------|---------|
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Total Collisions | 9 | -- | 15 | -- | 30 | -- | 13 | -- |
| Collisions Involving Only Vehicles | 7 | 78% | 12 | 80% | 28 | 93% | 11 | 85% |
| Collisions Involving Pedestrians and Vehicles | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Collisions Involving Bicyclists and Vehicles | 2 | 22% | 3 | 20% | 2 | 7% | 2 | 15% |
| Collisions that Resulted in Injury | 3 | 33% | 4 | 27% | 12 | 40% | 3 | 23% |
| Vehicle Only Collisions Resulting in Injury ^f | 1 | 14% | 3 | 25% | 10 | 36% | 3 | 27% |
| Pedestrian/Vehicle Collisions Resulting in Injury ^g | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Bicycle/Vehicle Collisions Resulting in Injury ^h | 2 | 100% | 1 | 33% | 2 | 100% | 0 | 0% |
| Collisions that Resulted in Fatality | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |

^a Collision history data summarized for the five year period between 2006 and 2010
^b Adeline Street between Lowell and Market Streets
^c Lowell Street between Market and Adeline Streets
^d Market Street between 63rd and Adeline Streets
^e Stanford Avenue between Los Angeles Street and Market Street
^f Percentage reflects the number of vehicle/vehicle collisions resulting in injury divided by the total number of vehicle/vehicle collisions
^g Percentage reflects the number of pedestrian/vehicle collisions resulting in injury divided by the total number of pedestrian/vehicle collisions
^h Percentage reflects the number of bicycle/vehicle collisions resulting in injury divided by the total number of bicycle/vehicle collisions

SOURCE: California Highway Patrol SWITRS data between 2006 and 2010.

As shown in the table, Market Street had the most collisions (30) reported between 2006 and 2010. Of these 30 collisions, two involved bicyclists (seven percent). No vehicle / pedestrian collisions or collision-related fatalities were reported in the vicinity of the Project Study Area. Vehicle collisions with bicycles accounted for about 13 percent of reported collisions in the vicinity of the Project Study Area. About 33 percent of collisions in the area resulted in injuries. However, most bicycle/vehicle collisions resulted in injuries.

Table 4.13-7 summarizes collision data by location along Adeline, Lowell, and Market Streets, and Stanford Avenue for 2006 through 2010. As shown in the table, the Stanford Avenue / Market Street intersection had the highest number of reported collisions (seven); none involved bicycles or pedestrians and no injuries were reported.

**TABLE 4.13-7
 PROJECT STUDY AREA COLLISION LOCATION SUMMARY^a**

| Location | Total Collisions | Collisions Involving Pedestrians | Collisions Involving Bicyclists | Collisions Resulting in Injury | Collisions Resulting in Fatality |
|--|-------------------------|---|--|---------------------------------------|---|
| Adeline Street | | | | | |
| Adeline Street /Lowell Street Intersection | 1 | 0 | 0 | 1 | 0 |
| Between Lowell and 54th Streets | 2 | 0 | 0 | 0 | 0 |
| Between 54th and 55th Streets | 2 | 0 | 0 | 0 | 0 |
| Adeline Street /56th Street Intersection | 1 | 0 | 1 | 1 | 0 |
| Between 56th and Aileen Streets | 1 | 0 | 0 | 0 | 0 |
| Adeline St./Aileen St. Intersection | 1 | 0 | 1 | 1 | 0 |
| Lowell Street | | | | | |
| Between Market and 62nd Streets | 1 | 0 | 0 | 0 | 0 |
| Lowell Street /62nd Street Intersection | 2 | 0 | 0 | 0 | 0 |
| Lowell Street /61st Street Intersection | 1 | 0 | 0 | 0 | 0 |
| Lowell Street /57th Street Intersection | 1 | 0 | 0 | 1 | 0 |
| Lowell St. /Aileen St. Intersection | 2 | 0 | 0 | 0 | 0 |
| Between 55th and 54th Streets | 2 | 0 | 1 | 1 | 0 |
| Lowell Street /54th Street Intersection | 3 | 0 | 0 | 2 | 0 |
| Between 54th and 53rd Streets | 1 | 0 | 0 | 0 | 0 |
| Lowell Street /53rd Street Intersection | 1 | 0 | 1 | 0 | 0 |
| Market Street | | | | | |
| Market Street/63rd Street/Lowell Street Intersection | 4 | 0 | 0 | 3 | 0 |
| Between Lowell and 62nd Streets | 1 | 0 | 0 | 1 | 0 |
| Market Street/62nd Street Intersection | 2 | 0 | 0 | 0 | 0 |
| Between 62nd and 61st Streets | 2 | 0 | 0 | 1 | 0 |
| Market Street/61st Street Intersection | 3 | 0 | 0 | 1 | 0 |
| Between 61st St. and Occidental Ct. | 1 | 0 | 0 | 1 | 0 |
| Market Street/59th Street Intersection | 2 | 0 | 0 | 0 | 0 |
| Between 58th St. and Arlington Ave. | 1 | 0 | 0 | 0 | 0 |
| Market St./Arlington Ave. Intersection | 2 | 0 | 0 | 0 | 0 |
| Between Arlington Avenue and Adeline Street | 5 | 0 | 0 | 2 | 0 |
| Market St./Adeline St. Intersection | 4 | 0 | 2 | 3 | 0 |
| Stanford Avenue | | | | | |
| Stanford Avenue/Los Angeles Street intersection | 3 | 0 | 0 | 1 | 0 |
| Stanford Ave./Lowell St. Intersection | 3 | 0 | 2 | 0 | 0 |
| Between Lowell Street and 59th Street | 1 | 0 | 0 | 1 | 0 |
| Between 59th Street and Market Street | 4 | 0 | 1 | 1 | 0 |
| Stanford Ave./Market St. Intersection | 7 | 0 | 0 | 0 | 0 |

^a Collision history data summarized for the five year period between 2006 and 2010

SOURCE: California Highway Patrol SWITRS data between 2006 and 2010.

Planned Transportation Network Changes

A review of the available information indicates that several changes are planned for all transportation modes in the Amendment Area and vicinity, as described below. However, not all of these changes have finalized design plans, are fully funded, and/or are approved. Those changes lacking final design, full funding, and/or approval are not available to mitigate any deficient conditions in the No Project conditions, and it would be speculative to include them in the analysis. Therefore, they are not assumed in the quantitative analysis, and are included herein for information purposes only.

Planned Roadway Changes

The planned roadway changes identified in the Project Study Area and vicinity include:

- Caltrans is currently constructing the fourth bore of the Caldecott Tunnel on SR 24. After completion (expected by 2014), the tunnel would accommodate a total of four travel lanes in each direction. Therefore, this project is assumed in the analysis of future conditions.

No other roadway changes are currently planned in the vicinity of the Project Study Area.

Planned Bicycle/Pedestrian Facilities Changes

The City of Oakland *Bicycle Master Plan Update*, as adopted in December 2007, proposes several improvements to the bicycle facilities within the Amendment Area, including:

- Class 2 bike lanes on 40th Street between Yerba Buena and Martin Luther King Jr. Way. This project has funding, and is approved. Therefore, it is assumed in the analysis of future conditions; however, it would not affect future traffic operations because it would not change the number of automobile lanes or reduce the number of on-street parking spaces.
- Class 3B bicycle boulevard on 52nd Street between West and Genoa Streets and on Genoa Street between 52nd and Adeline Streets. This project is funded, approved, and expected to be implemented in 2011. Therefore, it is assumed in the analysis of future conditions; however, it would not affect future traffic operations because it would not change the number of automobile lanes.
- Class 3B bicycle boulevard on 53rd Street between Emeryville city limit and Gaskill Street, on Gaskill Street between 53rd and 54th Streets, and on 54th Street between Gaskill and Adeline Streets. This project is funded, approved, and expected to be implemented in 2011. Therefore, it is assumed in the analysis of future conditions; however, it would not affect future traffic operations because it would not change the number of automobile lanes.
- Class 3B bicycle boulevard on 65th Street between Emeryville city limit and Herzog Street, on Herzog Street between 65th and 66th Streets, and on 66th Street between Herzog Street and Berkeley city limit. Although it is not known when this project would be implemented, it is funded and approved. Therefore, it is assumed in the analysis of future conditions; however, it would not affect future traffic operations because it would not change the number of automobile lanes.

The Oakland *Bicycle Master Plan* proposes Class 2 bicycle lanes on Adeline Street between Emeryville city limit and 61st Street by narrowing the street from two to one travel lane in each direction. This improvement could be facilitated by the Proposed Amendments and therefore, this SEIR analyzes its potential impacts.

In order to facilitate the movement of bicycles at the Adeline Street/Market Street intersection, this SEIR explores improvements at this intersection. These improvements could be facilitated by the Proposed Amendments and funded through the Bicycle Program.

4.13.3 Regulatory Setting

Local Plans and Policies

The Oakland General Plan is comprised of numerous elements, and those containing policies relevant to transportation resources primarily are contained in the Land Use and Transportation Element (LUTE). The goals and policies contained in the various General Plan Elements are often competing. In reviewing a project for conformity with the General Plan, the City is required to ‘balance’ the competing goals and policies. The Proposed Amendments are reviewed for compliance with the following local plans and policies:

- General Plan LUTE
- City of Oakland Pedestrian Master Plan
- City of Oakland Bicycle Master Plan
- City of Oakland Bicycle Parking Ordinance
- City of Oakland Transit First Policy
- AC Transit Short-Range Transit Plan
- City of Oakland Standard Conditions of Approval

City of Oakland General Plan LUTE

The City of Oakland, through various policy documents, states a strong preference for encouraging use of alternative transportation modes. The following policies are included in the LUTE:

LUTE Policy Framework: Encouraging Alternative Means of Transportation. “A key challenge for Oakland is to encourage commuters to carpool or use alternative modes of transportation, including bicycling or walking. The Policy Framework proposes that congestion be lessened by promoting alternative means of transportation, such as transit, biking, and walking, providing facilities that support alternative modes, and implementing street improvements. The City will continue to work closely with local and regional transit providers to increase accessibility to transit and improve intermodal transportation connections and facilities. Additionally, policies support the introduction of light rail and trolley buses along appropriate arterials in heavily traveled corridors, and expanded use of ferries in the bay and estuary.”

- *Objective T2, Integrating Transportation and Land Use Planning.* Provide mixed use, transit-oriented development that encourages public transit use and increases pedestrian and bicycle trips at major transportation nodes.

- *Policy T2.1, Encouraging Transit-Oriented Development.* Transit-oriented development should be encouraged at existing or 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 T2.4, Linking Transportation and Economic Development.* Encourage transportation improvements that facilitate economic development.
- *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 T3.5, Including Bikeways and Pedestrian Walks.* The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realized streets, wherever possible.
- *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. (Policies T3.6 and T3.7 are based on the City Council’s passage of “Transit First” policy in October 1996.)
- *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.

City of Oakland Pedestrian Master Plan

In November 2002, the *Pedestrian Master Plan* (PMP) was adopted by the City Council and incorporated into the adopted General Plan. The PMP identifies policies and implementation measures that promote a walkable City. The PMP designates a Pedestrian Route Network throughout Oakland. In the vicinity of the Amendment Area, it identifies San Pablo Avenue and Market Street as City Routes, Alcatraz and Stanford Avenues and 55th and Adeline Streets as District Routes, and 63rd Street as a Neighborhood Route.

The *PMP* includes the following relevant policies and actions:

- *Policy 1.1: Crossing Safety*: Improve pedestrian crossings in area of high pedestrian activity where safety is an issue.

Action 1.1.1. Consider the full range of design elements – including bulbouts and refuge islands – to improve pedestrian safety.

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

Action 1.2.7. Consider using crossing enhancement technologies like countdown pedestrian signals at the highest pedestrian volume locations.

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

Action 1.3.1. Conduct a survey of areas lacking sidewalks and estimate the cost and feasibility of filling sidewalk gaps in areas with pedestrian traffic.

Action 1.3.7. Conduct a survey of all street intersections to identify corners with missing, damaged, or non-compliant curb ramps and create a plan for completing their installation.

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

Action 2.1.8. To the maximum extent possible, make walkway accessible to people with physical disabilities.

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

Action 2.3.1: Develop and implement street designs (like bus bulbouts) that improve pedestrian/bus connections.

Action 2.3.3: Prioritize the implementation of street furniture (including bus shelters) at the most heavily used transit stops.

Action 2.3.4: Improve pedestrian wayfinding by providing local area maps and directional signage at major AC Transit stops and BART stations.

- *Policy 3.2: Land Use*. Promote land uses and site designs that make walking convenient and enjoyable.

Action 3.2.4: Require contractors to provide safe, convenient, and accessible pedestrian rights-of-way along construction sites that require sidewalk closure.

Action 3.2.8: Discourage motor vehicle parking facilities that create blank walls, unscreened edges along sidewalks, and/or gaps between sidewalks and building entrances.

City of Oakland Bicycle Master Plan

The Oakland City Council adopted the *Oakland Bicycle Master Plan Update* in December 2007. The adopted plan includes the following policy-supporting actions that are applicable to the Proposed Amendments:

- *Policy 1A: Bikeway Network*. Develop and improve Oakland’s bikeway network.
 - Action 1A.1 – Bicycle Lanes (Class 2)*: Install bicycle lanes where feasible as the preferred bikeway type for all streets on the proposed bikeway network (except for the bicycle boulevards proposed for local streets with low traffic volumes and speeds).
 - Action 1A.3 – Bicycle Boulevards (Class 3B)*: Enhance bicycle routes on local streets by developing bicycle boulevards with signage, striping, and intersection modifications to prioritize bicycle travel.
 - Action 1A.6 – Dedicated Right Turn Lanes and “Slip Turns”*: Where feasible, avoid the use of dedicated right turn lanes on streets included in the bikeway network. Where infeasible, consider a bicycle through lane to the left of the turn lane or a combined bicycle lane/right turn lane.
- *Policy 1B: Routine Accommodation*. Address bicycle safety and access in the design and maintenance of all streets.
 - Action 1B.2 – Traffic Signals*: Include bicycle-sensitive detectors, bicycle detector pavement markings, and adequate yellow time for cyclists with all new traffic signals and in the modernization of all existing signals.
- *Policy 1C – Safe Routes to Transit*. Improve bicycle access to transit, bicycle parking at transit facilities, and bicycle access on transit vehicles.
 - Action 1C.1 – Bikeways to Transit Stations*: Prioritize bicycle access to major transit facilities from four directions, integrating bicycle access into the station design and connecting the station to the surrounding neighborhoods.
- *Policy 1D – Parking and Support Facilities*. Promote secure and conveniently located bicycle parking at destinations throughout Oakland.
 - Action 1D.6 – Bicycle Parking Ordinance*: Adopt an ordinance as part of the City’s Planning Code that would require new development to include short and long-term bicycle parking.
 - Action 1D.7 – Development Incentives*: Consider reduced automobile parking requirements in exchange for bicycle facilities as part of transportation demand management strategies in new development.

City of Oakland Bicycle Parking Ordinance

The Oakland City Council adopted a Bicycle Parking Ordinance in 2008. The ordinance is contained in Municipal Code Chapter 17.117, and requires new development to provide both short-term (i.e., bicycle racks) and long-term bicycle parking (i.e., lockers or indoor storage) for bicycles.

City of Oakland Transit First Policy

The City adopted what is known as the “Transit First” Policy in October 2006. This resolution supports public transit and other alternatives to single occupant vehicles, and directs the LUTE to incorporate “various methods of expediting transit services on designated streets, and encouraging greater transit use.”

AC Transit Short-Range Transit Plan

AC Transit, the provider of bus transit service in the Amendment Area, has established goals related to transit service. These goals are documented in the *Short Range Transit Plan – Fiscal Year (FY) 2003 to FY 2012* (AC Transit, 2004). Some of the major goals of AC Transit include:

- Goal 1: Provide High Quality, Useful Transit Service for Customers in the East Bay.
- Goal 4: Plan and Advocate for the Funding and Implementation of Future Projects.
- Work with City and Local agencies to make transit usage as safe, secure, reliable, and quick as possible and to promote transit usage in the planning process.
- Promote “Transit First” development practices and increased funding for transit through transit mitigation funding for new developments.

AC Transit has also established a *Strategic Vision* to provide fast, frequent, reliable service on a wide variety of routes with attractive vehicles and an easy-to-use, affordable fare structure (AC Transit, 2002). Key elements of the AC Transit Strategic Vision include: increased frequency of buses to reduce wait time; greater frequency of service during midday, evening and owl travel times; an easy-to-use, integrated fare system; flexible routes; adequate around-the-clock service; a redesigned network that matches travel patterns and helps meet demand in the high-density urban core; gradual transition to “Bus Rapid Transit” in the highest ridership corridors; and bus stop improvements including real-time display of arrival times.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The City’s SCAs relevant to the transportation and circulation are listed below. All applicable SCAs for parking and transportation demand management, and construction traffic and parking would be adopted as conditions of approval for projects facilitated by the Redevelopment Plan, as Amended, to reduce significant transportation and circulation impacts. The SCA’s are incorporated and required as part of development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures.

Where there are impacts associated with development facilitated by the Redevelopment Plan, as Amended, that would result in significant environmental impacts despite implementation of the SCA, additional mitigation measures are recommended.

The City's SCAs relevant to transportation and circulation impacts are shown below.

- **SCA 20: Improvements in the Public Right-of-Way (General)**

Approved prior to the issuance of a P-job or building permit

- a. The project applicant shall submit Public Improvement Plans to Building Services Division for adjacent public rights-of-way (ROW) showing all proposed improvements and compliance with the conditions and/or mitigations and City requirements including but not limited to curbs, gutters, sewer laterals, storm drains, street trees, paving details, locations of transformers and other above ground utility structures, the design specifications and locations of facilities required by the East Bay Municipal Utility District (EBMUD), street lighting, on-street parking and accessibility improvements compliant with applicable standards and any other improvements or requirements for the project as provided for in this Approval. Encroachment permits shall be obtained as necessary for any applicable improvements- located within the public ROW.
- b. Review and confirmation of the street trees by the City's Tree Services Division is required as part of this condition and/or mitigations.
- c. The Planning and Zoning Division and the Public Works Agency will review and approve designs and specifications for the improvements. Improvements shall be completed prior to the issuance of the final building permit.
- d. The Fire Services Division will review and approve fire crew and apparatus access, water supply availability and distribution to current codes and standards.

- **SCA 21: Improvements in the Public Right-of-Way (Specific)**

Approved prior to the issuance of a grading or building permit. Final building and public improvement plans submitted to the Building Services Division shall include the following components:

- a. Install additional standard City of Oakland streetlights.
- b. Remove and replace any existing driveway that will not be used for access to the property with new concrete sidewalk, curb and gutter.
- c. Reconstruct drainage facility to current City standard.
- d. Provide separation between sanitary sewer and water lines to comply with current City of Oakland and Alameda Health Department standards.
- e. Construct wheelchair ramps that comply with Americans with Disabilities Act requirements and current City Standards.
- f. Remove and replace deficient concrete sidewalk, curb and gutter within property frontage.
- g. Provide adequate fire department access and water supply, including, but not limited to currently adopted fire codes and standards.

- **SCA 25: Parking and Transportation Demand Management**

This SCA would apply to all development projects facilitated by the Proposed Amendments consisting of 50 or more new residential units, or 50,000 square feet or more of new non-residential space.

Prior to issuance of a final inspection of the building permit. The applicant shall submit for review and approval by the Planning and Zoning Division a Transportation Demand Management (TDM) plan containing strategies to reduce on-site parking demand and single occupancy vehicle travel. The applicant shall implement the approved TDM plan. The TDM shall include strategies to increase bicycle, pedestrian, transit, and carpools/vanpool use. All four modes of travel shall be considered. Strategies to consider include the following:

- a. Inclusion of additional bicycle parking, shower, and locker facilities that exceed the requirement
 - b. Construction of bike lanes per the Bicycle Master Plan; Priority Bikeway Projects
 - c. Signage and striping onsite to encourage bike safety
 - d. Installation of safety elements per the Pedestrian Master Plan (such as cross walk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient crossing at arterials
 - e. Installation of amenities such as lighting, street trees, trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.
 - f. Direct transit sales or subsidized transit passes
 - g. Guaranteed ride home program
 - h. Pre-tax commuter benefits (checks)
 - i. On-site car-sharing program (such as City Car Share, Zip Car, etc.)
 - j. On-site carpooling program
 - k. Distribution of information concerning alternative transportation options
 - l. Parking spaces sold/leased separately
 - m. Parking management strategies; including attendant/valet parking and shared parking spaces
- **SCA 33: Construction Traffic and Parking**

Prior to the issuance of a demolition, grading or building permit. The project applicant and construction contractor shall meet with appropriate City of Oakland agencies to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this project and other nearby projects that could be simultaneously under construction. The project applicant shall develop a construction management plan for review and approval by the Planning and Zoning Division, the Building Services Division, and the Transportation Services Division. The plan shall include at least the following items and requirements:

- a. A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.
- b. Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.
- c. Location of construction staging areas for materials, equipment, and vehicles at an approved location.
- d. A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager. The manager shall

determine the cause of the complaints and shall take prompt action to correct the problem. Planning and Zoning shall be informed who the Manager is prior to the issuance of the first permit issued by Building Services.

- e. Provision for accommodation of pedestrian flow.

Major Project Cases:

- f. Provision for parking management and spaces for all construction workers to ensure that construction workers do not park in on-street spaces.
- g. Any damage to the street caused by heavy equipment, or as a result of this construction, shall be repaired, at the applicant's expense, within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to issuance of a final inspection of the building permit. All damage that is a threat to public health or safety shall be repaired immediately. The street shall be restored to its condition prior to the new construction as established by the City Building Inspector and/or photo documentation, at the applicant's expense, before the issuance of a Certificate of Occupancy.
- h. Any heavy equipment brought to the construction site shall be transported by truck, where feasible.
- i. No materials or equipment shall be stored on the traveled roadway at any time.
- j. Prior to construction, a portable toilet facility and a debris box shall be installed on the site, and properly maintained through project completion.
- k. All equipment shall be equipped with mufflers.
- l. Prior to the end of each work day during construction, the contractor or contractors shall pick up and properly dispose of all litter resulting from or related to the project, whether located on the property, within the public rights-of-way, or properties of adjacent or nearby neighbors.

4.13.4 Impacts and Mitigation Measures

This section evaluates the Proposed Amendments' potential adverse effects related to transportation, circulation and parking, and it considers vehicles, bicycles and pedestrians. Traffic impacts are assessed on the study roadway segments in the vicinity of the Project Study Area under the following scenarios:

- Existing Plus Project
- Cumulative Year 2015 Plus Project
- Cumulative Year 2035 Plus Project

Following the intersection impact analysis, the Proposed Amendments' potential effects on bus travel times; the Alameda County Congestion Management Program; vehicle, pedestrian and bicycle safety; emergency access; and consistency with local plans, as well as temporary construction effects, are presented. Assessments of non-CEQA issues such as parking, transit ridership, queuing, and neighborhood traffic intrusion are also provided.

Significance Criteria

Significance criteria established by City of Oakland were used to determine if the Redevelopment Plan, as Amended, would cause a significant impact at study intersections in Oakland. City of Oakland's criteria were also used for study intersections in Emeryville because City of Emeryville does not have established intersection operation criteria. City of Berkeley's criteria were used to determine if the Redevelopment Plan, as Amended would result in significant impacts at the study intersection in the City of Berkeley.

City of Oakland

The project would have a significant impact on the environment if it were to:

Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, specifically:

Traffic Load and Capacity Thresholds

1. at a study, signalized intersection which is located outside the Downtown¹ area, the project would cause the LOS to degrade to worse than LOS D (i.e., LOS E);
2. at a study, signalized intersection which is located within the Downtown area, the project would cause the LOS to degrade to worse than LOS E (i.e., LOS F);
3. at a study, signalized intersection outside the Downtown area where the level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four or more seconds, or degrade to worse than LOS E (i.e., LOS F);
4. at a study, signalized intersection for all areas where the level of service is LOS E, the project would cause an increase in the average delay for any of the critical movements of six seconds or more, or degrade to worse than LOS E (i.e., LOS F);
5. at a study, signalized intersection for all areas where the level of service is LOS F, the project would cause
 - a) the overall volume-to-capacity (V/C) ratio to increase 0.01 or more or
 - b) the critical movement V/C ratio to increase 0.02 or more;
6. at a study, unsignalized intersection for all areas, the project would add ten or more vehicles and after project completion satisfy the Caltrans peak-hour volume warrant;
7. A Project's contribution to cumulative impacts is considered "considerable" (i.e., significant) when the Project exceeds at least one of the thresholds listed above in a future year scenario.

¹ Downtown is defined in the Land Use and 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. None of the project study intersections are in Downtown Oakland.

8. For a Congestion Management Program (CMP) required analysis, (i.e., projects that generate 100 or more PM peak-hour trips), cause a roadway segment on the Metropolitan Transportation System to operate at LOS F or increase the v/c ratio by more than three percent for a roadway segment that would operate at LOS F without the project;
9. Result in substantially increased travel times for AC Transit buses;

Other CEQA Thresholds

1. 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;
2. Substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
3. Result in fewer than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions;
4. Fundamentally conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities;
5. Have a significant, though temporary, impact on the environment caused by construction traffic from the project, or if project construction would substantially affect traffic flow and circulation, parking, and pedestrian safety.

Intersections in the City of Berkeley²

The following criteria, established by City of Berkeley, were used to determine if the project were to result in significant impacts at study intersections in the City of Berkeley:

- at a study, signalized intersection operations degrade from LOS D to LOS E or worse and more than a two-second increase in delay; or
- at a study, signalized intersection, more than a 3-second increase in delay at intersections operating at LOS E without and with the project; or
- at a study, signalized intersection, operations degrade from LOS E to LOS F *and* more than a three-second increase in delay; or
- at a study, signalized intersection operating at LOS F without the project, a change in the volume-to-capacity (v/c) ratio of more than 0.01.
- at a study, unsignalized intersection, the addition of project-related traffic causes:
 - the critical approach to operate at LOS F; and

² This EIR uses the significance criteria established by each city for intersections under its jurisdiction to identify impacts and appropriate mitigations at study intersection within that jurisdiction (e.g., City of Oakland’s criteria are used for intersections in Oakland, and City of Berkeley’s criteria are used in Berkeley). The application of Oakland’s significance criteria would not result in a new significant impact or different mitigation at the study intersection in Berkeley that differs from this analysis.

- the intersection meets peak-hour signal warrants; and
 - no alternative routes are available.
- A project’s contribution to cumulative impacts is considered “considerable” (i.e., significant) when the project exceeds at least one of thresholds listed above under a future year scenario.

Planning-Related Non-CEQA Issues

The following transportation-related topics are not considerations under CEQA, but should be evaluated in order to inform decision-makers and the public about these issues.

Parking-Related Impacts

This transportation analysis assesses the issue of parking as a non-CEQA impact. Parking impacts are assessed according to the following language, which was developed by the City of Oakland:

The Court of Appeal has held that parking is not part of the permanent physical environment, that parking conditions change over time as people change their travel patterns, and that unmet parking demand created by a project need not be considered a significant environmental impact under CEQA unless it would cause significant secondary effects.³ Similarly, the December 2009 amendments to the State CEQA Guidelines (which were effective March 18, 2010) removed parking from the State’s Environmental Checklist (Appendix G of the State CEQA Guidelines) as an environmental factor to be considered under CEQA. Parking supply/demand varies by time of day, day of week, and seasonally. As parking demand increases faster than the supply, parking prices rise to reach equilibrium between supply and demand. Decreased availability and increased costs result in changes to people’s mode and pattern of travel. However, the City of Oakland, in its review of a proposed project, wants to ensure that the project’s provision of additional parking spaces along with measures to lessen parking demand (by encouraging the use of non-auto travel modes) would result in minimal adverse effects to project occupants and visitors, and that any secondary effects (such as on air quality due to drivers searching for parking spaces) would be minimized. As such, although not required by CEQA, parking conditions are evaluated in this document.

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

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

³ San Franciscans Upholding the Downtown Plan v. City and County of San Francisco (2002) 102 Cal.App.4th 656.

Transit Ridership

Transit load is not part of the permanent physical environment; transit service changes over time as people change their travel patterns. Therefore, the effect of a proposed project on transit ridership need not be considered a significant environmental impact under CEQA unless it would cause significant secondary effects, such as causing the construction of new permanent transit facilities which in turn causes physical effects on the environment. Furthermore, an increase in transit ridership is an environmental benefit, not an impact. The City of Oakland, however, in its review of the proposed project, wants to understand the project's potential effect on transit ridership. As such, although not required by CEQA, transit ridership is evaluated in this document as a non-CEQA topic for informational purposes.

This document evaluates whether the Redevelopment Plan, as Amended would exceed any of the following:

- increase the average ridership on AC Transit lines by three percent at bus stops where the average load factor with the project in place would exceed 125 percent over a peak 30-minute period;

Queuing-Related Impacts

This transportation analysis evaluates the Redevelopment Plan, as Amended's potential effect on 95th percentile queuing, to see if the development facilitated by the Redevelopment Plan, as Amended would cause an increase in 95th percentile queue length of 25 feet or more at a signalized study intersection.

Traffic Control Devices

This transportation analysis evaluates the need for additional traffic control devices (e.g., stop signs, street lighting, crosswalks, traffic calming devices) using the California Manual on Uniform Traffic Control Devices (MUTCD) and applicable city standards.

Collision History

This transportation analysis evaluates five years of vehicle, pedestrian, and bicycle collision data for intersections and roadway segments in the Project Study Area and vicinity to determine if the Redevelopment Plan, as Amended would contribute to an existing problem or if any improvements are recommended in order to alleviate potential effects of the project. As described previously, the Project Study Area and vicinity had few collisions in general, and there are no existing physical problems to which the Redevelopment Plan, as Amended would contribute.

Approach to Analysis

Prior to approval of any project that is facilitated by the Redevelopment Plan, as Amended, the project would be subject to project-level environmental review as well as the SCAs and the goals and policies of the City's General Plan as outlined above.

The 2000 EIR analyzed the potential environmental effects on transportation and circulation and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As

previously indicated in Section 4.13.1, changes that have occurred to the transportation and circulation setting since preparation of the 2000 EIR are included in the analysis in this SEIR. As mentioned in Section 4.13.1, some of these changes to physical conditions are identified, assessed and/or the result of mitigation measures identified in other EIRs. This analysis evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.⁴ Based on the information in each of the aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding transportation and circulation relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for these topics. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference. Changes to regulatory conditions have occurred and are incorporated and discussed in Section 4.13.1, above.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of transportation and circulation in the Existing Project Area in this SEIR. Therefore, the impact discussions and analyses below focus on the activities facilitated by the Proposed Amendments and the potential for transportation and circulation impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes that have occurred to the environmental setting since the 2000 EIR are also evaluated as “past, present or reasonably foreseeable” projects and accordingly, are considered in the cumulative analysis in this SEIR.

Methodology Guidance

The analysis was conducted in compliance with City of Oakland and Alameda County Transportation Commission (ACTC), formerly known as Alameda County Congestion Management Agency (ACCMA), guidelines.

Proposed Amendment Elements

Development facilitated by the Proposed Amendments is assumed to result in the following:

- Redevelopment of existing uses on or in the vicinity of Lowell Street into a land use mix consisting of 280 multi-family dwelling units, 90 live-work units, and 110,000 square feet of industrial incubator space.
- Conversion of Adeline Street from two automobile lanes to one automobile lane and one bicycle lane in each direction between Emeryville city limit and 61st Street.

⁴ Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

Analysis Scenarios

The analysis evaluates the traffic-related impacts during both the weekday morning (AM) and evening (PM) peak hours, under the following six scenarios at 17 intersections that are likely to be affected:

- **Existing** – Represents existing conditions with volumes obtained from recent traffic counts and the existing roadway system.
- **Existing Plus Project** – Represents existing conditions plus projected traffic generated by development facilitated by the Proposed Amendments in the Lowell Street corridor.
- **Cumulative Year 2015 No Project** – Represents future conditions with planned population and employment growth and planned transportation system improvements for the year 2015. This scenario assumes no traffic growth within the Amendment Area. Traffic projections were developed using the most recently available version of the Alameda Countywide Travel Demand Model provided by the ACTC (ACTC Model).
- **Cumulative Year 2015 Plus Project** – Represents future forecasted conditions for the year 2015, as determined in the Cumulative Year 2015 No Project scenario, plus projected traffic generated by development facilitated by the Proposed Amendments.
- **Cumulative Year 2035 No Project** - Represents future conditions with planned population and employment growth and planned transportation system improvements for the year 2035. This scenario assumes no traffic growth within the Amendment Area. Traffic projections were developed using the ACTC Model.
- **Cumulative Year 2035 Plus Project** – Represents future forecasted conditions for the year 2035, as determined in the Cumulative Year 2035 No Project scenario, plus projected traffic generated by development facilitated by the Proposed Amendments.

Project Trip Generation

The project trip generation estimates the trips that the development facilitated by the Proposed Amendments would generate and accounts for trips generated by the existing uses that this development would replace along the Lowell Street corridor.

Existing Trip Generation

This analysis accounts for existing traffic that is generated by existing uses that the development facilitated by the Proposed Amendments would replace and remove from the roadway network. Vehicle trip generation for existing uses was estimated by using the trip generation data in *Trip Generation, 8th Edition*, published by the Institute of Transportation Engineers (ITE, 2008). Because *Trip Generation* does not include data for live-work space, trip generation for these units is based on a trip generation survey of Phoenix Lofts, a live-work building at 737 2nd Street in Oakland (Fehr & Peers, 2002).

Table 4.13-8 summarizes the estimated traffic currently generated by the parcels along the Lowell Street corridor. In order to present a conservative estimate of the existing trip generation and to account for the current below average occupancies along the Lowell Street corridor, the total

number of existing trips estimated by ITE data was reduced by 50 percent. It is estimated that the existing uses currently generate about 104 AM peak-hour trips and 113 PM peak-hour trips.

**TABLE 4.13-8
 EXISTING PROJECT STUDY AREA VEHICLE TRIP GENERATION**

| Land Use | ITE Code | Units ^a | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
|---|------------------|--------------------|----------------------|-----------|------------|----------------------|-----------|------------|
| | | | In | Out | Total | In | Out | Total |
| Live-Work | n/a ^b | 12 DU | 4 | 5 | 9 | 3 | 5 | 8 |
| Industrial | 110 ^c | 155.0 KSF | 126 | 17 | 143 | 18 | 132 | 150 |
| Warehousing | 150 ^d | 162.8 KSF | 39 | 10 | 49 | 13 | 39 | 52 |
| Repair Garage | 942 ^e | 1.0 KSF | 2 | 1 | 3 | 2 | 2 | 4 |
| Store | 852 ^f | 3.3 KSF | 2 | 1 | 3 | 6 | 6 | 12 |
| Vacant Properties | n/a | 31.4 KSF | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | | | 173 | 34 | 207 | 42 | 184 | 226 |
| 50% Adjustment ^g | | | -86 | -17 | -103 | -21 | -92 | -113 |
| Estimated Existing Trip Generation | | | 87 | 17 | 104 | 21 | 92 | 113 |

- ^a DU = dwelling units; KSF = 1,000 square feet
- ^b Average trip rates from 2002 survey of Phoenix Lofts live-work site in Oakland:
 AM: T = 0.71(X); Enter = 41%, Exit = 59%
 PM: T = 0.65(X); Enter = 36%, Exit = 64%
- ^c ITE Trip Generation average rates used:
 AM: T = 0.92(X); Enter = 88%, Exit = 12%
 PM: T = 0.97(X); Enter = 12%, Exit = 88%
- ^d ITE Trip Generation average rates used:
 AM: T = 0.30(X); Enter = 79%, Exit = 21%
 PM: T = 0.32(X); Enter = 25%, Exit = 75%
- ^e ITE Trip Generation average rates used:
 AM: T = 2.94(X); Enter = 65%, Exit = 35%
 PM: T = 3.38(X); Enter = 50%, Exit = 50%
- ^f ITE Trip Generation average rates used:
 AM: T = 1.00(X); Enter = 61%, Exit = 39%
 PM: T = 3.73(X); Enter = 49%, Exit = 51%
- ^g 50% adjustment to account for below average occupancy in area

SOURCE: ITE, *Trip Generation* (8th Edition), 2008; and Fehr & Peers, 2011.

Development Facilitated by the Proposed Amendments Trip Generation

The vehicle trip generation for the development facilitated by the Proposed Amendments was also estimated based on the data in ITE *Trip Generation*. Multi-family housing trip generation was estimated using ITE land use code 820 (apartments) rates, and industrial incubator trip generation was estimated using ITE land use code 110 (light industrial) rates. **Table 4.13-9** presents trip generation estimates for this development, and accounts for vehicle trips that would be removed from the roadway network due to the existing uses that would be redeveloped.

**TABLE 4.13-9
 PROJECT VEHICLE TRIP GENERATION**

| Land Use | ITE Code | Units ^a | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
|---|------------------|--------------------|----------------------|------------|------------|----------------------|-----------|------------|
| | | | In | Out | Total | In | Out | Total |
| Multi-family | 220 ^b | 280 DU | 28 | 113 | 141 | 112 | 60 | 172 |
| <i>Alternate Mode Auto Trip Reduction (20%)^c</i> | | | -6 | -22 | -28 | -22 | -12 | -34 |
| Industrial Incubator | 110 ^d | 110 KSF | 89 | 12 | 101 | 13 | 94 | 107 |
| Live-Work | n/a ^e | 90 DU | 26 | 38 | 64 | 21 | 38 | 59 |
| Total | | | 137 | 141 | 278 | 124 | 180 | 304 |
| <i>Existing Trip Generation Reduction^f</i> | | | -87 | -17 | -104 | -21 | -92 | -113 |
| Net New Vehicle Trips | | | 50 | 124 | 174 | 103 | 88 | 191 |

- ^a DU = dwelling units; KSF = 1,000 square feet
- ^b ITE Trip Generation average rate used:
 AM: T = 0.49(X) + 3.73; Enter = 20%, Exit = 80%
 PM: T = 0.55(X) + 17.65; Enter = 65%, Exit = 35%
- ^c Alternative mode auto trip reduction percentage based on U.S. Census (2000) Journey-to-Work surveys for census tracts along the Lowell Street corridor.
- ^d ITE Trip Generation average rate used:
 AM: T = 0.92(X); Enter = 88%, Exit = 12%
 PM: T = 0.97(X); Enter = 12%, Exit = 88%
- ^e Average trip rates from 2002 survey of Phoenix Lofts live-work site in Oakland:
 AM: T = 0.71(X); Enter = 41%, Exit = 59%
 PM: T = 0.65(X); Enter = 36%, Exit = 64%
- ^f See "Estimated Existing Trip Generation" in Table 4.13-8.

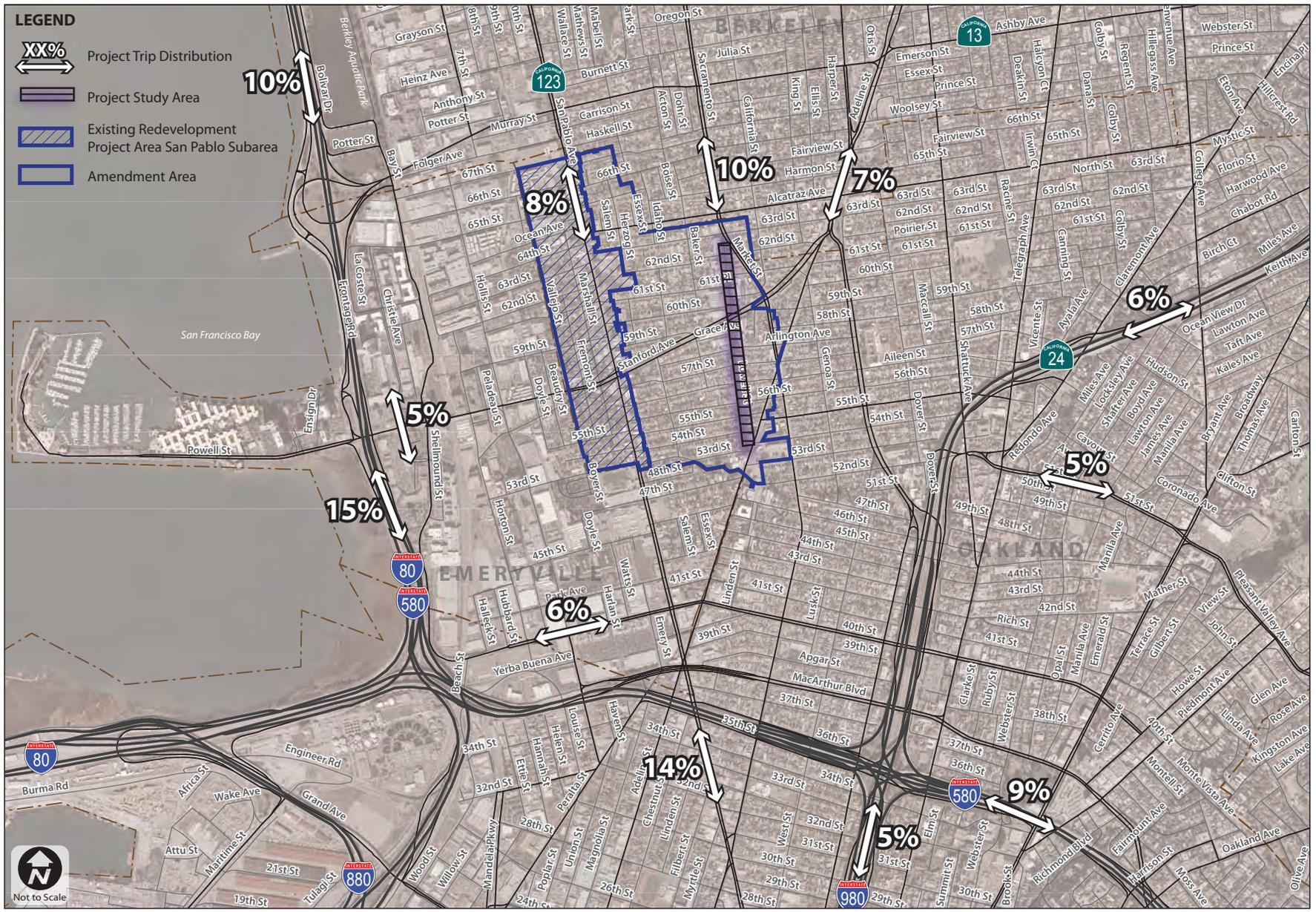
SOURCE: ITE, *Trip Generation* (8th Edition), 2008; and Fehr & Peers, 2011

Because ITE *Trip Generation* is based on data collected at suburban sites with little or no transit service and minimal pedestrian and bicycle infrastructure, the project trip generation was adjusted to include a 20 percent reduction for residential uses due to the usage of other travel modes in the Amendment Area. Based on 2000 U.S. Census data, approximately 80 percent of work commute trips in the Amendment Area were by private vehicle, and the remaining 20 percent were by other travel modes, including transit, bicycling, and walking. Alternative mode adjustments were not made for either the industrial incubator or live-work uses because the industrial incubators are expected to generate mostly automobile trips and the trip generation rates for live-work already account for alternative modes because they are based on an existing site with similar transit service. As shown in Table 4.13-9, the Proposed Amendments would generate about 174 AM peak-hour and 191 PM peak-hour net new trips.

Trip Distribution and Assignment

Trip distribution is defined as the directions of approach and departure that vehicles would use to arrive at and depart from the Lowell Street corridor. Distribution of project trips was estimated based on existing travel patterns, existing control at intersections along Lowell Street, relative location and proximity of popular area destinations, and the results of the ACTC Model.

Figure 4.13-10 shows the resulting distribution.



SOURCE: Fehr & Peers

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Figure 4.13-10
Project Trip Distribution

The trips generated by the development facilitated by the Proposed Amendments were assigned to the roadway network according to the above-described project trip distribution. The resulting trip assignment by roadway segment is presented on **Figure 4.13-11** for the weekday PM peak hour, when trip generation will be highest and typical traffic conditions are at their worst. **Figure 4.13-12** presents the project-generated turning movements at the study intersections.

Existing Plus Project Conditions

This section analyzes the transportation system with trips associated with the development facilitated by the Proposed Amendments added to the existing traffic counts and modification made by the redevelopment activities to the roadway network. Because it would take a number of years to secure approvals and complete the development facilitated by the Proposed Amendments, this analysis is presented for information only. This analysis presents the extent of project impacts relative to existing conditions.

Existing Plus Project Traffic Volumes

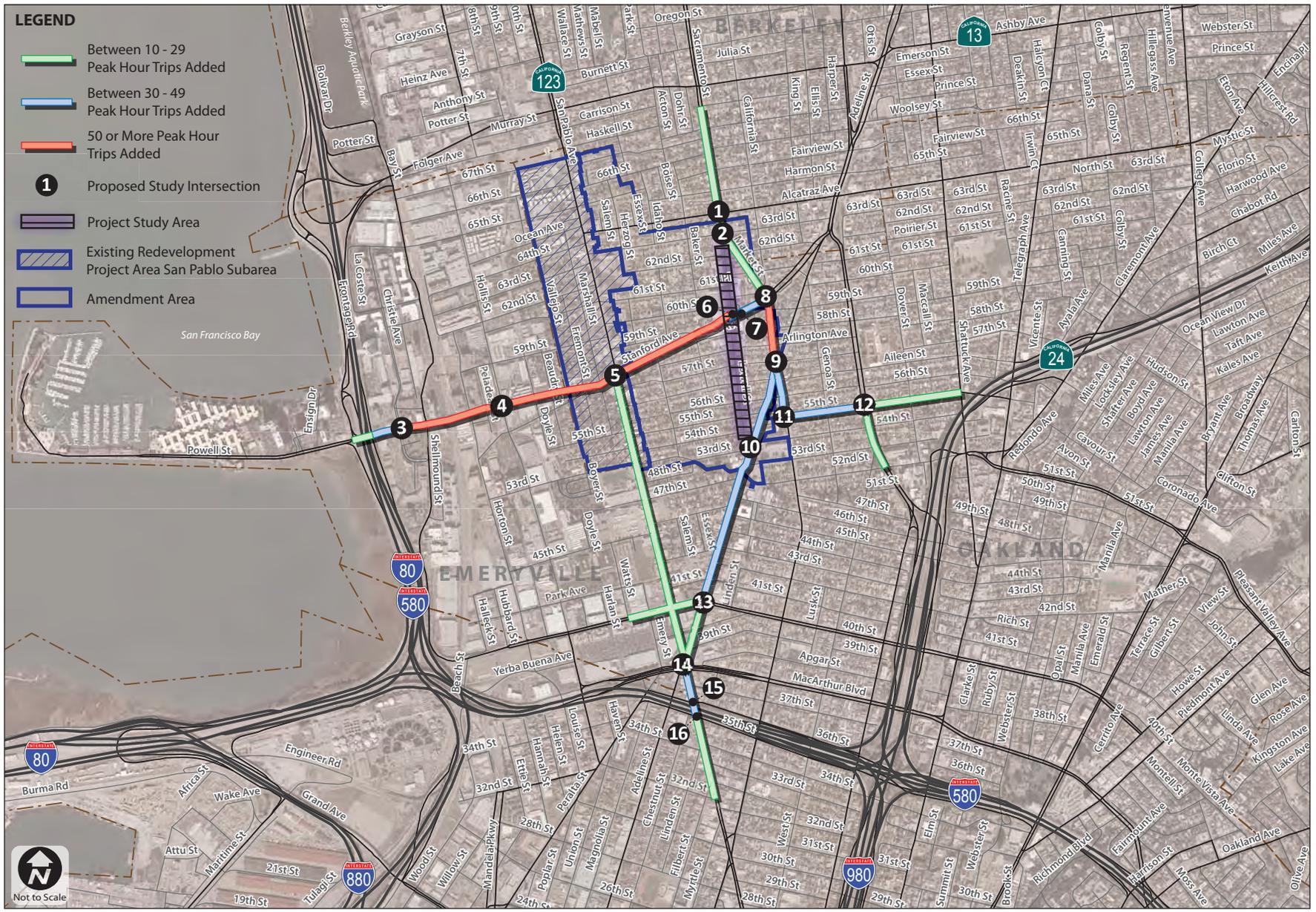
The traffic volumes for the Existing Plus Project conditions were estimated by adding the traffic volumes generated by the development facilitated by the Proposed Amendments (Figure 4.13-12) to the existing traffic volumes (Figure 4.13-5). **Figure 4.13-13** shows the Existing Plus Project traffic volumes.

Existing Plus Project Roadway Network

As described above, the development facilitated by the Proposed Amendments would narrow Adeline Street to one travel lane and a bicycle lane in each direction between Emeryville city limit and 61st Street. As such the Existing Plus Project analysis includes that narrowing of Adeline Street and assumes that Adeline Street would not provide left-turn lanes. No other modifications to the roadway network are assumed for the Existing Plus Project analysis. In addition, no adjustments were assumed to optimize the traffic signal timings at the study intersections.

Existing Plus Project Intersection Operations

Intersection LOS calculations were completed with the existing plus project traffic volumes and the existing lane configurations. As shown in **Table 4.13-10**, all study intersections would continue to operate at LOS D or better with the addition of the project-generated traffic, and the Proposed Amendments would cause a less-than-significant impact at the study intersections under Existing Plus Project conditions. Detailed intersection LOS calculation worksheets are presented in Appendix E-4.

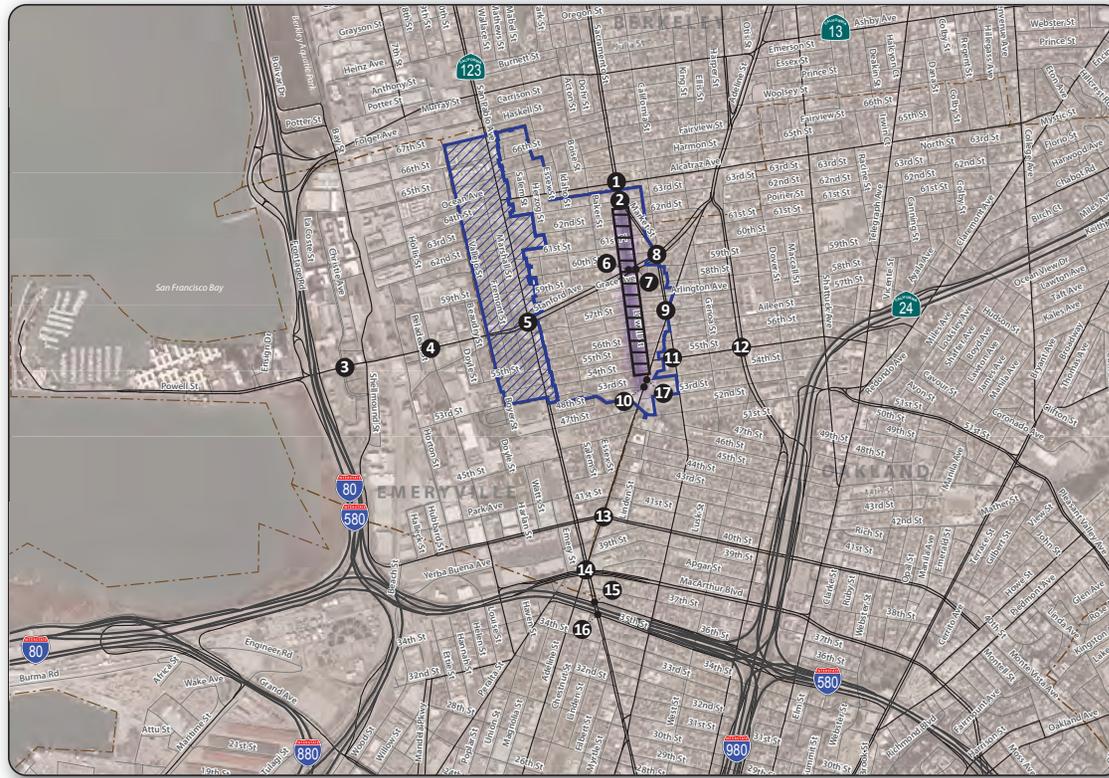


SOURCE: Fehr & Peers

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Figure 4.13-11

Weekday PM Peak Hour Project Trip Assignment

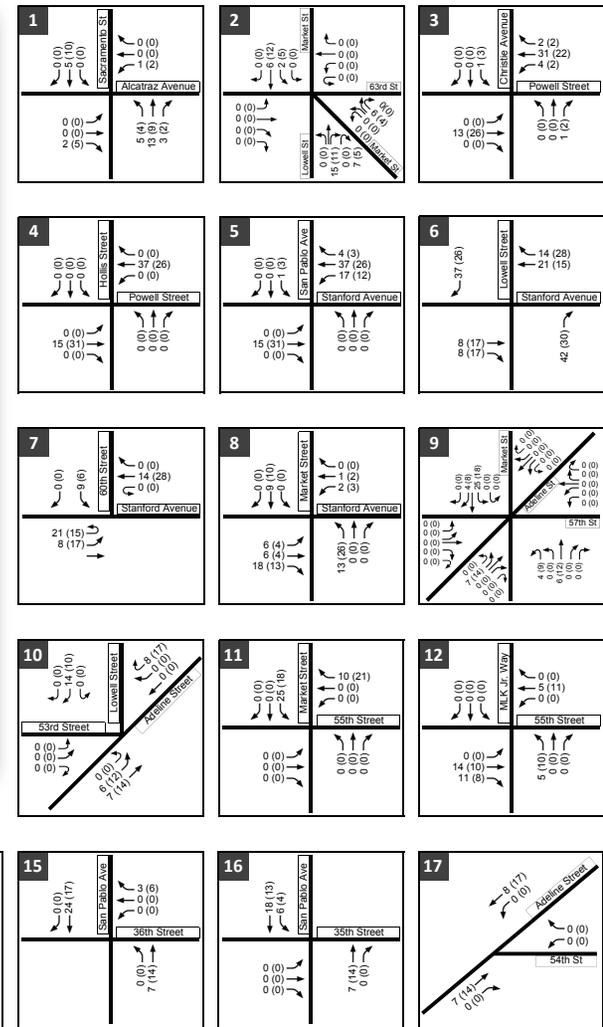


MAP LEGEND

- ① Study Intersection
- Project Study Area
- Existing Redevelopment Project Area San Pablo Subarea
- Amendment Area

VOLUMES LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

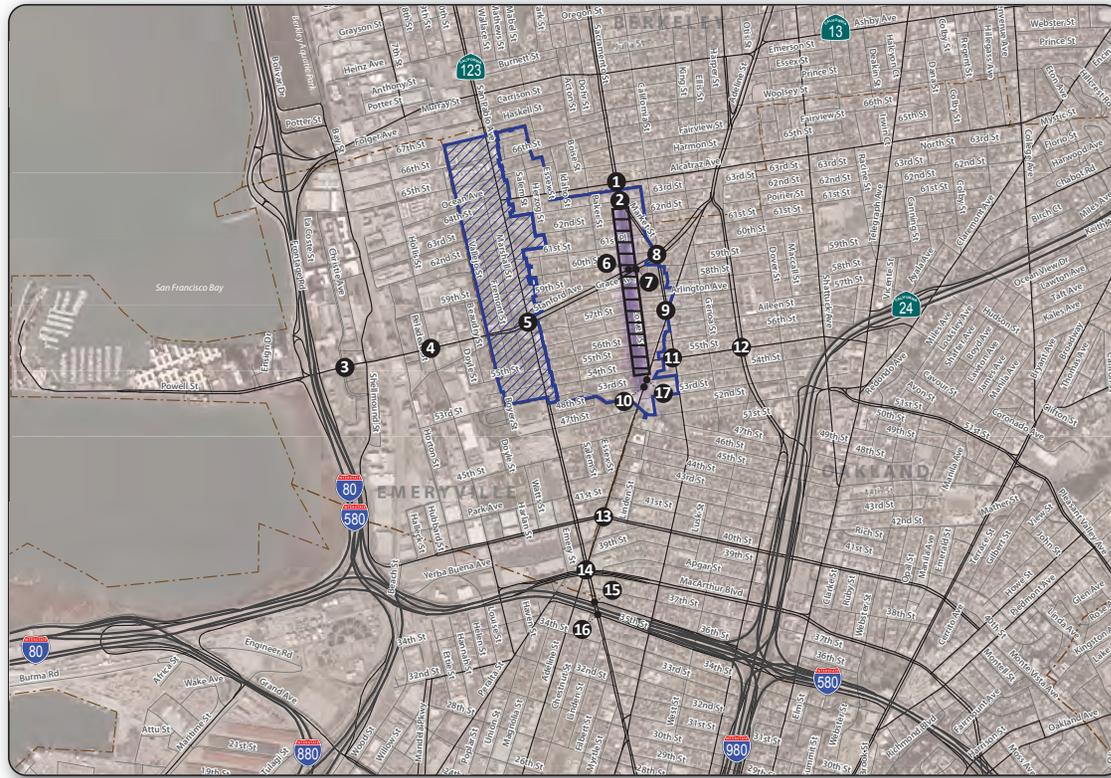


SOURCE: Fehr & Peers

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Figure 4.13-12

Net New Project Trips at Study Intersections

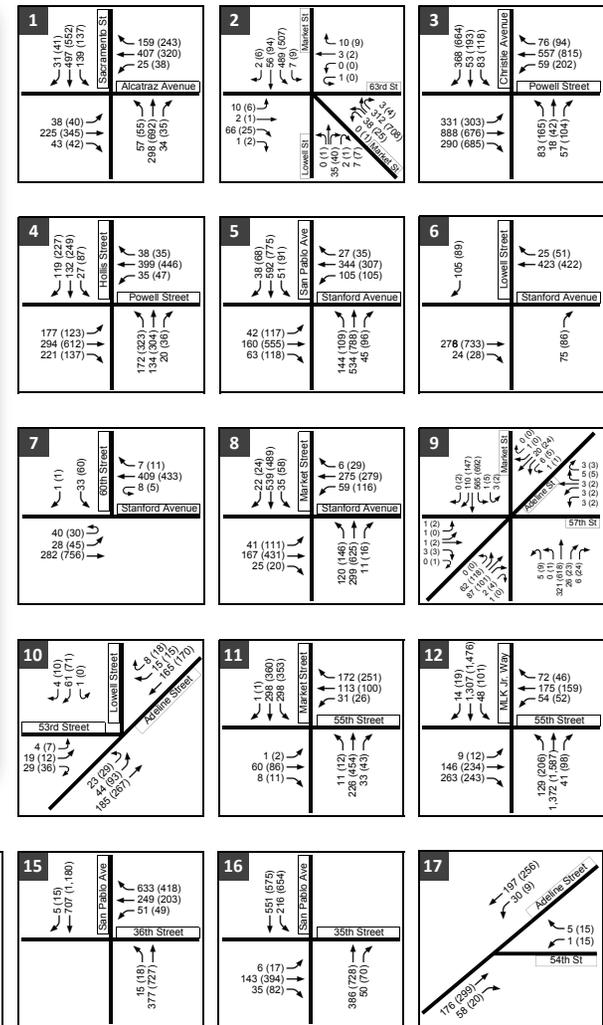


MAP LEGEND

- ① Study Intersection
- Project Study Area
- Existing Redevelopment
- Project Area San Pablo Subarea
- Amendment Area

VOLUMES LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes



SOURCE: Fehr & Peers

Proposed Amendments to B/M/SP Redevelopment Plan - 210505.02

Figure 4.13-13
Existing Plus Project Conditions-
Peak Hour Traffic Volumes

**TABLE 4.13-10
EXISTING PLUS PROJECT CONDITIONS INTERSECTION LOS SUMMARY**

| | Intersection | Jurisdiction | Traffic Control ^a | Peak Hour | Existing | | Existing Plus Project | | Sig. Impact? |
|-----|---|--------------|------------------------------|-----------|------------------------------|------------------|------------------------------|------------------|--------------|
| | | | | | Delay ^b (seconds) | LOS ^c | Delay ^b (seconds) | LOS ^c | |
| #1 | Alcatraz Avenue/ Sacramento Street | Berkeley | Signal | AM | 16.4 | B | 16.5 | B | No |
| | | | | PM | 22.7 | C | 23.3 | C | No |
| #2 | 63rd Street/Lowell Street/Market Street | Oakland | SSSC | AM | 1.9 (12.7) | A (B) | 2.2 (14.0) | A (B) | No |
| | | | | PM | 1.1 (14.1) | A (B) | 1.2 (13.9) | A (B) | No |
| #3 | Powell Street/ Christie Avenue | Emeryville | Signal | AM | 31.9 | C | 32.1 | C | No |
| | | | | PM | 39.5 | D | 40.8 | D | No |
| #4 | Powell Street/ Hollis Street | Emeryville | Signal | AM | 35.1 | D | 34.8 | C | No |
| | | | | PM | 44.3 | D | 44.2 | D | No |
| #5 | Stanford Avenue/ San Pablo Avenue | Oakland | Signal | AM | 30.3 | C | 31.8 | C | No |
| | | | | PM | 34.4 | C | 35.3 | D | No |
| #6 | Stanford Avenue/ Lowell Street | Oakland | SSSC | AM | 1.3 (10.6) | A (B) | 2.1 (11.2) | A (B) | No |
| | | | | PM | 1.0 (11.5) | A (B) | 1.4 (12.1) | A (B) | No |
| #7 | Stanford Avenue/ 60th Street | Oakland | SSSC | AM | 0.8 (14.9) | A (B) | 1.0 (16.1) | A (B) | No |
| | | | | PM | 1.1 (19.8) | A (C) | 1.4 (23.0) | A (C) | No |
| #8 | Stanford Avenue/ Market Street | Oakland | Signal | AM | 17.8 | B | 18.4 | B | No |
| | | | | PM | 24.8 | C | 26.7 | C | No |
| #9 | 57th Street/Adeline Street/Market Street | Oakland | Signal | AM | 20.5 | C | 20.6 | C | No |
| | | | | PM | 21.4 | C | 22.1 | C | No |
| #10 | 53rd Street/Adeline Street/Lowell Street | Oakland | SSSC | AM | 3.0 (10.7) | A (B) | 3.5 (11.8) | A (B) | No |
| | | | | PM | 3.1 (10.1) | A (B) | 3.5 (10.9) | A (B) | No |
| #11 | 55th Street/ Market Street | Oakland | Signal | AM | 10.0 | A | 10.5 | B | No |
| | | | | PM | 17.5 | B | 21.8 | C | No |
| #12 | 55th Street/Martin Luther King Jr. Way | Oakland | Signal | AM | 21.1 | C | 21.8 | C | No |
| | | | | PM | 38.7 | D | 41.1 | D | No |
| #13 | 40th Street/ Adeline Street | Emeryville | Signal | AM | 14.3 | B | 14.9 | B | No |
| | | | | PM | 13.2 | B | 13.8 | B | No |
| #14 | Adeline Street/ San Pablo Avenue | Emeryville | Signal | AM | 13.1 | B | 13.4 | B | No |
| | | | | PM | 13.6 | B | 13.8 | B | No |
| #15 | 36th Street/ San Pablo Avenue | Oakland | Signal | AM | 31.6 | C | 31.2 | C | No |
| | | | | PM | 15.3 | B | 15.7 | B | No |
| #16 | 35th Street/ San Pablo Avenue | Oakland | Signal | AM | 23.1 | C | 23.0 | C | No |
| | | | | PM | 30.3 | C | 30.3 | C | No |
| #17 | 54th Street/ Adeline Street | Oakland | AWSC | AM | 7.4 | A | 9.0 | A | No |
| | | | | PM | 8.1 | A | 10.1 | B | No |

^a Signal = intersection is controlled by a traffic signal; AWSC = intersection is controlled by stop signs on all approaches; SSSC = Intersection is controlled by a stop-sign on the side-street approach.
^b For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst movement and average intersection delay are shown: intersection average (worst movement)
^c Intersections operating at unacceptable levels (LOS E or LOS F) are shown in **bold**.

SOURCE: Fehr & Peers, 2011.

2015 Conditions

This section addresses potential impacts on intersection operations that the development facilitated by the Proposed Amendments would cause in 2015. Although not all components of the project are expected to be complete by 2015, this section analyzes the impacts of the full project to present a worst-case analysis. Items discussed in this section include the development of traffic volume forecasts for the 2015 No Project and 2015 Plus Project scenarios, intersection operations results, and potential project intersection impacts.

2015 Intersection Traffic Forecasts

Traffic volume forecasts for the 2015 No Project scenario were developed using the ACTC Model and existing traffic counts, which reflects past, present, and future developments expected by year 2015. The main inputs to the 2015 forecasting process are the model outputs from a modified version of the ACTC Model (with updated land use) and the existing traffic counts. The base land use data in the ACTC Model was modified to reflect more accurate land use projections in the City of Oakland than is available at the County level. The modifications to the model land use database are described in Appendix E-5. These modifications assure that the ACTC Model correctly accounts for traffic growth from past, present, and reasonably foreseeable development (i.e., pending, planned, proposed, and recently completed residential and non-residential developments) in the vicinity of the Amendment Area.

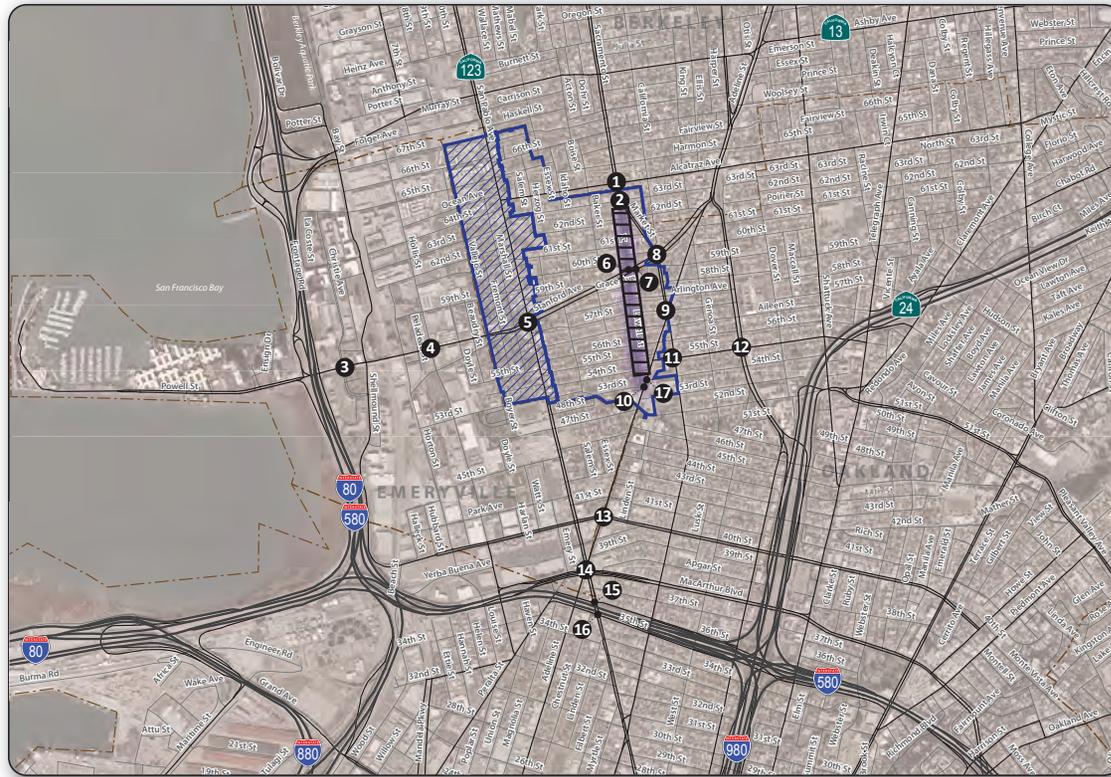
The ACTC Model produces weekday peak-hour roadway segment volumes. The difference method, which increases existing turning movement volumes to reflect model-predicted increases in roadway segment volumes, was applied to these forecasted segment volumes to estimate AM and PM peak-hour intersection turning movements under 2015 No Project conditions.

Figure 4.13-14 shows the traffic volumes for the 2015 No Project scenario. In addition, this analysis assumes that pedestrian and bicycle volumes at the study intersections would increase proportional to the projected growth in traffic volumes in the vicinity of the Project Study Area.

Figure 4.13-15 shows the traffic volumes under the 2015 Plus Project scenario. They include 2015 No Project traffic volumes plus traffic volumes generated by development facilitated by the Proposed Amendments.

2015 Roadway Network

No roadway modifications are assumed in the vicinity of the Project Study Area under the 2015 No Project scenarios. As described above, the proposed narrowing of Adeline Street to one travel lane and a bicycle lane in each direction between Emeryville city limit and 61st Street is assumed in the 2015 Plus Project analysis. No other modifications to the roadway network are assumed for the 2015 No Project or Plus Project scenarios. No adjustments were assumed to optimize traffic signal timings at the study intersections.

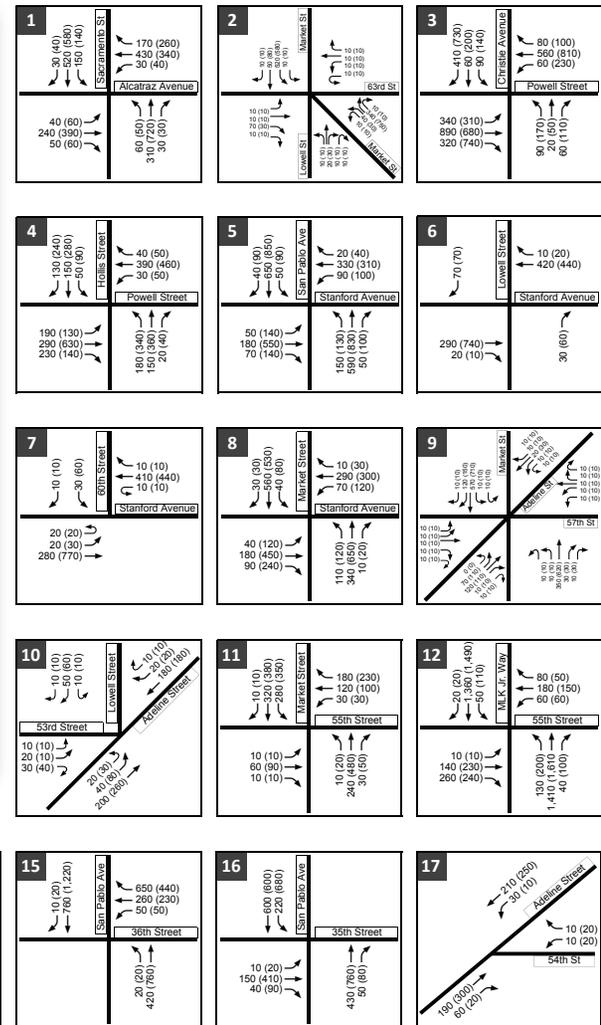


MAP LEGEND

- 1** Study Intersection
- Project Study Area
- Existing Redevelopment Project Area San Pablo Subarea
- Amendment Area

VOLUMES LEGEND

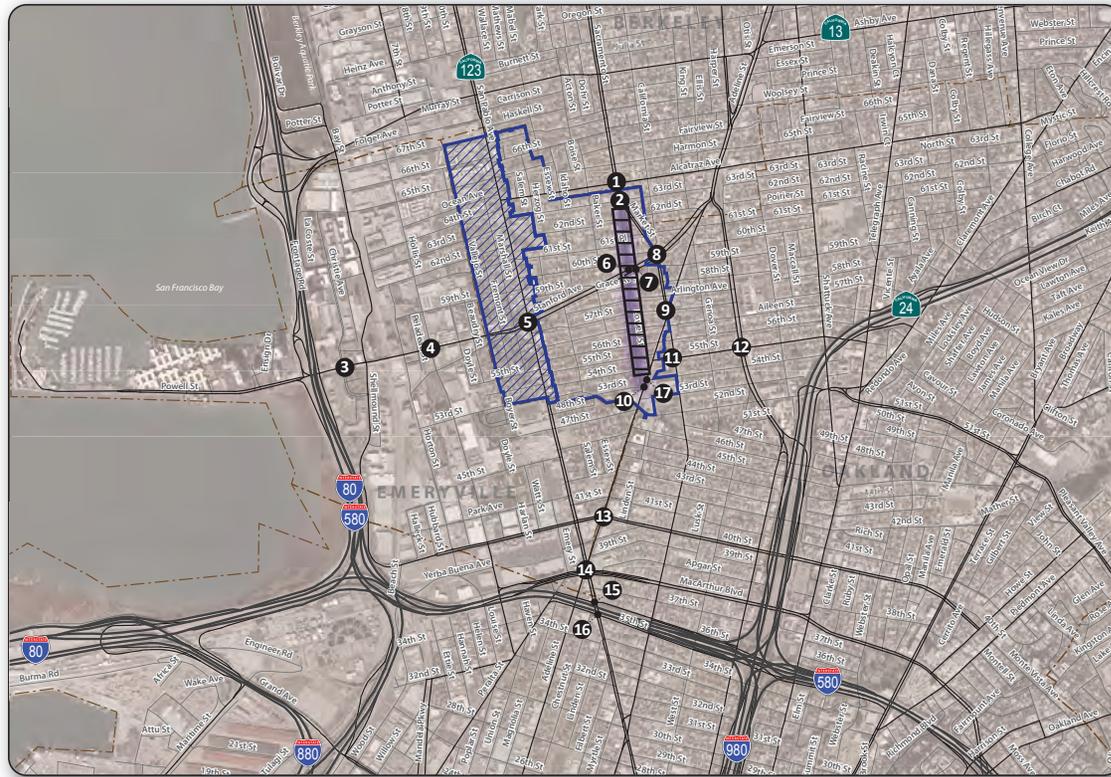
XX (YY) AM (PM) Peak Hour Traffic Volumes



SOURCE: Fehr & Peers

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Figure 4.13-14
2015 No Project Conditions -
Peak Hour Traffic Volumes

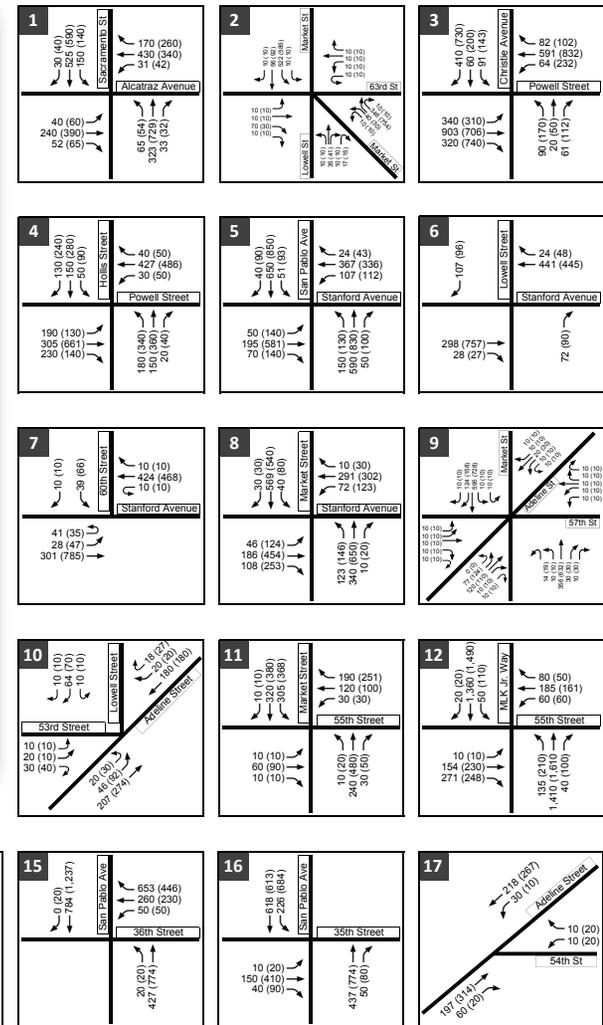


MAP LEGEND

- 1** Study Intersection
- Project Study Area
- Existing Redevelopment Project Area San Pablo Subarea
- Amendment Area

VOLUMES LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes



SOURCE: Fehr & Peers

Proposed Amendments to B/M/SP Redevelopment Plan - 210505.02

Figure 4.13-15
2015 Plus Project Conditions-
Peak Hour Traffic Volumes

2015 Intersection Operations

The forecasted 2015 intersection turning movement volumes in conjunction with the existing intersection lane configurations and traffic signal timings were used to evaluate intersection operations for the 2015 No Project scenario. The 2015 Plus Project scenario was analyzed after accounting for trips generated and roadway modification facilitated by the Proposed Amendments. As shown in **Table 4.13-11**, all study intersections would continue to operate at LOS D or better with the addition of the project-generated traffic in 2015, and the project would cause a less-than-significant impact at the study intersections under 2015 Plus Project conditions. Appendix E-6 presents the detailed intersection LOS calculation worksheets.

Cumulative Year 2035 Conditions

This section addresses potential impacts caused by development facilitated by the Proposed Amendments at the study intersections in 2035.

2035 Intersection Traffic Forecasts

The 2035 No Project intersection turning movement forecasts were developed using the same procedure as the 2015 No Project forecasts. The only difference is that instead of the ACTC Model output for 2015, the ACTC model output for 2035, which reflects past, present, and future developments expected by year 2035, was used. **Figure 4.13-16** shows the traffic volumes under the 2035 No Project scenario. In addition, this analysis assumes that pedestrian and bicycle volumes at the study intersections would increase proportional to the projected growth in traffic volumes in the Project Study Area.

Figure 4.13-17 shows the traffic volumes under the 2035 Plus Project scenario. They include 2035 No Project traffic volumes plus traffic volumes generated by the development facilitated by the Proposed Amendments.

2035 Roadway Network

No roadway modifications are assumed in the vicinity of the Project Study Area under the 2035 No Project scenario. As described above, the proposed narrowing Adeline Street to one travel lane and a bicycle lane in each direction between Emeryville city limit and 61st Street is assumed in the 2035 Plus Project analysis. No other modifications to the roadway network are assumed for the 2035 No Project or Plus Project scenarios. No adjustments were assumed to optimize traffic signal timings at the study intersections.

2035 Intersection Operations

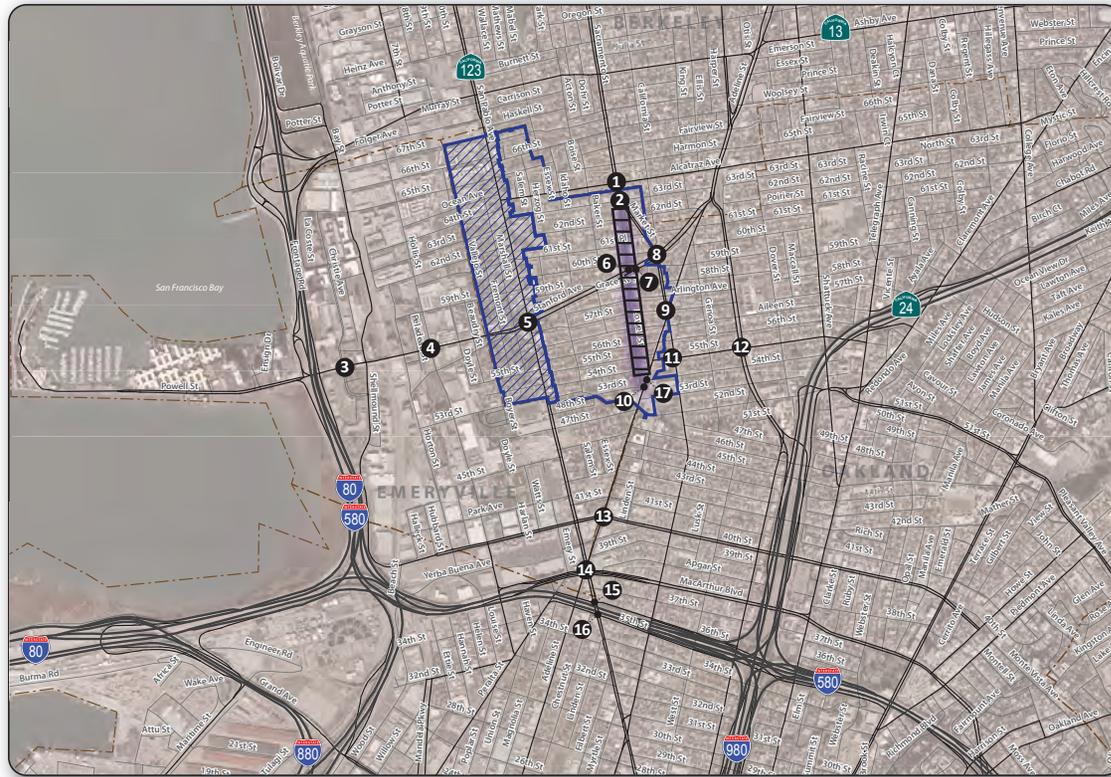
The forecasted 2035 intersection turning movement volumes in conjunction with the existing intersection lane configurations and traffic signal timings were used to evaluate intersection operations under the 2035 No Project scenario. The 2035 Plus Project scenario was analyzed after accounting for trips generated and roadway modification facilitated by the Proposed Amendments. **Table 4.13-12** summarizes the results. Appendix E-7 presents the detailed intersection LOS calculation worksheets.

**TABLE 4.13-11
 2015 INTERSECTION LOS SUMMARY**

| Intersection | Jurisdiction | Traffic Control ^a | Peak Hour | 2015 No Project | | 2015 Plus Project | | Sig. Impact? |
|--|--------------|------------------------------|-----------|------------------------------|------------------|------------------------------|------------------|--------------|
| | | | | Delay ^b (seconds) | LOS ^c | Delay ^b (seconds) | LOS ^c | |
| #1 Alcatraz Avenue/ Sacramento Street | Berkeley | Signal | AM | 17.3 | B | 17.4 | B | No |
| | | | PM | 25.5 | C | 26.1 | C | No |
| #2 63rd Street/Lowell Street/Market Street | Oakland | SSSC | AM | 3.4 (17.6) | A (C) | 4.0 (20.8) | A (C) | No |
| | | | PM | 2.2 (20.7) | A (C) | 2.5 (21.1) | A (C) | No |
| #3 Powell Street/ Christie Avenue | Emeryville | Signal | AM | 32.3 | C | 32.5 | C | No |
| | | | PM | 44.5 | D | 46.1 | D | No |
| #4 Powell Street/ Hollis Street | Emeryville | Signal | AM | 36.8 | D | 36.5 | D | No |
| | | | PM | 46.6 | D | 46.6 | D | No |
| #5 Stanford Avenue/ San Pablo Avenue | Oakland | Signal | AM | 31.1 | C | 32.5 | C | No |
| | | | PM | 37.1 | D | 38.0 | D | No |
| #6 Stanford Avenue/ Lowell Street | Oakland | SSSC | AM | 1.2 (10.7) | A (B) | 2.0 (11.4) | A (B) | No |
| | | | PM | 1.1 (11.7) | A (B) | 1.4 (12.3) | A (B) | No |
| #7 Stanford Avenue/ 60th Street | Oakland | SSSC | AM | 1.0 (14.3) | A (B) | 1.2 (15.7) | A (C) | No |
| | | | PM | 1.3 (20.2) | A (C) | 1.6 (23.8) | A (C) | No |
| #8 Stanford Avenue/ Market Street | Oakland | Signal | AM | 19.5 | B | 20.1 | C | No |
| | | | PM | 30.3 | C | 31.5 | C | No |
| #9 57th Street/Adeline Street/Market Street | Oakland | Signal | AM | 23.5 | C | 23.9 | C | No |
| | | | PM | 28.1 | C | 31.2 | C | No |
| #10 53rd Street/Adeline Street/Lowell Street | Oakland | SSSC | AM | 3.1 (11.6) | A (B) | 3.7 (13.1) | A (B) | No |
| | | | PM | 3.2 (10.7) | A (B) | 3.7 (11.8) | A (B) | No |
| #11 55th Street/ Market Street | Oakland | Signal | AM | 10.5 | B | 11.1 | B | No |
| | | | PM | 25.5 | C | 30.8 | C | No |
| #12 55th Street/ Martin Luther King Jr. | Oakland | Signal | AM | 22.9 | C | 25.8 | C | No |
| | | | PM | 43.9 | D | 46.2 | D | No |
| #13 40th Street/ Adeline Street | Emeryville | Signal | AM | 15.0 | B | 15.7 | B | No |
| | | | PM | 14.3 | B | 15.2 | B | No |
| #14 Adeline Street/ San Pablo Avenue | Emeryville | Signal | AM | 13.9 | B | 14.2 | B | No |
| | | | PM | 14.8 | B | 15.0 | B | No |
| #15 36th Street/ San Pablo Avenue | Oakland | Signal | AM | 34.0 | C | 35.5 | D | No |
| | | | PM | 16.7 | B | 17.0 | B | No |
| #16 35th Street/ San Pablo Avenue | Oakland | Signal | AM | 22.9 | C | 22.8 | C | No |
| | | | PM | 30.9 | C | 31.0 | C | No |
| #17 54th Street/ Adeline Street | Oakland | AWSC | AM | 7.7 | A | 9.1 | A | No |
| | | | PM | 8.3 | A | 10.4 | B | No |

^a Signal = intersection is controlled by a traffic signal; AWSC = intersection is controlled by stop signs on all approaches; SSSC = Intersection is controlled by a stop-sign on the side-street approach.
^b For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst movement and average intersection delay are shown: intersection average (worst movement)
^c Intersections operating at unacceptable levels (LOS E or LOS F) are shown in **bold**.

SOURCE: Fehr & Peers, 2011.

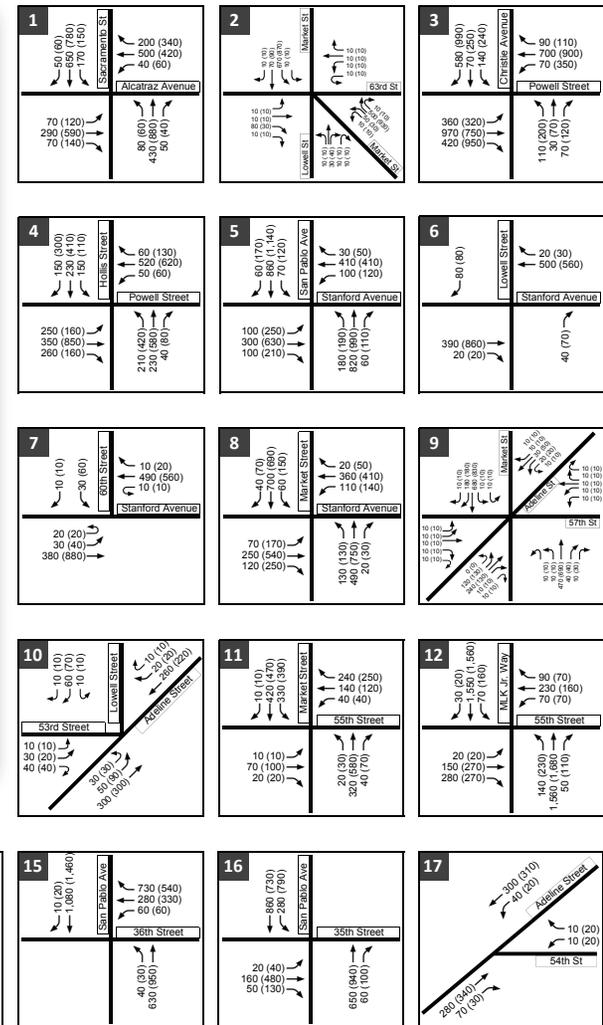


MAP LEGEND

- ① Study Intersection
- Project Study Area
- Existing Redevelopment Project Area San Pablo Subarea
- Amendment Area

VOLUMES LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes



SOURCE: Fehr & Peers

Proposed Amendments to B/M/SP Redevelopment Plan . 210505.02

Figure 4.13-16
2035 No Project Conditions-
Peak Hour Traffic Volumes

**TABLE 4.13-12
2035 INTERSECTION LOS SUMMARY**

| Intersection | Jurisdiction | Traffic Control ^a | Peak Hour | 2035 No Project | | 2035 Plus Project | | Sig. Impact? |
|--|--------------|------------------------------|-----------|------------------------------|------------------|------------------------------|------------------|------------------|
| | | | | Delay ^b (seconds) | LOS ^c | Delay ^b (seconds) | LOS ^c | |
| #1 Alcatraz Avenue/ Sacramento Street | Berkeley | Signal | AM | 22.4 | C | 22.8 | C | No |
| | | | PM | 88.1 (v/c = 1.51) | F | 89.6 (v/c = 1.51) | F | No |
| #2 63rd Street/Lowell Street/Market Street | Oakland | SSSC | AM | 5.2 (34.4) | A (D) | 7.0 (46.1) | A (E) | No |
| | | | PM | 2.4 (25.3) | A (D) | 2.6 (26.0) | A (D) | No |
| #3 Powell Street/ Christie Avenue | Emeryville | Signal | AM | 34.6 | C | 35.0 | C | No |
| | | | PM | 79.9 | E | 83.7 (v/c = 1.14) | F | Yes ^d |
| #4 Powell Street/ Hollis Street | Emeryville | Signal | AM | 46.1 | D | 46.0 | D | No |
| | | | PM | 75.8 | E | 76.8 | E | No |
| #5 Stanford Avenue/ San Pablo Avenue | Oakland | Signal | AM | 37.8 | D | 39.0 | D | No |
| | | | PM | 65.2 | E | 67.5 | E | Yes ^e |
| #6 Stanford Avenue/ Lowell Street | Oakland | SSSC | AM | 1.2 (10.4) | A (B) | 1.8 (10.9) | A (B) | No |
| | | | PM | 1.0 (12.6) | A (B) | 1.4 (13.5) | A (B) | No |
| #7 Stanford Avenue/ 60th Street | Oakland | SSSC | AM | 1.0 (16.2) | A (C) | 1.2 (18.3) | A (C) | No |
| | | | PM | 1.4 (26.2) | A (D) | 1.8 (32.6) | A (D) | No |
| #8 Stanford Avenue/ Market Street | Oakland | Signal | AM | 24.2 | C | 25.0 | C | No |
| | | | PM | 39.8 | D | 41.7 | D | No |
| #9 57th Street/Adeline Street/Market Street | Oakland | Signal | AM | 27.2 | C | 30.2 | C | No |
| | | | PM | 37.4 | D | 46.4 | D | No |
| #10 53rd Street/Adeline Street/Lowell Street | Oakland | SSSC | AM | 3.5 (14.9) | A (B) | 4.7 (19.1) | A (C) | No |
| | | | PM | 3.4 (11.9) | A (B) | 4.0 (13.7) | A (B) | No |
| #11 55th Street/ Market Street | Oakland | Signal | AM | 16.0 | B | 17.9 | B | No |
| | | | PM | 64.3 | E | 74.4 | E | Yes ^f |
| #12 55th Street/Martin Luther King Jr. Way | Oakland | Signal | AM | 33.8 | C | 35.4 | D | No |
| | | | PM | 62.4 | E | 66.0 | E | Yes ^e |
| #13 40th Street/ Adeline Street | Emeryville | Signal | AM | 21.2 | C | 26.3 | C | No |
| | | | PM | 32.6 | C | 41.1 | D | No |
| #14 Adeline Street/ San Pablo Avenue | Emeryville | Signal | AM | 15.8 | B | 16.1 | B | No |
| | | | PM | 20.2 | C | 20.6 | C | No |
| #15 36th Street/ San Pablo Avenue | Oakland | Signal | AM | 73.0 | E | 74.6 | E | Yes ^e |
| | | | PM | 28.7 | C | 30.3 | C | No |
| #16 35th Street/ San Pablo Avenue | Oakland | Signal | AM | 22.2 | C | 22.2 | C | No |
| | | | PM | 36.4 | D | 36.8 | D | No |
| #17 54th Street/ Adeline Street | Oakland | AWSC | AM | 8.6 | A | 11.5 | B | No |
| | | | PM | 8.8 | A | 11.5 | B | No |

- ^a Signal = intersection is controlled by a traffic signal; AWSC = intersection is controlled by stop signs on all approaches; SSSC = Intersection is controlled by a stop-sign on the side-street approach.
- ^b For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst movement and average intersection delay are shown: intersection average (worst movement)
- ^c Intersections operating at unacceptable levels (LOS E or LOS F) are shown in **bold**.
- ^d The development facilitated by the Proposed Amendments would cause a significant impact at this intersection because it would degrade the intersection operations from LOS E to LOS F.
- ^e The development facilitated by the Proposed Amendments would cause an impact at this intersection because it would increase delay for a critical movement by more than six seconds at an intersection in Oakland already operating at LOS E.
- ^f The development facilitated by the Proposed Amendments would cause an impact at this intersection because it would increase intersection average delay by more than four seconds and increase delay for a critical movement by more than six seconds at an intersection in Oakland already operating at LOS E.

SOURCE: Fehr & Peers, 2011.

The following eight intersections are projected to operate at a deficient level in 2035 without or with the Proposed Amendments:

- #1. The signalized Alcatraz Avenue / Sacramento Street intersection, located in the City of Berkeley, would operate at LOS F during the PM peak hour regardless of the Proposed Amendments.
- #2. The side-street stop-controlled eastbound approach at the 63rd Street / Lowell Street / Market Street intersection, located in the City of Oakland, would operate at LOS F under 2035 Plus Project conditions.
- #3. The signalized Powell Street / Christie Avenue intersection, located in the City of Emeryville, would operate at LOS E during the PM peak hour under 2035 No Project conditions and degrade to LOS F under 2035 Plus Project conditions.
- #4. The signalized Powell Street / Hollis Street intersection, located in the City of Emeryville, would operate at LOS E during the PM peak hour regardless of the Proposed Amendments.
- #5. The signalized Stanford Avenue / San Pablo Avenue intersection, located in the City of Oakland, would operate at LOS E during the PM peak hour regardless of the Proposed Amendments.
- #11. The signalized 55th Street / Market Street intersection, located in the City of Oakland, would operate at LOS E during the PM peak hour regardless of the Proposed Amendments.
- #12. The signalized 55th Street / Martin Luther King Jr. Way intersection, located in the City of Oakland, would operate at LOS E during the PM peak hour regardless of the Proposed Amendments.
- #15. The signalized 36th Street / San Pablo Avenue intersection, located in the City of Oakland, would operate at LOS E during the AM peak hour regardless of the Proposed Amendments.

The development facilitated by the Proposed Amendments would cause a significant impact at the following five intersections (described below in Impacts TRA-1 to TRA-5):

- #3. Powell Street / Christie Avenue
- #5. Stanford Avenue / San Pablo Avenue
- #11. 55th Street / Market Street
- #12. 55th Street / Martin Luther King Jr. Way
- #15. 36th Street / San Pablo Avenue

The development facilitated by the Proposed Amendments would have a less-than-significant impact at the following three intersections:

- #1. The signalized Alcatraz Avenue / Sacramento Street intersection would operate at LOS F during the PM peak hour, but the addition of project traffic would not increase intersection volume-to-capacity (v/c) ratio by 0.01 or more.

- #2. The unsignalized 63rd Street / Lowell Street/Market Street intersection would operate at LOS F during the PM peak hour, but it would not meet the peak-hour signal warrant.
- #4. The signalized Powell Street / Hollis Street intersection would operate at LOS E during the PM peak hour, but the addition of project traffic would not increase average intersection delay by more than four seconds, or increase delay for any critical movements by more than six seconds.

Impacts

2035 Plus Project Impacts and Mitigations

New Impact TRA-1: Development facilitated by the Redevelopment Plan, as Amended, would degrade the Powell Street / Christie Avenue intersection (#3) from LOS E to LOS F during the PM peak hour under 2035 conditions. (Significant)

New Mitigation Measure TRA-1: Implement the following measures at the Powell Street / Christie Avenue intersection:

- Reconstruct the westbound approach to provide a second left turn lane. The resulting two left turn lanes should be 250 feet in length. The south side of the Powell Street bridge would need to be widened by about 12 feet to accommodate the second left-turn lane.

To implement this measure, the project sponsor shall submit the following to City of Emeryville for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection and accommodate the signal timing changes supporting vehicle travel and alternative modes travel consistent with City of Emeryville requirements.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans.

This improvement is consistent with the finding of the *Marketplace Redevelopment Project EIR* (City of Emeryville, 2007). Implementation of this mitigation measure would require acquisition of right-of-way. After implementation of this measure, the intersection would improve to LOS E during the PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the delay would be less than under 2035 No Project conditions. The *Marketplace Redevelopment Project EIR* did not identify any significant secondary impacts from implementation of this mitigation measure (City of Emeryville, 2007).

Significance after Mitigation: This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Emeryville, the City of Oakland, as Lead Agency, does not have jurisdiction at this intersection. Because the mitigation measure would need to be approved and implemented by City of Emeryville, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRA-1 could be implemented, the impact would be less than significant.

Comparison to 2000 EIR: *New Significant and Unavoidable Impact and Conclusion.* This new significant and unavoidable conclusion was not identified in the 2000 EIR. This new impact results from the project changes (i.e., the Proposed Amendments) pursuant to CEQA Guidelines Section 15162.

New Impact TRA-2: Development facilitated by the Redevelopment Plan, as Amended, would increase the vehicle delay to a critical movement by more than six seconds at the Stanford Avenue / San Pablo Avenue intersection (#5), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Redevelopment Plan, as Amended., (Significant)

New Mitigation Measure TRA-2: Implement the following measures at the Stanford Avenue / San Pablo Avenue intersection:

- Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach).
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. This intersection is under the jurisdiction of Caltrans so any equipment or facility upgrades must be approved by Caltrans prior to installation.

To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division and Caltrans for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal timing changes supporting vehicle travel and alternative modes travel consistent with Caltrans requirements.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund, prepare, and install the approved plans and improvements.

After implementation of this measure, the intersection would continue to operate at LOS E during the PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the resulting increase in delay for the critical eastbound through movement would be less than the threshold of significance. No secondary significant impacts would result from implementation of this measure.

Significance after Mitigation: This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Although located in the City of Oakland, San Pablo Avenue, also known as SR 123, is also under Caltrans jurisdiction. Thus, the City of Oakland, as Lead Agency, does not have jurisdiction at this intersection. Because the mitigation measure would need to be approved and implemented by Caltrans, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRA-2 could be implemented, the impact would be less than significant.

Comparison to 2000 EIR: *New Significant and Unavoidable Impact and Conclusion.* This new significant and unavoidable conclusion was not identified in the 2000 EIR. This new impact results from the project changes (i.e., the Proposed Amendments) pursuant to CEQA Guidelines Section 15162.

New Impact TRA-3: Development facilitated by the Redevelopment Plan, as Amended, would increase the intersection average delay by more than four seconds and the vehicle delay to a critical movement by more than six seconds at the 55th Street / Market Street intersection (#11), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Proposed Amendments. (Significant)

New Mitigation Measure TRA-3: Implement the following measures at the 55th Street / Market Street intersection:

- Increase signal cycle length to 65 seconds during the PM peak period
- Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach)
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection. All elements shall be designed to city standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both city standards and Americans with Disabilities Act (ADA) standards (according to Federal and State Access Board guidelines) at the time of construction. Current city standards call for among other items the elements listed below:
 - 2070L Type Controller
 - GPS communication (clock)
 - Accessible pedestrian crosswalks according to Federal and State Access Board guidelines
 - City Standard ADA wheelchair ramps
 - Full actuation (video detection, pedestrian push buttons, bicycle detection)
 - Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's Intelligent Transportation System (ITS) Master Plan
 - Signal timing plans for the signals in the coordination group.

The project sponsor shall fund, prepare, and install the approved plans and improvements.

After implementation of this measure, the intersection would continue to operate at LOS E during the PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the intersection average delay and the delay for the critical southbound left movement would be less than the thresholds of significance. No secondary significant impacts would result from implementation of this measure.

Significance after Mitigation: Less than Significant.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* This conclusion was not previously identified in the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from the project changes (i.e., Proposed Amendments), “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

New Impact TRA-4: Development facilitated by the Redevelopment Plan, as Amended, would increase the vehicle delay to a critical movement by more than six seconds at the 55th Street / Martin Luther King Jr. Way intersection (#12), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Proposed Amendments. (Significant)

New Mitigation Measure TRA-4: Implement the following measures at the 55th Street / Martin Luther King Jr. Way intersection:

- Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach)
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit the following to City of Oakland’s Transportation Services Division for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection. All elements shall be designed to city standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both city standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current city standards call for among other items the elements listed below:
 - 2070L Type Controller
 - GPS communication (clock)
 - Accessible pedestrian crosswalks according to Federal and State Access Board guidelines
 - City Standard ADA wheelchair ramps
 - Full actuation (video detection, pedestrian push buttons, bicycle detection)

- Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's ITS Master Plan
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund, prepare, and install the approved plans and improvements.

After implementation of this measure, the intersection would continue to operate at LOS E during the PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the delay for the critical southbound through movement would be less than the threshold of significance. No secondary significant impacts would result from implementation of this measure.

Significance after Mitigation: Less than Significant.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* This conclusion was not previously identified in the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from project changes (i.e., the Proposed Amendments), “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

New Impact TRA-5: Development facilitated by the Redevelopment Plan, as Amended, would increase the vehicle delay to a critical movement by more than six seconds at the 36th Street / San Pablo Avenue intersection (#15), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Redevelopment Plan, as Amended. (Significant)

New Mitigation Measure TRA-5: Implement the following measures at the 36th Street / San Pablo Avenue intersection:

- Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach)
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. This intersection is under the jurisdiction of Caltrans so any equipment or facility upgrades must be approved by Caltrans prior to installation.

To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division and Caltrans for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal timing changes supporting vehicle travel and alternative modes travel consistent with Caltrans requirements.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund, prepare, and install the approved plans and improvements.

After implementation of this measure, the intersection would continue to operate at LOS E during the PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the delay for the critical westbound right movement would be less than the threshold of significance. No secondary significant impacts would result from implementation of this measure.

Significance after Mitigation: This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Although located in the City of Oakland, San Pablo Avenue, also known as SR 123, is also under Caltrans jurisdiction. Thus, the City of Oakland, as Lead Agency, does not have jurisdiction at this intersection. Because the mitigation measure would need to be approved and implemented by Caltrans, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRA-5 could be implemented, the impact would be less than significant.

Comparison to 2000 EIR: *New Significant and Unavoidable Impact and Conclusion.* This new significant and unavoidable conclusion was not identified in the 2000 EIR. This new impact results from the changed project (i.e., the Proposed Amendments) and not “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

2035 Plus Project Mitigated Conditions

Table 4.13-13 summarizes intersection operations after implementation of the mitigation measures at the affected intersections.

Bus Travel Time

New Impact TRA-6: Traffic congestion caused by the traffic generated by development facilitated by the Redevelopment Plan, as Amended, would increase travel time for AC Transit buses. (Less than Significant)

As shown in the analyses in the previous sections and summarized in Table 4.13-10 through Table 4.13-12, development facilitated by the Proposed Amendments would increase the amount of traffic and congestion along corridors, such as San Pablo Avenue and Market Street, potentially increasing the amount of delay incurred by AC Transit buses. In general, the City has no basis to establish a numerical threshold for “substantially increased travel times” due to several factors:

First, bus service, in general, is extremely transitory, and can change quite frequently, as is the case with AC Transit’s bus network. During the duration of the Proposed Amendments, existing routes may be eliminated, or new routes may be put in service. Similar to parking, transit service is not part of the physical environment, and can change over time in response to external factors. In fact, AC Transit has generally reduced its bus service over the past few years in response to budget issues.

**TABLE 4.13-13
2035 PLUS PROJECT MITIGATED CONDITIONS INTERSECTION LOS SUMMARY**

| | Intersection | Jurisdiction | Traffic Control ^a | Peak Hour | 2035 No Project | | 2035 Plus Project | | 2035 Plus Project Mitigated | | Significance After Mitigation? |
|-----|--|----------------------|------------------------------|-----------|------------------------------|------------------|------------------------------|------------------|------------------------------|------------------|--|
| | | | | | Delay ^b (seconds) | LOS ^c | Delay ^b (seconds) | LOS ^c | Delay ^b (seconds) | LOS ^c | |
| #3 | Powell Street/ Christie Avenue | Emeryville | Signal | AM | 34.6 | C | 35.0 | C | 34.9 | C | Significant and Unavoidable ^d |
| | | | | PM | 79.9 | E | 83.7 | F | 72.8 | E | |
| #5 | Stanford Avenue/ San Pablo Avenue | Oakland/ Caltrans | Signal | AM | 37.8 | D | 39.0 | D | 39.0 | D | Significant and Unavoidable ^d |
| | | | | PM | 65.2 | E | 67.5 | E | 66.8 | E | |
| #11 | 55th Street/ Market Street | Oakland | Signal | AM | 16.0 | B | 17.9 | B | 17.9 | B | Less than Significant |
| | | | | PM | 64.3 | E | 74.4 | E | 65.6 | E | |
| #12 | 55th Street/ Martin Luther King Jr. Way | Oakland | Signal | AM | 33.8 | C | 35.4 | D | 35.4 | D | Less than Significant |
| | | | | PM | 69.9 | E | 72.6 | E | 60.9 | E | |
| #15 | 36th Street/ San Pablo Avenue | Oakland/ Caltrans | Signal | AM | 73.0 | E | 74.6 | E | 66.6 | E | Significant and Unavoidable ^d |
| | | | | PM | 28.7 | C | 30.3 | C | 30.3 | C | |

^a Signal = intersection is controlled by a traffic signal; SSSC = Intersection is controlled by a stop-sign on the side-street approach.

^b For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst movement and average intersection delay are shown: intersection average (worst movement)

^c Intersections operating at unacceptable levels (LOS E or LOS F) are shown in **bold**.

^d Impact is significant and unavoidable because the intersection is not within Oakland's jurisdiction and it is not certain the measure could be implemented. If the mitigation measure is implemented, the impact would be less than significant.

SOURCE: Fehr & Peers, 2011.

Second, any numerical threshold to determine the significance of increased travel times needs to consider additional characteristics of the bus service, including its headway (the amount of time between scheduled trips) and total travel time. Given the transitory nature of bus service, establishing such thresholds is not reasonable, as service can be rerouted, eliminated, or created at any time. Consideration would also have to be given to different types of transit service (e.g., trunk service, Transbay service, local service, and community service), as they generally operate with different characteristics.

Third, unlike the situation for intersections or roadway facilities, there are no well-established methodologies for characterizing the operations of transit service in relation to travel times. For intersections, clear distinctions are made between intersections that operate at acceptable conditions (e.g., LOS D or better) and those that operate at unacceptable conditions (e.g., LOS E or LOS F), and separate impact thresholds are provided. For bus service, however, there is no well-established LOS equivalent for characterizing transit service in relation to travel times.

The three factors described above would make establishing numerical thresholds for AC Transit travel times difficult and impractical, as the City would have little background or experience on which to base such thresholds.

Based on the traffic operations analysis, it is estimated that the traffic generated by the development facilitated by the Proposed Amendments would increase the peak-hour travel times along San Pablo Avenue (AC Transit Routes 72, 72M, and 72R) and Market Street (Route 88 and F) corridors by less than 20 seconds under Existing Plus Project conditions. The estimated increase is within the variability in current travel times for buses on these corridors. Thus, the resulting increase would have a minor effect on transit service within the area, and the impact would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* This conclusion was not previously identified in the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from the project changes (i.e., Proposed Amendments), “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Required Congestion Management Program (CMP) Evaluation

The Alameda County CMP requires the assessment of development-driven impacts to regional roadways. Because the development facilitated by the Proposed Amendments would generate more than 100 “net new” PM peak-hour trips, the CMP requires the use of the Countywide Travel Demand Model to assess the impacts on regional roadways near the Amendment Area. The CMP and Metropolitan Transportation System (MTS) roadways in the vicinity of the Amendment Area identified in the NOP comments by ACTC (June 18, 2011 letter) include:⁵

⁵ The roadway segments included in this evaluation are not based on an assessment of the project trip distribution or application of screening criteria to determine if the project would contribute enough new trips to warrant analysis.

- I-80
- I-580
- I-980
- SR 24
- Grand Avenue
- Telegraph Avenue
- Shattuck Avenue
- Adeline Street
- Broadway
- Powell Street
- 51st Avenue
- College Avenue

The ACTC Model used in this study is a regional travel demand model that uses socio-economic data and roadway and transit network assumptions to forecast traffic volumes and transit ridership using a four-step modeling process that includes trip generation, trip distribution, mode split, and trip assignment. This process accounts for changes in travel patterns due to future growth and balances trip productions and attractions. This version of the Countywide Model is based on Association of Bay Area Governments (ABAG) *Projections 2007* land uses for 2015 and 2035.

For the purposes of this CMP and MTS Analysis (and to present a more conservative analysis), the development facilitated by the Proposed Amendments is assumed to not be included in the Countywide Model. The traffic forecasts for the 2015 and 2035 without project scenario were extracted for the CMP and MTS highway segments from that model and used as the baseline “no project” forecasts. Vehicle trips generated by the project were added to the baseline “no project” forecasts to estimate the “plus project” forecasts.

The CMP and MTS segments were assessed using a volume-to-capacity (v/c) ratio methodology. For freeway segments, a per-lane capacity of 2,000 vehicles per hour (vph) was used, consistent with the latest CMP documents. For surface streets, a per-lane capacity of 800 vph was used. Roadway segments with a v/c ratio greater than 1.00 signify LOS F.

The “plus project” results were compared to the baseline “no project” results for the 2015 and 2035 horizon years. The 2015 and 2035 peak-hour volumes, v/c ratios and the corresponding levels of service for without and with project conditions are provided in Appendix E-8.

Due to differences in the land use assumptions and differences in analysis methodologies, the forecasted traffic volumes on the roadway links can be different from the intersection volumes presented earlier, particularly at the local level. The first area of difference is the land use data sets employed for the intersection forecasts and the MTS forecasts. The intersection forecasts, which are used to assess project traffic impacts on City of Oakland intersections, are based on land use data adjusted to reflect all past, present, existing, approved, pending and reasonably foreseeable projects in the City of Oakland, which differs from the data in the ACTC Model. The second area of difference is the use of the Furness process. The intersection forecasts use the output of the ACTC Model as an input to develop intersection volumes in conjunction with existing traffic counts. The CMP and MTS roadway analysis is based on the outputs of the ACTC Model directly on a roadway segment level. It is not unusual to have discrepancies given that the two analyses measure impacts at a different scale. For local streets, intersections are typically a more accurate measure of operating conditions because the capacity of an urban street, defined as the number of vehicles that can pass through its intersections, is controlled by the capacity at its intersections.

The development facilitated by the Proposed Amendments would contribute to 2015 and 2035 increases in traffic congestion on MTS roadways. However, this development would not cause a

roadway segment on the MTS to degrade from LOS E or better to LOS F. The development facilitated by the Proposed Amendments also would not increase the v/c ratio by more than three percent for roadway segments that would operate at LOS F without the project. This is a less-than-significant impact, and as a result no mitigation measures are required.

Change in Air Traffic Patterns

New Impact TRA-7: Development facilitated by the Redevelopment Plan, as Amended, would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. (Less than Significant)

The Oakland International Airport is located about nine miles south of the Redevelopment Plan, as Amended. Development facilitated by the Redevelopment Plan, as Amended, would increase density and increase building heights at specific locations. However, building heights are not expected to interfere with current flight patterns of Oakland International Airport or other nearby airports. Therefore, development facilitated by the Redevelopment Plan, as Amended, would not result in change in air traffic patterns.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* This conclusion was not previously identified in the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from the project changes (i.e., the Proposed Amendments), “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Traffic Safety Hazards

New Impact TRA-8: Development facilitated by the Redevelopment Plan, as Amended, would increase traffic volumes on area roadway segments, potentially causing conflicts among motor vehicles, bicycles, or pedestrians. (Significant)

The individual redevelopment projects facilitated by the Proposed Amendments are anticipated to be developed primarily on and around Lowell Street. The locations and/or specific design elements of these developments are not known at this time. Therefore, it is beyond the scope of this programmatic SEIR to determine if the Proposed Amendments would adversely affect traffic safety. However, considering that each individual development would be required to be consistent with appropriate regulations and design standards in effect at the time, such as SCA 20, *Improvements in the Public Right-of-Way (General)* and SCA 21, *Improvements in the Public Right-of-Way (General)*, which requires that public improvement plans and building plans for individual developments incorporate design requirements such as curbs, gutters, handicap access, adequate

Fire Department access, and other measures to improve vehicle, bicycle, and pedestrian safety. The project would cause a less-than-significant impact on safety for motor vehicles and bicycles.

With the exception of the proposed narrowing of Adeline Street, described above, development facilitated by the Proposed Amendments is not expected to modify the roadway network in the Amendment Area. The proposed change to the number of travel lanes on Adeline Street, and other potential roadway modifications as facilities by the Proposed Amendments, would be consistent with appropriate regulations and design standards in effect at the time.

The development facilitated by the Proposed Amendments would increase pedestrian activity along Lowell Street. The majority of Lowell Street currently does not provide sidewalks. Thus, pedestrians must share the right-of-way with automobiles and trucks. This may result in unsafe conditions for pedestrians and discourage pedestrian activity in the area, and is considered a significant impact.

New Mitigation Measure TRA-8: Provide continuous sidewalks on both sides of Lowell Street between 62nd and Adeline Streets. Consistent with the City of Oakland's *Pedestrian Master Plan*, sidewalks on Lowell Street shall be at least six feet wide (five feet acceptable). In addition, a two- to four-foot wide utility zone clear of the pedestrian passageway (to accommodate above-ground public infrastructure such as utility poles, signs, and trees, and to provide a buffer between pedestrians and motor vehicles) should also be provided where the right-of-way is available. Directional curb ramps shall be provided at intersections. Pedestrian facilities shall be consistent with ADA requirements and other appropriate regulations and design standards in effect at the time.

Significance after Mitigation: Less than Significant.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* Conclusion was not previously identified in the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Emergency Vehicle Access

New Impact TRA-9: Development facilitated by the Redevelopment Plan, as Amended, would generate services from emergency vehicles. (Less than Significant)

With the exception of the proposed narrowing of Adeline Street, described above, development facilitated by the Proposed Amendments is not expected to modify the roadway network in the Amendment Area. It is also not expected to result in dead-end streets longer than 600 feet, which is the standard set forth in city regulations. Although the proposed change to Adeline Street would narrow the street from two to one travel lane in each direction, it would not alter emergency vehicle access in the area, because the Amendment Area would continue to be accessible from multiple directions. If one street were blocked, other streets could be used by

emergency vehicles to reach the Amendment Area. Thus, the Proposed Amendments would not result in fewer than two emergency vehicle access routes.

The City's Fire Code and Subdivision regulations contained detailed standards and mitigation requirements relating to dead-end streets and emergency vehicle access. The adequacy of emergency vehicle access will be evaluated for each individual development in the Amendment Area. Considering that each individual development is expected to be consistent with the City's Fire Code, Subdivision and other regulations in effect at the time, the Proposed Amendments would cause a less-than-significant impact on emergency access.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* This conclusion was not previously identified in the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from the project changes (i.e., the Proposed Amendments), "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Consistency with Adopted Policies, Plans or Programs Supporting Alternative Transportation

Updated Impact B.4 (TRA): Development facilitated by the Redevelopment Plan, as Amended, would generate demand for alternative transportation services. (Less than Significant)

The City of Oakland General Plan LUTE and "Transit First" Policy state a strong preference for encouraging the use of alternative transportation modes, such as transit, bicycling, and walking. Development facilitated by the Redevelopment Plan, as Amended, would encourage use of alternative modes because it would provide a variety of new uses near existing and other planned uses. Development facilitated by the Redevelopment Plan, as Amended, would encourage pedestrian activity by providing a variety of complementary uses within walking distance of other residential, commercial, employment, and cultural uses. In addition, the Project Area, as Amended, is located in an area that is well-served by transit, including major AC Transit corridors, BART, and Amtrak.

Consistent with the City of Oakland General Plan LUTE and "Transit First" Policy, and as required by the City's SCA 25, *Parking and Transportation Demand Management*, development projects facilitated by the Proposed Amendments consisting of 50 or more new residential units, or 50,000 square feet or more of new non-residential space, and any other major development under the Redevelopment Plan, as Amended, would implement a TDM program to encourage more residents, employees, and/or visitors to shift from driving alone to other modes of travel. Potential TDM measures may include, but are not limited to, transit ticket subsidies, awareness programs, direct transit sales, providing a guaranteed ride home program, and parking

management strategies. Individual projects will determine the specific components of their TDM program to encourage increased use of alternatives transportation modes.

Redevelopment activities facilitated by the Redevelopment Plan, as Amended, are expected to be consistent with the City of Oakland *Pedestrian Master Plan* (PMP) by including features and improvements as needed such as providing sidewalks or crosswalks to improve pedestrian safety and circulation. Individual projects are also expected to be consistent with ADA requirements.

For the Amendment Area, New Mitigation Measure TRA-8, which would provide sidewalks along Lowell Street, would be consistent with the PMP by providing sidewalks on a street that currently does not have sidewalks and would experience increased pedestrian activity in the future.

The Redevelopment Plan, as Amended, would be consistent with the City of Oakland *Bicycle Master Plan* (BMP) by implementing Class 2 bicycle lanes on Adeline Street between Emeryville city limit and 61st Street. The Redevelopment Plan, as Amended, would not preclude implementation of the BMP by modifying roadways that have been designated for future bicycle facilities. In addition, development facilitated by the Proposed Amendments is expected to provide adequate bicycle parking.

In summary, the Redevelopment Plan, as Amended, including mitigation measures described above, would be consistent with policies, plans and programs described above, and would not cause a significant impact by conflicting with adopted policies, plans, or programs supporting alternative transportation.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* This conclusion was not previously identified in the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from the project changes (i.e., Proposed Amendments), “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Temporary Construction Impacts

New Impact TRA-11: Development facilitated by the Redevelopment Plan, as Amended, would generate temporary increases in traffic volume and temporary effects on transportation conditions. (Less than Significant)

During the construction of development facilitated by the Proposed Amendments, temporary and intermittent transportation impacts may result from truck movements as well as construction worker vehicles to and from the project site, or temporary closure of sidewalks and/or bicycle lanes. The construction-related traffic may temporarily reduce capacities of Amendment Area

roadways because of the slower movements and larger turning radii of construction trucks compared to passenger vehicles. Truck traffic that occurs during the peak commute hours (7:00 to 9:00 AM and 4:00 to 6:00 PM) may result in temporary worse levels of service and higher delays at study intersections during the construction period. Also, if parking of construction workers' vehicles cannot be accommodated within the specific project site, it would temporarily increase parking occupancy levels in the area. Construction could also affect the operations of AC Transit buses.

The City of Oakland SCA 33, as discussed above, requires that a Construction Traffic Management Plan be developed and implemented as part of a larger Construction Management Plan for each development project to address potentially significant impacts during the project's construction. This is a less-than-significant impact, and as a result no mitigation measures are required.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact and Conclusion.* This conclusion was not previously identified in the 2000 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from project changes (i.e., the Proposed Amendments), "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Planning-Related Non-CEQA Issues

The following transportation-related topics are not considered under CEQA, but are evaluated in order to inform decision-makers and the public about these issues.

Parking-Related Impacts

This transportation analysis assesses the issue of parking as a non-CEQA impact. Parking impacts are assessed according to the language discussed in the Approach to Analysis subsection above.

As previously stated, the specific uses, exact size, or the proposed parking supply of each individual development project anticipated to be facilitated by the Proposed Amendments are not known. In addition, development projects also could modify existing parking supply. Thus, this SEIR cannot determine if the projects' estimated parking demand (both project-generated and project-displaced) would be satisfied by the projects' proposed parking supply or by the existing parking supply available in the Lowell Street corridor or vicinity.

It is expected that future review of each individual development project would determine the adequacy of the proposed parking supply to meet the expected parking demand. In addition, SCA 25, *Parking and Transportation Demand Management*, discussed above, would be applicable to the development facilitated by the Proposed Amendments and would require implementation of programs and strategies to reduce the project's parking demand.

Increased Transit Ridership

One of the stated goals in City of Oakland General Plan LUTE is the promotion of transit ridership and encouragement of transit accessibility and improvement of transit service throughout Oakland. Thus, an increase in transit ridership is not identified as an adverse impact.

The Amendment Area is served by a variety of local and regional transit services: AC Transit, BART, and Amtrak. Based on 2000 U.S. Census data, up to 20 percent of trips in the Amendment Area are by transit. It is estimated that development facilitated by the Proposed Amendments would generate about 44 transit trips during the AM peak hour and 48 transit trips during the PM peak hour. Considering the proposed uses and the distance to BART and Amtrak stations, it is estimated that the majority of these transit trips would be AC Transit trips with very few BART or Amtrak trips.

AC Transit Ridership

An impact would occur on an AC Transit line if a project were to add more than three percent to the total ridership on a line when the average passengers per seat rate (i.e., load factor) on that line exceeds 125 percent, or if project-related traffic congestion would substantially increase travel times for AC Transit buses.

Transit operations are evaluated against the existing conditions using the transit trips generated by the development facilitated by the Proposed Amendments. Currently, the bus lines with the higher ridership and load factors serving in the Amendment Area are Lines 72/72M. Although five local AC Transit bus routes currently provide service in the Amendment Area, this analysis conservatively assumes that all new transit trips generated in the Amendment Area would use Lines 72/72M. Of the new 48 PM peak-hour trips, about six additional riders are expected to be added to each individual northbound or southbound 72/72M bus. **Table 4.13-14** shows AC Transit maximum passenger load factors on the 72/72M buses.

**TABLE 4.13-14
 AC TRANSIT MAXIMUM LOADS (NO PROJECT AND PLUS PROJECT)**

| Bus Line | Direction | Average Capacity (seats) | No Project | | Plus Project | |
|----------|-----------|--------------------------|--------------|------------------|--------------|------------------|
| | | | Maximum Load | Max. Load Factor | Maximum Load | Max. Load Factor |
| 72 | NB | 32 | 22 | 69% | 28 | 88% |
| | SB | | 34 | 97% | 37 | 116% |
| 72M | NB | 32 | 33 | 103% | 39 | 122% |
| | SB | | 34 | 106% | 40 | 125% |

SOURCE: Fehr & Peers, 2011

The Proposed Amendments could result in a 19 percent increase in load factors in both northbound and southbound directions. However, because the overall load factors would continue to be 125 percent or less, the new generated ridership increases to AC Transit lines would result in a less-than-significant impact.

Intersection Queuing Analysis

Environmental impacts of the Proposed Amendments on intersection traffic operations were analyzed through the delay/LOS analysis presented previously in this section. In addition, although not an environmental impact, an analysis on Proposed Amendment's effects on queuing at intersections was also completed to provide additional information to aid the public and decision makers in evaluating and considering the merits of the Proposed Amendments.

Queuing analysis for intersections in the vicinity of the Amendment Area was completed for all analysis scenarios using the Synchro software program, which calculates the expected queue using a formula that extrapolates the length of queue based on two signal cycle lengths. This methodology provides reasonable results for locations operating in the LOS A through LOS D range, but can misrepresent conditions as intersection operations approach capacity (LOS E). In those latter instances, the software output denotes the condition with a letter/symbol adjacent to the analysis output worksheet.

Queuing impacts were identified where the project trips would add 25 or more feet to the existing 95th percentile queue if the existing 95th percentile queue already extends beyond the available storage length, or where project trips would cause the queue to extend beyond the available storage length. The findings are summarized below for study intersections (Intersection Number shown) under different analysis years, and the queue calculation sheets are presented in Appendix E-9.

Existing Conditions

5. Stanford Avenue / San Pablo Avenue:
Westbound Left – Project would increase queue from 135 feet to 170 feet during the AM peak hour; storage length is 140 feet.

8. Stanford Avenue / Market Street:
Northbound Left – Project would increase queue from 140 feet to 165 feet during the PM peak hour; storage length is 75 feet.

9. 57th Street / Adeline Street / Market Street:
Northeastbound Left/Through/Right – Project would increase queue from 50 feet to 110 feet during the AM peak hour and from 70 feet to 160 feet during the PM peak hour; storage length is 40 feet before the upstream unsignalized intersection is blocked. The increase in queue is primarily due to the proposed narrowing of Adeline Street from two to one lane in each direction.

11. 55th Street / Market Street:
Southbound Left – Project would increase queue from 145 feet to 170 feet during the AM peak hour; storage length is 60 feet.

2015 Conditions

5. Stanford Avenue / San Pablo Avenue:
Westbound Left – Project would increase queue from 135 feet to 170 feet during the AM peak hour and from 140 to 165 feet during the PM peak hour; storage length is 140 feet.
8. Stanford Avenue / Market Street:
Northbound Left – Project would increase queue from 140 feet to 175 feet during the PM peak hour; storage length is 75 feet.
9. 57th Street / Adeline Street / Market Street:
Northbound Left/Through/Right – Project would increase queue from 265 feet to 320 feet during the PM peak hour; storage is 110 feet before the upstream unsignalized intersection is blocked.

Northeastbound Left/Through/Right – Project would increase queue from 70 feet to 160 feet during the AM peak hour and from 80 feet to 190 feet during the PM peak hour; storage length is 40 feet before the upstream unsignalized intersection is blocked. The increase in queue is primarily due to the proposed narrowing of Adeline Street from two to one lane in each direction.

2035 Conditions

5. Stanford Avenue / San Pablo Avenue:
Westbound Left – Project would increase queue from 160 feet to 195 feet during the AM peak hour and from 180 to 205 feet during the PM peak hour; storage length is 140 feet.
8. Stanford Avenue / Market Street:
Northbound Left – Project would increase queue from 155 feet to 180 feet during the PM peak hour; storage length is 75 feet.

Southbound Through/Right – Project would increase queue from 360 feet to 405 feet during the PM peak hour; storage length is 400 before the upstream unsignalized intersection is blocked.
9. 57th Street / Adeline Street / Market Street:
Northbound Left/Through/Right – Project would increase queue from 330 feet to 370 feet during the PM peak hour; storage is 110 feet before the upstream intersection is blocked.

Northeastbound Left/Through/Right – Project would increase queue from 130 feet to 330 feet during the AM peak hour and from 90 feet to 215 feet during the PM peak hour; storage length is 40 feet before the upstream intersection is blocked. The increase in queue is primarily due to the proposed narrowing of Adeline Street from two to one lane in each direction.

11. 55th Street / Market Street:
Southbound Left – Project would increase queue from 265 feet to 290 feet during the AM peak hour; storage length is 60 feet.
12. 55th Street / Martin Luther King Jr. Way:
Eastbound Left/Through/Right – Project would increase queue from 560 feet to 590 feet during the PM peak hour; storage length is 490 feet before the upstream intersection is blocked.

Neighborhood Traffic Intrusion

As previously described above, most of the residential streets in the vicinity of the Lowell Street corridor have traffic calming devices, such as speed humps or traffic circles, installed to reduce speeding and cut-through traffic. The traffic operations analysis presented above assumed that motor vehicles would access the Lowell Street corridor using arterials and major streets in the vicinity of the Amendment Area.

As shown in Tables 4.13-10 through 4.13-12, the Proposed Amendments would increase congestion at the study intersections. The development facilitated by the Proposed Amendments is estimated to increase intersection average delay by no more than about 10 seconds. Considering that most of the residential streets have traffic calming devices installed to reduce travel speeds, it is unlikely that they would provide shorter travel times than the arterials and the major streets in the area. Therefore, it is unlikely that a large number of motor vehicles would divert to the residential streets in the area.

57th Street/Adeline Street/Market Street Intersection

Currently, Market Street provides two automobile lanes and is designated as a Class 3A Arterial Bicycle Route with shared lane bicycle stencils in each direction north of Aileen Street, and one automobile lane and one Class 2 Bicycle Lane in each direction south of Aileen Street. The outside lane on southbound Market Street starts to merge just south of Aileen Street with the full bicycle lane starting just south of 56th Street.

The Proposed Amendments could facilitate the addition of Class 2 bicycle lanes on Adeline Street. It would be preferable to extend the existing bicycle lane on southbound Market Street to connect with the proposed bicycle lanes on Adeline Street. A bicycle lane can be implemented on southbound Market Street between Adeline and 56th Streets by narrowing the street to one through lane. This would require the southbound Market Street approach at the intersection with Adeline Street to be modified from one shared right/ through lane and one shared left/through lane to a dedicated right-turn lane and a shared left/ through lane.

As previously described, and summarized in **Table 4.13-15** below, the 57th Street / Adeline Street / Market Street intersection would operate at LOS D or better during both AM and PM peak hours after narrowing of Adeline Street to one travel lane in each direction. Converting the southbound

**TABLE 4.13-15
57TH STREET/ADELINE STREET/MARKET STREET INTERSECTION – LOS SUMMARY**

| Configuration | Peak Hour | Existing Plus Project | | 2015 Plus Project | | 2035 Plus Project | |
|---|-----------|------------------------------|------------------|------------------------------|------------------|------------------------------|------------------|
| | | Delay ^a (seconds) | LOS ^b | Delay ^a (seconds) | LOS ^b | Delay ^a (seconds) | LOS ^b |
| 1 Existing Configuration | AM | 20.6 | C | 23.9 | C | 30.2 | C |
| | PM | 22.1 | C | 31.2 | C | 46.4 | D |
| 2 Convert Southbound Market Street approach to a dedicated right turn lane and a shared left/through lane | AM | 27.6 | C | 44.4 | D | 70.9 | E |
| | PM | 50.2 | D | 94.2 | F | 134.5 | F |
| 3 Configuration 2 plus prohibit southbound left-turns | AM | 27.0 | C | 37.0 | D | 60.4 | E |
| | PM | 47.3 | D | 81.8 | F | 112.6 | F |
| 4 Configuration 3 plus crosswalk modifications | AM | 17.4 | B | 21.0 | C | 34.1 | C |
| | PM | 19.1 | B | 26.9 | C | 38.4 | D |

^a For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst movement and average intersection delay are shown: intersection average (worst movement)
^b Intersections operating at unacceptable levels (LOS E or LOS F) are shown in **bold**.

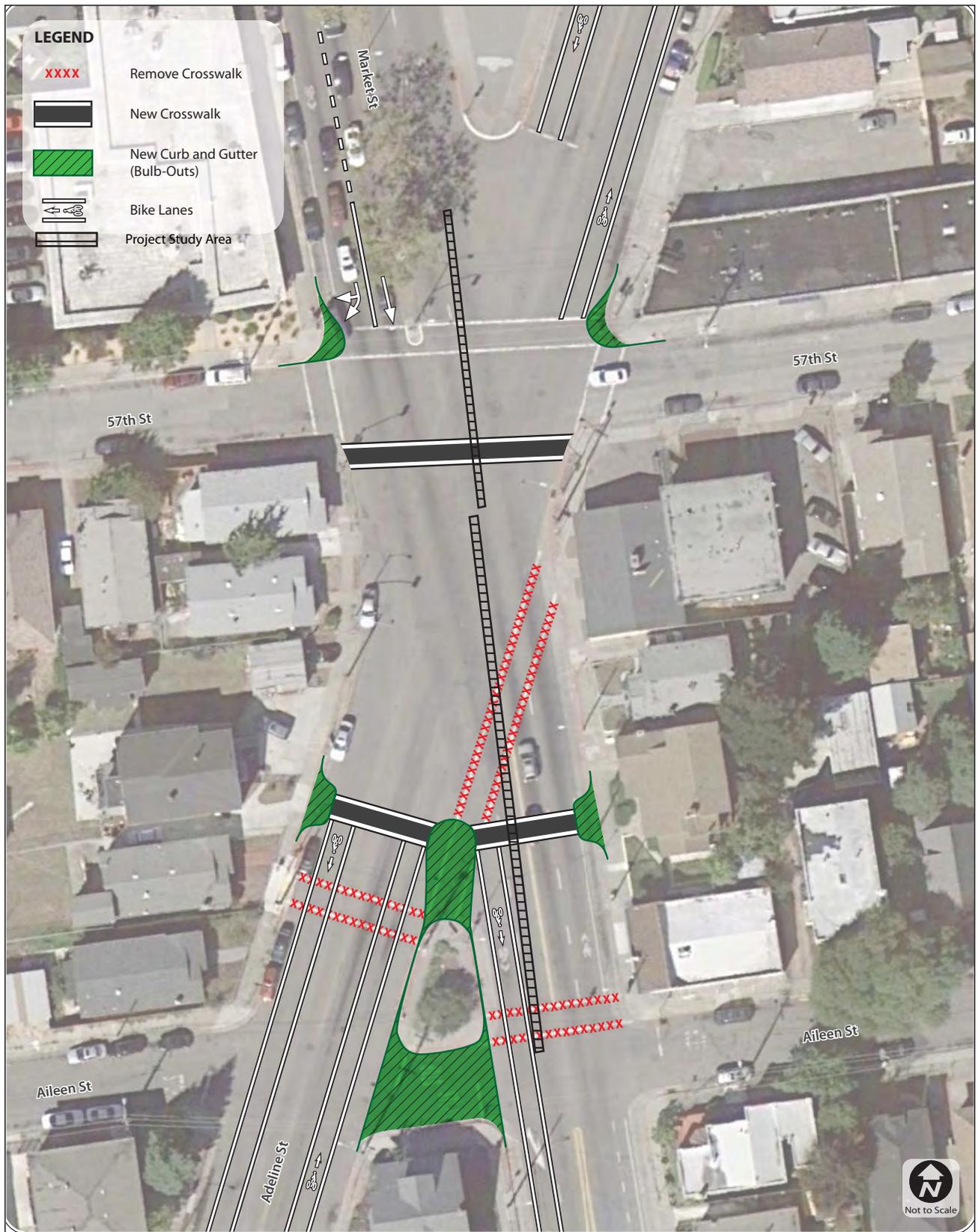
SOURCE: Fehr & Peers, 2011.

Market Street approach to provide a dedicated right-turn lane and a shared left-through lane would increase the delay at the intersection. The intersections would operate at LOS D or better under Existing Plus Project conditions, but would degrade to LOS E or LOS F during the PM peak hour under 2015 Plus Project conditions, and during both AM and PM peak hours under 2035 Plus Project conditions. The additional delay is primarily experienced by the 670 existing peak hour vehicles traveling through on southbound Market Street (forecasted to increase to 850 vehicles per hour under 2035 Plus Project conditions) that would use one lane of travel.

Currently, four AM peak-hour and seven PM peak-hour vehicles turn left from southbound Market Street to either Adeline Street or 57th Street. The southbound left-turn volume is not expected to increase drastically in the future. Prohibiting the southbound left-turn movement at the intersection would reduce the overall delay at the intersection; however, the intersection would continue to operate at the same LOS.

Currently, the traffic signal at the 57th Street/Adeline Street/Market Street allocates more green time to the 57th Street and Adeline Street approaches than the proportion of traffic carried by these streets. This is to accommodate the pedestrians at the long crosswalks crossings Adeline Street and Market Street. The amount of green time allocated to Market Street can be increased by reducing the green time for Adeline Street and 57th Street. The pedestrian crossing distances and times can be reduced through the following as shown on **Figure 4.13-18**:

- Provide bulbout at both ends of the crosswalk on the north side of the intersection (crossing Adeline Street and Market Street).



SOURCE: Fehr & Peers

Proposed Amendments to B/M/SP Redevelopment Plan . 210505.02

Figure 4.13-18
 Conceptual Improvements at the 57th Street/
 Adeline Street/Market Street Intersection

- Replace the diagonal crosswalk on the southeast approach of the intersection (crossing Market Street) with a perpendicular crosswalk. Although this configuration would increase the overall walking distance for pedestrians along Adeline Street, it would reduce the length of the crosswalk. Bulbouts at both ends of the crosswalk should also be provided as part of this improvement.
- Expand the existing island bound by Adeline, Market, and Aileen Streets. Enlarging the island would reduce the pedestrian crossing distance for crosswalks crossing both Adeline Street and Market Street. In addition, it would also reduce the size of the intersection.

The intersection would improve to LOS D or better during both peak hours under all studied scenarios after implementation of these improvements.

The modifications described above would increase the queue lengths on the southbound Market Street approach. Similar to the current intersection configuration, the 95th percentile queue would extend past the unsignalized upstream intersections, but would not spill back to the upstream signalized intersection at Stanford Avenue.

The following, as shown on Figure 4.13-18, should also be considered in this area:

- Provide a crosswalk across Adeline Street and Market Street just south of 57th Street. This crosswalk can be accommodated in the same signal phase and the existing crosswalk just north of the intersection and would require less crossing time than the existing crosswalk.
- If the southbound Market Street approach is modified to provide a dedicated right-turn lane, consider providing a combined bicycle lane/right-turn lane which would allow bicyclists to proceed straight through the intersection along the left-side of the dedicated right-turn lane.
- Consider closing the segment of Aileen Street between Adeline and Market Streets. This segment of Aileen Street is about 30 feet long and is about 50 feet south of the 57th Street/Adeline Street/Market Street intersection. Queues on both northbound Market Street and northeastbound Adeline Street spill back past Aileen Street. Aileen Street is a primarily residential street, and its closure at Adeline and Market Streets would result in vehicles diverting to other parallel streets such as 56th and 57th Streets. Also consider eliminating the crosswalk across Market Street at Aileen Street.

2000 EIR Impacts Replaced or that Require No Further Analysis in this SEIR

The 2000 EIR identified the following impacts that not addressed in detail in this SEIR because the Proposed Amendments are not expected to change future developments or public infrastructure in the existing Redevelopment Plan Project Area, thus this assessment evaluated the impacts of development that would be facilitated by the Proposed Amendments along the Lowell Street corridor only and does not warrant further analysis beyond that in the 2000 EIR to adequately apply to the Redevelopment Plan Area as Amended. In some cases the impact and mitigation measure is specific to a geographic area not addressed or affected by the Proposed Amendments. These impacts are carried forward in this SEIR. New SCAs are added as appropriate.

The impacts and mitigation measures are listed below and may reflect minor revisions made for clarity and consistency within the context of this SEIR, for example, topic designators, e.g., “(TRA)” and references to distinguish that the impact is pertinent to the “existing Project Area” analyzed in the 2000 EIR. (Revisions are shown in Appendix G to this SEIR in underlined/strikeout format.)

- **Updated Impact B.1 (TRA): The addition of project traffic from traffic from the Existing Redevelopment Plan would result in unacceptable level of service at three intersections during the PM peak hour under existing conditions in the Existing Project Area. (Potentially Significant)**

Mitigation Measure B.1a: By providing “protected + permitted” left turn phasing for the southbound left turns on Broadway, the impacts at the intersection of Broadway / Piedmont Avenue can be reduced to less than significant levels. With these improvements, which could be funded through the Redevelopment Plan by earmarking funds for transportation improvements, the intersection would operate at LOS C without the project and LOS D with the project.

Mitigation Measure B.1b: By providing “protected” left turn phasing for all approaches and re-striping the shared through-left lanes to exclusive left turn lanes on MacArthur Boulevard, the impacts at the intersection of Telegraph Avenue / MacArthur Boulevard can be reduced to less than significant levels. With these improvements, which could be funded through the Redevelopment Plan by earmarking funds for transportation improvements, the intersection would operate at LOS C without the project and LOS D with the project.

Mitigation Measure B.1c: By providing “protected” left turn phasing for all approaches and re-striping the shared through-left lanes to exclusive left turn lanes on 27th Street, the impacts at the intersection of Telegraph Avenue / 27th Street can be reduced to less than significant levels. With these improvements, which could be funded through the Redevelopment Plan by earmarking funds for transportation improvements, the intersection would operate at LOS C without the project and LOS D with the project during the PM peak hour.

Significance after Mitigation: Less than Significant.

Impact B.1 (TRA) and the corresponding mitigation measures are carried forward in this SEIR, and no further analysis is required in this document to make the 2000 EIR adequately address the potential effects of the Redevelopment Plan, as Amended.

- **Updated Impact B.2 (TRA): The addition of project traffic from the Existing Redevelopment Plan would result in unacceptable level of service at three intersections during the PM peak hour under cumulative Year 2020 conditions in the Existing Project Area. (Potentially Significant)**

Mitigation Measure B.2a: By providing “protected + permitted” left turn phasing for the southbound left turns, the impacts at the intersection of Broadway / Piedmont Avenue can be reduced to less than significant levels. With these improvements,

which could be funded through the Redevelopment Plan by earmarking funds for transportation improvements, the intersection would operate at LOS C without the project and LOS D with the project.

Mitigation Measure B.2b: By providing “protected” left turn phasing for all approaches and re-striping the shared through-left lanes to exclusive left turn lanes on MacArthur Boulevard, the impacts at the intersection of Telegraph Avenue / MacArthur Boulevard can be reduced to less than significant levels. With these improvements, which could be funded through the Redevelopment Plan by earmarking funds for transportation improvements, the intersection would operate at LOS C without the project and LOS D with the project.

Mitigation Measure B.2c: By providing “protected” left turn phasing for all approaches and re-striping the shared through-left lanes to exclusive left turn lanes on 27th Street, the impacts at the intersection of Telegraph Avenue / 27th Street can be reduced to less than significant levels. With these improvements, which could be funded through the Redevelopment Plan by earmarking funds for transportation improvements, the intersection would operate at LOS C without the project and LOS D with the project during the PM peak hour.

Significance after Mitigation: Less than Significant.

Impact B.2 (TRA) and the corresponding mitigation measures are carried forward in this SEIR, and no further analysis is required in this document to make the 2000 EIR adequately address the potential effects of the Redevelopment Plan, as Amended.

- **Updated Impact B.3 (TRA): Traffic from the Existing Redevelopment Plan would contribute incrementally to the cumulative impacts on the regional and local roadways. (Less than Significant)**

Mitigation: None Required.

Impact B.3 (TRA) and the corresponding mitigation measures are carried forward in this SEIR, and no further analysis is required in this document to make the 2000 EIR adequately address the potential effects of the Redevelopment Plan, as Amended.

- **Updated Impact B.5 (TRA): Traffic from the Existing Redevelopment Plan would increase vehicular and bicycle traffic along identified bicycle corridors and has the potential to increase pedestrian circulation in the Broadway Auto Row and MacArthur Transit Village subareas. (Less than Significant)**

Mitigation: None Required.

Impact B.5 (TRA) is carried forward in this SEIR, and no further analysis is required in this document to make the 2000 EIR adequately address the potential effects of the Redevelopment Plan, as Amended. The topic is also addressed in Updated Impact B.4 (TRA), above.

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4.14 Utilities and Service Systems

This section analyzes how the development facilitated by the Redevelopment Plan, as Amended, may affect utilities and service systems. Specifically, this section describes existing public utilities in the Amendment Area and evaluates the potential impact of the development facilitated by the Proposed Amendments, and as appropriate, the development facilitated by the Existing Redevelopment Plan, on the provision of public utilities and possible adverse physical impacts to the environment that could result. Topics analyzed in this section include public water supply, sanitary sewer (wastewater), stormwater drainage facilities, solid waste, and energy services. Pursuant to CEQA Guidelines Section 15162 regarding an SEIR, this section also discusses whether there are any new or more severe significant impacts than those identified in the 2000 EIR that result from changed circumstances or new information.

4.14.1 2000 EIR and Existing Project Area

Utilities and service systems within the Existing Project Area were evaluated in the 2000 EIR (Initial Study Checklist Item # 35 and Chapter 4.E), and in FEIR (Chapters 2 and 4). The 2000 EIR (Chapter 4.E), included a detailed description of electrical and gas services, solid waste, water and wastewater services available for the Existing Project Area at the time.

The development scenario analyzed in the 2000 EIR is incorporated into this environmental analysis of the Redevelopment Plan, as Amended. Also, changes that have occurred to the utilities and service systems setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

Because the only new impacts regarding the Redevelopment Plan, as Amended, are associated with the Proposed Amendments and would not involve any new significant impacts with respect to the Existing Project Area, the remainder of the Utilities Environmental Setting, Regulatory Setting, and Impacts and Mitigation Measures analysis herein focuses primarily on the Amendment Area and the additions/changes related to the Proposed Amendments, although part of the setting discussion pertains to the City of Oakland at-large.

4.14.2 Environmental Setting for the Amendment Area

Water Service

Water Supply System

The East Bay Municipal Utility District (EBMUD) is a publicly owned water utility supplying water and wastewater treatment for parts of western Alameda and Contra Costa Counties, including the Amendment Area. The 577-square-mile Mokelumne Watershed provides the single source of water used to serve the 1.3 million people plus industrial, commercial, and institutional water users in EBMUD's 331-square-mile service area; water is stored primarily in the Pardee and Camanche Reservoirs. The Pardee Reservoir has 198 thousand acre-feet (TAF) (64.5 billion gallons) of storage. The Camanche Reservoir has 417 TAF (135.8 billion gallons) of storage.

The East Bayshore Recycled Water Project, currently under construction, will use water treated in EBMUD's wastewater treatment plant (see description below) and supply an annual average of 2.2 million gallons per day (mgd) of recycled water to portions of Alameda, Albany, Berkeley, Emeryville and Oakland, including customers within the Amendment Area. Recycled water will be used for irrigation, industrial and commercial activities and possibly wetland restoration projects and will offset demands for potable water supply. The first customers began service in April 2008 and used 0.04 mgd of recycled water in 2009 (EBMUD, 2009b).

Water Demand

EBMUD produces an average of about 220 mgd of potable water in non-drought years. By 2040, EBMUD estimates that water demand will increase to approximately 312 mgd in its service area. With successful implementation of water recycling and conservation programs, this demand is estimated to be reduced to about 230 mgd (EBMUD, 2009a).

EBMUD adopted an updated long-term Water Supply Management Program (WSMP) in October 2009.¹ This document serves as a planning guide for the reliable provision of quality water to the EBMUD service area through 2040. The WSMP analysis found that a combination of existing system reservoirs, conservation measures, and recycled water would meet water demand during wet and normal years. In addition, it formulated a Preferred Portfolio of water management that includes rationing of up to 15 percent, aggressive conservation resulting in 39 mgd by 2040, and recycling water resulting in 11 mgd that would meet demand during drought years.

The WSMP also identified supplemental supply components that would keep rationing at a lower level during dry years. EBMUD continues to study and pursue a range supplemental supply options. Some combination of these supplemental supply components, summarized below, would be required to meet the estimated 2040 water demand in a worst-case drought event (EBMUD, 2010a).

Water Supply Projects

Northern California Water Transfer

Under the Water Transfer, there is a change in the way water supplies are allocated, either temporarily or permanently, or the acquisition of additional water rights. Long-term transfers require a more extensive environmental review process. It is assumed that EBMUD would transfer up to 100 mgd of water through the Freeport Regional Water Project, which will also regularly supply the Sacramento County Water Agency (SCWA) with 85 mgd. At this time, water transfer partners have not been identified, so sources of water are not known.

¹ EBMUD's current Urban Water Management Plan (UWMP) is 5 years old and is not used to describe the existing water supply or demand in this document. EBMUD is currently preparing its 2010 Urban Water Management Plan (UWMP), which is scheduled for submission to the State Department of Water Resources by July 2011. The UWMP will describe conservation targets contemplated to achieve a 20-percent reduction in urban per capita water use by 2020, pursuant to Senate Bill 7.

Bayside Groundwater Project Phase 2

Phase I of the Bayside Groundwater Project involves the use of an existing well in South East Bay Plain Basin with an annual capacity of 1 mgd, as well as construction of associated conveyance and treatment facilities. Phase 2 would build upon this system by expanding extraction and storage capacity to up to 9 mgd through replacement of the existing Phase 1 well and construction of a second well at that site, construction of two new wells each at two new sites, a new treatment plant, as well as distribution and injection pipes. Under this project, facilities would be designed to inject treated water into the underlying aquifer during years when water is available and to recover water during the drought years.

Sacramento Groundwater Banking / Exchange

This system would develop an artificial groundwater recharge and recover operation in partnership with the SCWA or other Sacramento-area agencies. EBMUD would support development of facilities that would recharge the Sacramento groundwater basin and would receive a portion of the water extracted or stored as a dry-year supply. Maximum facilities would include up to 39 acres of recharge ponds; three extraction wells capable of pumping 2,000 gallons per minute all year; as well as a pre-treatment plant, pipelines, a pump station, and other associated infrastructure. It is assumed that the project would produce 4.2 mgd, but individual allocations and operational details have not yet been determined.

Mokelumne Inter-Regional Conjunctive Use Project / San Joaquin Groundwater Banking / Exchange

The Inter-Regional Conjunctive Use Project (IRCUP) would use the San Joaquin Groundwater Basin for storage. It would involve one or more of the involved parties obtaining a water right to enable surface water to be diverted from the Mokelumne River and banked for later use by one or more of the parties. Recharge would occur over a conceptual 137 acres of basins, and groundwater would be extracted via 15 wells for use in dry years. Water would travel to the EBMUD service area via the Mokelumne Aqueduct.

Regional Desalinization

In partnership with Contra Costa Water District (CCWD), the San Francisco Public Utilities Commission (SFPUC), and the Santa Clara Valley Water District (SCVWD), EBMUD is exploring a Bay Area Regional Desalinization Project, which would produce 20 to 71 mgd. One or more desalinization plants would be constructed. The plants would provide water for emergencies; intermittent dry-year supplemental supply; and increase water supply reliability of each of the project partners. The technical feasibility of the project was confirmed by a 6-month pilot test, which was completed in April 2009 at Contra Costa Water District's Mallard Slough Pump Station. Project construction is scheduled for 2015 (EBMUD, 2010).

Enlarge Pardee / Lower Bear Reservoirs

Enlargement of the Pardee Reservoir, which currently tops out at 568 feet above mean sea level, would occur under this project. The reservoir would be expanded up to 600 feet above mean sea level, creating an additional 126,000 acre-feet of storage, or about 37.5 mgd of water supply in

each dry year (for up to three consecutive dry years). Implementation would require project-specific environmental review to address cultural and historic resources, road access and bridges, and biological resources.

Enlargement of the Lower Bear Reservoir, which is currently owned by Pacific Gas and Electric (PG&E), would allow increased water supply users in five separate counties. Studies indicated that the reservoir would yield an additional 18,300 acre-feet of water. It is assumed that EBMUD would receive about 4,500 acre-feet during wet or normal years, as well as 2,500 acre-feet during dry years.

Sanitary Sewer Service

Sanitary Sewer Conveyance

The City of Oakland owns, operates, and maintains a local sanitary sewer collection system covering approximately 48 square miles, approximately 1,000 miles of pipe, and seven pump stations (City of Oakland Public Works Agency, 2011). The City's sewer collection system is divided into basins and subbasins. Each numbered subbasin encompasses a specific physical area, and its sewer flows are assigned to a single discharge point from the City's collection system into the EBMUD's interceptor lines. City sewer pipes range from 6 to 72 inches in diameter. Most of the system is gravity-fed. Some areas of Oakland, such as former military bases, cemeteries, large parks, and some hillside areas, are not part of the sewer service system. Sanitary sewer facilities currently serve the Amendment 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 percent increase in wastewater flows for each subarea within the City.

Sanitary Sewer Treatment

EBMUD provides sanitary sewer treatment services to approximately 640,000 people within an 83-square-mile area of Alameda and Contra Costa counties, including the City of Oakland. The City of Oakland is within the EBMUD Special District No. 1 sanitary sewer treatment service area (EBMUD, 2007).

EBMUD's Main Wastewater Treatment Plant (MWWTP) and Interceptor System is located southwest of the Interstate 580/Interstate 80 (I-580/I-80) interchange in Oakland, south of the San Francisco/Oakland Bay Bridge. Wastewater is collected by 29 miles of interceptor lines that move wastewater from about 1,400 miles of sewers owned and operated by the jurisdictions served. The permitted plant capacity for the dry weather season is 120 mgd and for the wet weather season is 320 mgd (SFRWQCB, 2010). Average daily flow is 73 mgd (EBMUD, 2007).

Stormwater Drainage Facilities

In Oakland, stormwater runoff is collected from the southwesterly flows from the Oakland/Berkeley hills to the developed flatlands, where it then flows primarily through underground storm drains and culverts to the San Francisco Bay, via the Oakland Estuary (directly or by way of Lake Merritt) or through the City of Emeryville. As stated in Section 4.8, *Hydrology and Water Quality* of this document, the Amendment Area is relatively flat and drainage patterns vary with local topography. The majority of the Amendment Area drains west towards the San Francisco Bay. While the portion of Temescal Creek within the Amendment Area is culverted, it is possible that local storm drains discharge into the creek. Therefore, a small amount of stormwater from the Amendment Area could potentially flow into Temescal Creek, which drains into the San Francisco Bay.

The Alameda County Flood Control and Water Conservation District constructs, operates, and maintains major trunk lines and flood-control facilities in Oakland, and the Oakland Public Works Agency is responsible for construction and maintenance of the local storm drainage system within Oakland's public areas and roads.

The City prepared a comprehensive storm drainage master plan to identify existing deficiencies in the system and develop prioritized recommendations for rehabilitating the system in order to reduce localized flooding (City of Oakland Public Works Agency, 2006). The existing storm drain system is aged and would not be able to handle increased runoff flows. Therefore, the City requires development projects to evaluate the onsite and offsite condition and capacity of the existing stormwater collection system and implement necessary improvements that are identified to accommodate the project.

Solid Waste

Waste Management and Disposal

Non-hazardous waste in the City of Oakland is collected by Waste Management of Alameda County (WMAC), which provides curbside pickup for residential, commercial and industrial non-hazardous waste, and transports it to WMAC's Davis Street Transfer Station in the City of San Leandro. Transfer trucks haul waste to the Altamont Landfill and Resource Facility, located approximately 35 miles east of Oakland near Livermore. In 2009, the City of Oakland disposed of approximately 306,839 tons of solid waste, 264,636 tons of which went to the Altamont Landfill (CalRecycle, 2011). Most of the remaining solid waste is sent to one of four landfills: Forward Landfill in San Joaquin County; the Keller Canyon Landfill in Contra Costa County, Potrero Hills Landfill in Solano County, and the Vasco Road Landfill in Alameda County. The Altamont Landfill has an estimated capacity of 62,000,000 cubic yards, of which about 26 percent was used, in the year 2000. The solid waste facility permit is currently undergoing its regular 5-year review. It has a permitted maximum daily disposal of 11,500 tons per day.

The official closures dates of the Altamont and Vasco Landfills are 2025 and 2019 respectively as stated on each of their permits. However, increased diversion rates and the downturn of the economy could result in extended closure dates as new capacity estimates are generated annually

(Snider, 2011). Alameda County's Integrated Waste Management Plan, prepared by the Alameda County Waste Management Authority (ACWMA) pursuant Assembly Bill 939 (see below), projects long-term landfill capacity by projecting Alameda County disposal tonnage at the Altamont and Vasco Road Landfills through 2050 (ACWMA, 2011). The most recent disposal tonnage projections are conservative in that they are based on 2007 actuals and do not account for impacts from economic cycles. According to these projections, Vasco Road Landfill tonnage is assumed to divert to Altamont Landfill in the year 2023. The Altamont Landfill capacity is projected to be reduced to 1,439,630 tons in the year 2049.

Waste Generation and Diversion

AB 939, enacted in 1989, requires Source Reduction and Recycling Element of each city and county to include an implementation schedule to divert a percentage of its solid waste from landfill disposal through source reduction, recycling, and composting activities. AB 939 specifies a required diversion rate of at least 50 percent of wastes by the year 2000, and at least 75 percent by 2010. The California Department of Resources Recycling and Recovery (CalRecycle) indicates that the Oakland's diversion rate was 59 percent in 2006. Beginning with the 2007 jurisdiction annual reports, diversion rates were no longer measured. With the passage of SB 1016 in 2006, the Per Capita Disposal Measurement System, only per capita disposal rates are measured to determine if jurisdiction's efforts are meeting the intent of AB 939. Oakland's per resident disposal target rate is 5.8 pounds per person per day (PPD), and its per employee disposal target rate is 15.3 PPD. In 2008, which is the most recent date for which data is available, the measured disposal rate was 4.0 PPD for residents and 10.0 PPD for employees, thereby meeting the City's target rates (CalRecycle, 2011).

Energy Services

Electricity and gas service in the City of Oakland is provided primarily by PG&E, which owns the gas and electrical utility supply lines. Some users purchase energy services directly from alternate power providers. Throughout most of Oakland, electrical power is delivered via overhead distribution and transmission lines, and natural gas is distributed through underground piping. PG&E expands its services on an as-needed basis and requires the user to fund the extension of service.

Electricity Service Demand

Electrical service in the Amendment Area is provided by PG&E. PG&E provides natural gas and electricity to approximately 13 million people throughout a 70,000 square mile service area in Northern and Central California (PG&E, 2011). Other companies may also provide electricity, but PG&E delivers the service. Electrical energy is supplied to the City of Oakland via electrical substations, to which electricity is transported through high-voltage electric cables. Large transformers at the local substations convert the electricity which is provided to the existing PG&E customers, representing predominantly industrial uses, throughout the Amendment Area and surrounding vicinity.

The California Energy Commission (CEC) indicates that Alameda County consumed 11,534 gigawatt-hours (GWh) of electricity in 2009, up from 11,097 GWh in 2006 (CEC, 2011). In the PG&E Planning area, total consumption in 2009 was approximately 108,503 GWh, up from 104,719 GWh in 2006; in 2018, total consumption is estimated to be 119,644 GWh with a peak of approximately 24,600 MW (CEC, 2011).²

The California Independent System Operator (California ISO) is charged with managing the flow of electricity along the State's open market wholesale power grid. The California ISO Energy Demand Forecast (2008–2018) estimates that residential, commercial, and industrial sectors represented 85 percent of statewide electricity demand in 2008. Statewide consumption is expected to increase 11.6 percent by 2018, due primarily to growth in the residential and commercial sectors.

4.14.3 Regulatory Setting

Water Quality, Supply, and Distribution

Safe Drinking Water Act

The USEPA administers the Safe Drinking Water Act (SDWA), the primary federal law that regulates the quality of drinking water and establishes standards to protect public health and safety. The Department of Health Services (DHS) implements the SDWA and oversees public water system quality statewide. DHS establishes legal drinking water standards for contaminants that could threaten public health.

Senate Bill (SB) 610 / Senate Bill (SB) 221

Senate Bill (SB) 610, codified as Sections 10910-10915 of the California Public Resources Code, requires local water providers to conduct a water supply assessment for projects proposing over 500 housing units³, 250,000 square feet of commercial office space (or more than 1,000 employees), a shopping center or business establishment with over 500,000 square feet (or more than 1,000 employees), or equivalent usage. Local water suppliers must also prepare or have already prepared an Urban Water Management Plan to guide planning and development in the water supplier's service area, and specifically pursue efficient use of water resources.

² The CEC defines the PG&E Planning Area to include PG&E bundled retail customers, customers served by energy service providers using the PG&E distribution system to deliver electricity to end users, and customers of publicly owned utilities and irrigation districts in PG&E transmission system (with the exception of the Sacramento Municipal Utility District).

³ Senate Bill (SB) 221 similarly amended the Subdivision Map Act to ensure confirmation that public water supply is sufficient to serve proposed development projects of 500 dwelling units or more.

Water Conservation in Landscaping Act (Assembly Bill 1881, 2006)

The Water Conservation in Landscaping Act of 2006 (Assembly Bill 1881, Laird) requires cities, counties, and charter cities and charter counties to adopt landscape water conservation ordinances by January 1, 2010. Pursuant to this law, the Department of Water Resources (DWR) has prepared a Model Water Efficient Landscape Ordinance (Model Ordinance) for use by local agencies. Most new and rehabilitated landscapes are subject to a water efficient landscape ordinance. Public landscapes and private development projects are subject to the Model Ordinance. However, the Ordinance does not apply to registered local, state, or federal historic sites, ecological restoration projects, mined-land reclamation projects, or plant collections.

Stormwater Drainage

Regulations related to the quality and quantity of stormwater runoff (i.e., Federal Clean Water Act and the National Pollution Discharge Elimination System) are discussed in Section 4.8, *Hydrology and Water Quality*.

Solid Waste

Assembly Bill (AB) 939

The California Integrated Waste Management Act of 1989, or Assembly Bill (AB) 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans and also mandated that local jurisdictions divert at least 50 percent of all solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. As required by AB 939, the City of Oakland has prepared a Source Reduction and Recycling Element (SRRE) which requires proposed development projects to undergo, as part of the required environmental review, an assessment of project impacts on the City's ability to maintain the mandated 50 percent waste diversion rates. With the passage of SB 1016 in 2006, the Per Capita Disposal Measurement System, only per capita disposal rates are measured to determine if jurisdiction's efforts are meeting the intent of AB 939.

Alameda County Waste Reduction and Recycling Initiative (Measure D)

In addition to AB 939, the 1990 Voter Initiative Measure D (Alameda County Waste Reduction and Recycling Initiative) mandates all cities in Alameda County to divert 75 percent of their solid waste from landfills by the year 2010.

Construction and Demolition Debris Waste Reduction and Recycling (Ordinance No. 12253 C.M.S.)

The City of Oakland's construction and demolition (C&D) debris waste reduction and recycling requirements are intended to further the goals of AB 939 and Alameda County's Measure D. As part of the application for a building permit, a project applicant is required to prepare and submit a Construction and Demolition Debris Waste Reduction and Recycling Plan (WRRP) to divert at least 50 percent of all construction and demolition debris generated by project development from landfill disposal.

Energy

Buildings constructed after June 30, 1977 must comply with standards identified in Title 24 of the California Code of Regulations. Title 24, established by the California Energy Commission (CEC) in 1978, requires the inclusion of state-of-the-art energy conservation features in building design and construction including the incorporation of specific energy conserving design features, use of non-depletable energy resources, or a demonstration that buildings would comply with a designated energy budget.

Local Plans and Policies

City of Oakland General Plan

The Oakland General Plan includes the following policy related to the provision of utilities and infrastructure:

- ***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*.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The City of Oakland SCA relevant to utilities and service systems are listed below. All applicable SCAs would be adopted as conditions of approval for projects facilitated by the Redevelopment Plan, as Amended, to reduce significant impacts to utilities and service systems. The SCAs are incorporated and required as part of development facilitated by the Redevelopment Plan, as Amended, so they are not listed as mitigation measures.

The City's SCAs relevant to utilities and service systems impacts are shown below.

- **SCA 36: Waste Reduction and Recycling**

The project applicant will submit a Construction and Demolition WRRP and an Operational Diversion Plan (ODP) for review and approval by the Public Works Agency.

Chapter 15.34 of the Oakland Municipal Code outlines requirements for reducing waste and optimizing construction and demolition recycling. Affected projects include all new construction, renovations/alterations/modifications with construction values of \$50,000 or more (except R-3), and all demolition (including soft demo). The WRRP must specify the methods by which the development will divert construction and demolition debris waste generated by the proposed project from landfill disposal in accordance with current City requirements. Current standards, FAQs, and forms are available at www.oaklandpw.com/Page39.aspx or in the Green Building Resource Center. After approval of the plan, the project applicant shall implement the plan.

The ODP will identify how the project complies with the Recycling Space Allocation Ordinance, (Chapter 17.118 of the Oakland Municipal Code), including capacity calculations, and specify the methods by which the development will meet the current

diversion of solid waste generated by operation of the proposed project from landfill disposal in accordance with current City requirements. The proposed program shall be implemented and maintained for the duration of the proposed activity or facility. Changes to the plan may be re-submitted to the Environmental Services Division of the Public Works Agency for review and approval. Any incentive programs shall remain fully operational as long as residents and businesses exist at the project site.

- **SCA 91: Stormwater and Sewer**

Confirmation of the capacity of the City's surrounding stormwater and sanitary sewer system and state of repair shall be completed by a qualified civil engineer with funding from the project applicant. The project applicant shall be responsible for the necessary stormwater and sanitary sewer infrastructure improvements to accommodate the proposed project. In addition, the applicant shall be required to pay additional fees to improve sanitary sewer infrastructure if required by the Sewer and Stormwater Division. Improvements to the existing sanitary sewer collection system shall specifically include, but are not limited to, mechanisms to control or minimize increases in infiltration/inflow to offset sanitary sewer increases associated with the proposed project. To the maximum extent practicable, the applicant will be required to implement Best Management Practices to reduce the peak stormwater runoff from the project site. Additionally, the project applicant shall be responsible for payment of the required installation or hook-up fees to the affected service providers.

SCAs related to Hydrology and Water Quality, including those related to stormwater, are described in Section 4.8, *Hydrology and Water Quality* of this document.

4.14.4 Impacts and Mitigation Measures

Significance Criteria

The Redevelopment Plan, as Amended, would have a significant impact on the environment if it would:

1. Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board;
2. Require or result in construction of new stormwater drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
3. 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;
4. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
5. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects;

6. Violate applicable federal, state, and local statutes and regulations related to solid waste;
7. Violate applicable federal, state and local statutes and regulations relating to energy standards; or
8. Result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects.

Approach to Analysis

Prior to approval of any project that is facilitated by the Redevelopment Plan, as Amended, the project would be subject to project-level environmental review as well as the SCAs and the goals and policies of the City's General Plan as outlined above.

The 2000 EIR analyzed the potential environmental effects on utilities and service systems and identified feasible mitigation measures and alternatives for the Existing Redevelopment Plan. As previously indicated in Section 4.14.1, the development scenario analyzed in the 2000 EIR is considered in this environmental analysis of the Redevelopment Plan, as Amended, and changes that have occurred to the utilities and service systems setting since preparation of the 2000 EIR are included in the analysis in this SEIR.

The approach to the analysis herein compared the 2000 EIR setting to existing conditions and then evaluated the analysis and conclusions of the Oakland Housing Element EIR (2010) and other project-specific EIRs for major projects located within the Existing Project Area, all of which were certified by the City since the 2000 EIR was prepared.⁴ Based on the information in each of the aforementioned EIRs and the limited development that has occurred in other parts of the Existing Project Area and nearby, there have not been substantial changes to the existing setting regarding utilities and service systems relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for these topics. Each of the analyses in the aforementioned EIRs certified since the 2000 EIR are incorporated in this SEIR by reference.

The Proposed Amendments do not propose any changes to the Existing Redevelopment Plan or circumstances surrounding the Plan necessitating further analysis of utilities and service systems in the Existing Project Area in this SEIR. Therefore, the impact discussions and analyses below focus on the activities facilitated by the Proposed Amendments and the potential for utilities and service systems impacts within the Amendment Area, and conclude with the impacts of the Redevelopment Plan, as Amended. Physical changes that have occurred to the environmental setting since the 2000 EIR are also evaluated as "past, present or reasonably foreseeable" projects

⁴ Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007); see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed since 2000 for Major Projects in the Existing Project Area. The City also prepared the Oakland Housing Element EIR since 2000; see Appendix I, Impacts and Mitigation Measures from the Oakland Housing Element EIR.

and accordingly, are considered in the cumulative analysis in this SEIR (see New Impact UTIL-6).

The increases in population and land use intensity that would be facilitated by the Redevelopment Plan, as Amended, were evaluated based on the web-based information regarding the various utility service providers and agencies with jurisdiction over the Project Area, as Amended. Additionally, the development facilitated by the Redevelopment Plan, as Amended, was evaluated for conformity with the goals, objectives and policies of the General Plan related to utilities.

To ensure overall conformance within the SEIR, and to reflect City of Oakland's *CEQA Thresholds/Criteria of Significance Guidelines* (initially established in 2008) and new City requirements and analysis methods, such as the incorporation of the City's *Standard Conditions of Approval and Uniformly Applied Development Standards* established since the 2000 EIR, this SEIR updates the 2000 EIR. In accordance with CEQA Guidelines Section 15163, the SEIR contains only the information necessary to make the 2000 EIR adequate for the Redevelopment Plan, as Amended.

Impacts

Water Supply

New Impact UTIL-1: The water demand generated by development facilitated by the Redevelopment Plan, as Amended, would not exceed water supplies available from existing entitlements and resources. (Less than Significant)

As stated above, EBMUD produces an average of about 220 mgd in non-drought years. By 2040, EBMUD estimates that water demand will increase to approximately 312 mgd in its service area, although, with successful implementation of water recycling and conservation programs, this demand could be reduced to about 230 mgd (EBMUD, 2009a). EBMUD adopted an updated long-term Water Supply Management Program (WSMP) in October 2009, which included the growth projections of the Oakland General Plan and those that would be facilitated by the Redevelopment Plan, as Amended.⁵ The WSMP analysis found that a combination of existing system reservoirs, conservation measures, and recycled water would meet water demand during wet and normal years. In addition, it formulated a Preferred Portfolio of water management that includes rationing of up to 15 percent, aggressive conservation resulting in 39 mgd by 2040, and recycling water resulting in 11 mgd that would meet demand during drought years. Further, a portion of the Amendment Area falls within the boundary of the East Bayshore recycled water main transmission pipeline which presents additional opportunities for recycled water uses ranging from landscape irrigation, toilet flushing and other non-potable commercial and industrial uses (EBMUD, 2011).

⁵ EBMUD's current Urban Water Management Plan (UWMP) is 5 years old and is not used to describe the existing water supply or demand in this document. EBMUD is currently preparing its 2010 Urban Water Management Plan (UWMP), which is scheduled for submission to the State Department of Water Resources by July 2011. The UWMP will describe conservation targets contemplated to achieve a 20-percent reduction in urban per capita water use by 2020, pursuant to Senate Bill 7.

Individual development projects facilitated by the Redevelopment Plan, as Amended, would be subject to environmental review as necessary and appropriate. Pursuant to Sections 10910 through 10915 (SB 610) of the California Water Code, projects that exceed the threshold for a Water Supply Assessment (WSA) would prepare such an assessment or request EBMUD to prepare such an assessment.

As such, development facilitated by the Redevelopment Plan, as Amended, would not require new water supply entitlements, resources, facilities, or expansion of existing facilities beyond that which is already planned for in EBMUD's WSMP and the impact would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact, but no New or Changed Conclusions.* The conclusions regarding the potential impact to water supply is substantially the same as identified in the 2000 EIR within the discussion of Growth Inducing Impacts. New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from "changed circumstances" or "new information," pursuant to CEQA Guidelines Section 15162.

Sanitary Sewer

New Impact UTIL-2: Development facilitated by the Redevelopment Plan, as Amended, would not exceed the wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination that new or expanded wastewater treatment facilities would be required. (Less than Significant)

Development facilitated by the Redevelopment Plan, as Amended, may require localized investment in new or upgraded local City-owned sanitary sewer infrastructure, or in the larger EBMUD-owned sanitary sewer transmission infrastructure. Development facilitated by the Redevelopment Plan, as Amended, would increase the amount of wastewater generated within the Project Area, as Amended. EBMUD's MWWTP and Interceptor System are anticipated to have adequate dry weather capacity to treat this projected demand in addition to its existing commitments. However, wet weather flows are a concern as the three wet weather facilities historically used to provide treatment for high wet weather flows that exceed the treatment capacity of the MWWTP were prohibited from further discharges on January 14, 2009 (EBMUD, 2011). As a result, EBMUD is undergoing extensive flow monitoring and hydraulic modeling to identify and ultimately reduce infiltration/inflow into the private sewer lateral system. Development facilitated by the Redevelopment Plan, as Amended, may require localized investment in new or upgraded local City-owned sanitary sewer infrastructure, or in the larger EBMUD-owned sanitary sewer transmission infrastructure. Individual projects would be required to undergo project-specific environmental review as needed and appropriate, and their project-level impacts, including those associated with the potential construction of new or upgraded

wastewater conveyance infrastructure, would be evaluated at that time. Projects would be required to implement SCA 91, *Stormwater and Sewer*, which would require that the applicants of individual projects construct the necessary stormwater infrastructure improvements to accommodate their projects. Development facilitated by the Redevelopment Plan, as Amended, would have a less-than-significant impact on sanitary sewer service and treatment.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact, but no New or Changed Conclusion.* The conclusions regarding the potential impact to wastewater treatment capacity is substantially the same as identified in the 2000 EIR within the discussion of Growth Inducing Impacts. New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Stormwater Drainage Facilities

New Impact UTIL-3: Development facilitated by the Redevelopment Plan, as Amended, would not require or result in construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant)

Given the location of the Project Area, as Amended, within a built-out urban environment, much of the area comprises impervious surfaces. The Redevelopment Plan, as Amended, would facilitate construction of projects that could alter the composition of the overall impervious surfaces. However, as stated in Section 4.8, *Hydrology and Water Quality*, compliance with the in-place Alameda Countywide Clean Water Program NPDES Permit would require no net increase in stormwater runoff after construction at any individual project site. Therefore, development facilitated by the Redevelopment Plan, as Amended, as a whole, would not directly or indirectly lead to an increase in stormwater runoff.

Individual development project facilitated by the Redevelopment Plan, as Amended, would be subject to environmental review as necessary and appropriate. Projects would be required to implement SCA 91, *Stormwater and Sewer*, which would require that the applicants of individual projects construct the necessary stormwater infrastructure improvements to accommodate their projects. Projects would also be required to implement SCA 80, *Post-construction Stormwater Pollution Prevention Plan*, (as listed in Section 4.8, *Hydrology and Water Quality*), which requires compliance with Provision C.3 of the Alameda Countywide Clean Water Program. This provision regulates post-construction stormwater runoff. Projects would also be required to prepare Stormwater Pollution Prevention Plans (SWPPP) as described under SCA 75, *Stormwater Pollution Prevention Plan*, (as listed in Section 4.8, *Hydrology and Water Quality*).

Because development facilitated by the Redevelopment Plan, as Amended, would not result in an increase in stormwater runoff, and individual projects would be required to meet the SCA listed above, the development facilitated by the Redevelopment Plan, as Amended, would have a less-than-significant impact on storm drainage facilities.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact, but no New or Changed Conclusion.* The conclusions regarding the potential impact to stormwater drainage facilities is substantially the same as identified in the 2000 EIR within the discussion of Growth Inducing Impacts. New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Solid Waste Services

New Impact UTIL-4: Development facilitated by the Redevelopment Plan, as Amended, would not generate solid waste that would exceed the permitted capacity of the landfills serving the area. (Less than Significant)

The Redevelopment Plan, as Amended, could facilitate projects that would generate construction/demolition debris. In addition, the residential and employee population increase facilitated by the Redevelopment Plan, as Amended, would increase demand for solid waste services.

As stated above Altamont landfill has an official permitted closure date of 2025 but is conservatively projected to retain capacity through the year 2049 which is beyond the 30-year effective lifetime of the Redevelopment Plan, as Amended, (ACWMA, 2011). The Redevelopment Plan, as Amended, would not impede the ability of the City to meet the waste diversion requirements or cause the City to violate other applicable federal, state, and local statutes and regulations related to solid waste. In addition, projects facilitated by the Redevelopment Plan, as Amended, would be subject to SCA 36, *Waste Reduction and Recycling*, which requires the preparation of an Operational Diversion Plan to identify how projects would comply with the City’s Recycling Space Allocation Ordinance (Chapter 17.118 OMC). Development facilitated by the Redevelopment Plan, as Amended, would have a less-than-significant impact on solid waste services and landfill capacity.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact, but no New or Changed Conclusion.* The conclusions regarding the potential impact to solid waste services is substantially the same as identified in the 2000 EIR within the discussion of Growth Inducing Impacts. New SCAs apply and are consistent with and update the 2000 analysis. No new

significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Energy

New Impact UTIL-5: Development facilitated by the Redevelopment Plan, as Amended, would not violate applicable federal, state and local statutes and regulations relating to energy standards; nor result in a determination by the energy provider which serves or may serve the area that it does not have adequate capacity to serve projected demand in addition to the providers’ existing commitments and require or result in construction of new energy facilities or expansion of existing facilities. (Less than Significant)

The Redevelopment Plan, as Amended, would facilitate projects that would result in an incremental increase in the demand for gas and electrical power. However, the level of public energy required of this new development would not be expected to violate applicable federal, state and local statutes and regulations relating to energy standards or exceed PG&E’s service capacity or require new or expanded facilities.

Projects facilitated by the Redevelopment Plan, as Amended, would comply with all standards of Title 24 of the California Code of Regulations, which requires construction projects to incorporate energy-conserving design measures into projects. All individual projects facilitated by the Redevelopment Plan, as Amended, would undergo project-specific environmental review, as needed and appropriate, and any projects requiring extension, relocation, or increases in PG&E services would be required to undergo review by the utility. The impacts to energy services would be less than significant.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact, but no New or Changed Conclusion.* The conclusions regarding the potential impact to energy standards or capacity is substantially the same as identified in the 2000 EIR within the discussion of Growth Inducing Impacts. New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

Cumulative Impacts

New Impact UTIL-6: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present and reasonably foreseeable future projects within and around the Project Area, as Amended, would result in an increased demand for utilities services. (Less than Significant)

Geographic Context

The cumulative geographic context for Utilities and Service Systems for the activities facilitated by the Redevelopment Plan, as Amended, consists of the Project Area, as Amended, in addition to all areas of the City since utilities services are provided citywide as well as regionally. Cumulative development considers those projects in the Major Projects List in Appendix B to this Draft SEIR and discussed in Section 4.09, *Cumulative Context*, in the front of Chapter 4 of this Draft SEIR.

Impacts

EBMUD's protections for water and wastewater demand incorporate growth pursuant to service-area-wide growth projections. As stated above, EBMUD has determined that it would meet area-wide water demand in wet and normal years, as well as meet demand during multiple dry years through a combination of conservation, recycled water, and new water supply projects. EBMUD's and the City of Oakland's planning for wastewater capacity similarly include cumulative development.

Development facilitated by the Redevelopment Plan, as Amended, would not result in a significant impact related to stormwater, solid waste and energy services. Thus, the development facilitated by the Redevelopment Plan, as Amended, would not combine with, or add to, any potential adverse impacts on the provision of stormwater, solid waste or energy services that may be associated with other cumulative development. In addition, past projects have, and present and reasonably foreseeable future projects would be subject to SCA 36, *Waste Reduction and Recycling*; SCA 91, *Stormwater and Sewer*; SCA 75, *Stormwater Pollution Prevention Plan*; and SCA 80, *Post-construction Stormwater Management Plan* (as listed in section 4.8, *Hydrology and Water Quality*). Based on the information in this section and for the reasons summarized above, the development facilitated by the Redevelopment Plan, as Amended, would not contribute to any significant adverse cumulative impacts on utilities or service systems when considered together with past, present, and reasonably foreseeable future development.

Mitigation: None Required.

Comparison to 2000 EIR: *New Less than Significant Impact, but no New or Changed Conclusion.*

The conclusions regarding the potential for a cumulative impact related to utilities is substantially the same as identified in the 2000 EIR within the discussion of Growth Inducing Impacts. New SCAs apply and are consistent with and update the 2000 analysis. No new significant environmental effects or a substantial increase in the severity of previously identified significant

effects would result from “changed circumstances” or “new information,” pursuant to CEQA Guidelines Section 15162.

4.14.5 References

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CHAPTER 5

Alternatives

5.1 Criteria for Selecting Alternatives

CEQA requires that an EIR compare the effects of a “reasonable range of alternatives” to the effects of the project. The “range of alternatives” is governed by the “rule of reason” which requires the EIR to set forth only those alternatives necessary to permit an informed and reasoned choice by the decision-making body and informed public participation (CEQA Guidelines Section 15126.6[f]). CEQA generally defines “feasible” to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors.

Therefore, each of the alternatives addressed in this SEIR were selected based on the following factors, and with consideration given to the alternatives addressed in the 2000 EIR:

1. The extent to which the alternative would accomplish most of the basic objectives of the Proposed Amendments and the Redevelopment Plan, as Amended (identified in Chapter 3);
2. The extent to which the alternative would avoid or lessen any of the identified significant environmental effects of the Proposed Amendments and the Redevelopment Plan, as Amended (discussed throughout Chapter 4);
3. The feasibility of the alternative, taking into account site suitability, availability of infrastructure, property control (ownership), and consistency with applicable plans and regulatory limitations;
4. The extent to which the alternative contributes to a “reasonable range” of alternatives necessary to permit a reasoned choice; and
5. The requirement of the CEQA Guidelines to consider a no-project alternative and to identify an environmentally superior alternative in addition to the no-project alternative (CEQA Guidelines, Section 15126.6(e)). The purpose of evaluating the no-project alternative is to allow decision makers to compare the impacts of approving the Redevelopment Plan, as Amended, with the impacts of not approving the Redevelopment Plan, as Amended.

5.2 Significant Impacts

Under CEQA, the important consideration is whether an alternative would avoid or lessen any of the identified significant environmental resulting from the Redevelopment Plan, as Amended. To make that determination, the significant impacts must be considered. Impacts that are not mitigated to less than significant are considered “significant and unavoidable” (“SU”). The SU impacts identified for the in Chapter 4 are listed below for convenience.

SU Air Quality Impacts

- **New Impact AIR-3:** Development facilitated by the Redevelopment Plan, as Amended, could include residential developments that expose occupants to substantial health risk from diesel particulate matter (DPM) from mobile and stationary sources. Although compliance with City’s Standard Conditions of Approval would provide that a site specific health risk assessment (HRA) be prepared, and that would reduce exposures to DPM sources to less than significant, there is no assurance that exposure to gaseous TACs could be reduced to a less-than-significant level at every site.
- **Updated Impact C.5 (AIR):** Development facilitated by the Redevelopment Plan, as Amended, would encourage new residential uses that expose occupants to sources of substantial and frequent odors affecting a substantial number of people and would be guided by City policies to reduce potential odor impacts.

SU Cultural Resources Impacts

- **New Impact CUL-1:** Development facilitated by the Redevelopment Plan, as Amended, would result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources.
- **New Impact CUL-5:** Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, would contribute considerably to a significant adverse cumulative impact to cultural resources.

SU Transportation and Circulation Impacts

- **New Impact TRA-1:** Development facilitated by the Redevelopment Plan, as Amended, would degrade the Powell Street / Christie Avenue intersection (#3) from LOS E to LOS F during the PM peak hour under 2035 conditions.
- **New Impact TRA-2:** Development facilitated by the Redevelopment Plan, as Amended, would increase vehicle delay to a critical movement by more than six seconds at the Stanford Avenue / San Pablo Avenue intersection (#5), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Redevelopment Plan, as Amended.
- **New Impact TRA-5:** Development facilitated by the Redevelopment Plan, as Amended, would increase the vehicle delay to a critical movement by more than six seconds at the

25th Street / San Pablo Avenue intersection (#15), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Redevelopment Plan, as Amended.

The 2000 EIR for the Existing Redevelopment Plan identified one SU impact regarding consistency with air quality planning (Updated Impact C.1 [AIR]), which is identified as less than significant in this SEIR that considers the Redevelopment Plan, as Amended.

5.3 Alternatives Selected for Consideration

5.3.1 2000 EIR Alternatives

The 2000 EIR analyzed the following reasonable range of alternatives to the Redevelopment Plan:

- **No Project Alternative:** As required by CEQA, under the No Project Alternative, the Existing Redevelopment Plan would not have been adopted. The proposed subareas would have remained subject to the applicable regulations adopted and in force in the City of Oakland, including the City of Oakland General Plan and its Zoning Regulations.
- **Reduced Project Alternative:** Under this alternative, the proposed, approximately 700 new residential units would be removed from the Existing Redevelopment Plan to reduce the less-than-significant impacts identified in the 2000 EIR regarding noise compatibility (Updated Impacts D.3 and D.4 [NOI]). Mixed use development would also be restricted, and housing would be limited to infill areas where housing is compatible with surrounding uses and noise levels (e.g., less than 70 dBA CNEL).
- **Specific Plan Alternative:** Under this alternative, each proposed subarea would be designated a specific plan area, pursuant to State laws. Dependent primarily on private financing, development would take place at a much slower pace without the financing mechanisms for coordinated redevelopment available under the California Community Redevelopment Law.

The 2000 EIR identified the Reduced Project Alternative as the environmentally superior alternative; however the City adopted the Existing Redevelopment Plan as proposed and analyzed in the 2000 EIR. The Proposed Amendments do not propose changes to the Existing Project Area or the Existing Redevelopment Plan development scenario. Also, this SEIR does not re-analyze the alternatives addressed in the 2000 EIR as they were considered to be a reasonable range and reduced environmental impacts identified for the Existing Redevelopment Plan. The alternatives in this SEIR focus on the significant impacts that would result from development that would occur in the Amendment Area.

5.3.2 SEIR Alternatives

The SEIR alternatives focus on the significant impacts that would result from development facilitated by the Redevelopment Plan, as Amended, and thus considers alternative development scenarios specifically for the Proposed Amendments in the Amendment Area (the component of “substantial change” to the Existing Redevelopment Plan, as discussed in detail in Chapter 4). As

discussed above, the alternatives addressed in the 2000 EIR were considered to be a reasonable range and reduced environmental impacts identified for Existing Redevelopment Plan in the Existing Project Area. The SEIR alternatives do not replace or modify the alternatives analyzed in the 2000 EIR.

The following three alternatives are discussed and analyzed in this SEIR:

- **No Project – Alternative 1:** Under the No Project Alternative, the Proposed Amendments to the Existing Redevelopment Plan would not be adopted, therefore the development and programs described for the Proposed Amendments would not occur and no redevelopment funding would be used for projects in the Amendment Area. However, the No Project Alternative does include development that could occur even without adoption of the Proposed Amendments. Therefore, this alternative assumes a slight increase in housing along the Lowell Street corridor within the Amendment Area.
- **Lower Growth – Alternative 2:** The Lower Growth Alternative, the development and programs described for the Proposed Amendments would occur, except at a reduced intensity (approximately 50 percent less floor area and 50 percent fewer residential units, compared to the Proposed Amendments).
- **Industrial Use – Alternative 3:** The Industrial Use Alternative considers the potential shift in the market demand and assumes greater production of new light industrial incubator space (approximately 60 percent more floor area, compared to the Proposed Amendments) and less new housing and live-work (approximately 74 percent fewer units, compared to the Proposed Amendments) along the Lowell Street corridor.

Consideration of Other Alternatives in the SEIR

No other alternatives were considered for analysis in the SEIR. The set of selected alternatives above are considered to reflect a “reasonable range” of feasible alternatives in that it includes reduced scenarios that would lessen and/or avoid significant and unavoidable (as well as less-than-significant) effects of the Proposed Amendments and also includes an alternative land use scenario. The Proposed Amendments are specific to the geography of the Amendment Area, therefore this analysis does not consider an off-site alternative.

Tables comparing the development program of each alternative to the Proposed Amendments are presented with the detailed description of each alternative and the alternative analyses, in Section 5.4, below.

Each of the alternatives is described in detail in Section 5.4, which also summarized the environmental impacts of each. **Table 5-7** at the end of this chapter compares all the impacts among all of the alternatives and the Proposed Amendments, and indicates whether the impacts would have the same, fewer or greater effect on the environment compared to those identified for the Proposed Amendments.

5.4 Alternatives Analysis

This section describes each alternative followed by a discussion of the impacts of the alternative compared to those identified with the Proposed Amendments. Impact comparisons to the Proposed Amendment's SU impacts are highlighted in *bold italic* text for convenience.

The impacts associated with the Proposed Amendments and each alternative are for buildout conditions. Impacts are stated as levels of significance after implementation of mitigation measures identified in Chapter 4, and all applicable City Standard Conditions of Approval (SCA) are assumed to be part of each alternative, just as they are also assumed to be part of the Proposed Amendments and the Redevelopment Plan, as Amended.

As permitted by CEQA, the effects of the alternatives are discussed in less detail than the impact discussions for the Proposed Amendments in Chapter 4 (CEQA Guidelines Section 15126.6[d]). However, the alternatives analysis is conducted at a sufficient level of detail to provide the public, other public agencies, and City decision-makers adequate information to evaluate the alternatives and for the City to approve any of the alternatives without further environmental review.

5.4.1 No Project – Alternative 1

Description

Under the No Project Alternative, the Proposed Amendments would not be adopted. Without new development and revitalization that would be facilitated by the Proposed Amendments in the Amendment Area, no new tax increment funding would be generated. Property taxes generated in the Amendment Area would be distributed under the standard allocation.

Regarding programs, without the direct or indirect assistance of the Redevelopment Plan, as Amended, programs for affordable housing, blight removal, and streetscape improvements, would be discontinued. Under the No Project Alternative, new residential development would be substantially less than with the Proposed Amendments (approximately 10 percent of that assumed with the Proposed Amendments), and no new industrial square footage is assumed to be developed. Also, the affordable housing production requirements under the State Redevelopment law would not apply and the No Project Alternative likely would mean substantially smaller to no increases in the affordable housing supply.

Further, even though there would be no new development facilitated by the Proposed Amendments under the No Project Alternative, other new development will occur in the Amendment Area, as reflected in the growth potential shown in **Table 5-1**. Future development with the No Project Alternative would continue to be consistent with the policies of the City of Oakland General Plan and specifically the Land Use and Transportation Element (LUTE), the Housing Element, and the Historic Preservation Element. Future development would also be subject to the City's Planning Code, Zoning Ordinance and Standard Conditions of Approval. Table 5-1 compares the No Project development directly to that assumed with the Proposed

**TABLE 5-1
NO PROJECT (ALTERNATIVE 1) COMPARED TO
DEVELOPMENT FACILITATED BY THE PROPOSED AMENDMENTS^a**

| | Proposed Amendments | No Project (Alternative 1) | Percent Difference from Proposed Amendments |
|--|------------------------|-------------------------------|--|
| New Development – Lowell Street Corridor | | | |
| Housing Development (units) | 280 | 28 | -90% |
| Live-Work Development (units) | 90 | 0 | -100% |
| Industrial Incubator (sq ft) | 110,000 | 0 | -100% |
| Employment ^b | 286 | 0 | -100% |
| Households ^c | 356 | 27 | -92% |
| Population ^d | 855 | 65 | -92% |
| Existing Removed | | | |
| Housing/Live-Work Development (units) | 12 | 0 | -100% |
| Older Industrial, primarily (sq ft) | 359,000 | 0 | -100% |
| Employment ^b | 246 | 0 | -100% |
| Households ^c | 12 | 0 | -100% |
| Population ^d | 29 | 0 | -100% |
| Net Change | | | |
| Housing/Live-Work Development (units) | 358 | 28 | -90% |
| Industrial (sq ft) | (249,000) | 0 | -100% |
| Employment | 40 | 0 | -100% |
| Households | 344 | 27 | -92% |
| Population | 826 | 65 | -92% |
| Already Entitled Development (Cumulative)^{e,f} | | | |
| Housing/ Live-Work Development (units) | 69 | 69 | 0% |
| Ground Floor Commercial (sq ft) | 3,200 | 3,200 | 0% |
| Commercial/Live-Work (sq ft) | 25,000 | 25,000 | 0% |
| Employment | 52 | 52 | 0% |
| Households | 66 | 66 | 0% |
| Population | 158 | 158 | 0% |

^a The Proposed Amendments (Project) totals shown at the top portion of the table include only the development that would likely occur with the Proposed Amendments (as described in Table 3-1 in Chapter 3, *Project Description*, and detailed in Table 4.11-9 in Section 4.11, *Population, Employment and Housing*, in this Draft SEIR). The lower portion of the table includes other potential cumulative development that may occur even without the Proposed Amendments, in order to allow comparisons of the Proposed Amendments to the No Project Alternative.

^b Employment estimated by Hausrath Economics Group, based on density factors by use, for the types of development and uses proposed for and existing in the area. Average density for new industrial incubator development is assumed at 525 sq.ft. per employee. Average density for new live-work development is assumed at 0.85 employees per unit.

^c Assumes an average, four percent vacancy factor.

^d Assumes an average of 2.4 persons per household, appropriate for loft housing and live-work development in this area of Oakland.

^e City of Oakland, March 2011.

^f Growth in already entitled development along the Lowell Street corridor could occur with or without approval of the Proposed Amendments, and is considered as cumulative growth for the SEIR analyses.

SOURCE: City of Oakland; Environmental Science Associates; Hausrath Economics Group.

Amendments, in addition to other potential cumulative development that may occur without the Proposed Amendments in order to allow comparisons to the No Project Alternative.

Comparison of No Project (Alternative 1) to the Proposed Amendments¹

Aesthetics, Shadow and Wind

Similar to the development that would occur with the Proposed Amendments, individual developments that could occur under the No Project Alternative would be required to incorporate all the City's SCAs, as well as adhere to the City's design review process. Development under the No Project Alternative would be substantially less than with the Proposed Amendments. Therefore the aesthetics, shadow and wind effects from that development likely would be less than what would occur with development under the Proposed Amendments. Overall, any adverse change in aesthetic character, shadow and wind effects from the No Project Alternative development within the cumulative context (that is not assumed with the Proposed Amendments in the cumulative context) is considered less than what could adversely change with the Proposed Amendments in the cumulative context. While still considered less than significant (and not resulting from changes to existing conditions, which the CEQA analysis focuses on), it is worth noting that implementation of the Proposed Amendments would result in improved aesthetic conditions in the Amendments Area that would not occur under the No Project Alternative. Therefore, existing adverse conditions would continue under the No Project. However, overall, impacts of the No Project and any existing contribution to any cumulative adverse change would not be considerable. The impact would be less than significant, as with the Proposed Amendments.

The No Project Alternative would result in the same less-than-significant aesthetics, shadow and wind impacts identified with the Proposed Amendments. This is the same finding as for the Lower Growth Alternative and the Industrial Use Alternative.

Air Quality

Given the No Project Alternative would result in substantially less development and related construction activity than would occur with the Proposed Amendments, and the proportionally fewer new residents and workers that would occur in the Amendments Area, air quality emissions and the potential for exposing new residents to air pollutants would be less than that identified for the Proposed Amendments. ***The two SU air quality impacts identified with the Proposed Amendments (New Impact AIR-3, exposure to gaseous TACs, and Updated Impact C.5 [AIR], exposure to substantial and frequent odors) would continue to be SU under the No Project Alternative since new residential development (although less than with the Proposed Amendments) still would occur in the Amendment Area and potentially locate new residents near gaseous TAC and odor sources.*** The No Project Alternative also would result in the same less-than-significant air quality impacts that would occur with the Proposed Amendments, and the No Project Alternative would be subject to the same air quality SCAs that would apply to the Proposed Amendments.

¹ Comparative discussion of SU impacts are shown in ***bold italic*** text.

Overall, the No Project Alternative would result in the same SU and less-than-significant air quality impacts identified with the Proposed Amendments, even though development would be substantially less compared to the Proposed Amendments. This is the same finding as for the Lower Growth Alternative.

Biological Resources

Under the No Project Alternative, development would still occur in the Amendments Area and the construction activities and operation of development could impact biological resources. Similar to the development facilitated by the Proposed Amendments, individual projects would be required to conform to all the City's SCAs. Overall, given its reduced development, the No Project Alternative would maintain the same less-than-significant impacts on biological resources identified with the Proposed Amendments, even though construction and development operations would be relatively less. This is the same finding as for the Lower Growth Alternative and the Industrial Use Alternative.

Cultural Resources

Under the No Project Alternative, although there would be substantially less development compared to the Proposed Amendments, there would still be the potential for development to effect historical resources within the Amendment Area. ***Therefore, the potential SU historic resources impacts that would occur if development is unable to avoid, adaptively reuse, or appropriately relocate historically significant structures (New Impacts CUL-1 and CUL-5, impacts to resources – project and cumulative), would continue to be SU as identified with the Proposed Amendments.*** Mitigation Measure CUL-1 identified with the Proposed Amendments would also apply to development of the No Project Alternative, even though implementation of these mitigation measures would not reduce the impact to less than significant.

All other cultural resources impacts with the No Project Alternative would be less than significant or reduced to less than significant with mitigations, as identified with the Proposed Amendments. Therefore, overall impacts to cultural resources under the No Project Alternative would result in the same SU and less-than-significant impacts as the Proposed Amendments, even though development operations would be relatively less. This is the same finding as for the Lower Growth Alternative and the Industrial Use Alternative.

Geology, Soils and Geohazards

Under the No Project Alternative, development would still occur in the Amendments Area and the construction activities and operation of development could expose residents to geologic hazards including strong ground shaking during a seismic event, as under the Proposed Amendments. However, as discussed above, new development would be at a smaller scale compared to the Proposed Amendments, and would therefore result in fewer new residents and workers in the Amendment Area. As with the development facilitated by the Proposed Amendments, individual projects would be required to incorporate all applicable SCAs. Thus, the No Project Alternative would result the same less-than-significant impacts to geology, soils and geohazards as identified with the Proposed Amendments, even though the extent of exposure and

risks would be reduced given the reduced development and population. This is the same finding as for the Lower Growth Alternative and the Industrial Use Alternative.

Greenhouse Gases and Climate Change The reduced development related construction, residents and workers that would occur under the No Project Alternative would generate less annual greenhouse gas emissions compared to the Proposed Amendments. Therefore, as with the Proposed Amendments, the greenhouse gas emissions impacts under the No Project would continue to be less than significant after incorporation of SCA B, *GHG Reduction Plan*, that would still be incorporated in future developments, as applicable. This is the same finding as for the Lower Growth Alternative and the Industrial Use Alternative.

Hazardous Materials

Under the No Project Alternative, some development still would occur in the Amendment Area and the construction activities involving demolition, soil disturbance, excavation, and trenching could continue to potentially expose construction workers and residents to potential hazards and hazardous materials as identified for the Proposed Amendments. These potential hazardous materials include asbestos, PCBs, lead-based paint, contents of underground and aboveground storage tanks, and potentially contaminated soil and water. As with the Proposed Amendments, any new construction would incorporate applicable City SCAs, and therefore would result in the same less-than-significant impacts associated with hazardous materials and hazards compared to the Proposed Amendments, even though the extent of exposure would be less given the reduced development that would occur under the No Project Alternative. While still considered less than significant (and not resulting from changes to existing conditions, which the CEQA analysis focuses on), it is worth noting that implementation of the Proposed Amendments could result in remediation or removal of existing hazardous conditions on redevelopment sites—improvements that would not occur with the No Project Alternative. Moreover, the No Project Alternative could avoid exposures during construction that would occur with construction under the Proposed Amendments. Overall, the impact of the No Project Alternative would be less than significant, as with the Proposed Amendments. This is the same finding as for the Lower Growth Alternative and the Industrial Use Alternative.

Hydrology and Water Quality

Under the No Project Alternative, development would still occur in the Amendment Area and the construction activities could lead to increased contaminants being washed into San Francisco Bay. However, as discussed above, the No Project Alternative would have less new development than the Proposed Amendments. Any development would incorporate the City's applicable SCAs and implement best management practices. Therefore, impacts to water quality under the No Project Alternative would continue to be less than significant. This is the same finding as for the Lower Growth Alternative and the Industrial Use Alternative.

Land Use, Plans and Policies

Under the No Project Alternative, some development would still occur in the Amendment Area, but there would be substantially less development overall. All new development would be

required to be consistent with the General Plan and current Oakland Zoning designations. Further, as with the Proposed Amendments, any new construction would be subject to the City's SCAs. The reduced development would not introduce land uses unlike those identified with the Proposed Amendments or locate them in a manner that would adversely affect existing communities or natural resources more than would the development facilitated by the Proposed Amendments. Therefore, the No Project Alternative would result in the same less-than-significant land use impacts identified with the Proposed Amendments, although development would be less. This is the same finding as for the Lower Growth Alternative and the Industrial Use Alternative.

Noise

Given that, compared with development facilitated by the Proposed Amendments, the No Project Alternative would result in substantially less development and related construction activity, and proportionally fewer new residents and workers in the Amendments Area, construction and operational noise impacts would be less than identified with the Proposed Amendments. Therefore, the No Project Alternative would have the same less-than-significant noise impacts as would occur with the Proposed Amendments. Further, the No Project Alternative would incorporate the same noise SCAs that would apply to the Proposed Amendments. This is the same finding as for the Lower Growth Alternative and the Industrial Use Alternative.

Population, Housing and Employment

Without the new development to be facilitated by the Proposed Amendments, the No Project Alternative would avoid the less-than-significant impacts of the Proposed Amendments in displacing industrial businesses/jobs and live-work housing/residents from sites along the Lowell Street corridor that would be developed for new uses. There also would be a lesser impact from induced population growth compared to the less-than-significant impacts under the Proposed Amendments. Without the Proposed Amendments, streetscape and basic infrastructure improvements would not be made in the older industrial areas along Lowell Street and Stanford Avenue. Existing types of industrial activities would remain along much of the Lowell Street corridor, continuing to support industrial business activities and employment there. Much of the corridor would not be redeveloped for housing and population growth as anticipated under the Proposed Amendments. There would be no affordable housing production requirements in the Amendment Area, and no tax increment funding for affordable housing generated by Amendment Area development. Therefore, the No Project Alternative would avoid the less-than-significant impacts related to displacing businesses/jobs or housing/residents, and would have the same less-than-significant impacts regarding induced population growth, although the increase would be substantially less than with the Proposed Amendments.

Public Services and Recreation Facilities

Although there would be an increase in population associated with the development that would occur under the No Project, the demand for public services and recreation facilities, and the use of such facilities, would be less than would occur with the Proposed Amendments. Compared to the demands of the development that would be facilitated by the Proposed Amendments, less police,

fire and emergency services and facilities would be required, fewer students would be generated by the reduced housing, and the demand for and use of park and recreational facilities would be less. Therefore, the No Project Alternative would have the same less-than-significant public services and recreation facilities impacts as identified with the Proposed Amendments. This is the same finding as for the Lower Growth Alternative and the Industrial Use Alternative.

Transportation and Circulation

The No Project Alternative would result in 163 fewer trips during the AM Peak Hour and 177 fewer trips during the PM peak hour, as compared to the Proposed Amendments. This corresponds to about 94 percent fewer trips during the AM peak hour and 93 percent fewer trips during the PM peak hour. **Table 5-2** summarizes the trip generation for the No Project Alternative and compares it to the analysis for the Proposed Amendments.

The reduced trip generation under the No Project Alternative would result in fewer SU impacts. ***The No Project Alternative would avoid two SU impacts (New Impact TRA-2, vehicle delay at the Stanford Avenue / San Pablo Avenue intersection, and New Impact TRA-5, vehicle delay at the 25th Street / San Pablo Avenue intersection).*** These impacts would be reduced to less than significant. ***However, one SU impact in the Cumulative Year 2035 Existing Plus Project scenario (New TRA-1, degrade the Powell Street / Christie Avenue intersection) would continue to be SU under the No Project Alternative.*** The reduced trip generation under the No Project Alternative also would reduce vehicle delay impacts at the 55th Street / Market Street intersection (TRA-3) and the 55th Street / Martin Luther King Jr. Way intersection (TRA-4) from significant and mitigable to less than significant.

The reduced trip generation would also reduce impacts related to bus travel time; conflicts among motor vehicles, bicycles, or pedestrians; emergency vehicle service; alternative transportation demand; and temporary construction impacts. Overall, the No Project Alternative would result in the same significant and mitigable and less-than-significant traffic and circulation impacts that would occur with the Proposed Amendments, and the No Project Alternative would be subject to the same transportation and circulation SCAs that would apply to the Proposed Amendments.

Utilities and Service Systems

Under the No Project Alternative, the demands for utilities and service systems would be less than under the Proposed Amendments given the reduced development that would occur. There would be less demand for water and energy services, and less need for increased wastewater and solid waste disposal. Therefore, the No Project Alternative would have the same less-than-significant utilities and service systems impacts as identified with the Proposed Amendments. This is the same finding as for the Lower Growth Alternative and the Industrial Use Alternative.

**TABLE 5-2
NO PROJECT (ALTERNATIVE 1)
TRIP GENERATION SUMMARY**

| Land Use | ITE Code | Units ^a | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
|---|------------------|--------------------|----------------------|-------------|-------------|----------------------|------------|-------------|
| | | | In | Out | Total | In | Out | Total |
| Multi-family | 220 ^b | 28 DU | 3 | 11 | 14 | 11 | 6 | 17 |
| <i>Alternate Mode Auto Trip Reduction (20%)^c</i> | | | -1 | -2 | -3 | -2 | -1 | -3 |
| Industrial Incubator | 110 ^d | 0.0 KSF | 0 | 0 | 0 | 0 | 0 | 0 |
| Live-Work | n/a ^e | 0 DU | 0 | 0 | 0 | 0 | 0 | 0 |
| Alternative 1 Trip Generation | | | 2 | 9 | 11 | 9 | 5 | 14 |
| Proposed Project Trips | | | 50 | 124 | 174 | 106 | 88 | 191 |
| Net Difference | | | -48 | -115 | -163 | -94 | -83 | -177 |

^a DU = dwelling units; KSF = 1,000 square feet

^b ITE Trip Generation average rate used:

AM: T = 0.51(X); Enter = 20%, Exit = 80%

PM: T = 0.62(X); Enter = 65%, Exit = 35%

^c Alternative mode auto trip reduction percentage based on U.S. Census (2000) Journey-to-Work surveys for census tracts along the Lowell Street corridor.

^d ITE Trip Generation average rate used:

AM: T = 0.92(X); Enter = 88%, Exit = 12%

PM: T = 0.97(X); Enter = 12%, Exit = 88%

^e Source: 2002 Fehr & Peers survey of Phoenix Lofts live-work site in Oakland. Average rate used:

AM: T = 0.71(X); Enter = 41%, Exit = 59%

PM: T = 0.65(X); Enter = 36%, Exit = 64%

SOURCE: Trip Generation (8th Edition), ITE, 2008, and Fehr & Peers, 2011

5.4.2 Lower Growth – Alternative 2

Description

The Lower Growth Alternative looks at the environmental effects of the Proposed Amendments by reducing the extent of growth and development anticipated within the Amendment Area. Under this alternative, the new residential and industrial development would be reduced as shown in **Table 5-3** below. In addition, the amount of existing uses to be removed and replaced, and the affordable housing production would also be less than under the Proposed Amendments.

Under this alternative, programs described in Table 3-1 in Chapter 3, *Project Description*, including the Adeline Bike Lane Project, would continue to be funded and implemented within the Amendment Area. With reduced tax revenues generated by less development under this alternative, however, these programs also would be reduced given less supporting funds.

**TABLE 5-3
LOWER GROWTH (ALTERNATIVE 2) COMPARED TO
DEVELOPMENT FACILITATED BY THE PROPOSED AMENDMENTS^a**

| | Proposed Amendments | Lower Growth (Alternative 2) | Percent Difference from Proposed Amendments |
|--|------------------------|---------------------------------|--|
| New Development – Lowell Street Corridor | | | |
| Housing Development (units) | 280 | 140 | -50% |
| Live-Work Development (units) | 90 | 45 | -50% |
| Industrial Incubator (sq ft) | 110,000 | 55,000 | -50% |
| Employment ^b | 286 | 143 | -50% |
| Households ^c | 356 | 178 | -50% |
| Population ^d | 855 | 427 | -50% |
| Existing Removed | | | |
| Housing/Live-Work Development (units) | 12 | 6 | -50% |
| Older Industrial, primarily (sq ft) | 359,000 | 180,000 | -50% |
| Employment ^b | 246 | 123 | -50% |
| Households ^c | 12 | 6 | -50% |
| Population ^d | 29 | 14 | -50% |
| Net Change | | | |
| Housing/Live-Work Development (units) | 358 | 179 | -50% |
| Industrial (sq ft) | (249,000) | (125,000) | -50% |
| Employment | 40 | 20 | -50% |
| Households | 344 | 172 | -50% |
| Population | 826 | 413 | -50% |
| Already Entitled Development (Cumulative)^{e,f} | | | |
| Housing/ Live-Work Development (units) | 69 | 69 | 0% |
| Ground Floor Commercial (sq ft) | 3,200 | 3,200 | 0% |
| Commercial/Live-Work (sq ft) | 25,000 | 25,000 | 0% |
| Employment | 52 | 52 | 0% |
| Households | 66 | 66 | 0% |
| Population | 158 | 158 | 0% |

^a The Proposed Amendments (Project) totals shown at the top portion of the table include only the development that would likely occur with the Proposed Amendments (as described in Table 3-1 in Chapter 3, *Project Description*, and detailed in Table 4.11-9 in Section 4.11, *Population, Employment and Housing*, in this Draft SEIR). The lower portion of the table includes other potential cumulative development that may occur even without the Proposed Amendments, in order to allow comparisons of the Proposed Amendments to the No Project Alternative.

^b Employment estimated by Hausrath Economics Group, based on density factors by use, for the types of development and uses proposed for and existing in the area. Average density for new industrial incubator development is assumed at 525 sq.ft. per employee. Average density for new live-work development is assumed at 0.85 employees per unit.

^c Assumes an average, four percent vacancy factor.

^d Assumes an average of 2.4 persons per household, appropriate for loft housing and live-work development in this area of Oakland.

^e City of Oakland, March 2011.

^f Growth in already entitled development along the Lowell Street corridor could occur with or without approval of the Proposed Amendments, and is considered as cumulative growth for the SEIR analyses.

SOURCE: City of Oakland; Environmental Science Associates; Hausrath Economics Group.

Comparison of Lower Growth (Alternative 2) to the Proposed Amendments²

Aesthetics, Shadow and Wind

Similar to the development facilitated by the Proposed Amendments, individual projects that would occur under the Lower Growth Alternative would be required to incorporate all the City's SCAs, as well as adhere to the City's design review process. Development under the Lower Growth Alternative would be less than with the Proposed Amendments, therefore, the aesthetics, shadow and wind effects from that development likely would be less than what would occur with development under the Proposed Amendments. However, although reduced from the Proposed Amendments, development of both residential and industrial space would still occur in the Lowell Street corridor. While the same less-than-significant aesthetics, shadow and wind impacts would occur with the Lower Growth Alternative as with the Proposed Amendments, the contribution of potential adverse changes to aesthetics, shadow and wind conditions under this Alternative would also be considered the same as with the Proposed Amendments. This is the same finding as for the No Project Alternative and the Industrial Use Alternative.

Air Quality

Under the Lower Growth Alternative, new development along the Lowell Street corridor would be approximately half of the development assumed with the Proposed Amendments. All other development and programs would be the same as described for the Proposed Amendments (e.g. the Adeline Bike Lane Project). As a result, less development and related construction activity, and proportionally fewer new residents and workers would occur in the Amendment Area compared to what would occur with the Proposed Amendments. Thus, Alternative 2 would result in reduced air quality emissions and the potential for exposing new residents to air pollutants would be less than that identified for the Proposed Amendments. ***Therefore, as with the No Project Alternative, the two SU air quality impacts identified with the Proposed Amendments (New Impact AIR-3, exposure to gaseous TACs, and Updated Impact C.5 [AIR-4], exposure to odors) would continue to be SU under the Lower Growth Alternative, since new residential development (although less than with the Proposed Amendments) would still occur in the Amendment Area and potentially locate new residents near gaseous TAC and odor sources.*** All other air quality impacts would be less than significant as identified with the Proposed Amendments, and the Lower Growth Alternative development would be subject to the same air quality SCAs that would apply to the Proposed Amendments.

Overall, the Lower Growth Alternative would result in the same SU and less-than-significant air quality impacts identified with the Proposed Amendments, even though development would be somewhat less than with the Proposed Amendments. This is the same finding as for the No Project Alternative.

² Comparative discussion of SU impacts are shown in ***bold italic*** text.

Biological Resources

Under the Lower Growth Alternative, less development would occur compared to the Proposed Amendments. The construction and location of the development that would occur would not be substantially different from that of the Proposed Amendments, and the development would incorporate the City's SCAs. Therefore, the Lower Growth Alternative would result in similar less-than-significant impacts on biological resources compared to the Proposed Amendments, and the effect would be slightly reduced given the reduced development that would occur. This is the same finding as for the No Project Alternative and the Industrial Use Alternative.

Cultural Resources

Under the Lower Growth Alternative, although there would be less development compared to the Proposed Amendments, there would still be the potential for development to effect historical resources in the Amendment Area. *Therefore, the potential SU historic resources impacts that would occur if development is unable to avoid, adaptively reuse, or appropriately relocate historically significant structures (New Impacts CUL-1 and CUL-5, impacts to historic and cultural resources – project and cumulative), as identified with the Proposed Amendments, would still occur.*

All other cultural resources impacts with the Lower Growth Alternative would remain less than significant or reduced to less than significant with mitigations, as identified with the Proposed Amendments. Overall, impacts to cultural resources under the Lower Growth Alternative would result in the same SU and less-than-significant impacts as the Proposed Amendments, even though development would be less with this Alternative. This is the same finding as for the No Project Alternative and the Industrial Use Alternative.

Geology, Soils and Geohazards

Under the Lower Growth Alternative, the reduced development and population still would result in the exposure of residents to geologic hazards including strong ground shaking during a seismic event, as under the Proposed Amendments. As with the development facilitated by the Proposed Amendments, individual projects would be required to incorporate all applicable City SCAs. Thus, the Lower Growth Alternative would result the same less-than-significant impacts to geology, soils and geohazards as identified with the Proposed Amendments, even though the extent of exposure and risks would be reduced given the reduced development and population. This is the same finding as for the No Project Alternative and the Industrial Use Alternative.

Greenhouse Gases and Climate Change

The development that would occur under the Lower Growth Alternative would be one half of that would occur with the Proposed Amendments. As a result, motor vehicle trips, floor area of land uses, residential units, and population would also be one half of that estimated for the Proposed Amendments. Applying this commensurate reduction to the 2,370 MT CO₂e of estimated annual net greenhouse gas emissions (see Section 4.6, Greenhouse Gases and Climate Change) and estimated population (residents and/or employees) (see *Population, Housing and Employment*

discussed below), the estimated annual emissions for the Lower Growth Alternative would be approximately 1,185 MT CO₂e, and the reduced population would be 415 persons, resulting 2.8 MT CO₂e per service population. The impact would be less than significant since both of the applicable GHG thresholds are not exceeded; the 2.9 is less than that significance threshold of 4.6 MT CO₂e per service population annually.

SCA B, *GHG Reduction Plan*, would still apply even though the impact would be less than significant, as the City's SCAs apply to all project development projects, as applicable. Implementation and adherence to SCA B is required to ensure the impact remains less than significant through incorporating specific GHG reduction measures specified in the GHG Reduction Plan. Overall, the Lower Growth Alternative would result in the same less-than-significant greenhouse gases and climate change impacts identified with the Proposed Amendments. This is the same finding as for the No Project Alternative and the Industrial Use Alternative.

(Note: Discussion of the GHG emissions and impact identified for the Proposed Amendments are discussed with in the Environmentally Superior Alternative analysis in Section 5.5, below. Although not comparable numerically to the Lower Growth Alternative in the Amendment Area, the Redevelopment Plan, as Amended, would exceed both significance thresholds, and the impact would be reduced to less than significant with implementation and adherence to SCA B. Both the Lower Growth Alternative and the Redevelopment Plan, as Amended, would result in less-than-significant GHG and climate change impacts.)

Hazardous Materials

Under the Lower Growth Alternative, although there would be less development compared to the Proposed Amendments, there still would be the potential for construction activities involving demolition, soil disturbance, excavation, and trenching to potentially expose construction workers and residents to potential hazards and hazardous materials, as identified with the Proposed Amendments. These potential hazardous materials include asbestos, PCBs, lead-based paint, contents of underground and aboveground storage tanks, and potentially contaminated soil and water. As with the Proposed Amendments, any new construction would incorporate applicable City SCAs. The construction, operation and population associated with the development facilitated by the Proposed Amendments would not result in substantially increased risk that would not be addressed with incorporation of the City SCAs. Therefore, the Lower Growth Alternative would result in the same less-than-significant impacts associated with hazardous materials and hazards compared to the Proposed Amendments, even though the extent of exposure would be less given the reduced development. This is the same finding as for the No Project Alternative and the Industrial Use Alternative.

Hydrology and Water Quality

Under the Lower Growth Alternative, less development would occur in the Amendment Area compared to the Proposed Amendments, and the construction activities could still lead to increased contaminants being washed into San Francisco Bay. However, as discussed above, the Lower Growth Alternative would have less new development than the Proposed Amendments.

Any development would incorporate the City's applicable SCAs and implement best management practices. Therefore, impacts to water quality under the Lower Growth Alternative would continue to be less than significant. This is the same finding as for the No Project Alternative and the Industrial Use Alternative.

Land Use, Plans and Policies

Under the Lower Growth Alternative, less development would occur in the Amendment Area. However, all new development still would be required to be consistent with the General Plan and current Oakland Zoning designations. Further, as with the Proposed Amendments, the new construction would be subject to the City's SCAs. The reduced development would not introduce land uses unlike those identified with the Proposed Amendments or locate them in a manner that would adversely affect existing communities or natural resources more than would the Proposed Amendments. Therefore, the Lower Growth Alternative would result in the same less-than-significant land use impacts identified with the Proposed Amendments, although development would be less. This is the same finding as for the No Project Alternative and the Industrial Use Alternative.

Noise

Given that, compared with development facilitated by the Proposed Amendments, the Lower Growth Alternative would result in less development and related construction activity, and proportionally fewer new residents and workers in the Amendments Area, construction and operational noise impacts would be less than what was identified with the Proposed Amendments. Therefore, the Lower Growth Alternative would have the same less-than-significant noise impacts as would occur with the Proposed Amendments. Further, the Lower Growth Alternative would incorporate the same noise SCAs that would apply to the Proposed Amendments. This is the same finding as for the No Project Alternative and the Industrial Use Alternative.

Population, Housing and Employment

Under the Lower Growth Alternative, there would be less growth of housing/live-work along the Lowell Street corridor and less development of new industrial incubator space, compared to development anticipated under the Proposed Amendments. More of the existing industrial space and uses would remain along the corridor. As fewer sites would be developed for new uses, about 50 percent fewer, there would be fewer impacts in displacing industrial businesses/jobs and live-work housing/residents compared to the less-than-significant impacts under the Proposed Amendments. The mix of older and new industrial activities under this alternative would support relatively similar amounts of business activity and employment along the Lowell Street corridor as would the mix of industrial activities under the Proposed Amendments. However, there would be less population growth in the area, with growth of about 415 residents compared to 830 residents for the Proposed Amendments (see Table 5-3). Thus, there would be a lesser impact from induced population growth under this alternative compared to the less-than-significant impacts under the Proposed Amendments. There also would be somewhat less affordable housing

production, due to a lower affordable housing production obligation and less tax increment funding generated for affordable housing. Overall, the Lower Growth Alternative would have the same less-than-significant impacts regarding the displacement of substantial housing, people, businesses or jobs and the same less-than-significant impacts regarding induced population growth. This is the same finding as for the Industrial Use Alternative.

Public Services and Recreation Facilities

Under the Lower Growth Alternative, there would be less growth of housing/live-work along the Lowell Street corridor and less development of new industrial incubator space, compared to development anticipated under the Proposed Amendments. As such, the demand for public services and recreation facilities, and the use of such facilities, also would be less than what would occur with the Proposed Amendments. Therefore, the Lower Growth Alternative would have the same less-than-significant public services and recreation facilities impacts as identified with the Proposed Amendments. This is the same finding as for the No Project Alternative and the Industrial Use Alternative.

Transportation and Circulation

The Lower Growth Alternative would result in 85 fewer trips during the AM Peak Hour and 93 fewer trips during the PM peak hour, as compared to the Proposed Amendments. This corresponds to about 49 percent fewer trips during the AM and PM peak hour. **Table 5-4** summarizes the trip generation for the Lower Growth Alternative and compares it to the analysis for the Proposed Amendments.

The reduced trip generation under the Lower Growth Alternative would result in fewer SU impacts. ***The Lower Growth Alternative would avoid two SU impacts (New Impact TRA-2, vehicle delay at the Stanford Avenue / San Pablo Avenue intersection, and New Impact TRA-5, vehicle delay at the 25th Street / San Pablo Avenue intersection). These impacts would be reduced to less than significant. However, one SU impact for the Cumulative Year 2035 Existing Plus Project scenario (New TRA-1, degrade the Powell Street / Christie Avenue intersection) would continue to be SU under the Lower Growth Alternative.*** The reduced trip generation under the No Project Alternative also would reduce vehicle delay impact at the 55th Street / Martin Luther King Jr. Way intersection (TRA-4) from significant and mitigable to less than significant.

The reduced trip generation would also reduce impacts related to bus travel time; conflicts among motor vehicles, bicycles, or pedestrians; emergency vehicle service; alternative transportation demand; and temporary construction impacts. Overall, the Lower Growth Alternative would result in the same significant and mitigable and less than significant traffic and circulation impacts that would occur with the Proposed Amendments, and the Lower Growth Alternative would be subject to the same transportation and circulation SCAs that would apply to the Proposed Amendments.

**TABLE 5-4
LOWER GROWTH (ALTERNATIVE 2)
TRIP GENERATION SUMMARY**

| Land Use | ITE Code | Units ^a | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
|---|------------------|--------------------|----------------------|------------|------------|----------------------|------------|------------|
| | | | In | Out | Total | In | Out | Total |
| New Development | | | | | | | | |
| Multi-family | 220 ^b | 140 DU | 14 | 58 | 72 | 62 | 33 | 95 |
| <i>Alternate Mode Auto Trip Reduction (20%)^c</i> | | | -3 | -11 | -14 | -12 | -7 | -19 |
| Industrial Incubator | 110 ^d | 55.0 KSF | 45 | 6 | 51 | 6 | 47 | 53 |
| Live-Work | n/a ^e | 45 DU | 13 | 19 | 32 | 10 | 19 | 29 |
| <i>Subtotal</i> | | | 69 | 72 | 141 | 66 | 92 | 158 |
| Existing Removed | | | | | | | | |
| Live-Work | n/a ^e | 6 DU | 2 | 2 | 4 | 1 | 3 | 4 |
| Industrial | 110 ^d | 76.7 KSF | 62 | 9 | 71 | 9 | 65 | 74 |
| Warehousing | 150 ^f | 80.6 KSF | 19 | 5 | 24 | 7 | 19 | 26 |
| Repair Garage | 942 ^g | 1.0 KSF | 2 | 1 | 3 | 2 | 2 | 4 |
| Store | 852 ^h | 3.3 KSF | 2 | 1 | 3 | 6 | 6 | 12 |
| Vacant | n/a | 15.5 KSF | 0 | 0 | 0 | 0 | 0 | 0 |
| Unadjusted Trip Generation | | | 87 | 18 | 105 | 25 | 95 | 120 |
| 50% Adjustment ⁱ | | | -43 | -9 | -53 | -13 | -47 | -60 |
| <i>Subtotal</i> | | | 44 | 9 | 52 | 12 | 48 | 60 |
| Net New Alternative 2 Trips | | | 25 | 63 | 89 | 54 | 44 | 98 |
| Proposed Project Trips | | | 50 | 124 | 174 | 106 | 88 | 191 |
| Net Difference | | | -25 | -61 | -85 | -49 | -44 | -93 |

^a DU = dwelling units; KSF = 1,000 square feet

^b ITE Trip Generation regression rate used:
AM: $T = 0.49(X) + 3.73$; Enter = 20%, Exit = 80%
PM: $T = 0.55(X) + 17.65$; Enter = 65%, Exit = 35%

^c Alternative mode auto trip reduction percentage based on U.S. Census (2000) Journey-to-Work surveys for census tracts along the Lowell Street corridor.

^d ITE Trip Generation average rate used:
AM: $T = 0.92(X)$; Enter = 88%, Exit = 12%
PM: $T = 0.97(X)$; Enter = 12%, Exit = 88%

^e Source: 2002 Fehr & Peers survey of Phoenix Lofts live-work site in Oakland. Average rate used:
AM: $T = 0.71(X)$; Enter = 41%, Exit = 59%
PM: $T = 0.65(X)$; Enter = 36%, Exit = 64%

^f ITE Trip Generation average rates used:
AM: $T = 0.30(X)$; Enter = 79%, Exit = 21%
PM: $T = 0.32(X)$; Enter = 25%, Exit = 75%

^g ITE Trip Generation average rates used:
AM: $T = 2.94(X)$; Enter = 65%, Exit = 35%
PM: $T = 3.38(X)$; Enter = 50%, Exit = 50%

^h ITE Trip Generation average rates used:
AM: $T = 1.00(X)$; Enter = 61%, Exit = 39%
PM: $T = 3.73(X)$; Enter = 49%, Exit = 51%

ⁱ 50% adjustment to account for below average occupancy in area.

SOURCE: Trip Generation (8th Edition), ITE, 2008, and Fehr & Peers, 2011

Utilities and Service Systems

Under the Lower Growth Alternative, the demands for utilities and service systems would be less than under the Proposed Amendments given the reduced development that would occur. There would be less demand for water and energy services, and less need for increased wastewater and solid waste disposal. Therefore, the Lower Growth Alternative would have the same less-than-significant utilities and service systems impacts as identified with the Proposed Amendments. This is the same finding as for the No Project Alternative and the Industrial Use Alternative.

5.4.3 Industrial Use - Alternative 3

Description

The Industrial Use Alternative considers the potential shift in the market demand and puts forth a development scenario with a heavier emphasis on the production of new light industrial incubator space along the Lowell Street corridor. This alternative assumes some residential development on vacant sites and sites zoned for residential use (RM zones) and redevelopment of some existing residential and live-work sites with similar uses (see **Table 5-5**). It also assumes an increase in development of light industrial uses along the Lowell Street corridor when compared with the Proposed Amendments. The mix of development would result in fewer new residential units and an associated reduction in the required production of affordable housing. Although this alternative would result in additional growth in business activity and employment, overall development under the Industrial Use Alternative would be reduced when compared with the Proposed Amendments, as shown in Table 5-5.

Under this alternative, programs described in Table 3-1 in Chapter 3, *Project Description*, including the Adeline Bike Lane Project, would continue to be funded and implemented within the Amendment Area.

Comparison of Industrial Use (Alternative 3) to the Proposed Amendments³

Aesthetics, Shadow and Wind

Development under the Industrial Use Alternative would be different from the development facilitated by the Proposed Amendments resulting in a Lowell Street corridor slightly more characterized by industrial uses. Similar to the development facilitated by the Proposed Amendments, individual projects that would occur under the Industrial Use Alternative would be required to incorporate all the City's SCAs, as well as adhere to the City's design review process. Although the ratio of residential to industrial use buildings would differ from the development facilitated by the Proposed Amendments, this alternative still would result in a redeveloped Lowell Street corridor supporting a mix of residential and industrial structures. Other redevelopment programs would continue to be funded and implemented within the Amendment Area. As such, the

³ Comparative discussion of SU impacts are shown in ***bold italic*** text.

**TABLE 5-5
INDUSTRIAL USE (ALTERNATIVE 3) COMPARED TO
DEVELOPMENT FACILITATED BY THE PROPOSED AMENDMENTS^a**

| | Proposed Amendments | Alternative 3 (Industrial Use) | Percent Difference from Proposed Amendments |
|--|------------------------|-----------------------------------|--|
| New Development – Lowell Street Corridor | | | |
| Housing Development (units) | 280 | 41 | -85% |
| Live-Work Development (units) | 90 | 54 | -40% |
| Industrial Incubator (sq ft) | 110,000 | 175,780 | +60% |
| Employment ^b | 286 | 416 | +45% |
| Households ^c | 356 | 91 | -74% |
| Population ^d | 855 | 219 | -74% |
| Existing Removed | | | |
| Housing/Live-Work Development (units) | 12 | 12 | 0% |
| Older Industrial, primarily (sq ft) | 359,000 | 207,400 | -42% |
| Employment ^b | 246 | 98 | -60% |
| Households ^c | 12 | 3 | -75% |
| Population ^d | 29 | 7 | -75% |
| Net Change | | | |
| Housing/Live-Work Development (units) | 358 | 92 | -74% |
| Industrial (sq ft) | (249,000) | (31,620) | -87% |
| Employment | 40 | 318 | +700% |
| Households | 344 | 88 | -74% |
| Population | 826 | 212 | -74% |
| Already Entitled Development (Cumulative)^{e,f} | | | |
| Housing/ Live-Work Development (units) | 69 | 69 | 0% |
| Ground Floor Commercial (sq ft) | 3,200 | 3,200 | 0% |
| Commercial/Live-Work (sq ft) | 25,000 | 25,000 | 0% |
| Employment | 52 | 52 | 0% |
| Households | 66 | 66 | 0% |
| Population | 158 | 158 | 0% |

^a The Proposed Amendments (Project) totals shown at the top portion of the table include only the development that would likely occur with the Proposed Amendments (as described in Table 3-1 in Chapter 3, *Project Description*, and detailed in Table 4.11-9 in Section 4.11, *Population, Employment and Housing*, in this Draft SEIR). The lower portion of the table includes other potential cumulative development that may occur even without the Proposed Amendments, in order to allow comparisons of the Proposed Amendments to the No Project Alternative.

^b Employment estimated by Hausrath Economics Group, based on density factors by use, for the types of development and uses proposed for and existing in the area. Average density for new industrial incubator development is assumed at 525 sq.ft. per employee. Average density for new live-work development is assumed at 0.85 employees per unit.

^c Assumes an average, four percent vacancy factor.

^d Assumes an average of 2.4 persons per household, appropriate for loft housing and live-work development in this area of Oakland.

^e City of Oakland, March 2011.

^f Growth in already entitled development along the Lowell Street corridor could occur with or without approval of the Proposed Amendments, and is considered as cumulative growth for the SEIR analyses.

SOURCE: City of Oakland; Environmental Science Associates; Hausrath Economics Group.

aesthetics, shadow and wind effects from the Industrial Use Alternative development likely would be similar to the development under the Proposed Amendments. The same less-than-significant aesthetics, shadow and wind impacts would occur with the Industrial Use Alternative as with the Proposed Amendments. However, because the Industrial Use Alternative would facilitate slightly less development along the Lowell Street corridor, the contribution of potential adverse changes to aesthetics, shadow and wind conditions under this alternative also would be considered slightly reduced. It is worth noting that implementation of the Proposed Amendments or the Industrial Use Alternative would result in improved aesthetic conditions in the Amendments Area.

The Industrial Use Alternative would result in the same less-than-significant aesthetics, shadow and wind impacts identified with the Proposed Amendments. This is the same finding as for the No Project Alternative and the Lower Growth Alternative.

Air Quality

Under the Industrial Use Alternative, the ratio of new residential to new industrial development would shift while all other programs would be the same as described for the Proposed Amendments. As shown in Table 5-5, compared to the Proposed Amendments, the increase in industrial space would result in an increase in employment population in the Amendment Area. Concurrently, fewer residential units would be developed and less new residential population would occur in the Amendment Area compared to the Proposed Amendments.

For a project to be consistent with the CAP, BAAQMD requires that the rate of projected increase in VMT associated with a proposed project be less than the rate of projected population increase. For context, these rates are estimated to be 0.036 and 0.043 percent, respectively, for the Proposed Amendments to occur in the Amendment Area, and 0.188 and 0.197, respectively, for the Redevelopment Plan, as Amended; in both instances the rate of VMT increase is less than the rate of population increase, thus less than significant (Updated Impact C.1 [AIR]).

As discussed below, the peak hour vehicle trips of the Industrial Use Alternative and the Proposed Amendments varies by approximately 3.0 percent. Therefore, the VMT for the Industrial Use Alternative would be similar to the Proposed Amendments. However, the residential population would be substantially reduced (by approximately 74.0 percent, as shown in Table 5-5), therefore the rate of VMT increase would likely exceed the rate of population growth, particularly given the relatively narrow variation between the two rates for the Proposed Amendments (7.0 percentage points) and the Redevelopment Plan, as Amended, (9.0 percentage points). As a result, although the Industrial Use Alternative would result in reduced air quality emissions compared with the Proposed Amendments, it would likely result in rates of VMT increase that exceed rates of population increase and thus be inconsistent with the CAP, even though development under the alternative would implement transportation control measures (“TCMs”) identified in the CAP, as applicable. ***The Industrial Use Alternative would result in a new SU Impact regarding a fundamental conflict with the Bay Area 2010 Clean Air Plan.***

In addition, and as with the No Project Alternative and the Lower Growth Alternative, *the two SU air quality impacts identified with the Proposed Amendments (New Impact AIR-3, exposure to gaseous TACs, and Updated Impact C.5 [AIR], exposure to odors) would continue to be SU under the Industrial Use Alternative, since new residential development (although less than with the Proposed Amendments) would still occur in the Amendment Area and potentially locate new residents near gaseous TAC and odor sources.*

All other air quality impacts would be less than significant as identified with the Proposed Amendments, and the Industrial Use Alternative development would be subject to the same air quality SCAs that would apply to the Proposed Amendments. Overall, the Industrial Use Alternative would result in an SU impact that would not occur with any other alternatives. All other less-than-significant air quality impacts identified with the Proposed Amendments would continue to be less-than-significant, even though the type of new development would be different from the Proposed Amendments.

Biological Resources

Under the Industrial Use Alternative, the construction and location of the development that would occur would not be substantially different from that of the Proposed Amendments, and the development would incorporate the City's SCAs. Therefore, this alternative result in similar less-than-significant impacts on biological resources compared to the Proposed Amendments, and the effect would be similar. This is the same finding as for the No Project Alternative and the Lower Growth Alternative.

Cultural Resources

Under the Industrial Use Alternative, development would still occur in the same locations as for the Proposed Amendments. There would still be the potential for development to effect historical resources in the Amendment Area. *Therefore, the potential SU historic resources impacts that would occur if development is unable to avoid, adaptively reuse, or appropriately relocate historically significant structures (New Impacts CUL-1 and CUL-5, impacts to historic and cultural resources – project and cumulative), as identified with the Proposed Amendments, would still occur.*

All other cultural resources impacts with the Industrial Use Alternative would remain less than significant or reduced to less than significant with mitigations, as identified with the Proposed Amendments. Overall, impacts to cultural resources under the Industrial Use Alternative would result in the same SU and less-than-significant impacts as the Proposed Amendments. This is the same finding as for the No Project Alternative and the Lower Growth Alternative.

Geology, Soils and Geohazards

Under the Industrial Use Alternative, the reduced residential population still would result in the exposure of residents to geologic hazards including strong ground shaking during a seismic event, as under the Proposed Amendments. As with the development facilitated by the Proposed Amendments, individual projects would be required to incorporate all applicable City SCAs. Thus,

the Industrial Use Alternative would result in the same less-than-significant impacts to geology, soils and geohazards as identified with the Proposed Amendments, even though the extent of exposure and risks would be reduced given the reduced overall population. This is the same finding as for the No Project Alternative and the Lower Growth Alternative.

Greenhouse Gases and Climate Change

As noted under Transportation and Circulation below, the Industrial Use Alternative would result in approximately 3.0 percent fewer peak hour motor vehicle trips when compared with the Proposed Amendments. As such, the Industrial Use Alternative would generate less annual greenhouse gas emissions compared to the Proposed Amendments. The estimated annual net emissions for the Proposed Amendments were 2,370 MT CO₂e (see Section 4.6, Greenhouse Gases and Climate Change). To not exceed the significance threshold of 4.6 GHG emissions per service population annually, the Proposed Amendments would require a new service population of at least 515 persons (residents and/or employees). Because the Industrial Use Alternative is anticipated to result in a growth of approximately 530 employees and residents, and as discussed above this alternative is anticipated to result in a slightly reduced annual GHG emissions due to fewer motor vehicle trips associated with this alternative, it is conservatively concluded that this alternative will not exceed the significance threshold of 4.6 MT CO₂e per service population annually.

SCA B, *GHG Reduction Plan*, would still apply even though the impact would be less than significant, as the City's SCAs apply to all project development projects, as applicable. Implementation and adherence to SCA B is required to ensure the impact remains less than significant by incorporating specific GHG reduction measures specified in the GHG Reduction Plan. Overall, the Industrial Use Alternative would result in the same less-than-significant greenhouse gases and climate change impacts identified with the Proposed Amendments. This is the same finding as for the No Project Alternative and the Industrial Use Alternative.

(Note: Discussion of the GHG emissions and impact identified for the Proposed Amendments are discussed with in the Environmentally Superior Alternative analysis in Section 5.5, below. Although not comparable numerically to the Industrial Use Alternative in the Amendment Area, the Redevelopment Plan, as Amended, would exceed both significance thresholds, and the impact would be reduced to less than significant with implementation and adherence to SCA B. Both the Industrial Use Alternative and the Redevelopment Plan, as Amended, would result in less-than-significant GHG and climate change impacts.)

Hazardous Materials

Under the Industrial Use Alternative, there would still be the potential for construction activities involving demolition, soil disturbance, excavation, and trenching to potentially expose construction workers and residents to potential hazards and hazardous materials, as identified with the Proposed Amendments. These potential hazardous materials include asbestos, PCBs, lead-based paint, contents of underground and aboveground storage tanks, and potentially contaminated soil and water. As with the Proposed Amendments, any new construction would incorporate applicable City

SCAs. The construction, operation and population associated with the housing units that would be developed under the Proposed Amendments would not result in substantially increased risk that would not be addressed with incorporation of the City SCAs. Therefore, the Industrial Use Alternative would result in the same less-than-significant impacts associated with hazardous materials and hazards compared to the Proposed Amendments. This is the same finding as for the No Project Alternative and the Lower Growth Alternative.

Hydrology and Water Quality

Under the Industrial Use Alternative, as with the development facilitated by the Proposed Amendments, construction activities could lead to increased contaminants being washed into San Francisco Bay. However, as discussed above, the Industrial Use Alternative would have slightly less new development than the Proposed Amendments. Any development would incorporate the City's applicable SCAs and implement best management practices. Therefore, impacts to water quality under the Industrial Use Alternative would continue to be less than significant. This is the same finding as for the No Project Alternative and the Lower Growth Alternative.

Land Use, Plans and Policies

Under the Industrial Use Alternative, development would occur in the Amendment Area. However, all new development still would be required to be consistent with the General Plan and current Oakland Zoning designations. Both residential and light industrial uses are consistent with the existing land use classification along the Lowell Street corridor. Further, as with the Proposed Amendments, the new construction would be subject to the City's SCAs. The new development would not introduce land uses incompatible with existing surrounding uses or locate new uses in a manner that would adversely affect existing communities or natural resources more than would the Proposed Amendments. Therefore, the Industrial Use Alternative would result in the same less-than-significant land use impacts identified with the Proposed Amendments. This is the same finding as for the No Project Alternative and the Lower Growth Alternative.

Noise

Compared with development facilitated by the Proposed Amendments, the Industrial Use Alternative would result in slightly less development and related construction activity. Although this alternative would result in fewer new residents, the employment population would increase in the Amendment Area and construction and operational noise impacts would be similar to those identified with the Proposed Amendments. Therefore, the Industrial Use Alternative would have the same less-than-significant noise impacts as would occur with the Proposed Amendments. Further, the Industrial Use Alternative would incorporate the same noise SCAs that would apply to the Proposed Amendments. This is the same finding as for the No Project Alternative and the Lower Growth Alternative.

Population, Housing and Employment

Under this alternative, development along the Lowell Street corridor would emphasize industrial incubator development to provide modern, light industrial facilities in the Amendment Area. In

addition, more of the existing industrial space and uses would remain along the corridor as fewer sites would be developed for new uses. There would be more growth of business activity and employment, growth of about 320 jobs in the area compared to growth of 40 jobs under the Proposed Amendments. There would be less growth of housing and population in the area, with anticipated growth of about 210 residents compared to population growth of 830 for the Proposed Amendments. Overall, there would be less new development and lesser impacts in displacing industrial businesses/jobs and live-work housing/residents compared to the less-than-significant impacts under the Proposed Amendments. The less-than-significant impacts from induced population growth also would be less under Alternative 3, with more emphasis on the effects of employment growth and less emphasis on effects of resident population growth. There would be somewhat less affordable housing production, due to a lower affordable housing production obligation and less tax increment funding generated from Amendment Area development. Overall, the Industrial Use Alternative would have the same less-than-significant impacts regarding the displacement of substantial housing, people, businesses or jobs and the same less-than-significant impacts regarding induced population growth. This is the same finding as for the Lower Growth Alternative.

Public Services and Recreation Facilities

Under the Industrial Use Alternative, there would be a decrease in new residential population associated with the reduction of residential development compared to the Proposed Amendments. Even considering the additional growth in employment in the Amendment Area, the demand for public services and recreation facilities, and the use of such facilities, would be slightly less than what would occur with the Proposed Amendments. Although the reduction would be minimal, less police, fire and emergency services and facilities would be required, fewer new students would be generated, and the demand for and use of park and recreational facilities would be less. Therefore, the Industrial Use Alternative would have the same less-than-significant public services and recreation facilities impacts as identified with the Proposed Amendments. This is the same finding as for the No Project Alternative and the Lower Growth Alternative.

Transportation and Circulation

The Industrial Use Alternative would result in five fewer trips during the AM Peak Hour and six fewer trips during the PM peak hour, as compared to the Proposed Amendments. This corresponds to about 3.0 percent fewer trips during the AM and PM peak hour. Whereas the development facilitated by the Proposed Amendments would generate more outbound trips in the AM peak hour and inbound trips in the PM peak hour, Alternative 3 would generate the opposite because the Proposed Amendment's trips are mostly attributable to residents leaving in the morning and returning in the evening. This alternative's industrial use trips are mostly attributable to employees arriving in the morning and departing in the afternoon. **Table 5-6** summarizes the trip generation for the Industrial Use Alternative and compares it to the analysis for the Proposed Amendments.

**TABLE 5-6
INDUSTRIAL USE (ALTERNATIVE 3)
TRIP GENERATION**

| Land Use | ITE Code | Units ^a | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | |
|---|------------------|--------------------|----------------------|------------|------------|----------------------|------------|------------|
| | | | In | Out | Total | In | Out | Total |
| New Development | | | | | | | | |
| Multi-family | 220 ^b | 41 DU | 5 | 19 | 24 | 26 | 14 | 40 |
| <i>Alternate Mode Auto Trip Reduction (20%)^c</i> | | | -1 | -4 | -5 | -5 | -3 | -8 |
| Industrial Incubator | 110 ^d | 175.8 KSF | 143 | 19 | 162 | 21 | 150 | 171 |
| Live-Work | n/a ^e | 54 DU | 16 | 22 | 38 | 13 | 22 | 35 |
| <i>Subtotal</i> | | | <i>163</i> | <i>56</i> | <i>219</i> | <i>55</i> | <i>183</i> | <i>238</i> |
| Existing Removed | | | | | | | | |
| Live-Work | n/a ^e | 3 DU | 1 | 1 | 2 | 1 | 1 | 2 |
| Industrial | 110 ^d | 66.3 KSF | 54 | 7 | 61 | 8 | 56 | 64 |
| Warehousing | 150 ^f | 114.7 KSF | 27 | 7 | 34 | 9 | 28 | 37 |
| Repair Garage | 942 ^h | 1.0 KSF | 2 | 1 | 3 | 2 | 2 | 4 |
| Store | 852 ⁱ | 0.0 KSF | 0 | 0 | 0 | 0 | 0 | 0 |
| Vacant | n/a | 25.4 KSF | 0 | 0 | 0 | 0 | 0 | 0 |
| Unadjusted Trip Generation | | | 84 | 16 | 100 | 20 | 87 | 107 |
| <i>50% Adjustmentⁱ</i> | | | <i>-42</i> | <i>-8</i> | <i>-50</i> | <i>-10</i> | <i>-44</i> | <i>-54</i> |
| <i>Subtotal</i> | | | <i>42</i> | <i>8</i> | <i>50</i> | <i>10</i> | <i>43</i> | <i>53</i> |
| Net New Alternative 3 Trips | | | 121 | 48 | 169 | 45 | 140 | 185 |
| Proposed Project Trips | | | 50 | 124 | 174 | 103 | 88 | 191 |
| Net Difference | | | 71 | -76 | -5 | -58 | 52 | -6 |

^a DU = dwelling units; KSF = 1,000 square feet

^b ITE Trip Generation regression rate used:

AM: $T = 0.49(X) + 3.73$; Enter = 20%, Exit = 80%

PM: $T = 0.55(X) + 17.65$; Enter = 65%, Exit = 35%

^c Alternative mode auto trip reduction percentage based on U.S. Census (2000) Journey-to-Work surveys for census tracts along the Lowell Street corridor.

^d ITE Trip Generation average rate used:

AM: $T = 0.92(X)$; Enter = 88%, Exit = 12%

PM: $T = 0.97(X)$; Enter = 12%, Exit = 88%

^e Source: 2002 Fehr & Peers survey of Phoenix Lofts live-work site in Oakland. Average rate used:

AM: $T = 0.71(X)$; Enter = 41%, Exit = 59%

PM: $T = 0.65(X)$; Enter = 36%, Exit = 64%

^f ITE Trip Generation average rates used:

AM: $T = 0.30(X)$; Enter = 79%, Exit = 21%

PM: $T = 0.32(X)$; Enter = 25%, Exit = 75%

^g ITE Trip Generation average rates used:

AM: $T = 2.94(X)$; Enter = 65%, Exit = 35%

PM: $T = 3.38(X)$; Enter = 50%, Exit = 50%

^h ITE Trip Generation average rates used:

AM: $T = 1.00(X)$; Enter = 61%, Exit = 39%

PM: $T = 3.73(X)$; Enter = 49%, Exit = 51%

ⁱ 50% adjustment to account for below average occupancy in area.

SOURCE: Trip Generation (8th Edition), ITE, 2008, and Fehr & Peers, 2011

The reduced trip generation under the Industrial Use Alternative would result in fewer SU impacts. *The Industrial Use Alternative would avoid one SU impact (New Impact TRA-2, vehicle delay at the Stanford Avenue / San Pablo Avenue intersection). This impact would be reduced to less than significant. However, two SU impacts for the Cumulative Year 2035 Existing Plus Project scenario (New TRA-1, degrade the Powell Street / Christie Avenue intersection, and New Impact TRA-5, vehicle delay at the 25th Street / San Pablo Avenue intersection) would continue to be SU under the Industrial Use Alternative.*

The reduced trip generation would also reduce impacts related to bus travel time; conflicts among motor vehicles, bicycles, or pedestrians; emergency vehicle service; alternative transportation demand; and temporary construction impacts. Overall, the Industrial Use Alternative would result in the same significant and mitigable and less-than-significant traffic and circulation impacts that would occur with the Proposed Amendments, and the Industrial Use Alternative would be subject to the same transportation and circulation SCAs that would apply to the Proposed Amendments.

The Industrial Use Alternative would avoid only one of the two SU impacts for vehicle delays at intersections that would be avoided under the No Project and the Lower Growth alternatives.

Utilities and Service Systems

Under the Industrial Use Alternative, the demands for utilities and service systems would be similar to the Proposed Amendments given that the development under this alternative would need services similar to development that would be facilitated by the Proposed Amendments. There would be similar demand for water and energy services, and similar need for increased wastewater and solid waste disposal. Therefore, the Industrial Use Alternative would have the same less-than-significant utilities and service systems impacts as identified with the Proposed Amendments. This is the same finding as for the No Project Alternative and the Lower Growth Alternative.

5.5 Environmentally Superior Alternative

CEQA Guidelines requires that the EIR identify an environmentally superior alternative (CEQA Guidelines, Section 15126.6), which is the CEQA alternative that reduces or avoids the environmental impacts identified for the Redevelopment Plan, as Amended, to the greatest extent. The extent to which an alternative reduces or avoids less-than-significant impacts is also considered, balanced by consideration of the extent to which the impact affects the physical environment.

As previously discussed in Section 5.3, this alternatives analysis focuses on the effects resulting from development facilitated by the Proposed Amendments compared to a no project and development alternatives specific to the Proposed Amendments and the Amendment Area. The evaluation below first considers the extent to which each of the CEQA alternatives reduces or avoids the SU impacts identified with the Proposed Amendments and the Redevelopment Plan, as Amended. The findings for the alternative to the Proposed Amendments in the Amendment Area inform the environmentally superior alternative for the Redevelopment Plan, as Amended, as discussed in Section 5.5.4, below.

5.5.1 No Project Alternative

As summarized in Table 5-7 below, and described in the analysis in Section 5.4 above, the No Project Alternative would avoid two of the SU traffic impacts, reducing them to less than significant with mitigation measures. *The No Project Alternative would avoid two SU traffic impacts resulting from traffic volumes in the Cumulative Year 2035 Existing Plus Project scenario (New Impact TRA-2, vehicle delay at the Stanford Avenue / San Pablo Avenue intersection, and New Impact TRA-5, vehicle delay at the 25th Street / San Pablo Avenue intersection).*

The No Project Alternative would reduce, but not avoid, each of the other SU impacts since some new development would still occur under this alternative. These include the *two SU air quality impacts identified with the Proposed Amendments (New Impact AIR-3, exposure to gaseous TACs, and Updated Impact C.5 [AIR], exposure to substantial and frequent odors)*, the *potential SU historic resources impacts that would occur if development is unable to avoid, adaptively reuse, or appropriately relocate historically significant structures (New Impacts CUL-1 and CUL-5, impacts to resources – project and cumulative)*, and the *Cumulative Year 2035 Existing Plus Project scenario (New TRA-1, degrade the Powell Street / Christie Avenue intersection).*

The No Project Alternative would also reduce or avoid each of the less-than-significant impacts identified with the Proposed Amendments, although certain existing adverse conditions (e.g., aesthetics, hazardous materials, stormwater quality) may not be improved as readily if the Proposed Amendments do not occur. Regardless, no impacts would be greater than those identified with the Proposed Amendments.

The No Project Alternative would not meet the objectives of the Proposed Amendments to the Existing Redevelopment Plan in that it would not contribute to the development, redevelopment, and private reinvestment to correct health and safety concerns and address economic and physical blight conditions in the Amendment Area. Further, Section 15126.6(e)(2) of the CEQA Guidelines requires that if the No Project Alternative is identified as the environmentally superior alternative, then the EIR shall identify another alternative as the environmentally superior alternative.

5.5.2 Lower Growth Alternative

Similar to the No Project Alternative, the Lower Growth Alternative would avoid reduce some SU impacts; *the Lower Growth Alternative would avoid two SU traffic impacts resulting from traffic volumes in the Cumulative Year 2035 Existing Plus Project scenario (New Impact TRA-2, vehicle delay at the Stanford Avenue / San Pablo Avenue intersection, and New Impact TRA-5, vehicle delay at the 25th Street / San Pablo Avenue intersection).* These two SU impacts would be reduced to less than significant, with mitigation measures.

The Lower Growth Alternative would result in the same less-than-significant impact regarding *fundamental conflict with the Bay Area 2010 Clean Air Plan* (due to a projected rate of VMT increase less than that of projected population increase) that would occur with the Proposed Amendments, but that would occur as SU with the Industrial Use Alternative.

There are no SU Impacts that were avoided by the No Project Alternative or the Industrial Use Alternative that would still occur with the Lower Growth Alternative. The Lower Growth Alternative would also reduce the effects of each of the less-than-significant impacts identified with the Proposed Amendments given the reduced development. No impacts would be greater than those identified with the Proposed Amendments. This alternative would also meet most of the basic objectives of the Proposed Amendments, which are described in Chapter 3, *Project Description*, but to a lesser extent.

5.5.3 Industrial Use Alternative

As described in the analysis in Section 5.4 above, the Industrial Use Alternative would reduce the effects of most of the less-than-significant impacts identified with the Proposed Amendments given the slightly reduced development. This alternative would also meet most of the basic objectives of the Proposed Amendments, which are described in Chapter 3, *Project Description*, but to a lesser extent.

Although the Industrial Use Alternative would result in reduced air quality emissions when compared with the Proposed Amendments, ***the Industrial Use Alternative would result in an SU Impact regarding a fundamental conflict with the Bay Area 2010 Clean Air Plan***, whereas this would be a less-than-significant impact (Updated Impact C.1 [AIR]) with the Proposed Amendments, the No Project and the Lower Growth Alternative.

The Industrial Use Alternative would avoid one SU traffic impact resulting from traffic volumes in the Cumulative Year 2035 Existing Plus Project scenario (New Impact TRA-2, vehicle delay at the Stanford Avenue / San Pablo Avenue intersection). The SU Impact that would be avoided by the No Project Alternative and the Lower Growth Alternative *but that would still occur with the Industrial Use Alternative* is ***the SU traffic impact resulting from traffic volumes in the Cumulative Year 2035 Existing Plus Project scenario (New Impact TRA-5, vehicle delay at the 25th Street / San Pablo Avenue intersection).***

Industrial Use Alternative would also reduce the effects of each of the less-than-significant impacts identified with the Proposed Amendments given the increase in industrial incubator use and decrease in residential and live-work use. No other impacts would be greater than those identified with the Proposed Amendments.

5.5.4 Environmentally Superior Alternative and Relationship to the 2000 EIR and the Proposed Redevelopment Plan as Amended

The Lower Growth Alternative is considered the environmentally superior alternative considering the Proposed Amendments and the Amendment Area, as it would avoid and/or substantially reduce SU impacts of the Proposed Amendments to the greatest extent compared to the Industrial Use Alternative, and would still meet the basic objectives of the Proposed Amendments.

The 2000 EIR identified the Reduced Project Alternative (“2000 Reduced Project Alternative”) as the environmentally superior alternative, even though that alternative would not meet some of the basic project objectives to (1) upgrade and increase Oakland’s housing supply, (2) create the MacArthur BART transit village, (3) improve the economic vitality of Oakland’s arterials and community commercial areas through mixed use redevelopment, and (4) update the physical and economic climate with new and rehabilitated housing development. Further, the 2000 Reduced Project Alternative would not avoid the SU impact identified in the 2000 EIR (which is reduced to less than significant in this SEIR).

The Proposed Amendments do not propose changes to the Existing Redevelopment Project or the alternatives analyzed in the 2000 EIR, and thus do not affect the environmentally superior alternative determination for the Existing Project Area discussed therein. The environmentally superior alternative for the Redevelopment Plan, as Amended, considers the 2000 EIR environmentally superior alternative determination combined with the analysis of alternatives to the Proposed Amendments presented herein. The environmentally superior alternative for the Redevelopment Plan, as Amended, is described as follows:

- **2000 EIR Reduced Project Alternative for the Existing Project Area, in combination with the Lower Growth Alternative in the Amendment Area.**

This combined environmentally superior alternative scenario would avoid and/or substantially reduce SU impacts of the Redevelopment Plan, as Amended, to the greatest extent compared to each of the other alternatives. However, by restricting new residential development in the Existing Project Area (per the 2000 Reduced Project Alternative), this combined environmentally superior alternative still would not fully meet some of the basic project objectives of the Existing Redevelopment Plan, as disclosed in the 2000 EIR. However, in the Amendment Area, a mix of new housing / live-work with commercial and light industrial uses would occur, consistent with one of the basic objectives of the Proposed Amendments, to stimulate home ownership opportunities in the Amendment Area.

**TABLE 5-7
SUMMARY COMPARISON OF IMPACTS: PROPOSED AMENDMENTS AND ALTERNATIVES**

| NOTE: Significance levels shown in the table reflect levels of significance after mitigation or standard conditions of approval and indicate maximum impact during buildout and operation, unless otherwise specified. | Proposed Amendments | No Project Alternative | Lower Growth Alternative | Industrial Use Alternative |
|---|----------------------------|-------------------------------|---------------------------------|-----------------------------------|
| 4.1 Aesthetics, Shadow, and Wind | | | | |
| Updated Impact AES-1: Development facilitated by the Redevelopment Plan as Amended would not adversely affect scenic public vistas or scenic resources. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact AES-2: Development facilitated by the Redevelopment Plan as Amended would not substantially degrade the existing visual character or quality of the site and its surroundings. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact AES-3: Development facilitated by the Redevelopment Plan as Amended would facilitate the creation of new sources of light or glare which would not substantially and adversely affect day or nighttime views in the area. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact AES-4: Development facilitated by the Redevelopment Plan as Amended would not result in substantial new shadow that would shade solar collectors, passive solar heaters, public open spaces, or historic resources or otherwise result in inadequate provision of adequate light. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact AES-5: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects in and around the Project Area, as Amended, would not result in impacts to aesthetics, shadow and wind. | LS | LS↓ | LS↓ | LS↓ |
| 4.2 Air Quality | | | | |
| Updated Impact C.1 (AIR): Development facilitated by the Redevelopment Plan, as Amended, would not fundamentally conflict with the <i>Bay Area 2010 Clean Air Plan</i> because the projected rate of increase in vehicle miles traveled (VMT) or vehicle trips is not greater than the projected rate of increase in population. | LS | LS↓ | LS↓ | SU |
| Updated Impact C.2 (AIR): Development facilitated by the Redevelopment Plan, as Amended, would not fundamentally conflict with the <i>Bay Area 2010 Clean Air Plan</i> because that future development under the Redevelopment Plan, as Amended, would incorporate reasonable efforts to implement control measures contained in the CAP. | LS | LS↓ | LS↓ | LS↓ |
| New Impact AIR-3: Development facilitated by the Redevelopment Plan, as Amended, could include residential developments that expose occupants to substantial health risk from diesel particulate matter (DPM) from mobile and stationary sources. Although compliance with City's Standard Conditions of Approval would provide that a site specific health risk assessment (HRA) be prepared, and that would reduce exposures to DPM sources to less than significant, there is no assurance that exposure to gaseous TACs could be reduced to a less-than-significant level at every site. | SU | SU ↓ | SU ↓ | SU ↓ |
| Updated Impact C.5 (AIR): Development facilitated by the Redevelopment Plan, as Amended, would encourage new residential uses that could expose occupants to sources of substantial and frequent odors affecting a substantial number of people and would be guided by City policies to reduce potential odor impacts. | SU | SU ↓ | SU ↓ | SU ↓ |

**TABLE 5-7 (CONTINUED)
SUMMARY COMPARISON OF IMPACTS: PROPOSED AMENDMENTS AND ALTERNATIVES**

| NOTE: Significance levels shown in the table reflect levels of significance after mitigation or standard conditions of approval and indicate maximum impact during buildout and operation, unless otherwise specified. | Proposed Amendments | No Project Alternative | Lower Growth Alternative | Industrial Use Alternative |
|--|----------------------------|-------------------------------|---------------------------------|-----------------------------------|
| 4.3 Biological Resources | | | | |
| Updated Impact BIO-1: Development facilitated by the Redevelopment Plan, as Amended, could adversely affect, either directly or through habitat modifications, species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact BIO-2: Development facilitated by the Redevelopment Plan, as Amended, would not have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact BIO-3: Development facilitated by the Redevelopment Plan, as Amended, would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. | LS | LS↓ | LS↓ | LS↓ |
| New Impact BIO-4: Development facilitated by the Redevelopment Plan, as Amended, could fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code Chapter 12.36) by removal of protected trees under certain circumstances. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact BIO-5: Construction activity and operations of development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects in and around the Amendment Area and the Project Area as Amended, would not result in impacts on special-status species, wildlife movement corridors, wetlands, and other waters of the U.S. | LS | LS↓ | LS↓ | LS↓ |
| 4.4 Cultural Resources | | | | |
| New Impact CUL-1: Development facilitated by the Redevelopment Plan, as Amended, would result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources. | SU | SU↓ | SU↓ | SU↓ |
| Updated Impact CUL-2: Development facilitated by the Redevelopment Plan, as Amended, could result in significant impacts to unknown archaeological resources. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact CUL-3: Development facilitated by the Redevelopment Plan, as Amended, could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact CUL-4: Development facilitated by the Redevelopment Plan, as Amended, could disturb human remains, including those interred outside of formal cemeteries. | LS | LS↓ | LS↓ | LS↓ |
| New Impact CUL-5: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects in and around the Amendment Area and the Project Area as Amended, would contribute considerably to a significant adverse cumulative impact to cultural resources. | SU | SU↓ | SU↓ | SU↓ |

TABLE 5-7 (CONTINUED)
SUMMARY COMPARISON OF IMPACTS: PROPOSED AMENDMENTS AND ALTERNATIVES

| NOTE: Significance levels shown in the table reflect levels of significance after mitigation or standard conditions of approval and indicate maximum impact during buildout and operation, unless otherwise specified. | Proposed Amendments | No Project Alternative | Lower Growth Alternative | Industrial Use Alternative |
|--|----------------------------|-------------------------------|---------------------------------|-----------------------------------|
| 4.5 Geology, Soils and Geohazards | | | | |
| Updated Impact GEO-1: Development facilitated by the Redevelopment Plan, as Amended, could expose people or structures to seismic hazards such as ground shaking and seismic-related ground failure such as liquefaction, differential settlement, or lateral spread. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact GEO-2: Development facilitated by the Redevelopment Plan, as Amended, could be subjected to geologic hazards, including expansive soils, subsidence, seismically induced settlement and differential settlement | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact GEO-3: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects in and around the Amendment Area and the Project Area as Amended, would not result in significant cumulative impacts with respect to geology, soils or seismicity. | LS | LS↓ | LS↓ | LS↓ |
| 4.6 Greenhouse Gases and Climate Change | | | | |
| New Impact GHG-1: Development facilitated by the Redevelopment Plan, as Amended, would produce greenhouse gas emissions that exceed 1,100 metric tons of CO ₂ e per year and exceed 4.6 metric tons of CO ₂ e per service population annually. | LS | LS↓ | LS↓ | LS↑ |
| New Impact GHG-2: Development facilitated by the Redevelopment Plan, as Amended, would not conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing greenhouse gas emissions, but would exceed the numeric threshold for GHG emissions. | LS | LS↓ | LS↓ | LS↑ |
| 4.7 Hazardous Materials | | | | |
| Updated Impact HAZ-1: Development facilitated by the Redevelopment Plan, as Amended, would result in an increase in the routine transportation, use, and storage of hazardous chemicals. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact HAZ-2: Development facilitated by the Redevelopment Plan, as Amended, would result in the accidental release of hazardous materials used during construction through improper handling or storage. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact HAZ-3: Development facilitated by the Redevelopment Plan, as Amended, would result in the exposure of hazardous materials in soil and ground water. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact HAZ-4: Development facilitated by the Redevelopment Plan, as Amended, would result in the exposure of hazardous building materials during building demolition or façade improvements. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact HAZ-5: Development facilitated by the Redevelopment Plan, as Amended, would require use of hazardous materials within 0.25 mile of a school. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact HAZ-6: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, would not result in cumulative hazards. | LS | LS↓ | LS↓ | LS↓ |

TABLE 5-7 (CONTINUED)
SUMMARY COMPARISON OF IMPACTS: PROPOSED AMENDMENTS AND ALTERNATIVES

| NOTE: Significance levels shown in the table reflect levels of significance after mitigation or standard conditions of approval and indicate maximum impact during buildout and operation, unless otherwise specified. | Proposed Amendments | No Project Alternative | Lower Growth Alternative | Industrial Use Alternative |
|--|----------------------------|-------------------------------|---------------------------------|-----------------------------------|
| 4.8 Hydrology and Water Quality | | | | |
| Updated Impact HYD-1: Development facilitated by the Redevelopment Plan, as Amended, would alter drainage patterns and increase the volume of stormwater, level of contamination or siltation in stormwater flowing from the Project Area, as Amended. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact HYD-2: Development facilitated by the Redevelopment Plan, as Amended, could be susceptible to flooding hazards in the event of dam or reservoir failure. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact HYD-3: Development facilitated by the Redevelopment Plan, as Amended, would not adversely affect the availability of groundwater supplies or interfere substantially with groundwater recharge | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact HYD-4: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, would not result in potentially significant cumulative impacts to hydrologic resources. | LS | LS↓ | LS↓ | LS↓ |
| 4.9 Land Use, Plans and Policies | | | | |
| Updated Impact A.1 (LU): Development facilitated by the Redevelopment Plan, as Amended, would blend with the established communities of the Project Area, as Amended, and would not result in the physical division of an existing community or conflict with nearby land uses. | LS | LS | LS | LS |
| Updated Impact A.2 (LU): Development facilitated by the Redevelopment Plan, as Amended, would not conflict with applicable land use plans and policies adopted for the purpose of avoiding or mitigating an environmental effect. | LS | LS | LS | LS |
| New Impact LU-3: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, does not reveal any significant adverse cumulative impacts in the area. | LS | LS | LS | LS |
| 4.10 Noise | | | | |
| Updated Impact D.2 (NOI): Development facilitated by the Redevelopment Plan, as Amended, would result in substantial temporary or periodic increases in ambient noise levels in the Project Area, as Amended, above levels existing without the Redevelopment Plan, as Amended, and in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact NOI-2: Development facilitated by the Redevelopment Plan, as Amended, could expose persons to or create excessive groundborne vibration or groundborne noise levels. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact D.4 (NOI): Development facilitated by the Redevelopment Plan, as Amended, could increase noise levels in the Project Area, as Amended, to levels in excess of standards established in the Oakland Noise Ordinance and Planning Code, which may result in noise compatibility problems due to the proximity of residential uses with other uses (including commercial and employment uses). (Less than Significant | LS | LS↓ | LS↓ | LS↓ |

**TABLE 5-7 (CONTINUED)
SUMMARY COMPARISON OF IMPACTS: PROPOSED AMENDMENTS AND ALTERNATIVES**

| NOTE: Significance levels shown in the table reflect levels of significance after mitigation or standard conditions of approval and indicate maximum impact during buildout and operation, unless otherwise specified. | Proposed Amendments | No Project Alternative | Lower Growth Alternative | Industrial Use Alternative |
|--|----------------------------|-------------------------------|---------------------------------|-----------------------------------|
| Updated Impact D.1 (NOI): Traffic generated by development facilitated by the Redevelopment Plan, as Amended, could substantially increase traffic noise levels in the Project Area, as Amended. | LS | LS↓ | LS↓ | LS↓ |
| Impact NOI-5: Traffic generated by development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, could substantially increase traffic noise levels in the Project Area, as Amended; and construction and operational noise levels in combination with traffic from past, present, and reasonably foreseeable future projects, could increase ambient noise levels. | LS | LS↓ | LS↓ | LS↓ |
| 4.11 Population, Employment and Housing | | | | |
| New Impact POP-1: Development facilitated by the Redevelopment Plan, as Amended, could displace a small number of existing housing units and residents, but not in substantial numbers necessitating the construction of replacement housing elsewhere, in excess of that anticipated in the City's Housing Element. | LS | N | LS↓ | LS↓ |
| New Impact POP-2: Development facilitated by the Redevelopment Plan, as Amended, could displace existing businesses and jobs, but not in substantial numbers necessitating construction of replacement facilities elsewhere, in excess of that anticipated in the City's General Plan. | LS | N | LS↓ | LS↓ |
| New Impact POP-3: Development facilitated by the Redevelopment Plan, as Amended, in combination with past, present, and reasonably foreseeable future projects, would not induce substantial population growth in a manner not contemplated in the General Plan, either directly by facilitating new housing or businesses, or indirectly through infrastructure improvements, such that additional infrastructure is required but the impacts of such were not previously considered or analyzed. | LS | LS↓ | LS↓ | LS↓ |
| 4.12 Public Services and Recreation Facilities | | | | |
| Updated Impact E.1 (PSR): Development facilitated by the Redevelopment Plan, as Amended, could result in an increase in calls for fire protection and emergency medical response services, but would not require new or physically altered fire protection facilities in order to maintain acceptable performance objectives. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact E.3 (PSR): Development facilitated by the Redevelopment Plan, as Amended, could increase the use of existing neighborhood and regional parks, including Mosswood Park and the Golden Gate Recreation Center, but not to the extent that substantial physical deterioration of the facilities would occur or be accelerated. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact E.5(PSR): Development facilitated by the Redevelopment Plan, as Amended, could result in an increase in calls for police service in the Project Area as Amended, but would not require new or physically altered police facilities in order to maintain acceptable performance objectives. | LS | LS↓ | LS↓ | LS↓ |

**TABLE 5-7 (CONTINUED)
SUMMARY COMPARISON OF IMPACTS: PROPOSED AMENDMENTS AND ALTERNATIVES**

| NOTE: Significance levels shown in the table reflect levels of significance after mitigation or standard conditions of approval and indicate maximum impact during buildout and operation, unless otherwise specified. | Proposed Amendments | No Project Alternative | Lower Growth Alternative | Industrial Use Alternative |
|--|----------------------------|-------------------------------|---------------------------------|-----------------------------------|
| Updated Impact E.6 (PSR): Development facilitated by the Redevelopment Plan, as Amended, could add an estimated 537 new students for local schools, but would not require new or physically altered school facilities to maintain acceptable performance objectives. | LS | LS↓ | LS↓ | LS↓ |
| New Impact PSR-5: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects within and around the Project Area, as Amended, would result in a cumulative increase in demand for police, fire, and school services. | LS | LS↓ | LS↓ | LS↓ |
| New Impact PSR-6: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, would result in an increased demand for recreational facilities. | LS | LS↓ | LS↓ | LS↓ |
| 4.13 Transportation and Circulation | | | | |
| New Impact TRA-1: Development facilitated by the Redevelopment Plan, as Amended, would degrade the Powell Street / Christie Avenue intersection (#3) from LOS E to LOS F during the PM peak hour under 2035 conditions. | SU | SU↓ | SU↓ | SU↓ |
| New Impact TRA-2: Development facilitated by the Redevelopment Plan, as Amended, would increase the vehicle delay to a critical movement by more than six seconds at the Stanford Avenue / San Pablo Avenue intersection (#5), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Redevelopment Plan, as Amended. | SU | LTS | LTS | LTS |
| New Impact TRA-3: Development facilitated by the Redevelopment Plan, as Amended, would increase the intersection average delay by more than four seconds and the vehicle delay to a critical movement by more than six seconds at the 55th Street / Market Street intersection (#11), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Proposed Amendments. | LSM | LTS | LSM↓ | LSM↓ |
| New Impact TRA-4: Development facilitated by the Redevelopment Plan, as Amended, would increase the vehicle delay to a critical movement by more than six seconds at the 55th Street / Martin Luther King Jr. Way intersection (#12), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Proposed Amendments. | LSM | LTS | LTS | LSM↓ |
| New Impact TRA-5: Development facilitated by the Redevelopment Plan, as Amended, would increase the vehicle delay to a critical movement by more than six seconds at the 36th Street / San Pablo Avenue intersection (#15), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Redevelopment Plan, as Amended. | SU | LTS | LTS | SU↓ |
| New Impact TRA-6: Traffic congestion caused by the traffic generated by development facilitated by the Redevelopment Plan, as Amended, would increase travel time for AC Transit buses. | LS | LS↓ | LS↓ | LS↓ |
| New Impact TRA-7: Development facilitated by the Redevelopment Plan, as Amended, would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. | LS | LS | LS | LS |

**TABLE 5-7 (CONTINUED)
SUMMARY COMPARISON OF IMPACTS: PROPOSED AMENDMENTS AND ALTERNATIVES**

| NOTE: Significance levels shown in the table reflect levels of significance after mitigation or standard conditions of approval and indicate maximum impact during buildout and operation, unless otherwise specified. | Proposed Amendments | No Project Alternative | Lower Growth Alternative | Industrial Use Alternative |
|--|----------------------------|-------------------------------|---------------------------------|-----------------------------------|
| New Impact TRA-8: Development facilitated by the Redevelopment Plan, as Amended, would increase traffic volumes on area roadway segments, potentially causing conflicts among motor vehicles, bicycles, or pedestrians. (Significant) | LSM | LSM↓ | LSM↓ | LSM↓ |
| New Impact TRA-9: Development facilitated by the Redevelopment Plan, as Amended, would generate services from emergency vehicles. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact B.4 (TRA): Development facilitated by the Redevelopment Plan, as Amended, would generate demand for alternative transportation services. | LS | LS↓ | LS↓ | LS↓ |
| New Impact TRA-11: Development facilitated by the Redevelopment Plan, as Amended, would generate temporary increases in traffic volume and temporary effects on transportation conditions. | LS | LS↓ | LS↓ | LS↓ |
| 4.14 Utilities and Service Systems | | | | |
| New Impact UTIL-1: The water demand generated by development facilitated by the Redevelopment Plan, as Amended, would not exceed water supplies available from existing entitlements and resources. | LS | LS↓ | LS↓ | LS↓ |
| New Impact UTIL-2: Development facilitated by the Redevelopment Plan, as Amended, would not exceed the wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination that new or expanded wastewater treatment facilities would be required. | LS | LS↓ | LS↓ | LS↓ |
| New Impact UTIL-3: Development facilitated by the Redevelopment Plan, as Amended, would not require or result in construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. | LS | LS↓ | LS↓ | LS↓ |
| New Impact UTIL-4: Development facilitated by the Redevelopment Plan, as Amended, would not generate solid waste that would exceed the permitted capacity of the landfills serving the area. | LS | LS↓ | LS↓ | LS↓ |
| New Impact UTIL-5: Development facilitated by the Redevelopment Plan, as Amended, would not violate applicable federal, state and local statutes and regulations relating to energy standards; nor result in a determination by the energy provider which serves or may serve the area that it does not have adequate capacity to serve projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities. | LS | LS↓ | LS↓ | LS↓ |
| New Impact UTIL-6: Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present and reasonably foreseeable future projects within and around the Project Area, as Amended, would result in an increased demand for utilities services. | LS | LS↓ | LS↓ | LS↓ |

**TABLE 5-7 (CONTINUED)
SUMMARY COMPARISON OF IMPACTS: PROPOSED AMENDMENTS AND ALTERNATIVES**

| NOTE: Significance levels shown in the table reflect levels of significance after mitigation or standard conditions of approval and indicate maximum impact during buildout and operation, unless otherwise specified. | Proposed Amendments | No Project Alternative | Lower Growth Alternative | Industrial Use Alternative |
|---|----------------------------|-------------------------------|---------------------------------|-----------------------------------|
| 2000 EIR Impacts and Mitigation Measures (modified, as appropriate) that Require No Further Analysis in this SEIR, and that Continue to Apply to the Project | | | | |
| Air Quality (Updated from 2000 EIR) | | | | |
| Updated Impact C.3 (AIR): Traffic generated by the Redevelopment Plan, as Amended, would not significantly increase CO emissions along roadways and at intersections within the planning area. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact C.4 (AIR): Cumulative development of future development projects in the Existing Project Area would result in increased stationary source emissions associated with heating and electricity consumption. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact C.6 (AIR): Construction activities associated with development projects within the Existing Project Area would generate dust (including the respirable fraction known as PM10) and combustion emissions. | LS | LS↓ | LS↓ | LS↓ |
| Land Use, Plans and Policies (Updated from 2000 EIR) | | | | |
| Updated Impact A.3 (LU): The Redevelopment Plan, as Amended, could result in land use conflicts in Subarea 3, particularly along San Pablo Avenue and Stanford Avenue because of the proximity of schools and parks. | LS | LS | LS | LS |
| Updated Impact A.4 (LU): The Redevelopment Plan, as Amended, could potentially conflict with the General Plan Historic Preservation Element. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact A.5 (LU): The Redevelopment Plan, as Amended, could result in land use conflicts between the City of Berkeley, the City of Emeryville and the City of Oakland in Subarea 3. | LS | LS | LS | LS |
| Noise (Updated from 2000 EIR) | | | | |
| Updated Impact D.3 (NOI): The Redevelopment Plan, as Amended, would encourage new residential uses as part of mixed-use retail areas within the Project Area, as Amended, and future noise levels in some areas could be incompatible with these new residential uses. | LS | LS↓ | LS↓ | LS↓ |
| Public Services and Recreation Facilities (Updated from 2000 EIR) | | | | |
| Updated Impact E.7 (PSR): Together with other existing and reasonably foreseeable future development in the vicinity in Oakland, the Redevelopment Plan, as Amended, would contribute to cumulative demand for increased fire protection services. | LS | LS↓ | LS↓ | LS↓ |
| Transportation and Circulation (Updated from 2000 EIR) | | | | |
| Updated Impact B.1 (TRA): The addition of project traffic from traffic from the Existing Redevelopment Plan would result in unacceptable level of service at three intersections during the PM peak hour under existing conditions in the Existing Project Area. | LS | LS↓ | LS↓ | LS↓ |

**TABLE 5-7 (CONTINUED)
SUMMARY COMPARISON OF IMPACTS: PROPOSED AMENDMENTS AND ALTERNATIVES**

| NOTE: Significance levels shown in the table reflect levels of significance after mitigation or standard conditions of approval and indicate maximum impact during buildout and operation, unless otherwise specified. | Proposed Amendments | No Project Alternative | Lower Growth Alternative | Industrial Use Alternative |
|---|----------------------------|-------------------------------|---------------------------------|-----------------------------------|
| Updated Impact B.2 (TRA): The addition of project traffic from the Existing Redevelopment Plan would result in unacceptable level of service at three intersections during the PM peak hour under cumulative Year 2020 conditions in the Existing Project Area. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact B.3 (TRA): Traffic from the Existing Redevelopment Plan would contribute incrementally to the cumulative impacts on the regional and local roadways. | LS | LS↓ | LS↓ | LS↓ |
| Updated Impact B.5 (TRA): Traffic from the Existing Redevelopment Plan would increase vehicular and bicycle traffic along identified bicycle corridors and has the potential to increase pedestrian circulation in the Broadway Auto Row and MacArthur Transit Village subareas. | LS | LS↓ | LS↓ | LS↓ |

CHAPTER 6

Impact Overview and Growth Inducement

6.1 Significant, Unavoidable and Cumulative Environmental Impacts

A significant and unavoidable impact would result if a project reaches or exceeds the defined threshold of significance and no feasible mitigation measure is available to reduce the significant impact to a less-than-significant level. Development facilitated by the Redevelopment Plan, as Amended, would result in the following significant and unavoidable (SU) impacts or cumulative impacts, as identified in Chapter 4 of this SEIR.

SU Air Quality Impacts

- **New Impact AIR-3:** Development facilitated by the Redevelopment Plan, as Amended, could include residential developments that expose occupants to substantial health risk from diesel particulate matter (DPM) from mobile and stationary sources. Although compliance with City's Standard Conditions of Approval would provide that a site specific health risk assessment (HRA) be prepared, and that would reduce exposures to DPM sources to less than significant, there is no assurance that exposure to gaseous TACs could be reduced to a less-than-significant level at every site.
- **Updated Impact C.5 [AIR]:** Development facilitated by the Redevelopment Plan, as Amended, would encourage new residential uses that expose occupants to sources of substantial and frequent odors affecting a substantial number of people and would be guided by City policies to reduce potential odor impacts.

SU Cultural Resources Impacts

- **New Impact CUL-1:** Development facilitated by the Redevelopment Plan, as Amended, would result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources.
- **New Impact CUL-5:** Development facilitated by the Redevelopment Plan, as Amended, in combination with other past, present, and reasonably foreseeable future projects within and around the Project Area, as Amended, would contribute considerably to a significant adverse cumulative impact to cultural resources.

SU Transportation and Circulation Impacts

- **New Impact TRA-1:** Development facilitated by the Redevelopment Plan, as Amended, would degrade the Powell Street / Christie Avenue intersection (#3) from LOS E to LOS F during the PM peak hour under 2035 conditions.
- **New Impact TRA-2:** Development facilitated by the Redevelopment Plan, as Amended, would increase vehicle delay to a critical movement by more than six seconds at the Stanford Avenue / San Pablo Avenue intersection (#5), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Redevelopment Plan, as Amended.
- **New Impact TRA-5:** Development facilitated by the Redevelopment Plan, as Amended, would increase the vehicle delay to a critical movement by more than six seconds at the 25th Street / San Pablo Avenue intersection (#15), which would operate at LOS E during the PM peak hour under 2035 conditions regardless of the Redevelopment Plan, as Amended.

6.2 Growth-Inducing Impacts

This section addresses the ways in which the Redevelopment Plan, as Amended, “could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment” (Section 15126.2(d) of the CEQA Guidelines). The section summarizes topics and impacts also addressed in Section 4.11 Population, Housing, and Employment, which provides the context for evaluating growth-inducing impacts.

Issues related to growth inducement were discussed in the Impact Overview chapter of the 2000 EIR (Chapter 6). The 2000 EIR concluded that the Existing Redevelopment Plan would not be expected to induce regional or local growth, and would therefore have a less-than-significant growth-inducing effect. Based on a review of project-level environmental reviews conducted throughout the Existing Project Area¹, and a reasonable understanding of the limited development that has occurred in other parts of the Existing Project Area, there have not been changes to the existing settings regarding growth relevant to the Existing Project Area that would warrant further analysis of the Existing Project Area for this topic (see Appendix H, Impacts and Mitigation Measures from Project-level EIRs completed Since 2000 for Major Projects in the Existing Project Area). Because the Proposed Amendments would not involve any new impacts with respect to the Existing Project Area, the remainder of this analysis herein focuses on the Amendment Area and the additions/changes related to the Proposed Amendments.

¹ Since 2000, four EIRs have been prepared for projects proposed for development within the existing Project Area. These are the MacArthur Transit Village (2008), the Alta Bates Summit Medical Center/Summit Campus Seismic Upgrade Master Plan (2009), the 2935 Telegraph Avenue (Courthouse Condominiums) Project (2007), and the Kaiser Permanente Oakland Medical Center Master Plan (2007).

6.2.1 The Proposed Amendments Would Foster Revitalization and Growth in the Amendment Area

The Proposed Amendments would expand the boundaries of the Existing Project Area to include the Lowell/Gaskill neighborhood (the Amendment Area). They also would provide the ability to finance redevelopment activities in the Amendment Area. Such activities could include a broad range of potential projects, programs, and strategies intended to reduce blight, improve conditions, and facilitate revitalization and growth in the Amendment Area.

Potential Growth and Development to be Facilitated by Proposed Amendments

Redevelopment activities to be facilitated by the Proposed Amendments are anticipated to focus in the areas along Lowell Street and Stanford Avenue in the eastern portions of the Amendment Area. As conditions in the area are improved, new development and renovations of existing buildings are likely to occur over time. Based on consideration of growth potentials, the SEIR conservatively anticipates that the Proposed Amendments could facilitate the development of up to 110,000 square feet of industrial incubator space and up to 370 housing units, potentially including up to 280 residential units and 90 live/work units. The new development and renovations would be focused along the Lowell Street corridor. They would occur on sites that are vacant or that include older industrial structures. Some existing uses in older buildings would be replaced.

Potential new development and/or renovations along the Lowell Street corridor would facilitate growth of business activity with an increase of up to 40 jobs and growth of up to approximately 340 households with 830 additional residents. This growth would not otherwise occur in the Amendment Area without the Proposed Amendments.

Beyond the Lowell corridor, housing rehabilitation loan or grant programs may be established for the residential neighborhood portions of the Amendment Area. Other redevelopment programs could be implemented, consistent with those being implemented through the existing Redevelopment Plan. Growth and new development are not anticipated in the existing neighborhood areas.

The Amendment Area growth of households, population, and employment due to the Proposed Amendments would contribute to growth expected in Oakland in the future. The amounts of growth anticipated because of the Proposed Amendments would account for less than one percent (0.7 percent) of total population growth as anticipated for Oakland by the ABAG projections for 2010-2035, and much less than one percent (0.04 percent) of total employment growth projected.

Possible Additional Economic Growth to be Fostered Indirectly

Over time, successful revitalization efforts and new development along the Lowell Street corridor as a result of the Proposed Amendments are likely to encourage some additional upgrading in that area and more intensive use of the existing building stock. As the desirability of the area increases, additional business activities could occur in improved, light industrial buildings along

the corridor, some of which may have been vacant or only marginally used. There also could be small growth of eating and drinking and local service uses, attracted to the area to serve the new residents as well as residents from nearby neighborhoods.

6.2.2 The Proposed Amendments are Unlikely to Induce Substantial Additional Growth Outside the Amendment Area

No Infrastructure-Induced Growth

Typical examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and the development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or are undeveloped. In this case, the Proposed Amendments would facilitate urban infill development and the revitalization of an older industrial enclave in North Oakland, located at the center of the large Bay Area region. The Amendment Area is well-served by existing transportation corridors and utility systems. Unlike development on vacant land in an outlying part of the region, the development to be facilitated by the Proposed Amendments would occur in an already developed urban area and would not require construction or extension of new roads, utilities, and other infrastructure that might stimulate population and employment growth in previously undeveloped areas.

Redevelopment activities to be facilitated by the Proposed Amendments are anticipated to include streetscape improvements focused along Lowell Street and Stanford Avenue to provide basic improvements that are lacking along these older industrial corridors. Improvements could include right-of-way adjustments, sidewalks, curbs, gutters, lighting, and other related improvements. These types of infrastructure improvements would address localized deficiencies and would not induce additional growth in other areas.

Limited Support for New Housing Growth Elsewhere in Oakland

The Proposed Amendments would result in affordable housing development. Under California redevelopment law, 15 percent of total new housing units built in the Amendment Area must be affordable to households of low- or moderate-income. With the Proposed Amendments, the Agency also would be required to allocate at least 20 percent of gross tax increment revenues from the Amendment Area to affordable housing (the housing “set-aside”). The housing set-aside would be used to provide financial assistance for meeting the Agency’s 15 percent affordable housing production obligation. If some of the housing set-aside funds were available for other affordable housing beyond the 15 percent production obligation, such funds could be used for additional affordable housing either inside or outside the Project Area, as Amended. Thus, it is possible that some additional affordable housing could be built in the Project Area, as Amended, or elsewhere in Oakland as a result of the Proposed Amendments. If so, the additional affordable housing could be built in residential areas and locations identified for housing in the City’s General Plan Land Use and Housing Elements.

Job-Induced Population Growth Likely To Be Accommodated By Anticipated Housing Development

Employment growth in development facilitated by the Proposed Amendments would support the growth of households and population to provide additional workers. The housing development facilitated by the Proposed Amendments, however, would accommodate a much larger number of additional workers than the relatively small number of additional jobs. Cumulatively, citywide growth of housing and employed residents in Oakland is projected to exceed the growth of jobs over time (thereby improving the relationships of jobs and housing in Oakland). Thus, cumulatively, the substantial growth of housing and population already anticipated to occur throughout the City could accommodate the number of additional workers due to the Proposed Amendments as well as the number of additional workers associated with other cumulative job growth.

Shifts of Some Existing Industrial Activity to Other Areas

Development and renovations in the Amendment Area to be facilitated by the Proposed Amendments are anticipated to require the removal of some existing industrial buildings/facilities. The loss of existing industrial space would result in some shifts of existing business activity to other areas of Oakland, and increased occupancy of industrial space in those areas. The magnitude of shifts would not be large in the context of business activity citywide, and would not be expected to lead to substantial construction of new facilities. Businesses seeking centrally-located facilities nearby could help support the modernization of other, older industrial facilities in areas designated to remain industrial and/or designated for business mix uses in the City's General Plan. There also could be relocations outside of Oakland, including to locations along the I-880 corridor in San Leandro or Hayward/Union City, and along the I-80/580 corridors in Richmond.

6.2.3 From a Regional Perspective, the Proposed Amendments Would Accommodate More Growth in Oakland, Thereby Reducing Growth Pressures Elsewhere

From a regional perspective, implementation of the Proposed Amendments would have a small effect on the distribution and location of growth within the East Bay and Bay Area region. It would result in more growth in Oakland and North Oakland, at the center of the region, and less growth in other areas.

The Proposed Amendments would accommodate housing and population growth in the Amendment Area, thereby reducing demand for housing in more outlying locations. The Proposed Amendments would support additional housing in a central Bay Area location and would attract households with a high proportion of working adults who value good accessibility to workplaces nearby and elsewhere in the Inner East Bay and San Francisco. Over the long term, with the Proposed Amendments, more housing in Oakland at the center of the region is likely to result in a larger total regional housing supply than would a more dispersed, lower-density pattern

of regional development, and it would result in more housing in proximity to employment centers in the Central Bay Area.

The Proposed Amendments also would accommodate the growth of business activity and employment in the Amendment Area, in industrial incubator and live/work developments. The Proposed Amendments would retain business activity in a central, Oakland location, in proximity to a growing workforce. The Proposed Amendments also would result in some shifts of industrial business activities to other Oakland or East Bay locations as a result of demolitions of older industrial facilities to make way for new development (both the residential and non-residential development). Though the amounts are small, the Proposed Amendments would contribute to the larger pattern of outward dispersion of industrial uses from Oakland and other parts of the Inner East Bay, as a result of a declining industrial land supply in the Central Bay Area.

6.2.4 Summary

Overall, the effects of the Proposed Amendments on growth would be largely beneficial and not considered substantial and adverse. This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the analysis presented in the 2000 EIR regarding Growth Inducing Impacts (2000 EIR, page 6-1), which addressed the potential effects of the Existing Redevelopment Plan. The effects of the Redevelopment Plan, as Amended, would continue to be less than significant, consistent with the findings herein and in the 2000 EIR.

6.3 Significant Irreversible Environmental Effects

An EIR must identify any significant irreversible environmental changes that could result from implementation of a development facilitated by the Proposed Amendments. These may include current or future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future generations to similar uses. CEQA dictates that irretrievable commitments of resources should be evaluated to assure that such current consumption is justified (CEQA Guidelines §15126.2(c)). The CEQA Guidelines identify three distinct categories of significant irreversible changes: (1) changes in land use that would commit future generations; (2) irreversible changes from environmental actions; and (3) consumption of non-renewable resources.

6.3.1 2000 EIR and Significant Irreversible Environmental Effects

Issues regarding nonrenewable natural resources, which addressed the potential effects of the Existing Redevelopment Plan, were discussed in the 2000 EIR (Initial Study Checklist Item #5). The analysis concluded that the Existing Redevelopment Plan would not significantly deplete nonrenewable resources or inhibit its extraction.

6.3.2 Significant Irreversible Environmental Effects for the Proposed Amendments

Changes in Land Use Which Would Commit Future Generations

The development facilitated by the Proposed Amendments would allow for the improvement of approximately 210 acres of land in North Oakland. The development facilitated by the Proposed Amendments would be consistent with the land use designated by the City of Oakland's General Plan. Because the development facilitated by the Proposed Amendments would occur within an urban area surrounded by similar or compatible uses, it would not commit future generations to significant changes in land use.

Irreversible Changes from Environmental Accidents

No significant irreversible environmental damage, such as what could occur as a result of an accidental spill or explosion of hazardous materials, is anticipated to result from the development facilitated by the Proposed Amendments. Furthermore, compliance with federal, State, and local regulations, the City of Oakland's Standard Conditions of Approval identified in Section 4.7, Hazardous Materials, would reduce to a less-than-significant level the possibility that hazardous substances within the Amendment Area would cause significant environmental damage.

Consumption of Non-Renewable Resources

Consumption of non-renewable resources includes conversion of agricultural lands, loss of access to mining reserves, and use of non-renewable energy sources. The Amendment Area is located within an urban area of Oakland; no agricultural land would be converted to non-agricultural uses. The Amendment Area does not contain known mineral resources and does not serve as a mining reserve.

Activities facilitated by the Proposed Amendments would require the use of energy, including energy produced from non-renewable resources. However, the programs, and other activities facilitated by the Proposed Amendments would incorporate energy-conserving features, as required by the Uniform Building Code and California Energy Code Title 24.

6.3.3 Summary

This analysis of the Redevelopment Plan, as Amended, considers the effects described above for the Amendment Area, in combination with the analysis presented in the 2000 EIR regarding nonrenewable natural resources (Item #5), which addressed the potential effects of the Existing Redevelopment Plan. The effects of the Redevelopment Plan, as Amended, would continue to be less than significant, consistent with the findings herein and in the 2000 EIR.

6.4 Effects Found Not To Be Significant

Meetings with representatives of the City of Oakland departments involved in the planning and review of development projects, and consultants to the City were held to determine the preliminary scope of the activities facilitated by the Proposed Amendments. In addition to those meetings, a Notice of Preparation (NOP) was circulated on March 16, 2011, and a public scoping meeting was held on April 6, 2011 at the Planning Commission to solicit comments from the public and city officials about the scope of this SEIR. On June 17, 2011, the City issued a revised NOP which was distributed to the same agencies, organizations and persons as the original NOP. The revised NOP was issued to specify that the City would prepare a Supplement to the 2000 EIR. The City provided a 30-day comment period, which ended on July 18, 2011, for the receipt of written responses, comments and/or questions on the NOP. Written and oral comments received on the NOP and the revised NOP were considered in the preparation of the final scope for this document and in the evaluation of the activities facilitated by the Proposed Amendments (see Appendix A). An Initial Study was not prepared for the proposed Project.

The NOP prepared for this SEIR indicated there would likely be environmental effects on aesthetics, shadow and wind; air quality and greenhouse gases; biological resources; cultural and historic resources; geology, soils and seismicity; hazardous materials; hydrology, water quality and water supply; land use; noise; population and housing; public services and utilities; and transportation and circulation, among other topics. These environmental topics have been fully analyzed in this document (Chapter 4).

The following two topics from the CEQA Environmental Checklist were excluded from discussion in the SEIR because it was determined during the scoping phase that there would be no impacts to these issues:

6.4.1 Agricultural Resources

As discussed in Section 4.9 (Land Use, Plans, and Policies), the Oakland General Plan Land Use Map designates various *Housing Type Residential* and *Housing and Business Mix* land use classifications on and surrounding the Amendment Area. The Amendment Area, as with the majority of developed land in the City of Oakland, is designated by the California Department of Conservation's Farmland Mapping and Monitoring Program as Urban and Built-Up Land (Department of Conservation, 1998). Therefore, the development facilitated by the Proposed Amendments would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use; would not conflict with existing zoning for agricultural use or a Williamson Act contract; and would not 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 activities facilitated by the Proposed Amendments would have no impact on agricultural resources. This is consistent with the determination in the 2000 EIR (Initial Study Checklist Item #5).

6.4.2 Mineral Resources

According to the City's OSCAR Element of the General Plan, the development facilitated by the Proposed Amendments is located in a developed urban area that has no known existing mineral resources. The California Geological Survey (CGS) has classified lands within the San Francisco Bay Region into Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface Mining and Reclamation Act (SMARA) of 1974 (Stinson et al., 1982). The Amendment Area is mapped by the California Department of Mines and Geology (CDMG) as MRZ-1, an area where adequate information indicates a low likelihood of significant mineral resources (Stinson, et al., 1982). The intent of designating significant deposits is to identify areas where mineral extraction could occur prior to development. The activities facilitated by the Proposed Amendments would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; and 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 activities facilitated by the Proposed Amendments would have no impact on mineral resources. This is consistent with the determination in the 2000 EIR (Initial Study ChecklistItem #5).

6.5 References

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CHAPTER 7

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